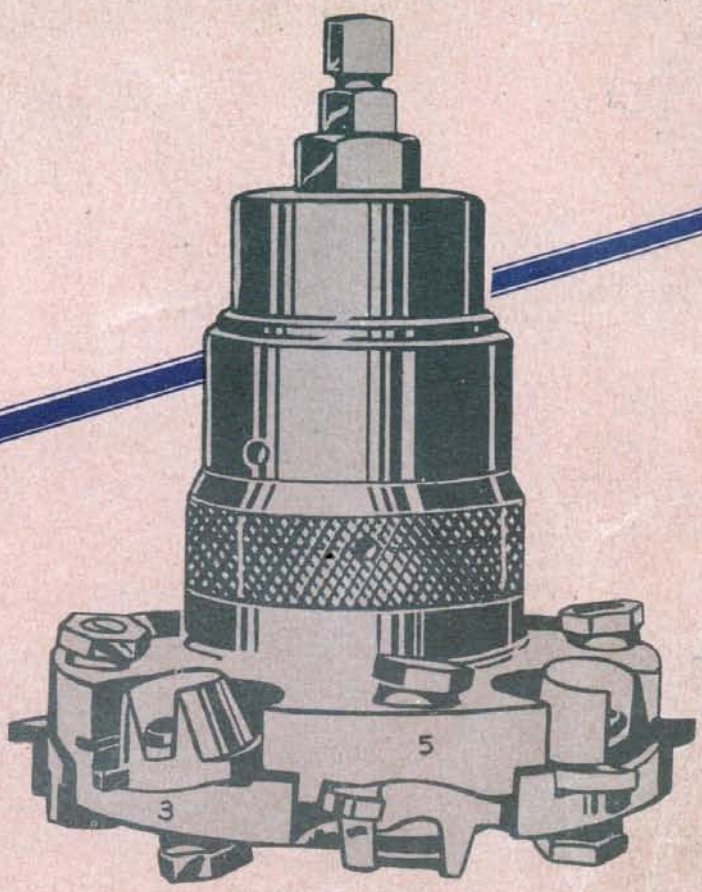
CATALOG AND PATTERN BOOK

51

1-717



Guide to Modern Millwork

SHIMER CUTTER HEADS

SAMUEL J. SHIMER & SONS, INC.
MILTON, PENNA., U. S. A.

Leaders for 81 Years

1868 1949

THE SHIMER CUTTER HEADS AND CUTTERS

IMPORTANT NOTICE

All prices in this Catalog No. 51 have been withdrawn as of March 1st, 1950.

SAMUEL J. SHIMER & SONS.

BOOK NO. 51

Samuel J. Shimer & Sons, Inc.,

Milton, Pennsylvania, U. S. A.

Cable Address—Shimer Codes: A B C. and W. U.

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FOR YOUR PROTECTION

Every Shimer Cutter Head is manufactured under a patent issued on some special feature peculiar to Shimer Heads. We carefully test every improvement that comes under our observation and when found practical it is placed into our tool for the benefit of the users. By this method we advance the tools for quality and quantity finishing of Flooring, Ceiling, Siding Door, Sash or Moulding.

Be sure that our trade mark——

THE SHIMER  CUTTER HEAD

TRADE MARK

is stamped on every Cutter Head and the Shimer name is on Bits and Cutters which you order.

Foreword

In this our No. 51 Catalogue we present many of the important tools which are used in the manufacture of high grade mill work. We have also included patterns of every design which make the book doubly valuable in the mill or office.

Our constant aim is to produce a woodworking tool which will make a good return for the user. This necessitated the selection of quality steels, the careful designing, the care of experienced men in manufacturing and putting out such a tool. That is the reason for the popularity of the Shimer Cutter Head. It is built with the view of production at lower costs in connection with any matching, moulding or tenoning machine.

We maintain a complete record of the cutter heads to insure quicker service. Parts of the correct size and Bits of the same pattern are shipped time after time by refering to the records. This feature is of great value to each user.

Be sure to specify Shimer Cutter Heads or Shimer Bits. They are genuine if stamped with our trade mark.

Samuel J. Shimer & Sons

Terms and Conditions

GUARANTEE

We guarantee our tools to be free from defect and will replace any Heads, Bits or Cutters which may be found defective when used for the purpose they are intended and under proper conditions. We will not pay claims for labor or damages.

CLAIMS

Claims of error, deficiency or imperfection will not be entertained unless made promptly after receipt of goods.

SHIPMENTS

Freight, Express and Parcel Post are used in shipping tools. Lowest rates are secured and shipments insured except with Freight where our responsibility ceases when placed in the hands of the Rail Road Company.

PRICES

The prices given in this Catalogue are net to the consumer F. O. B. Milton, Pa. They are subject to change without notice.

TERMS

Net cash 30 Days, unless otherwise specifically agreed at time of purchase.

The right is reserved to make draft at sight for overdue accounts with exchange.

In case of absence of satisfactory credit information orders should be accompanied with certified check or Post Office Order.

If shipment is requested C. O. D. at least 15% of the purchase price must accompany the order.

SHIPPING TO US

In shipping any article to us for repair or replacement, mark your package plainly. **Do not depend on your letter alone.**

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The Shimer Circular Bit Feature

Description



Fig. 202.
4 Bit Expansion Tongue Head.

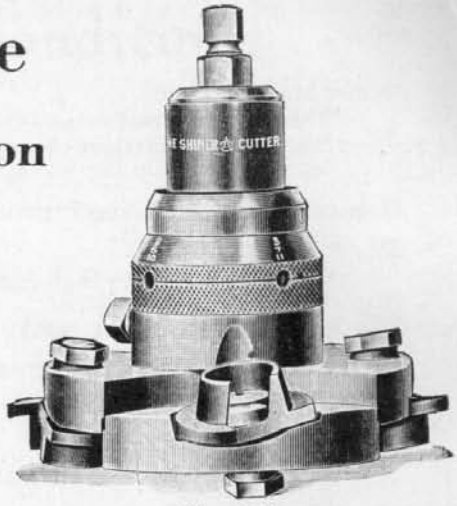


Fig. 203.
4 Bit Expansion Groove Head.

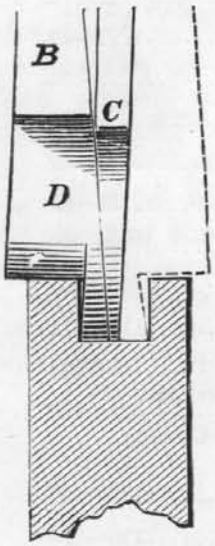


Fig. 3.

The Shimer Cutter Heads since their introduction in 1873 have grown into general favor by reason of their simplicity, convenience and economy.

As applied to the manufacture of flooring the Circular Bits are arranged alternately on opposite sides of the flange having seats therein and Bits on the seats secured by bolts and nuts. In operation these Bits are divided and work in upper and lower series cutting the chip alternately with suitable clearance from a divided line of cut.

First one Bit makes a cut, then the next Bit of the other series follows. The entire cut is therefore, not made at one carve. Both slightly shear—dividing the chip along the center line of cut.

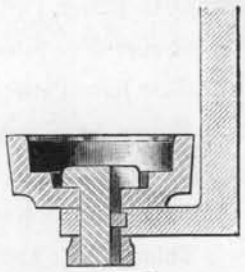


Fig. 7.

This Fig. 7 illustrates the bit seat with only one way incline, for clearance, via: forward or backward at right angles to the radial line (the centre line of the bit seats being radially parallel to the plane of revolution) of the Cutter Head. This bit seat is common to Fig. 1 and Fig. 2 either Solid or Expansion Head.

Permit us to illustrate by diagram, Fig. 3, showing groove Bit D in the position it occupies when making the cut. The Bit C which follows to complete the work, is given in outline. This shows how the chip is divided, and from it you will understand that the several Bits that thus complete the work are arranged in upper and lower series, upon a Head, that has a series of seats to which these Bits are secured.

The Bits are inclined alternately to and from a dividing line central to this arrangement of seats. **The object of the inclining seats, is to give to the Bits thus arranged a side clearance, and they take a position the same as a saw tooth when set.** You will observe, therefore, that the Bits when at work strike the lumber with their edges only.

Having a clearance thus carefully and permanently provided in connection with the divided chip, the bits turn out smoother work on hard, cross-grained and knotty lumber.

Figure 4 illustrates the bit seat, with the duplex incline, consisting of a forward and backward incline for clearance to the cutting edges, and an outward incline for the overcutting portion of the Bit, as in V siding. This bit seat is characteristic of Heads Figures 22 and 23, and Figures 202 and 203; as also the complete series of heads belonging thereto.

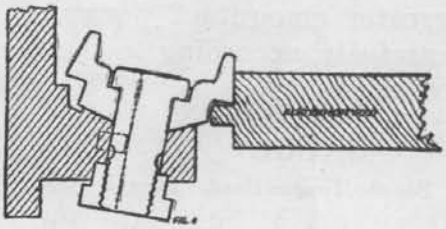


Fig. 4.

The advantages in having the bit seats within a concave seat consists in its being held, not only by the bolt, but by the flaring metal which surronds that bolt, and forms the bit seat socket. The cutter is thereby made self-centering, and by reason of the peculiar construction it is held firmly to its central position, which is as a vise grip in effect.

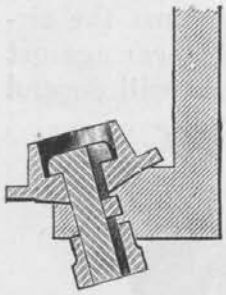


Fig. 6.

The bit-holding bolt, by reason of its angular slanting position, locates the nut closer to the center of the Head, and it therefore, takes a deeper and stronger grip on the head metal.

Figure 6 gives a cross sectional view of a Bit as we fasten it to the concave seat. It is not in a direct line with the force of the cut, and therefore the strain of the work does not have so great a twirling power on the Bit, hence, it is held in cutting position upon its concave duplex bit seat more firmly than could be the case were the seat simply a flat and straight one. (Compare Figures 6 and 7).

Sharpening Shimer Bits

Each Bit touches the work only with its cutting edges. It is sharpened with a file or emery wheel when dull, and as it wears away it is brought forward into working position by moving it about its center. It will be noticed that the entire circle of the Bit serves in its turn to make up the cutting edge. Comparatively the Circular Bit outwears any straight one many times, and always produces the same standard work on cross-grained and knotty lumber just as completely as on the best selected material.

The Bits must be sharpened according to the line indicated by the gauge and only from the notch side—do not touch them with a file on the outer circle as this portion of the Cutter carries the counterpart of the exact shape to be moulded. Respect must be given to the amount of hook that is filed or dressed into the face of the notch as upon this depends the exactness of the finished work. If the slant is deeper or

more acute the tongue and groove will be correspondingly longer and deeper. If this hooked portion should be made with less slant the tongue or groove will be shallower; the Bits also will cut hard and consume a greater amount of power. It is well, therefore, to dress the Cutters carefully, according to the line indicated by the gauge for the maximum of efficiency.

GAUGE
For the Tongue Head.

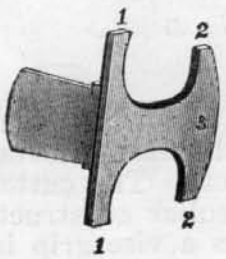


Fig. 14.

GAUGE
For the Groove Head.

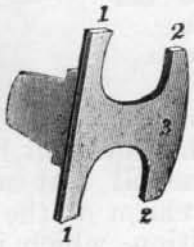


Fig. 15.

See Figures 14 and 15 representing respectively a tongue gauge and a groove gauge. To set the Bit in its cutting position place the arm of the gauge 1-1 in touch with the part of the nut that holds the Bit: the arms 2-2 pass down by the side of the Head and help to steady the gauge; the lug on the inside is located where Figure No. 3 will rest on the outer circle of the Head. When the gauge is in this position with the arm which bears against the circular collar of the nut, the face of the hook of the Bit must bear against the face of the gauge, and the exact pattern to be produced will depend upon the exactness with which the Bits are filed or ground.

The gauge is reversible, one side of it being used for the upper Bits and the other side for the lower Bits.

The Bits when dressed according to the gauge outlines will work with a drawing cut, a division of the chip and perfect side clearance: three essentials for the production of good work at satisfactory speeds.

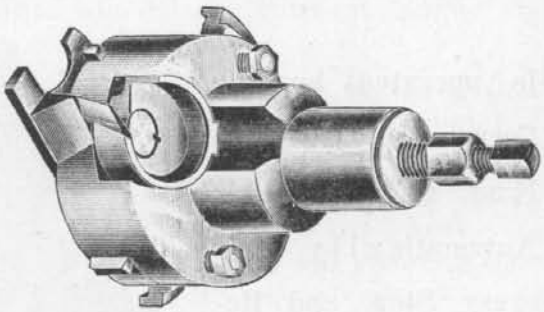


Fig. 16.

We here show a Head (Fig. 16) with the gauge for Tongue Head in place to fix the position of one of the upper Bits. **By a careful use of these gauges you will keep your work up to the true standard,** a consideration of much value, to have one shipment of flooring match with the other shipment made months or years previous. Dealers appreciate this uniformity of pattern.

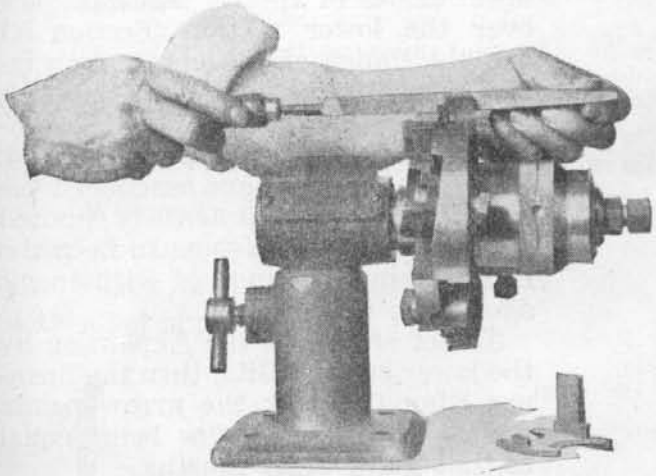
In designing the Bits for Matcher Heads and other tools we do it with the intention of filing or grinding the cutting edge with slant and hook as indicated by the gauge. If you give the edge of the Bits a different slant you change the relation of the cutting edge to the contour of the Bit and it will no longer cut the true shape of the mould.

All this we refer to here so that the user may accustom himself to the use of the gauge, file or grinder and set the Bits thereby, which is a very simple operation and one that requires no more time than that of sharpening a saw tooth.



Use an 8-inch taper or three-cornered file, which is the most convenient size and shape for all sizes and kinds of Cutters of our make.

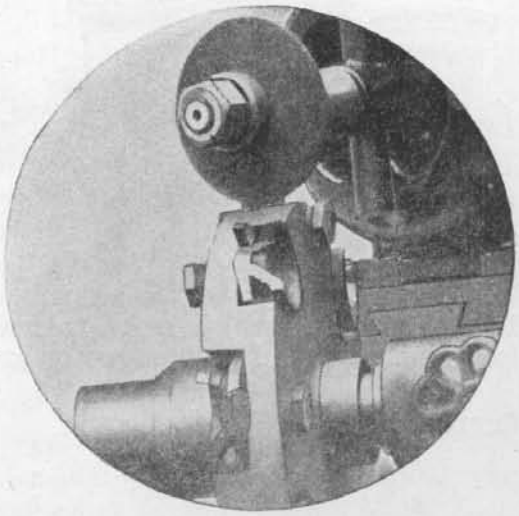
A 4-inch or 6-inch half round file is useful in filing away the inside of the edge for Cope Bits, etc., where the very keen edge is necessary to properly cut and form tenons across the grain.



A work bench fitted with one of our Filing Stands, illustrated, will give the operator the necessary equipment to care for the Heads in the best manner.

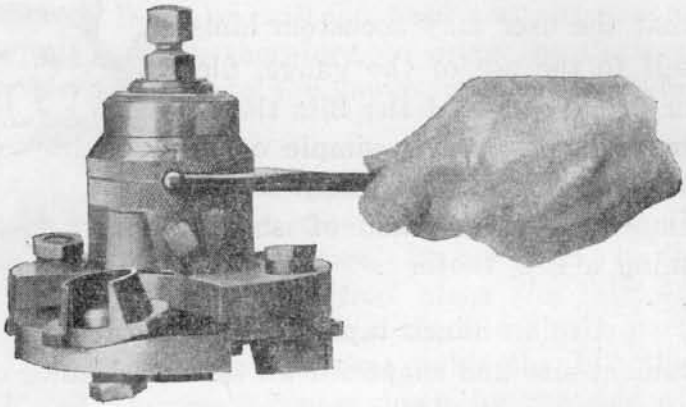
Our No. 3 Grinder is most convenient for sharpening all types of Heads especially those with High Speed Steel Cutters.

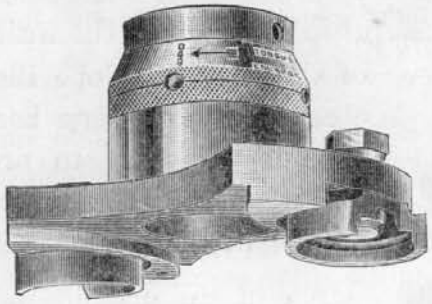
This method of grinding with a small wheel applied directly on a motor shaft as illustrated in the cut at the right is ideal. The wheel runs at a high rate of speed permitting the operator to take off the dull portion quickly without heating the steel. A full description of the No. 3 Grinder is given on page 129 The operation in sharpening bits on it is given in detail on that page also.



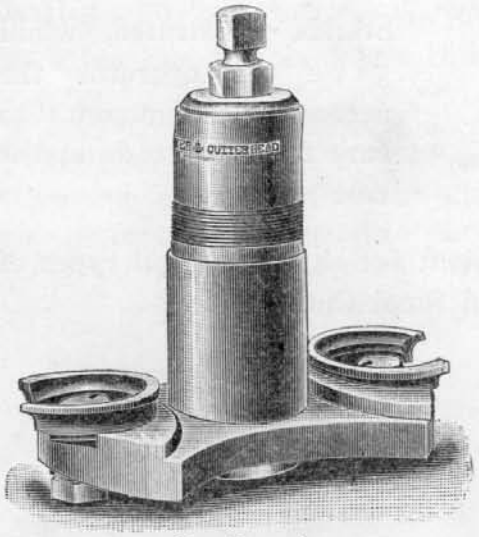
The Shimer Cutter Head Expansion

Is operated by the Corrugated Spanner Nut, which Locks Automatically at every Stop, and Registers in Sight.





Section B



Section A.

Each Head is made in two sections. The top section which carries the lower series of Bits is made to slide over the lower section (Section A) and the flange of the one section interlocks with the flange of the other, fitting together perfectly in the construction of a single Expansion Head. When the Head is thus assembled the up and down adjustment is limited by stops both ways so as to keep the Bits within the range of adjustment allotted to them.

To set and reset the Expansion by the lower cutting Bits, turn the Spanner Ring the way the arrow points and count the figures as being equal to that many sixty-fourths.

Thus: The Bits being regular will cut tongue and groove ¼ thick when the pointer is at o. To every one-quarter turn of the Spanner Ring the way the arrow points add one sixty-fourth (to the ¼ inch the normal thickness for tongue and groove) and you make the tongue ¼ plus 1-64 thick. With the pointer at 2, you make the tongue ¼ plus 2-64 thick. With the pointer at 3, you make the tongue ¼ plus 3-64 thick. With the pointer at 4, (one full turn) you make the tongue ¼ plus 4-64 or 5-16 thick, and thus on to the limit. There are also 3 automatic stops between every count, each equal to 1-3 of 1-64 of an inch, which serve to make a very fine adjustment to regulate for tight or loose fit of tongue or groove.

At every third-notch in the turn there is a perpendicular row of figures thus:

			v
3	2	1	0
7	6	5	4
11	10	9	8

With the Upper Section up as far as it will go, and the pointer v at o, the Bits will cut the thinnest tongue and groove; with the Upper Section down as far as it will go; the Bits will cut the thickest tongue and groove that they can make.

Every figure represents that many 64ths of an inch in the adjustment. On the first turn of the spanner nut you count by the figures 1, 2, 3, 4. On the second turn you count by the figures 5, 6, 7, 8, and so on to the limit of the adjustment. The automatic stops are rigid, the adjustment positive and true to measure.

The Expansion	That registers (thick or thin) size of tongue and groove in sight.
The Expansion	That closes up or comes together for the heavier work. When the lighter work is being done the Cutter Head sections are expanded.
The Expansion	That you can set for any thickness of single tongue and groove the Bits will cut by simply turning the spanner nut, without taking the Head off the spindle.
The Expansion	That you can set and reset for a tight or loose fit of the tongue in groove without disturbing the alignment cut of the Side Heads with the surface cut of the cylinder.
The Expansion	That locks automatically at every set, and reset, of the spanner nut.
The Expansion	That moves the lower Bits up or down without changing the upper Bits that are set (and carried by the top screw) in alignment with the surface cut of the cylinder.

THE SHIMER SELF CENTERING DEVICE

Whenever desired and where the cutting circle of the machine permits, we supply Heads equipped with our self-centering and clamping device. This device overcomes the undesirable features of fastening a Head with a set screw.

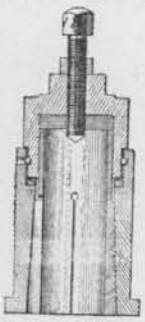


Fig. 685

The illustration, Fig. 685, is a cross section of a Cutter Head hub having a self-centering device. The Head is bored on a taper and a slotted taper sleeve which is threaded at the top fits into it. The threads of the sleeve turn into the top hub or nut. By tightening the top nut, the sleeve is drawn into the taper, thus tightening the Head securely on the spindle.

The illustration, Fig. 686, is an end view of a Cutter Head with the self-centering device. This shows how the sleeve is slotted to allow tightening securely when the top nut draws the sleeve into the taper.

This feature centers the Head for a perfect of cut, keeping the Head in perfect running balance and besides, holds the Head in place on the spindle.

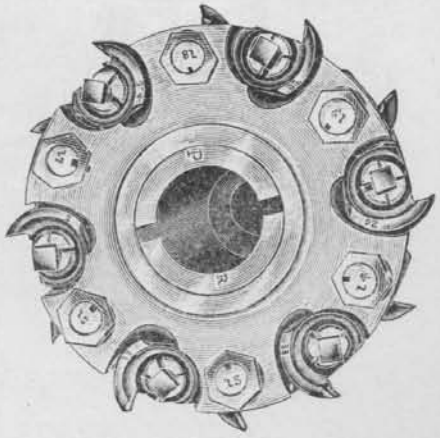


Fig. 686

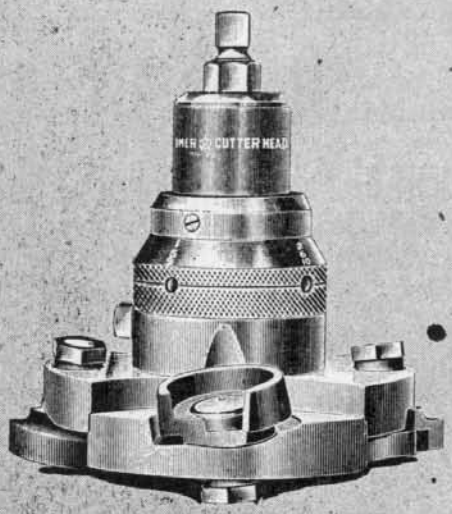


Fig. 202. 4 Bit Tongue Head

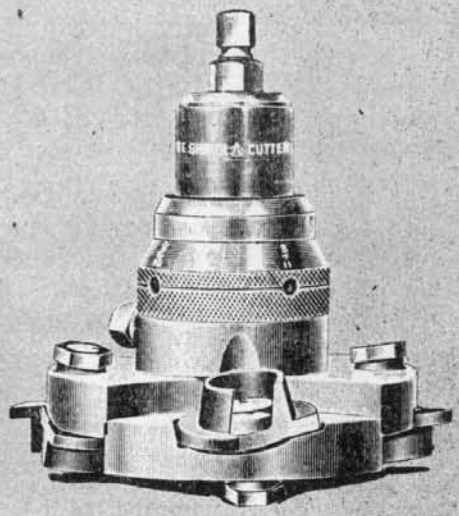


Fig. 203. 4 Bit Groove Head

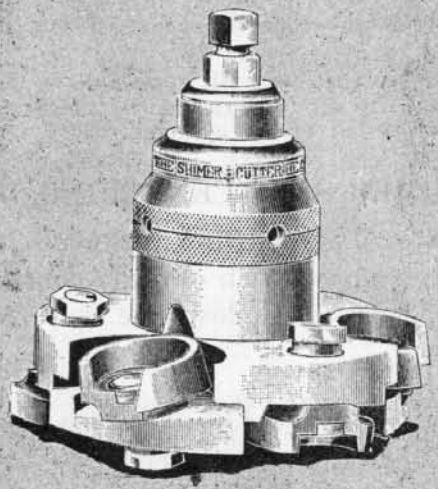


Fig. 202. 6 Bit Tongue Head

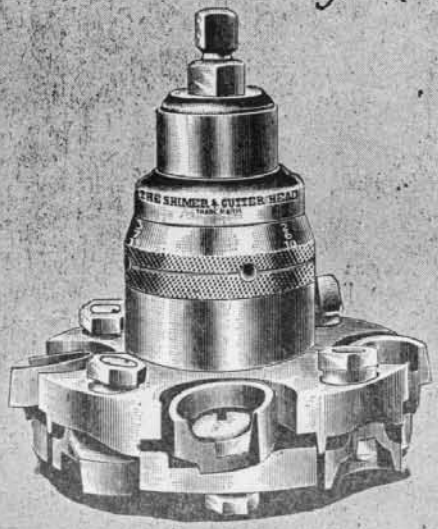


Fig. 202. 8 Bit Tongue Head

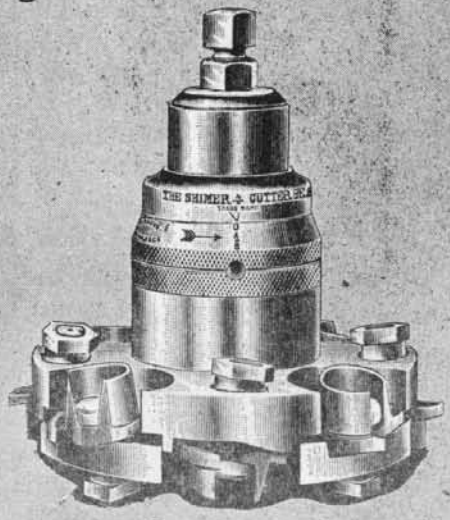


Fig. 203-8 Bit Groove Head

Shimer Cutter Heads for Flooring with the Conical Duplex Bit Seats

NO. 202 and 203 MATCHER HEADS

With Duplex Bit Seats and Expansion

Shimer Cutter Heads No. 202 and 203 are designed to give all of the time and labor saving features possible.

They are provided with the Duplex Bit Seats to make the under cut in the groove and the overcut above the groove with clearance—the Diamond Point Edge to start the cut, and shave the chips away from the divided incut, where the heaviest cutting is done.

The Expansion enables the operator to adjust the head for a narrower or wider tongue and groove by the turn of the spanner nut on the hub.

The Features are described fully on pages 6 to 11

THESE ARE OUR NET PRICES

One set of Cutter Heads Fig. 202 and 203 with 4 Bit Seats to each Head and the Shimer Cutter Head Expansion, without Bits **$98.24**

Same, Heads with Self Centering, without Bits $126.08

One set of 8 Bits to match ⅜ to ½ inch Stock $22.32
One set of 8 Bits to match ⅝ to ¾ inch Stock 22.32
One set of 8 Bits to match 13/16 to 1½ inch Stock 24.80
One set of 8 Bits to match 1½ to 2 inch Stock 28.16

Any one set of the above Bits work interchangeably on these Heads.

One set of Cutter Heads Fig. 202 and 203 with 6 Bit Seats to each Head and the Shimer Cutter Head Expansion, without Bits **$112.56**

Same, Heads with Self Centering, without Bits $140.40

Cutter Heads 5½ inches surface cut diameter and larger will take 6 bit seats.

One set of 12 Bits to match ⅜ to ½ inch Stock $33.48
One set of 12 Bits to match ⅝ to ¾ inch Stock 33.48
One set of 12 Bits to match 13/16 to 1½ inch Stock 37.20
One set of 12 Bits to match 1½ to 2 inch Stock 42.24

Any one set of the above Bits work interchangeably on these Heads.

One set of Cutter Heads Fig. 202 and 203 with 8 Bit Seats to each Head and the Shimer Cutter Head Expansion, without Bits **$121.44**

Same, Heads with Self Centering, without Bits $149.28

Cutter Heads 6¾ inches surface cut diameter and larger will take 8 bit seats.

One set of 16 Bits to match ⅜ to ½ inch Stock $44.64
One set of 16 Bits to match ⅝ to ¾ inch Stock 44.64
One set of 16 Bits to match 13/16 to 1½ inch Stock 49.60
One set of 16 Bits to match 1½ to 2 inch Stock 56.32

Any one set of the above Bits work interchangeably on these Heads.

Moulded Tongue and Groove Bits each (V Sliding etc.) $4.65

Extra Bit Setting Gauge, each, $2.00; Bit Holding Bolt and Nut, each, 50c; Steel Forged Wrench, $1.40.

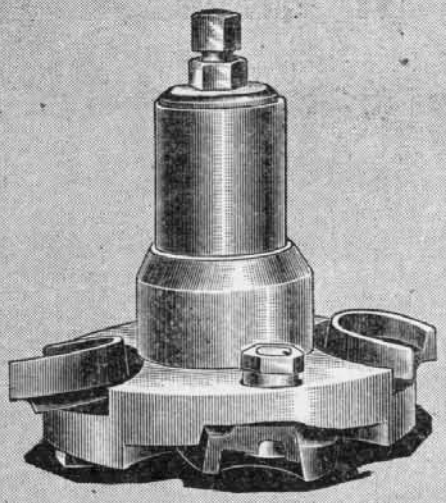


Fig. 22. 4 Bit Tongue Head

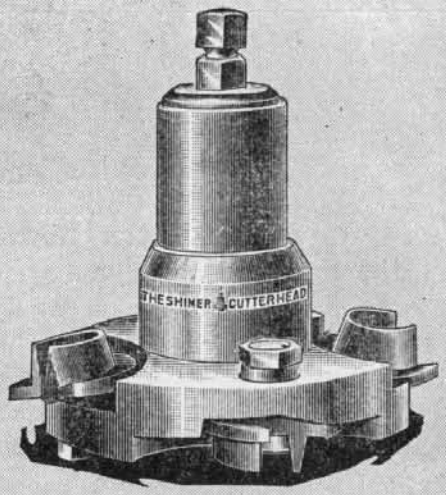


Fig. 23. 4 Bit Groove Head

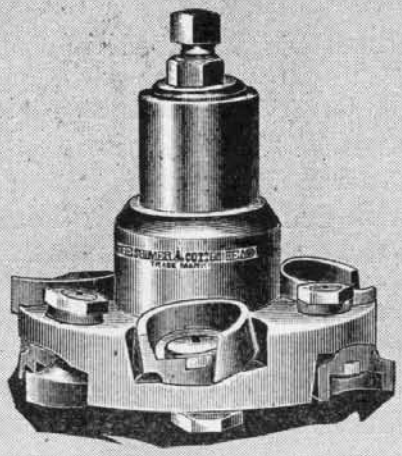


Fig. 22. 6 Bit Tongue Head

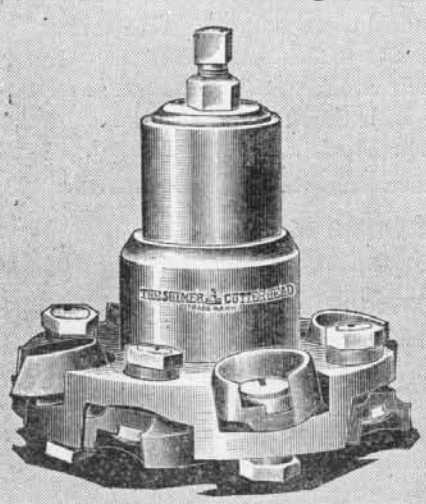


Fig. 22. 8 Bit Tongue Head

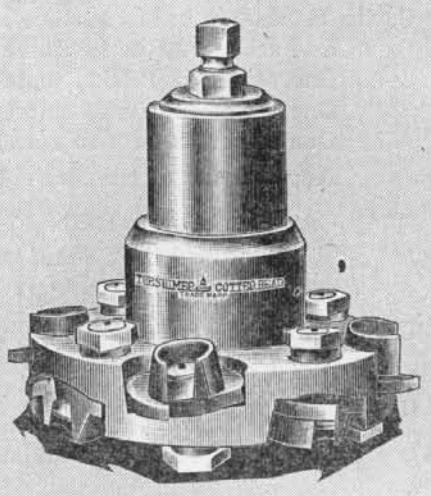


Fig. 23. 8 Bit Groove Head

Shimer Cutter Heads for Flooring with Conical Duplex Bit Seats, In Solid Section

NO. 22 and 23 SHIMER MATCHER HEADS

in Solid Section with Duplex Bit Seats

These Cutter Heads represent the strongest of all The Shimer Cutter Heads, in combination with the strongest of all Circular Bits to match single tongue and groove flooring from 13-16 to 1½ inches in thickness. Much attention is given to the details concerning a proper working clearance in order to have each part of the cutting edge render its longest and best service in such a way that by ordinary sharpening the original outlines are restored and maintained to the last limit of the cutter circle, which is brought forward on its central holding bolt as wear and sharpenings require. The face of the bit is thus set and reset by a gauge that accompanies each head and serves an important part of the uniform patterns produced.

Same as No. 202 and 203 only in Solid Section.

THESE ARE OUR NET PRICES

One set of Cutter Heads Fig. 22 and 23 with 4 Bit Seats to each Head in Solid Section, without Bits **$55.80**

Same, Heads with Self Centering, without Bits $83.64

One Set of 8 Bits to match ⅜ to ½ inch Stock 22.32
One set of 8 Bits to match ⅝ to ¾ inch Stock 22.32
One set of 8 Bits to match 13/16 to 1½ inch Stock 24.80
One set of 8 Bits to match 1½ to 2 inch Stock 28.16
Any one set of the above Bits work interchangeably on these Heads.

One set of Cutter Heads Fig 22 and 23 with 6 Bit Seats to each Head in Solid Section, without Bits **$63.60**

Same, Heads with Self Centering, without Bits $91.44

One set of 12 Bits to match ⅜ to ½ inch Stock 33.48
One set of 12 Bits to match ⅝ to ¾ inch Stock 33.48
One set of 12 Bits to match 13/16 to 1½ inch Stock 37.20
One set of 12 Bits to match 1½ to 2 inch Stock 42.24
Any one set of the above Bits will work interchangeably on these Heads.

One set of Cutter Heads Fig. 22 and 23 with 8 Bit Seats to each Head in Solid Section, without Bits **$66.72**

Same, Heads with Self Centering, without Bits $94.56

Cutter Heads 6¾ inches surface cut diameter and larger will take 8 bit seats.

One set of 16 Bits to match ⅜ to ½ inch Stock $44.64
One set of 16 Bits to match ⅝ to ¾ inch Stock 44.64
One set of 16 Bits to match 13/16 to 1½ inch Stock 49.60
One set of 16 Bits to match 1½ to 2 inch Stock 56.32
Any one set of the above Bits work interchangeably on these Heads.

Extra Bit Setting Gauge, each, $2.00; Bit Holding Bolt and Nut, each, 50c; Steel Forged Wrench, each, $1.40.

The price of Moulded Bits, each, (V Siding, etc.) $4.65

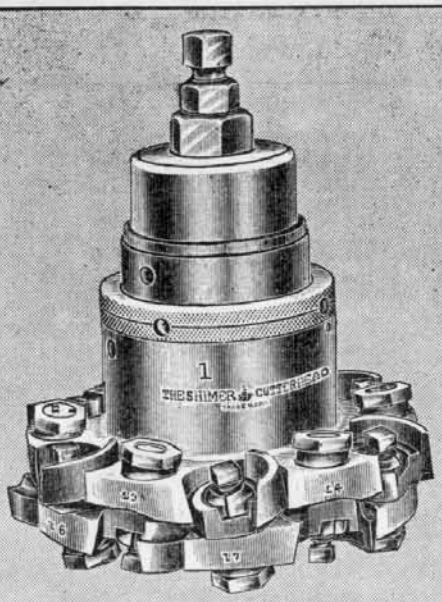


Fig. 631. 12 Bit Tongue Head with Expansion

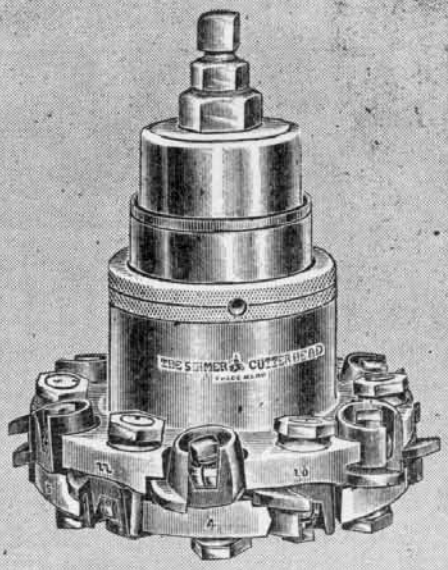


Fig. 632. 12 Bit Groove Head with Expansion

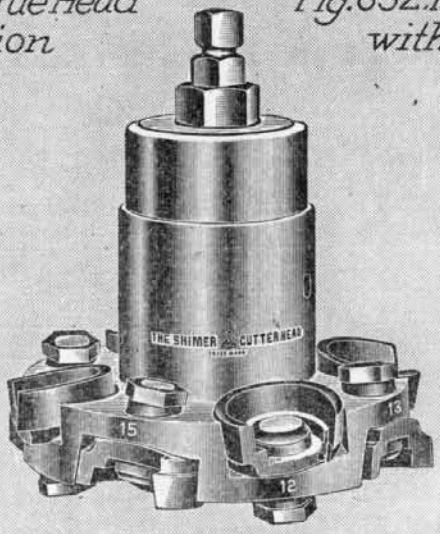


Fig. 624. 8 Bit Tongue Head in Solid Section

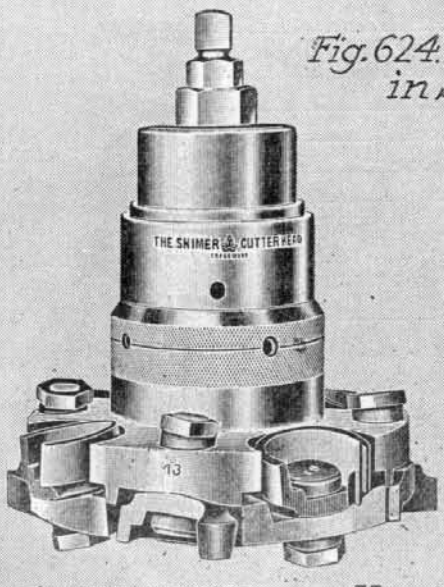


Fig. 627. 8 Bit Tongue Head with Expansion

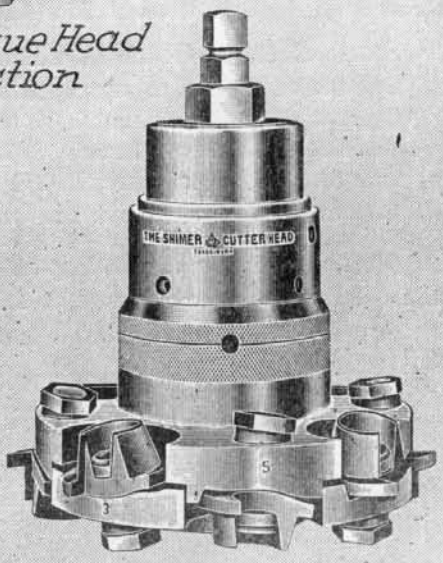


Fig. 628. 8 Bit Groove Head with Expansion

Shimer Cutter Heads for Flooring with Conical Duplex Bit Seats and the Self Centering Device

THE "SHIMER LIMITED" MATCHER HEADS

Having the Duplex Conical Bit Seat, the Expansion Feature and the Self Centering Device.

The "Shimer Limited" Cutter Heads with 12 Bits each Head differ only from the 8 Bit Heads in the interlocking of the head sections and in the use made of Sectional Bits instead of Bits with full circles.

The engravings represent Heads for Flooring, equipped with Flooring Bits but the same Heads also receive Bits for Ceiling, making single tongue and groove.

Heads of a similar nature are designed for Ship Lap and Jointing.

Unless rapid feeding is done the Bits will have too little cutting to do for a profitable tool. To keep Bits in good shape in the operation of any machine they must be provided with sufficient amount of feed or they will simply chafe the lumber and quickly dull.

The value of the Circular Bit or Shimer Cutter needs no introduction here; the perculiar angle at which the tool edge is introduced to the wood is conducive of results that always prove beneficial and profitable to the user; the maintenance of uniform patterns, with the least possible chipping or tearing of cross-grained or knotty portions; in the rapid cutting so important in a tool of this nature, where clearance protection to all leading tool points mean so much.

THESE ARE OUR NET PRICES

One set of Shimer Limited Heads Fig. 631 and 632, with 12 Bit seats to each Head.

With Shimer Cutter Head Expansion. Self Centering, without Bits	$177.70
One set Shimer 12 Bit Solid Matcher Heads with Self Centering, Fig. 624, without Bits	$110.25

CARBON STEEL BITS

One set of 24 Bits to match ⅜ to ½ inch Stock	$66.96
One set of 24 Bits to match ⅝ to ¾ inch Stock	66.96
One set of 24 Bits to match 13/16 to 1½ inch Stock	74.40

HIGH SPEED STEEL BITS

One set of 24 Bits to match ⅜ to ½ inch Stock	$126.00
One set of 24 Bits to match ⅝ to ¾ inch Stock	127.20
One set of 24 Bits to match 13/16 to 1½ inch Stock	134.40

Any one set of the above Bits work interchangeably on these Heads.

One set of "Shimer Limited" Cutter Heads Fig. 627 and 628 with Expansion and Self Centering.

Two Heads with 4 Bit seats each, without Bits	$140.50
Two Heads, with 6 Bit seats each, without Bits	156.48
Two Heads, with 8 Bit seats each, without Bits	167.20

Bits same price as Fig. 202 and 203 page 13

One set of "Shimer Limited" Cutter Heads Fig. 624 in Solid Section and Self Centering.

Two Heads, with 4 Bit seats each, without Bits	$88.38
Two Heads, with 6 Bit seats each, without Bits	97.72
Two Heads, with 8 Bit seats each, without Bits	101.47

Bits same price as Fig. 22 and 23 page 15

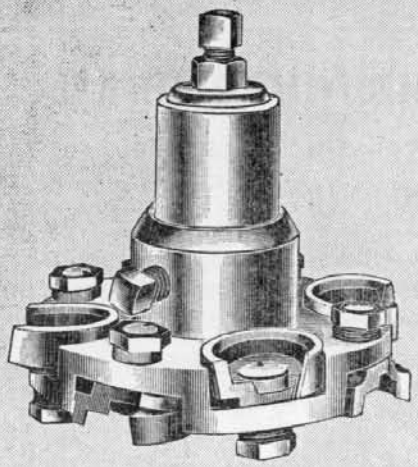


Fig. 12. 8 Bit Tongue Head in Solid Section

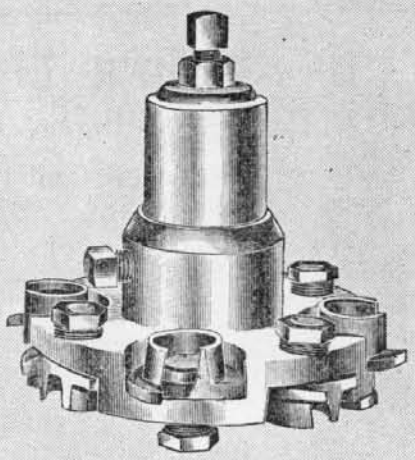


Fig. 13. 8 Bit Groove Head in Solid Section

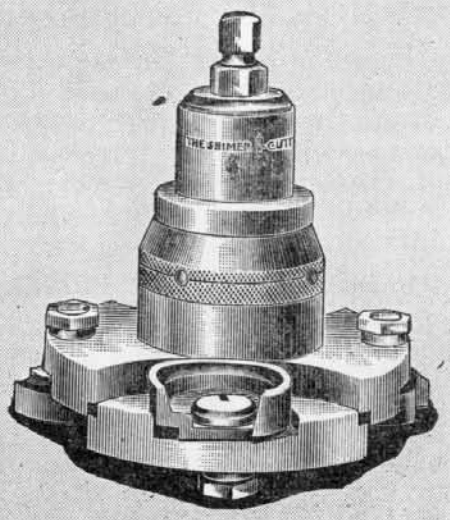


Fig. 212. 4 Bit Tongue Head with Expansion

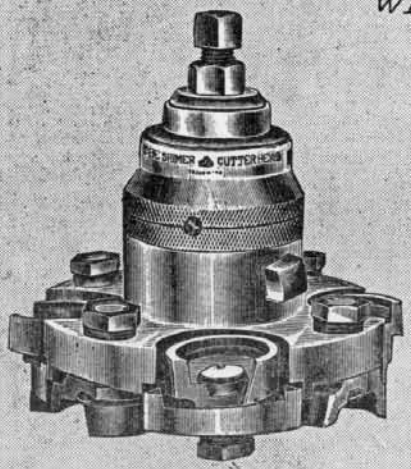


Fig. 212. 8 Bit Tongue Head with Expansion

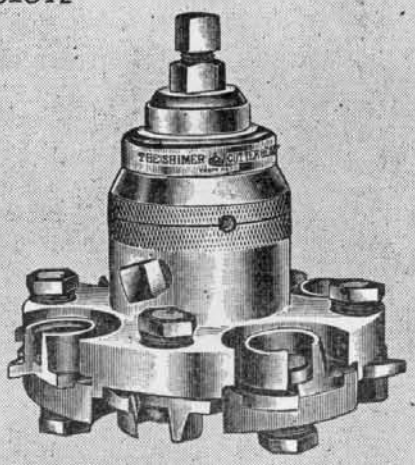


Fig. 213. 8 Bit Groove Head with Expansion

Shimer Cutter Heads for Flooring with Flat Duplex Bit Seats

NO. 12, 13 and 212 and 213 MATCHER HEADS

With Flat Duplex Bit Seat

The clearance protection given the Bits on these Heads is for a two-fold purpose —that of effectually clearing all leading points in carving the tongue and groove proportions, as well as that portion of the Cutter cutting the special outline above and below the tongue and groove, as in making Wainscoting or Car Siding and the like, have every available protection against unnecessary friction and wear. The Bits may be filed or ground for sharpening and when set to the gauge will maintain the uniform size and shape—"the pride of the mill."

One important feature that characterizes The Shimer Cutter Head Expansion is this: The lower Bits are "The Bits" that change position to make tight or loose fit of the tongue in the groove. This leaves the upper Bits, as set by the screw, **in alignment with the surface cut of the cylinder undisturbed.** This is important.

THESE ARE OUR NET PRICES

One set of Cutter Heads Fig. 12 and 13 or 212 and 213 with 4 Bits each Head.

Two Heads complete, without Bits in Solid Section Fig. 12 and 13 ..... $55.80

Two Heads complete, without Bits with Expansion Fig 212 and 213 ..... $98.24

One set of 8 Bits to match ⅜ to ½ inch Stock	$22.32
One set of 8 Bits to match ⅝ to ¾ inch Stock	22.32
One set of 8 Bits to match 13/16 to 1½ inch Stock	24.80
One set of 8 Bits to match 1½ to 2 inch Stock	28.16

Any one set of the above Bits will work interchangeably on these Cutter Heads.

Extra Bit Setting Gauge, each, $1.75; Bit Holding Bolt and Nut, each, 45c; Steel Forged Wrench, $1.20.

Bed Rails—Bed Rail Heads are preferably made of this style.

Fig. 13, to groove ½ or 9/16 inch deep, in solid section, (with flat bit seats) each head, without Bits	$27.90
Fig. 213, to groove ½ or 9/16 inch deep, in Expansion, (with flat bit seats) each head, without Bits	$49.12
Price for Bits to match stock 2 to 2½ inches thick, each	4.34
The Price of Bed Rail Moulded Bits, each	4.85
The Price of Bed Rail Plain Bits, each	3.84

One set of Cutter Heads Fig. 12 or 13 or 212 and 213 with 6 Bits each Head.

Two Heads complete, without Bits in Solid Section Fig. 12 and 13 ..... $63.60

Two Heads complete, without Bits with Expansion Fig. 212 and 213 ..... $112.56

Cutter Heads 5½ inches surface cut diameter and larger will take 6 bit seats.

One set of 12 Bits to match ⅜ to ½ inch Stock	$33.48
One set of 12 Bits to match ⅝ to ¾ inch Stock	33.48
One set of 12 Bits to match 13/16 to 1½ inch Stock	37.20
One set of 12 Bits to match 1½ to 2 inch Stock	42.24

One set of Cutter Heads Fig. 12 and 13 or 212 and 213 with 8 Bits each Head.

Two Heads complete, without Bits in Solid Section Fig. 12 and 13 ..... $66.72

Two Heads complete, without Bits with Expansion Fig. 212 and 213 ..... $121.44

Cutter Heads 6¾ inches surface cut diameter and larger will take 8 bit seats.

One set of 16 Bits to match ⅜ to ½ inch Stock	$44.64
One set of 16 Bits to match ⅝ to ¾ inch Stock	44.64
One set of 16 Bits to match 13/16 to 1½ inch Stock	49.60
One set of 16 Bits to match 1½ to 2 inch Stock	56.32

Any one set of the above Bits will work interchangeably on these Cutter Heads.

Self Centering and Clamping Device, $13.92 each Head.

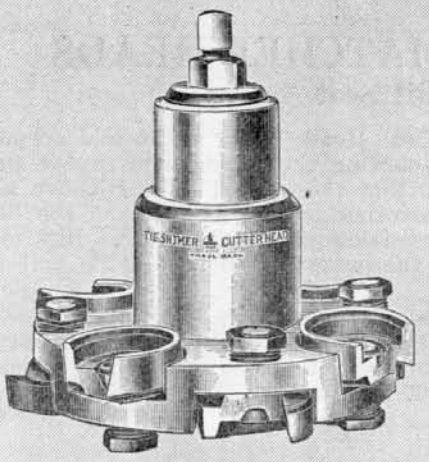


Fig. 1. 8 Bit Tongue Head in Solid Section

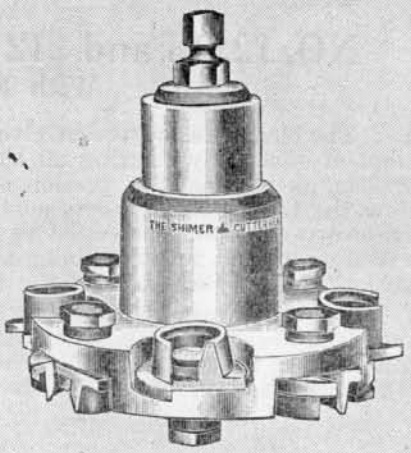


Fig. 2. 8 Bit Groove Head in Solid Section

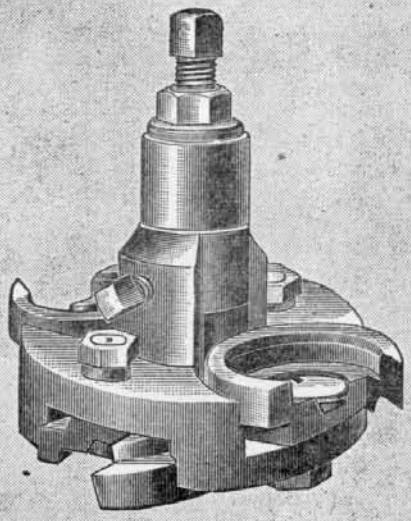


Fig. 1. 4 Bit Tongue Head in Solid Section

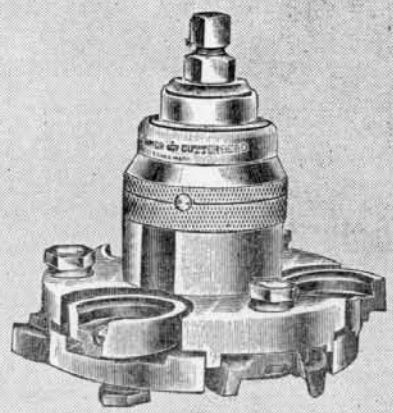


Fig. 1. 8 Bit Tongue Head with Expansion

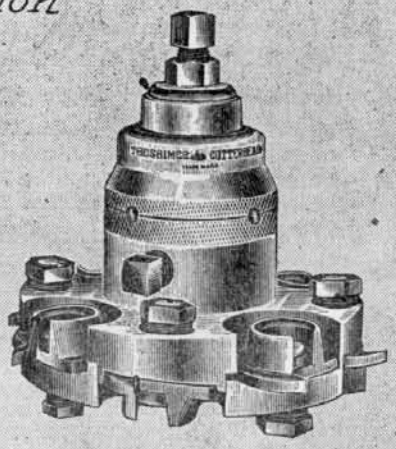


Fig. 2. 8 Bit Groove Head with Expansion

Shimer Cutter Heads for Flooring with Flat Bit Seats

NO. 1 and 2 SHIMER MATCHER HEADS

with the Flat Bit Seat

Aside from this overcutting to make bead, cove or bevel Siding, Partition, etc., this series of Heads, like possibly 40,000 other Shimer Cutter Heads yet in use, made 10 to 25 years ago, are just as good for plain matching and will work just as fast as any set of the Improved Shimer Cutter Heads, but while they make the undercut in the groove they do not make the overcut above the groove with like clearance. See the improved construction of The Shimer Cutter Heads on pages 13 and 15. For standard work up to 1½ inches thick, Figs. 22 to 23 or Figs. 202 and 203, are usually preferred. For 2-inch plank we recommend Figs. 12 and 13 and Figs. 212 and 213, page 19.

THESE ARE OUR NET PRICES

One set of Cutter Heads Fig. 1 and 2 with 4 Bits each Head.

Two Heads complete, without Bits in Solid Section Fig. 1 and 2 ..... $53.50

Two Heads complete, without Bits with Expansion Fig. 1 and 2 ..... $95.44

One set of 8 Bits to match ⅜ to ½ inch Stock	$22.32
One set of 8 Bits to match ⅝ to ¾ inch Stock	22.32
One set of 8 Bits to match 13/16 to 1½ inch Stock	24.80
One set of 8 Bits to match 1½ to 2 inch Stock	28.16

Any one set of the above Bits will work interchangeably on these Cutter Heads.

One set of Cutter Heads Fig. 1 and 2 with 6 Bits each Head.

Two Heads complete, without Bits in Solid Section Fig. 1 and 2 ..... $61.40

Two Heads complete, without Bits with Expansion Fig. 1 and 2 ..... $109.30

One set of 12 Bits to match ⅜ to ½ inch Stock	$33.48
One set of 12 Bits to match ⅝ to ¾ inch Stock	33.48
One set of 12 Bits to match 13/16 to 1½ inch Stock	37.20
One set of 12 Bits to match 1½ to 2 inch Stock	42.24

Any one set of the above Bits will work interchangeably on these Cutter Heads.

One set of Cutter Heads Fig. 1 and 2 with 8 Bits each Head.

Two Heads complete, without Bits in Solid Section Fig. 1 and 2 ..... $65.80

Two Heads complete, without Bits with Expansion Fig. 1 and 2 ..... $118.50

One set of 16 Bits to match ⅜ to½ inch Stock	$44.64
One set of 16 Bits to match ⅝ to ¾ inch Stock	44.64
One set of 16 Bits to match 13/16 to 1½ inch Stock	49.60
One set of 16 Bits to match 1½ to 2 inch Stock	56.32

Any one set of the above Bits will work interchangeably on these Cutter Heads.

Extra Bit Setting Gauge, each, $2.00; Bit Holding Bolt and Nut, each, 50c; Steel Forged Wrench, each, $1.40.

Self Centering and Clamping Device, $13.92 each Head.

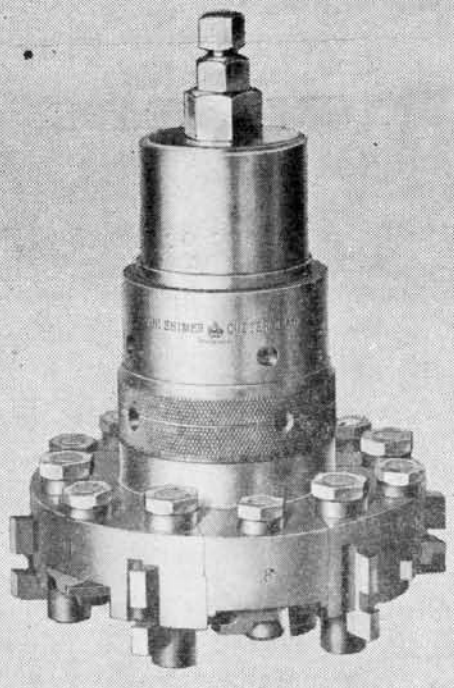


Fig. 514. 12 Bit Tongue Head

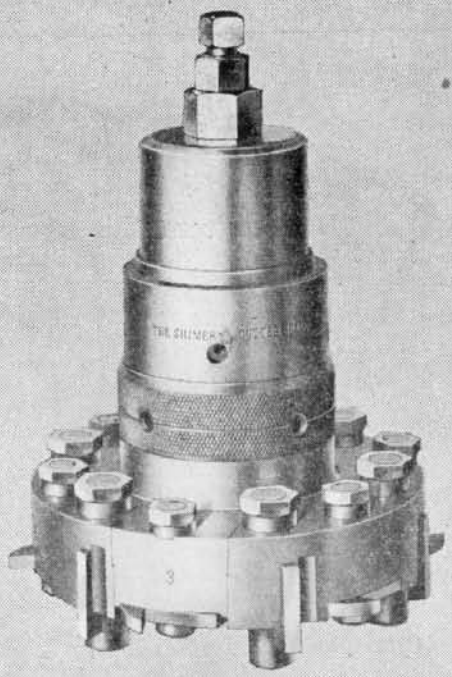


Fig. 515. 12 Bit Groove Head

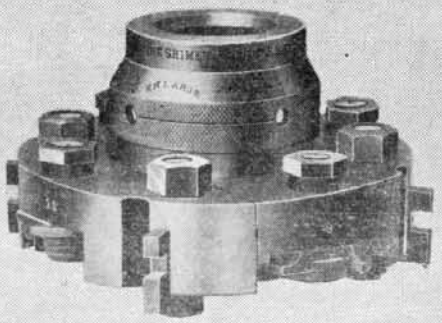


Fig. 512. 8 Bit Tongue Head
Open Top.

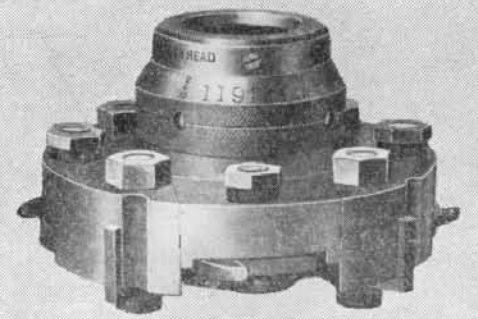


Fig. 513. 8 Bit Groove Head
Open Top.

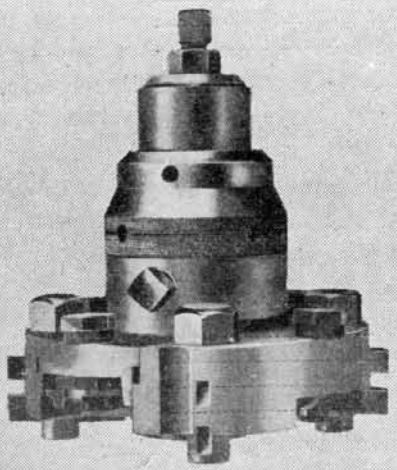


Fig. 510 8 Bit Tongue Head

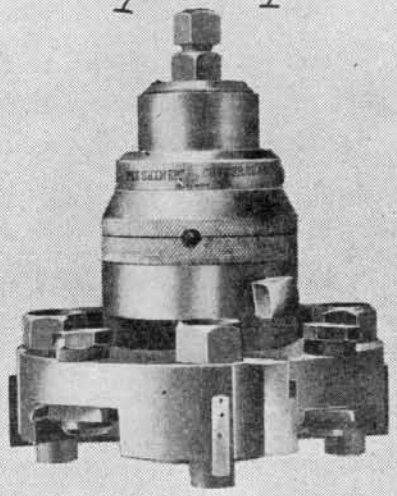


Fig. 511. 8 Bit Groove Head

Shimer Intermediate Cutter Heads for Flooring with Expansion

No. 510, 511 and 514 and 515 Intermediate High Speed Matcher Heads with Expansion

Intermediate the straight knives and diametrically opposite each other we arrange two small circular bits seated down into the flange of the first section so as to follow each other in the cutting of the lower portion of the tongue or groove. Between the other quarters of the straight knives we cut away the solid portion of the first section in order to arrange for the position of the second section which slips over the solid central hub and fits slidingly thereon. Upon the projections or lugs of the second section and within the lower faces of the same we seat two small circular bits, and when the two sections are thus assembled and set to their proper vertical functions by means of the Shimer Cutter Head Expansion (fully explained on pages 10 and 11) the head is complete and ready for use.

Fig. 512 and 513 represent a modification of the Intermediate Matcher Heads as designed to suit matcher spindles fitted with taper collars or sleeves with which to centre the Head. They are without the usual top adjusting screw, as all vertical adjustments are provided for in the construction of the matcher spindles and brackets so as to raise or lower the Heads while in motion. These engravings will represent the fact that we design the heads to meet the requirements of the most fastidious machine maker.

THESE ARE OUR NET PRICES

ALL BITS OF HIGH SPEED STEEL

The Shimer Intermediate Cutter Head with 8 Bits, Expansion, and Self-centering devices.

Two Heads complete with 8 Bits to match ⅜ to ½ inch thick material.... $252.22
Two Heads complete with 8 Bits to match ⅝ to ¾ inch thick material.... 252.22
Two Heads complete with 8 Bits to match 15-16 to 1½ inch thich material 259.83

Cutter Heads 6¼ inches surface cut diameter and over will make up into this style of Head.

One set of (8) Shimer Bits to match ⅜ to ½ inch thick material.....	$30.40	Each	$3.80
One set of (8) Shimer Bits to match ⅝ to ¾ inch thick material.....	30.40	Each	3.80
One set of (8) Shimer Bits to match 15-16 to 1½ inch thick material	30.40	Each	3.80
One set of (8) Straight Bits fitted and tempered ⅜ to ½	18.32	Each	2.29
One set of (8) Straight Bits fitted and tempered ⅝ to ¾	18.32	Each	2.29
One set of (8) Straight Bits fitted and tempered 15-16 to 1½	20.40	Each	2.55

The Shimer Twelve Bit Intermediate Cutter Heads with Expansion and Self-Centering Device.

Two Heads complete, ⅜ to ½ inch	$291.82		
Two Heads complete, ⅝ to ¾ inch	291.82		
Two Heads complete, 15-16 to 1½ inch	309.96		
One set (12) Shimer Bits to match ⅜ to ½ inch thick material	$45.60	Each	3.80
One set (12) Shimer Bits to match ⅝ to ¾ inch thick material	45.60	Each	3.80
One set (12) Shimer Bits to match 15-16 to 1½ inch thick material	45.60	Each	3.80
One set (12) Straight Bits fitted and tempered, ⅜ to ½ thick material	27.48	Each	2.29
One set (12) Straight Bits fitted and tempered, ⅝ to ¾ thick material	27.48	Each	2.29
One set (12) Straight Bits fitted and tempered, 15-16 to 1½ inch thick material	30.60	Each	2.55

Shimer Patent Matcher Heads

For Maple, Oak and Other Hard Woods with 12 Straight, High Speed Steel Bits in Each Head

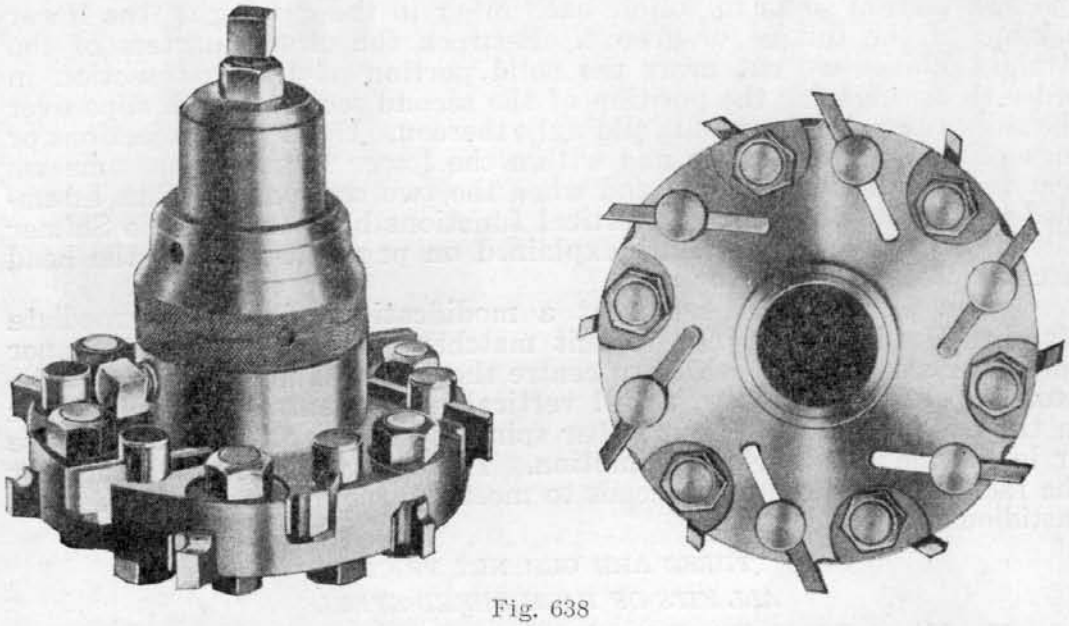


Fig. 638

The labor saving features embodied in the Shimer Cutter Head have become so generally understood and appreciated that a demand arose for a similar tool to carry 12 straight bits which can be quickly ground and sharpened. The result of our effort as manifestly shown by this tool. we submit for rigid inspection and trial.

The heads are designed after our own patents with inserted straight bits and made of steel forgings; are adapted more particularly for the use of manufacturers who grind the knives. The heads have no limitations but will take all the feed that the machine can measure up to them.

Each head is made in two sections similar to our Expansion Matcher Head—the one section fitting over the other and the flanges are arranged to firmly interlock. The head appears as a solid one, yet embraces every advantage of the expansion feature.

We have placed these tools in some of the most difficult operations where other heads have failed, and users have indicated their superiority by sending us repeat orders.

The heads being closely fitted do not admit chips and dust and save inconvenience from the causes.

The bits are made from high duty steel and cut every variety of hard wood at maximum rates of feed for many hours without re-grinding.

The ordinary methods of grinding restores the bit edges and from day to day the bits are thus maintained at highest working capacities at little actual tool expense.

THESE ARE OUR NET PRICES

New steel Forged Matcher Heads, Fig. 638, (2) with self centering device
With 8 bit seats each, (no bits) with expansion feature $179.52
With 12 bit seats, (no bits) with expansion feature 201.72
High Speed Steel Shimer Bits, for 3-8 in.to 1-2 in. thick material, each.. 2.62
High Speed Steel Shimer Bits for 13-16in. to 1 1-2 in. material, each .. 2.92
Cutter Heads of this design having eight or twelve bits each, require a cutting circle of 6 3-4 in. or more.

The Shimerzoidal Matcher Heads
For High Speed Matchers

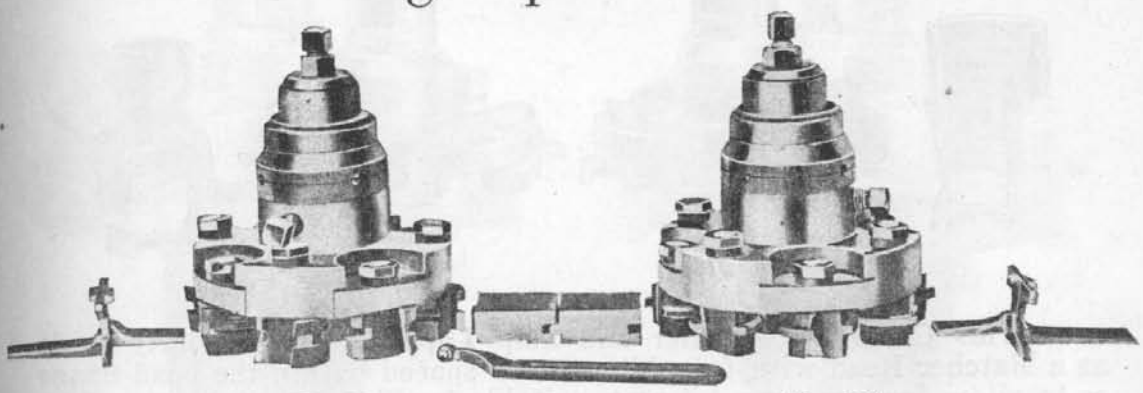


Fig. 501 Fig. 502

It is made to carry eight cutters, and represents a development of The Shimer Cutter Head for especial service applicable to the heavy machers. The large number of cutting edges serves to a good purpose in this tool as shown above, having the cutters arranged upon the lower side of the head flange secured firmly upon concaved seats diverging alternately from a radial line to effect a clearance cut by all the leading points. By thus arranging the Bits they work with perfect freedom, shearing the cut both upwardly and downwardly. They represent two series upon the head flange, the one series cutting the upper half of the tongue whereas the next cuts the lower half of the tongue, and both series of cutters engage in finishing the edge above and below the tongue and grove and work alternately.

The Bits being formed and set especially to allow cutting of the full tongue and grove pattern, represent double the amount of active knife edge as is found in our standard tools, wherein the cutters are divided, and hence will work at a greater rate of feed.

The Bits, being circular, carry the maximum of tool cutting edge, all of which is available for sevice. They are tempered hard to grind, or of medium temper to file slowly, and in ordering, attention should be given to the temper desired. The hard Bits may be readily sharpened with The Shimer Cutter Head Grinders shown on pages 128 and 129 which will set to suit the guage slants to which the Bits must be ground and satisfactory work will always result.

Write us for Prices on these Heads to fit your Matcher.

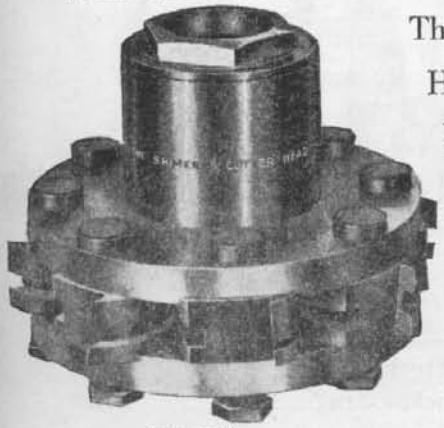


Fig. 504

The Shimerzoidal Heads with the bottom flange for added strength



Fig. 505

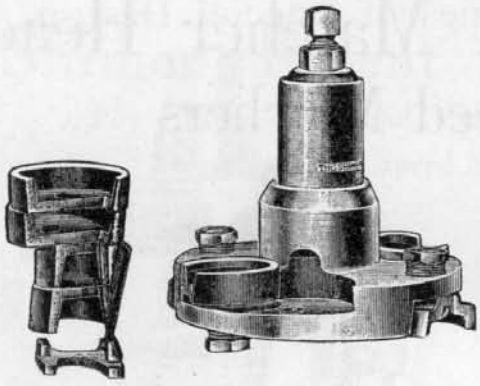


Fig. 216

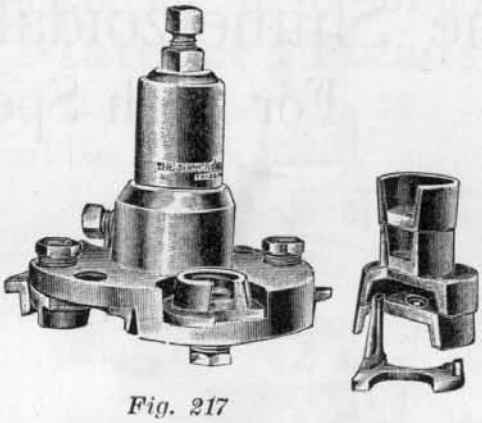


Fig. 217

This Combined Matcher and Ship Lap Head is regularly made as a Matcher Head with four bit seats so spaced within the head flange as to allow for two extra bit seats suitable for Ship Lap Rabbeting Bits. These Rabbeting Bits require special seat inclines and central bolt hole location. By thus combining the two features (suitable for flooring and ship lap) one set of Heads can be arranged to do both classes of work, a change of Bits being all that is necessary.

Price per set without Bits	$71.37
Price for one set of Ship Lap Bits, to 1½" Stock, extra	26.56
Price for one set of Matcher Bits, to 1½" Stock, extra	24.80

Interchangeable MATCHER and SHIP LAP Expansion Heads.

These tools represent the same Heads as shown above with the addition of the Expansion feature, which is especially desirable in the Matcher Heads, but figures no particular advantage in the Head when used with the Ship Lap Bits. These tools belong to the series Fig. 1 and Fig. 2 having flat bit seats and inclined for clearance protection only. They are well made and reliable tools, having for their special advantage principles controlling their seat arrangement in such a way as to make one set of Heads do the work of two.

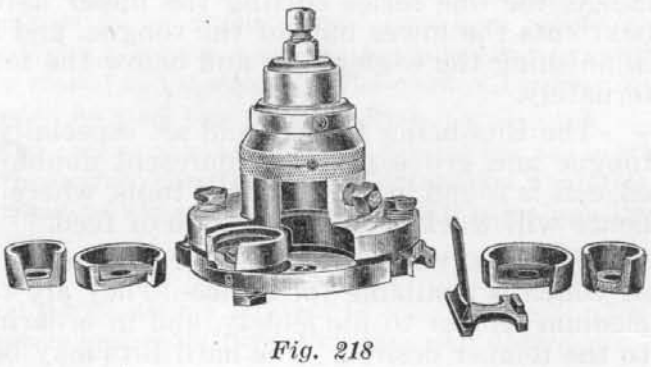


Fig. 218

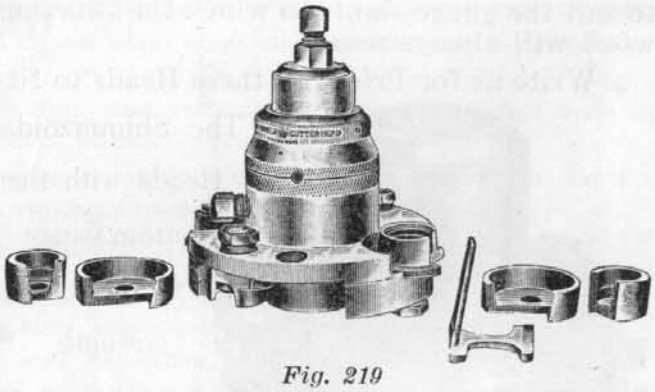


Fig. 219

Price per set without Bits, net	$116.44
Price for one set of Ship Lap Bits, to 1½" Stock, extra	26.56
Price of one set of Matcher Bits, to 1½" Stock, extra	24.80

Cutter Heads for Machines of Special Design.

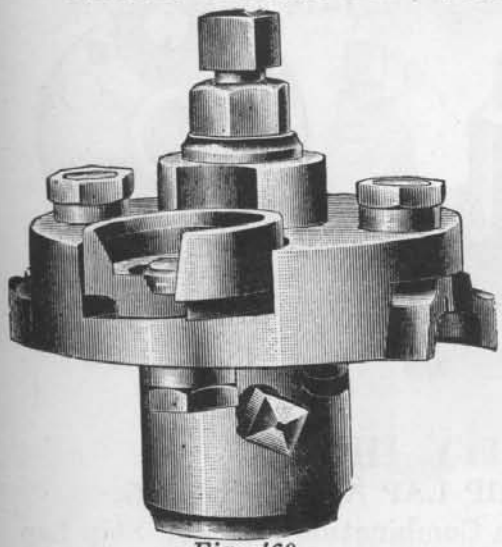


Fig. 469

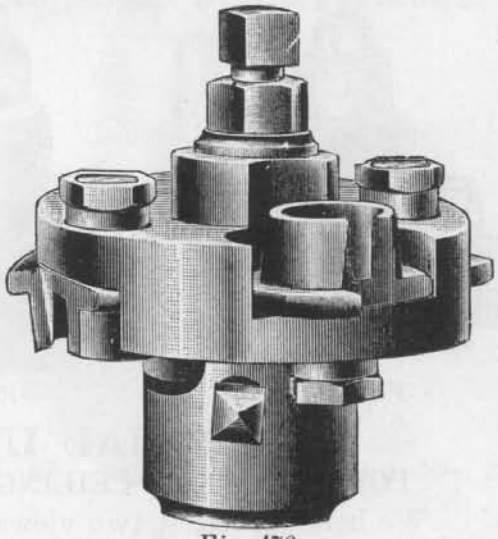


Fig. 470

There is a class of Planing and Matching Machines with spindles the top of which extend below the line of bed level, to which these Heads are applicable. We make them of various size, to suit the machine and spindles.

To measure spindles give height from top of box to top of spindle, and from level of planer bed to top of box. See measurement card and fill it up regularly. We take all chances of fitting machines.

Price, solid flange, without Bits, (2 heads)	$46.50
Price, Expansion, without Bits	82.70
Price, Bits for Ceiling, each set	18.56
Price, Bits for Flooring, each set	20.64
Price, Bits for 2 inch Plank, each set	23.52

These Expansion Matcher Heads are especially designed to meet the demand for machines where the top of the spindles do not reach up to the level of the planer bed. They are strong and substantial tools.

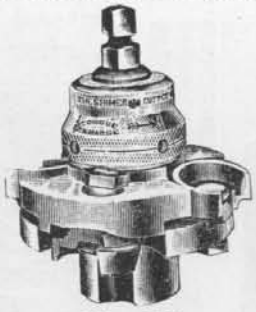


Fig. 227

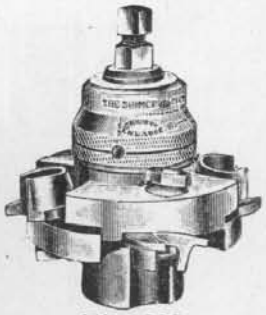


Fig. 228



Fig. 229



Fig. 230

The Shimer Cutter Heads to suit machines having long side spindles with upper bearing or box. The long sleevelike hub is made in two pieces, one threaded into the other so as to permit of the vertical set of the head on the spindle.

Net prices quoted on receipt of specifications.

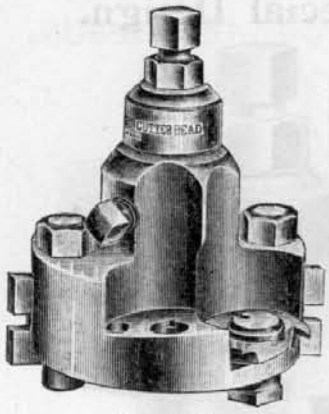


Fig. 232

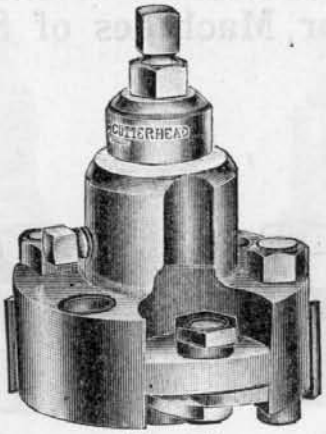
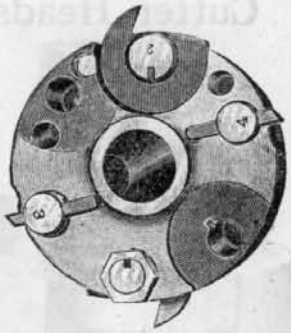


Fig. 233



Bottom View

SPECIAL UTILITY HEAD

FOR FLOORING, CEILING, SHIP LAP AND JOINTING.

We here represent two views of a Combination Matcher, Ship Lap and Jointer Head, Figures 232 and 233. These Heads are arranged for the use of two Straight Knives for cutting the vertical edges of the flooring, with Intermediate Circular Cutters for tonguing and grooving and other Intermediate Circular Cutters for rabbeting or Ship Lap work.

THESE ARE OUR NET PRICES

One set of Cutter Heads with 4 circular bit seats and 2 straight bit seats	$72.12
Extra for Bits as per list.	
One set of 4 Jointing Bits (straight) 1½ inches wide, slotted for bolts	10.60
One set of 4 Bits, 2 tonguing and 2 grooving tang Bits (circular)	14.80
One set of 4 Rabbeting Bits (circular)	15.92

The Ettinger solid flange Matcher Head.

Squared Bolt



Fig. 462

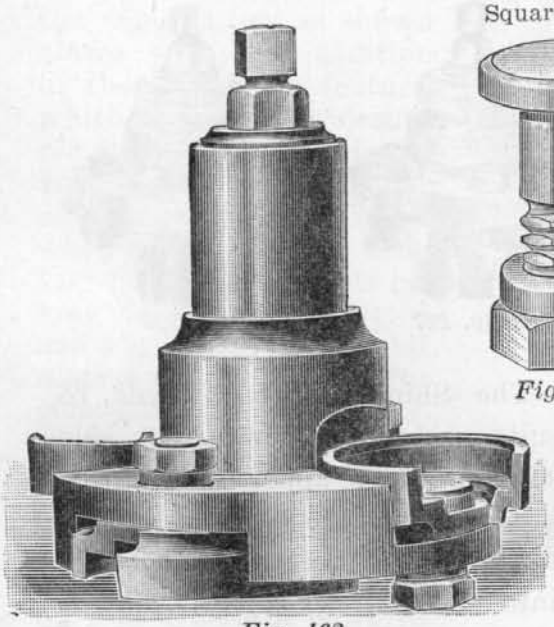


Fig. 463

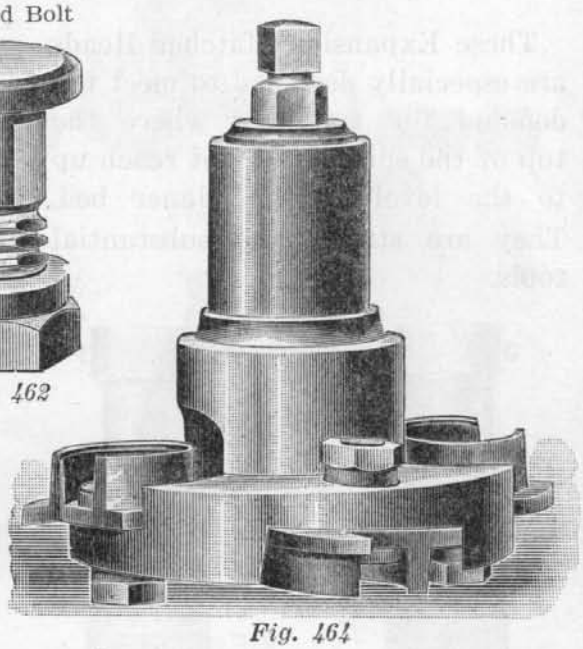


Fig. 464

Having acquired by purchase the business of The Ettinger Machine Co., Chester, Pa., with all special tools, templets, patterns, books and cards of records, patents, chucks and accessories, we offer supplies in the shape of new Bits, Bolts, Gauges, etc., as may be needed from time to time to suit the Heads now in use.

Expansion Matcher, Ship Lap and Jointer Heads.

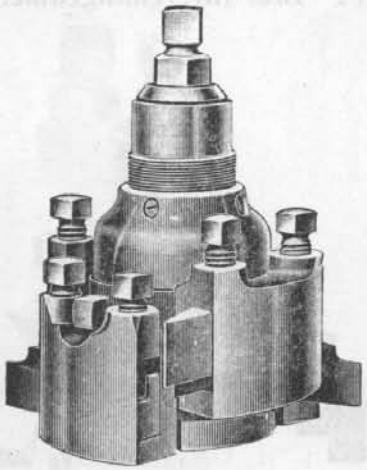


Fig. 35

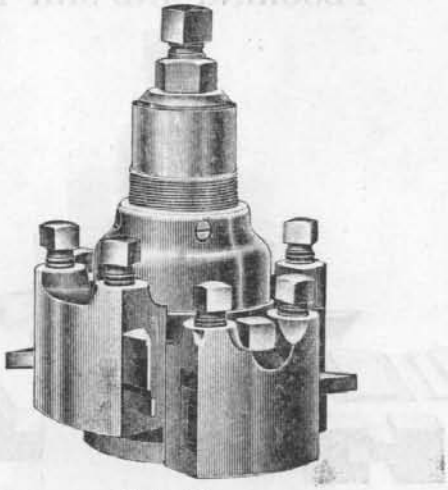


Fig. 36

This compactly built and neatly designed Straight-Bit Expansion Matcher, Jointer and Ship Lap Head, is made in two sections in such a manner that the Bits may be expanded or contracted to suit any thickness of Flooring within the range of the Bits by simply turning the expansion ring upon the hub to the right or left. The Heads are thus provided with four wings or mortises into which the knives are secured when set. The Bits break the chip upon a central line of the work and are divided into upper and lower Bits operating alternately as the Head revolves. The Bits are milled on the back to suit exact shape and each cutter carries its own clearance feature free of all friction and contact with the lumber, except the cutting edge. The Bits being milled upon their backs they are sharpened only upon their beveled edges, thus maintaining uniform patterns, etc.

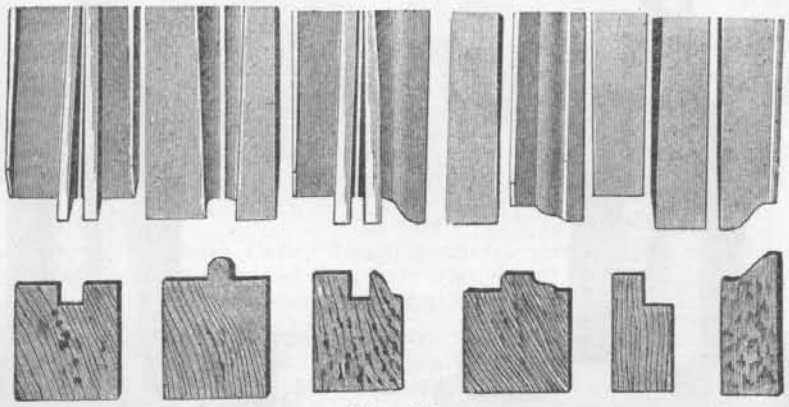


Fig. 37

A very practical tool for those wishing an all-round Head for general purposes. It is intended to meet the wants of those needing a Variety Head at little expense.

THESE ARE OUR NET PRICES

One set of 2 Steel Forged Heads, Figs. 35 and 36, without Bits....	$132.52
One set of 8 Flooring Bits	42.00
One set of 8 Ship Lap Bits	39.20
One set of 8 Jointer Bits	22.88
Special Bits per order applicable to this head.	
N. B.—These Heads fitted with Patent Self-centering device, extra Each	13.92

FOUR-SIDE SLOTTED HEAD WITH STRAIGHT BITS FOR FLOORING AND SHIP LAP. Bits Interchangeable.

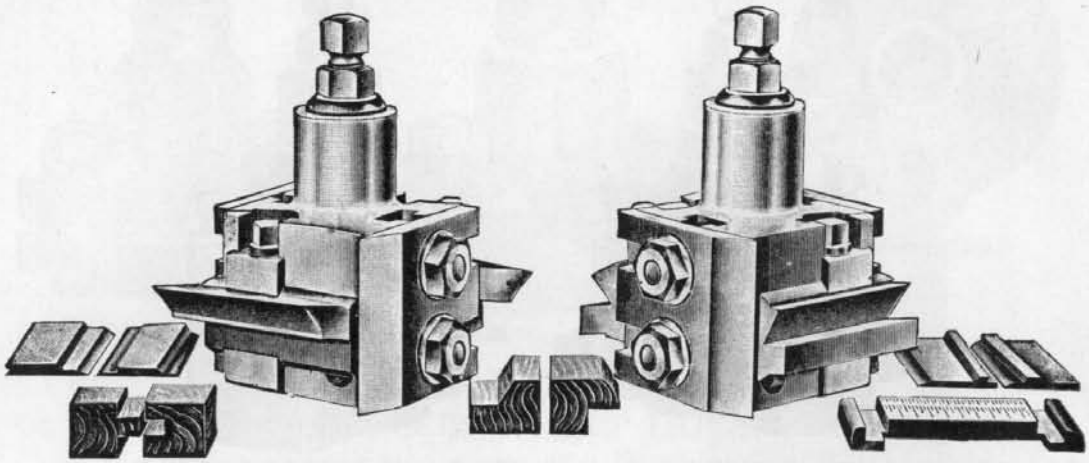


Fig. 235 With Flooring Bits Fig. 236

Here is a Head with straight Jointer Bits arranged on the two opposite sides, and intermediate also on opposite two sides from each other are fixed the grooving or tonguing Bits, the one cutting the upper whereas the other set cuts the lower half of the tongue or groove. This Head can be used for either tonguing or grooving, ship lap rabbeting or plain jointing or rustic. When two Heads are used, you can work with either tongue or groove to guide. This head will receive bits and knives for nearly every purpose, the knives being entirely interchangeable without the use of separate and costly attachments or fixtures.

THESE ARE OUR NET PRICES

One set of 2 Steel Forged Heads, without Bits	$105.12
4 Jointer Knives	10.36
Matching Bits per set of 4	21.00
Ship Lap Bits per set of 4	19.60

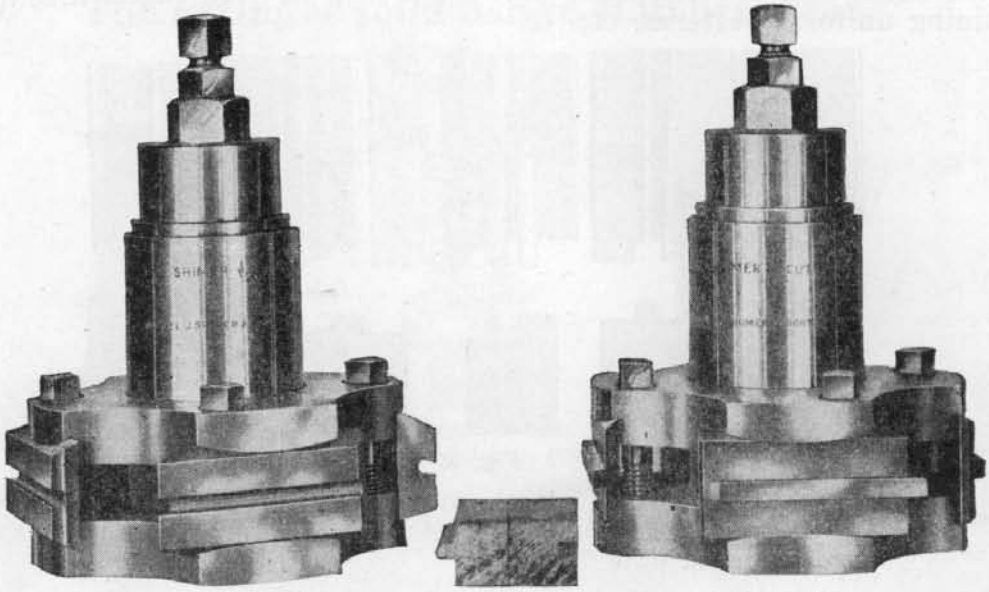


Fig. 687 Fig. 688

These High Speed Matcher Heads, Jointer Heads and Shiplap Heads are designed for those who appreciate the idea of interchangeable Bits and Knives to meet the need of the several classes of work. The bits, in each instance, being formed to agree with the work to be done, are strictly of the Milled to Pattern variety. Made of High Speed Steel they hold to their shape remarkably well, must be ground to sharpen, and set up with a gauge. The Heads are made of the Open Hearth Quality of Steel Forgings, well known for their strength and service in woodworking tools. Further information will cheerfully be given on receipt of inquiry.

Interchangeable Disc Cutter Heads



Fig. 553



Fig. 552

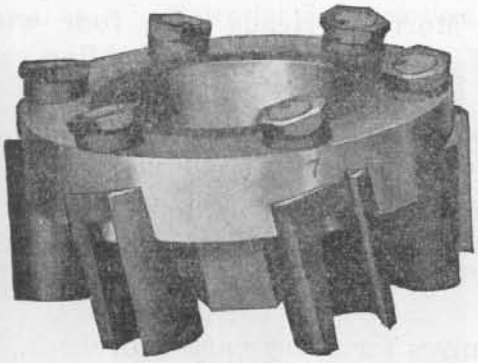


Fig. 552 A

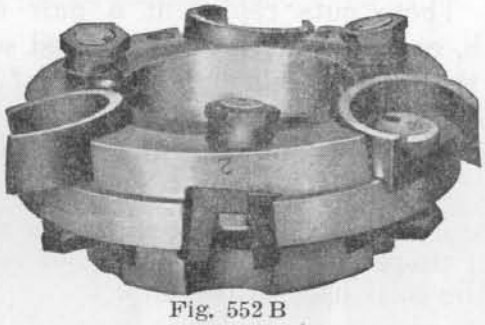


Fig. 552 B

We show here four Shimer Cutter Heads made to interchange with ordinary cutter discs for rapid feeding machines and represent the recent improvements in Cutter Head construction as explained in our general description of the Shimer Limited Cutter Heads.

These Heads are of the solid flange variety. Fig. 552, is for grooving flooring and Fig. 552,A, for jointing. Fig. 552,B, is for ship lap. We make these Heads for every variety of work to be done with the side spindles, as for Flooring, Ceiling, Siding, Jointing, Double Ceiling, O. G. Batten, Silo Staves, etc.

The Heads are made of steel forgings of the tough variety characteristic to all Shimer Cutter Heads.

The Bits are of our high grade cutter steel, Carbon or High Speed, well suited for high speed work with temper to file or to grind as may be desired.

Think of the convenience of Shimer Cutters with the moulded shape in reserve: the individual uniformity of the Cutters; the ease of sharpening as like a saw; the setting up to a guage or tracker, and the comfort of knowing that every cutting edge will share in the work clearance protected chisel point effect.

If you run a rapid feeding matcher you will need Shimer Cutters to give you maximum of quality and quantity output.

WRITE FOR PRICES

Four-Wing Mortised Heads with Patent Self-Centering Device.

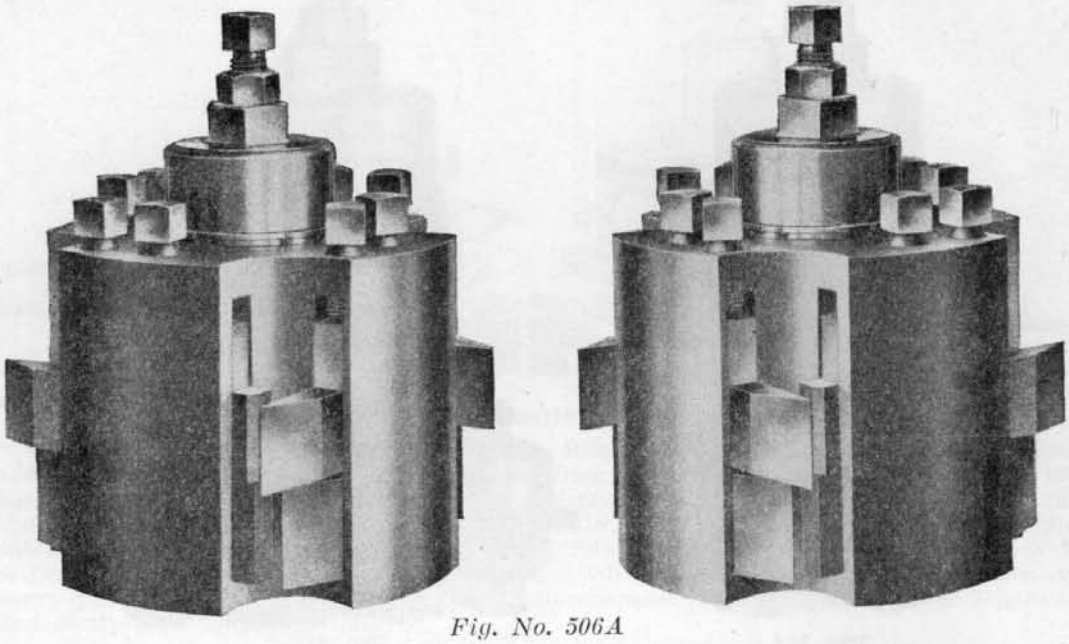
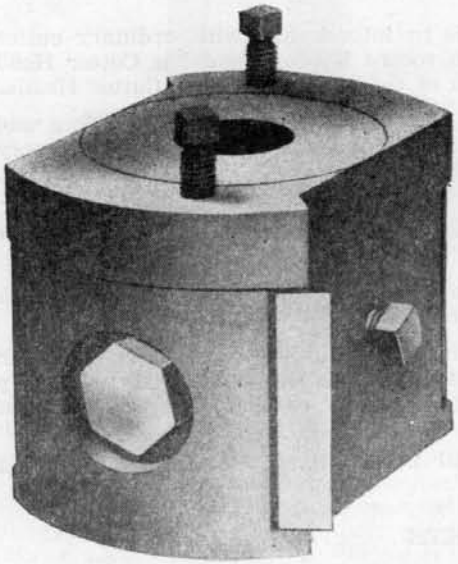


Fig. No. 506A

These cuts represent a pair of Mortised Heads with four wings each, equipped with our patented self-centering device for holding them to the spindle without the use of a set screw. They are made of the toughest and best steel forgings, combined with the usual accuracy and finish of all tools for which this factory has become famous.

The importance of tools made from the finest of materials cannot be stressed too greatly. It is to the advantage of the mill manager to see that there is a greater degree of safety, longer life and lasting qualities in the tools used in the mill.

Heads of this type will receive knives for every variety of work.



See Prices on page 33

MOULDER HEAD

With side Caps

Here is a steel forged moulder head with side knife caps accurately tooled and carefully balanced. It is just the thing for those desiring a good tool for quick changes.

Price net **$47.00**

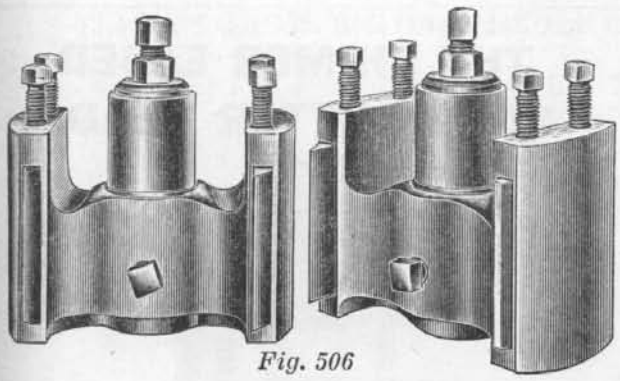


Fig. 506

Steel Forged Mortised Head.

These cuts will remind you of old times. Mortised heads have been in use 60 years and for some purposes (odd and irregular work) they are likely to hold a place for some time to come. Cast Iron and Steel Castings as a metal for these heads has shown its weakness and therefore these Steel Forged Cutter Heads, cut out of the solid steel forgings—strong, neat—complete.

We also furnish them in three and four-wing forged heads special to measurements and various uses.

THESE ARE OUR NET PRICES—Subject to change without notice.

2 Wing Mortised Heads 2 inches high, without Knives	*Per Set*	$95.58
2 Wing Mortised Heads 3 inches high, without Knives	*Per Set*	100.00
2 Wing Mortised Heads 4 inches high, without Knives	*Per Set*	104.90
3 Wing Mortised Heads 2 inches high, without Knives	*Per Set*	$144.74
3 Wing Mortised Heads 3 inches high, without Knives	*Per Set*	137.40
3 Wing Mortised Heads 4 inches high, without Knives	*Per Set*	141.80
4 Wing Mortised Heads 2 inches high, without Knives	*Per Set*	$169.82
4 Wing Mortised Heads 3 inches high, without Knives	*Per Set*	172.80
4 Wing Mortised Heads 4 inches high, without Knives	*Per Set*	179.00

Extra for Self-centering Device $13.92 each head.

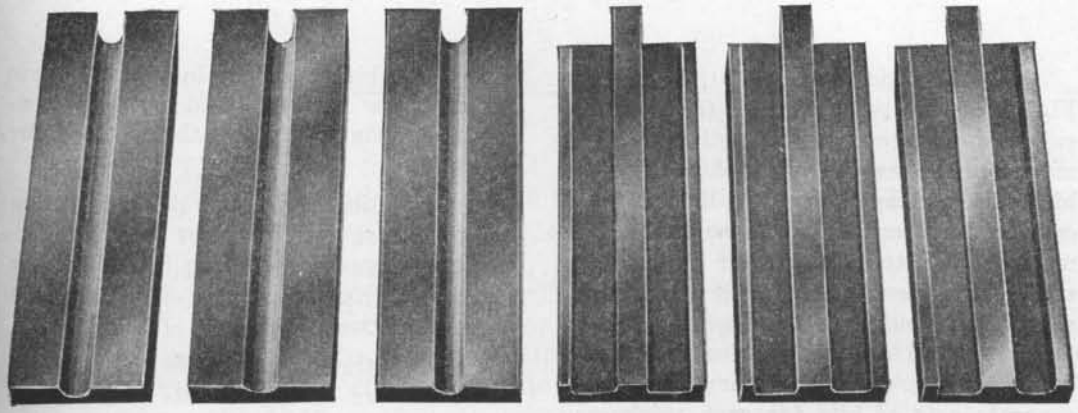


Fig. 525

Milled Matcher Bits

for mortised side heads are promptly made per order, of best carbon tool steel and guaranteed.

These are our Net Prices, subject to change without notice:

2 inches long or less	*Each*	$7.52
Over 2 inches to 3 inches long	*Each*	8.50

Milled to Pattern Knives with slot add $1.00 each.

The above are carefully milled to agree with the mould to be produced.

NOTE—A larger variety of milled bits can be used in these heads. We will be pleased to quote net prices on receipt of inquiry.

THE SHIMER EASED EDGE CUTTER HEADS

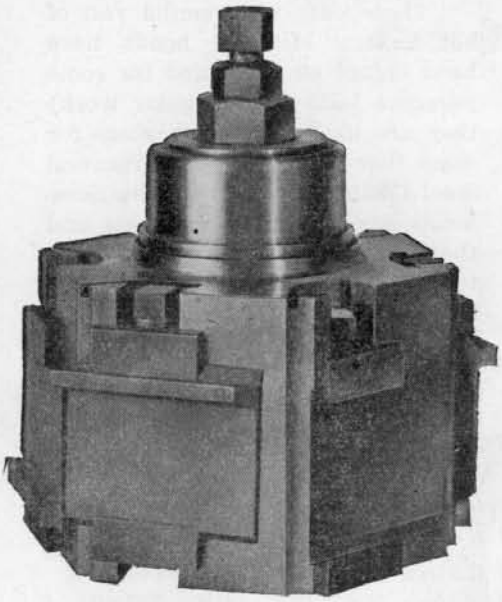


Fig. 677

Bits Adjustable for Various Thickness of Eased Edge Stock.

With Patent Self-Centering Device complete.

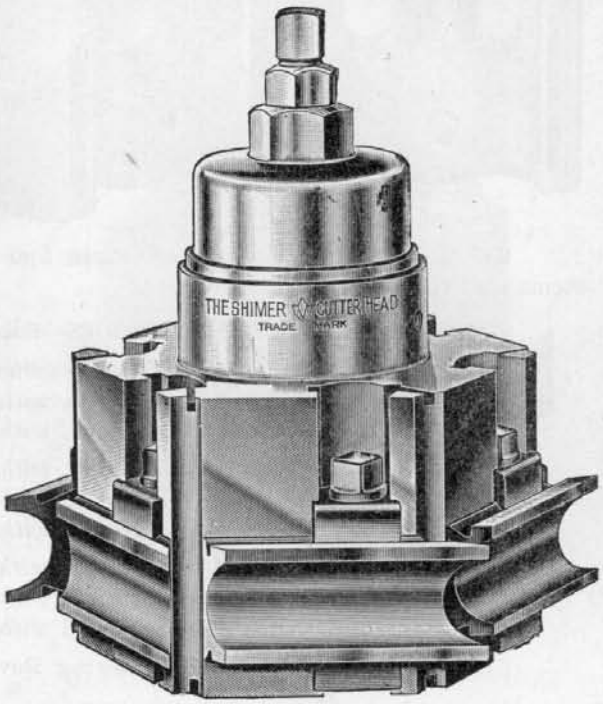


Fig 644

The Six Sided Combination Heads, Fig. 677, equipped with bits for jointing eased edge material, are meeting the demand for an easily adjusted tool. The bits are so shaped for rounding off the corners at alternate edges so that they may be adjusted for thicker or thinner stock:—or when desired, a bit is supplied with the round or both edges to finish the cut. The adjustment feature, however, makes it unnecessary to have separate sets of bits for each thickness of stock.

The Heads are constructed along the Shimer Combination Head features, having bit holding and clamping bolts which keep the bits securely in place. These bolts allow an easy and quick adjustment of the bits along the slots of the Head.

The Bits have the proper cutting angle for smooth and fast cutting. The cutting edges do not drag in the cut but have the right clearance for maximum service between grinds.

Only the best steel is used in the manufacture of the Heads and bits to give the longest service and the best wear for the hard use to which they are subjected.

Heads for Eased Edge Stock can be supplied for any size or style of machine

THESE ARE OUR NET PRICES

One Set 2 Six-Sided Eased Edge Stock Heads, Fig. 677 with bolts but without bits	$152.30
One Set 12 Eased Edge Stock Bits	56.64
One Set 12 Jointer Bits for same	54.00
One Set 12 Matching Bits to 1½" Stock	57.00
One Set 12 Matching Bits to work 1" to 2"	58.80
One Set 12 Matching Bits to work 2" to 2½"	68.00
One Set 12 Ship Lap Bits to work 13/16" to 1½"	57.00
One Set 12 Ship Lap Bits to work 2" to 2½"	69.60
One Set 2 Heads 8 Sides complete for flooring	292.00

Wainscoting

The half set of Bits that cut the upper half of the tongue and groove do this work. These Bits on the smaller Cutter Heads must be made sectional and should be ordered at the same time The Shimer Cutter Heads are ordered to have the Bits properly fitted thereto.

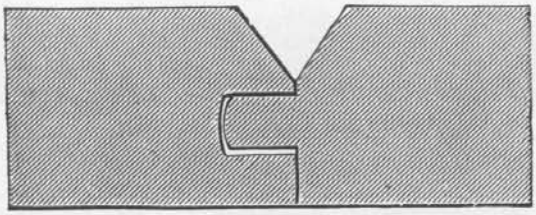


Fig. 19

Price for the Moulded Tongue Bits, each $4.65
Price for the Moulded Groove Bits, each 4.65

Double ⅜ Ship Lap

These Bits apply to the regular Matcher Heads, tongue and groove and are interchangeable with Flooring Bits.

¾ inch Ship Lap, Fig. 21, is made with any one set of The Shimer Cutter Heads made to work single tongue and groove.

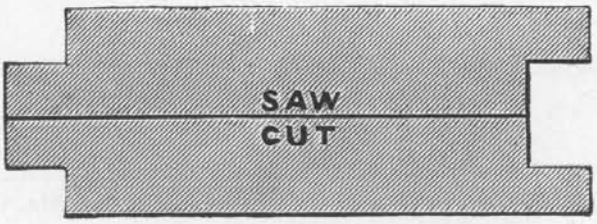


Fig. 21

Price for the set of Bits will be same as the class that go with The Shimer Cutter Heads from which you make your selection.

German or Novelty Siding

This is made with two Bits working on upper side of Tongue Head, but like the Cutters for Wainscoting, requires a special fitting of the head. This is a heavy cut for a side head, and we do not recommend it for deeper work than shown by the diagram, Fig. 20.

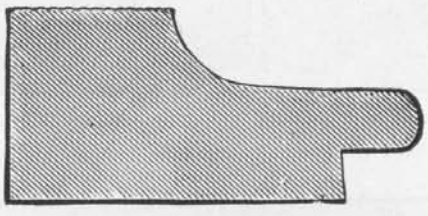
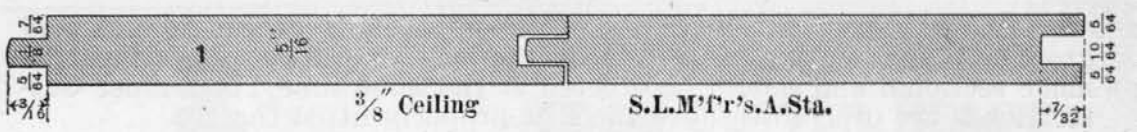


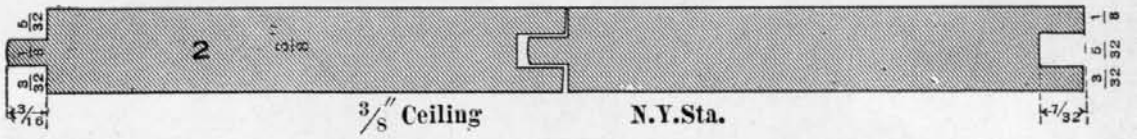
Fig. 20

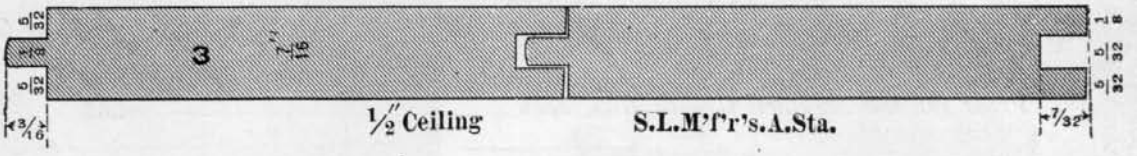
An additional cut of ¾ of an inch depth will necessarily add 1½ inches to the swing of the Bits, and for that reason each machine should be measured carefully, to determine whether the space around spindle will allow the Bits to swing clear before giving order for them.

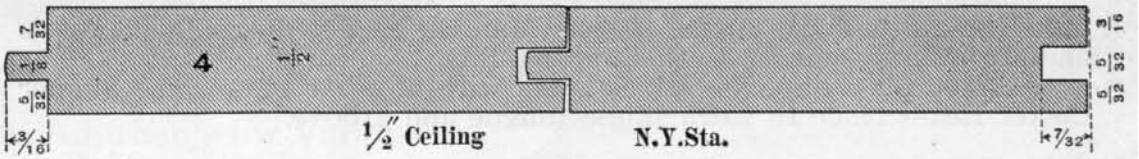
Price for the upper Novelty Siding Bit, each, net $7.88

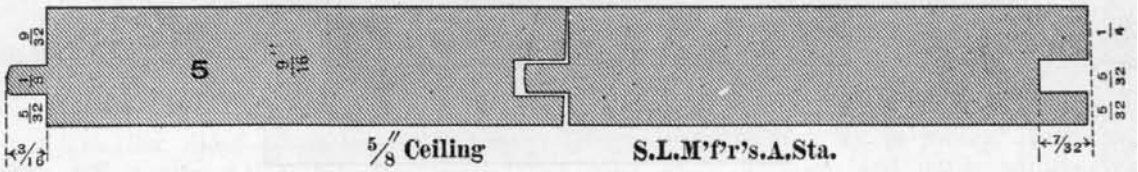
CEILING & FLOORING

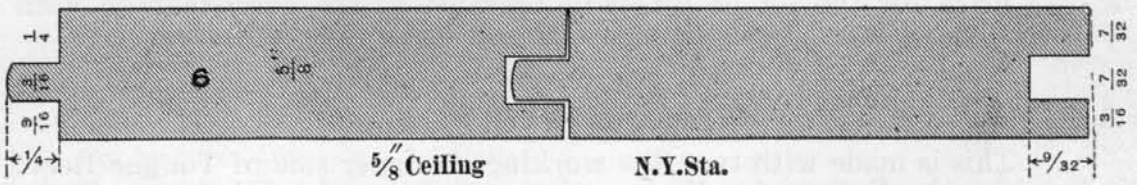


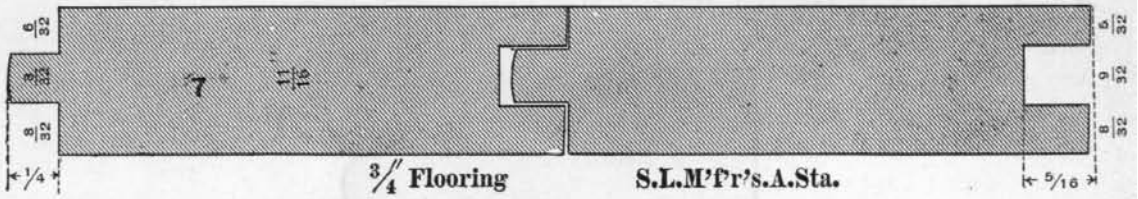


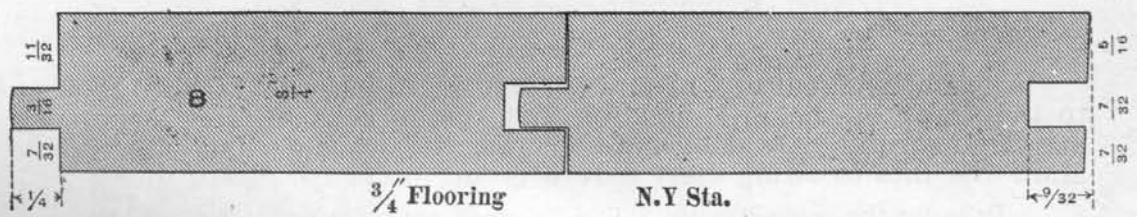


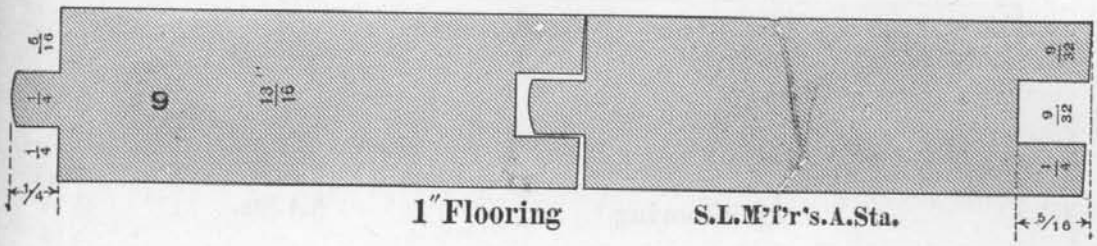




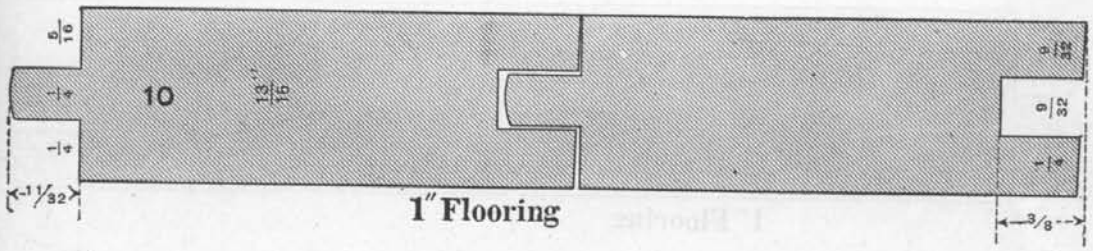




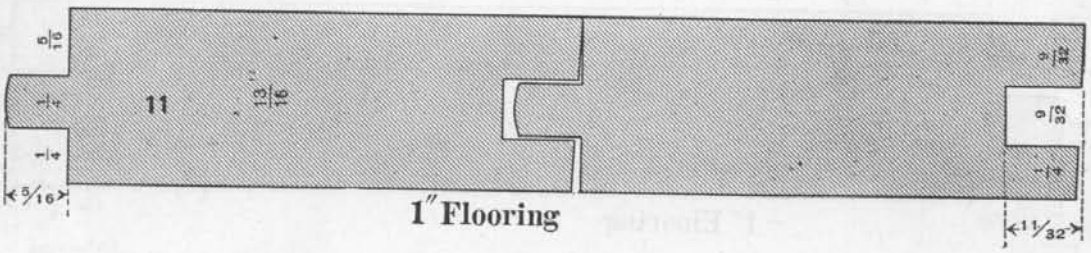




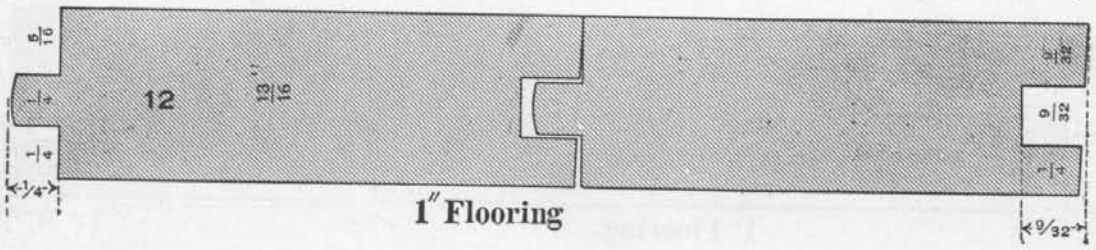
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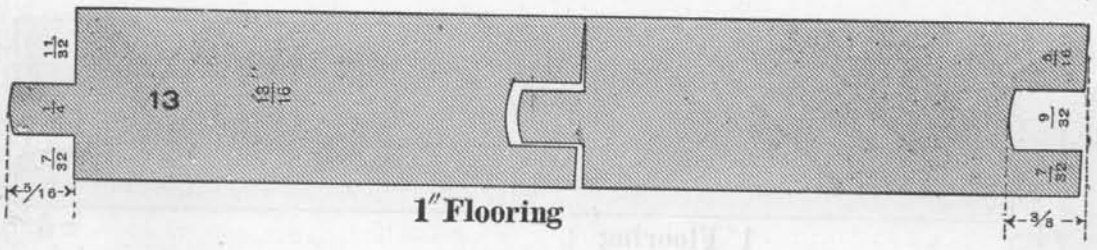
1" Flooring



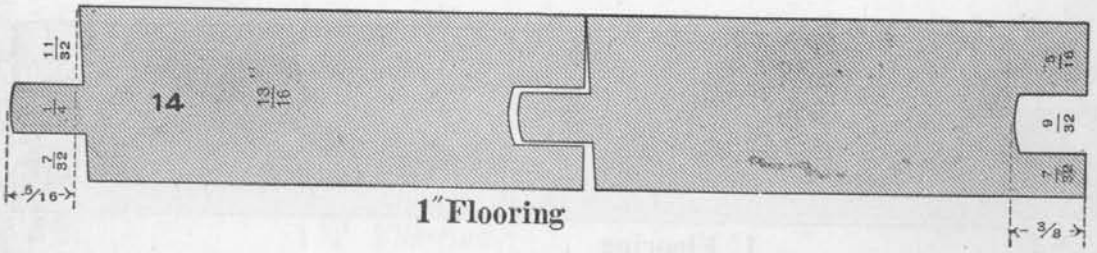
1" Flooring



1" Flooring

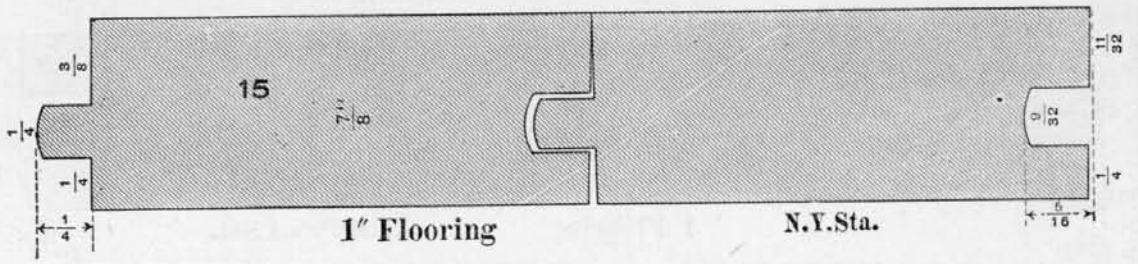


1" Flooring

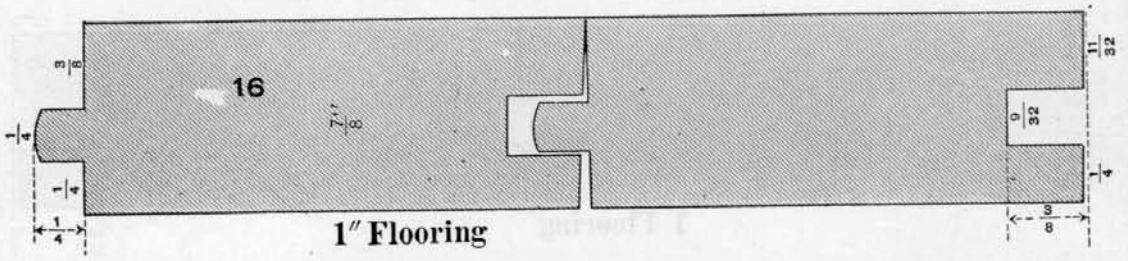


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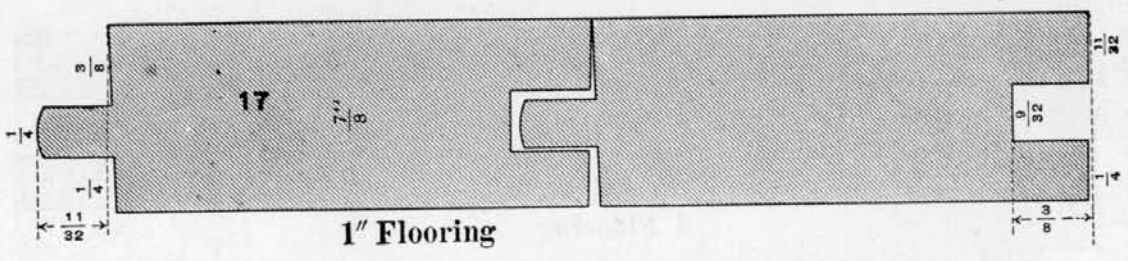
FLOORING



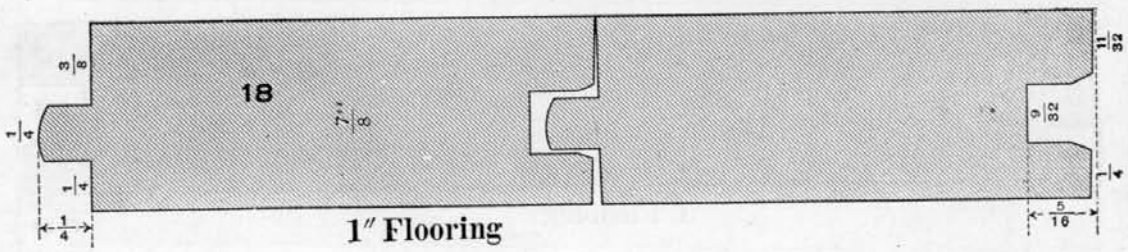
1″ Flooring N.Y.Sta.



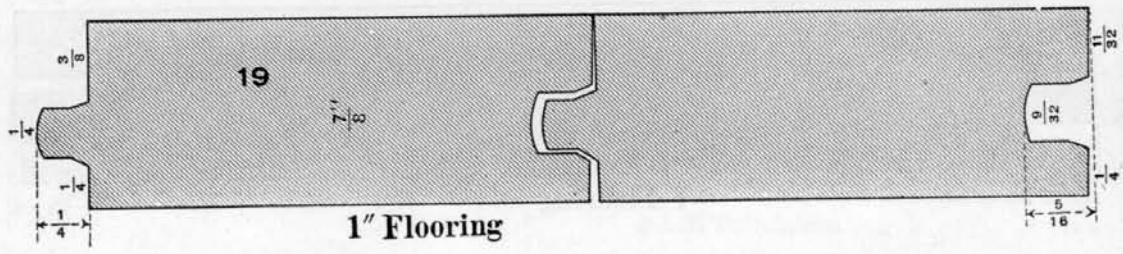
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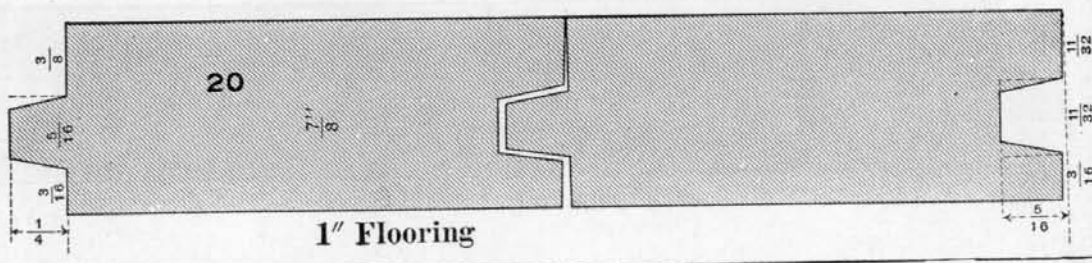
1″ Flooring



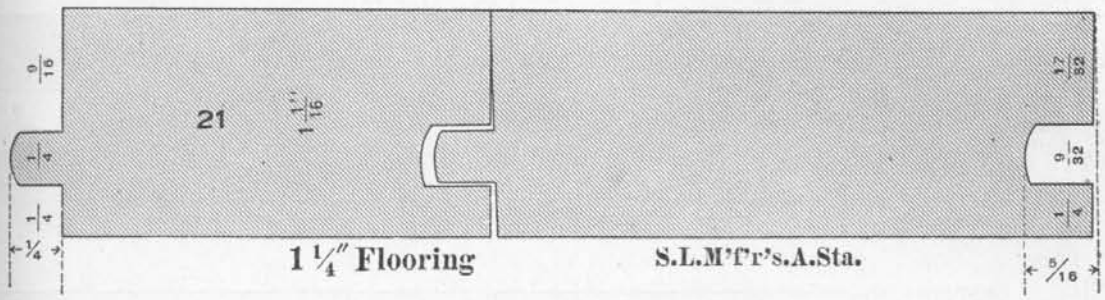
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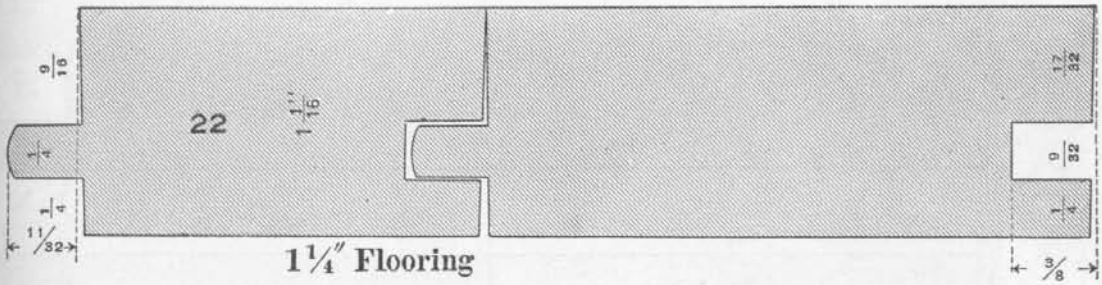
1″ Flooring



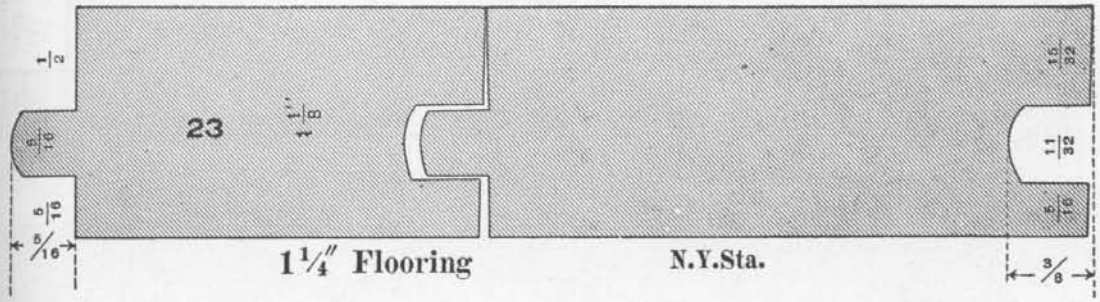
1″ Flooring



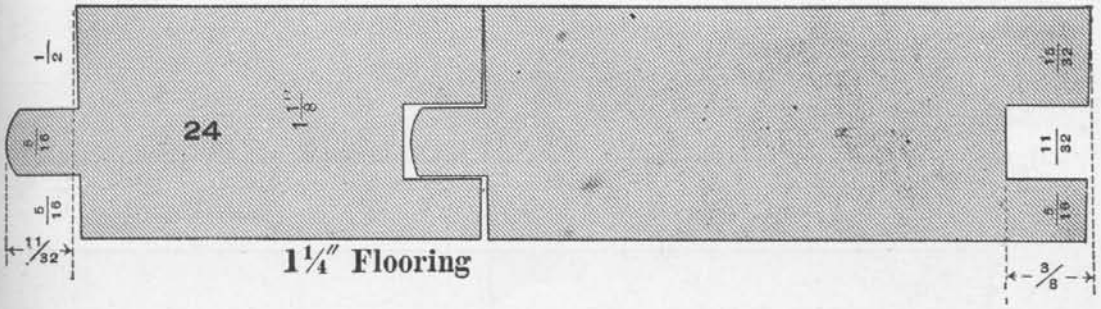
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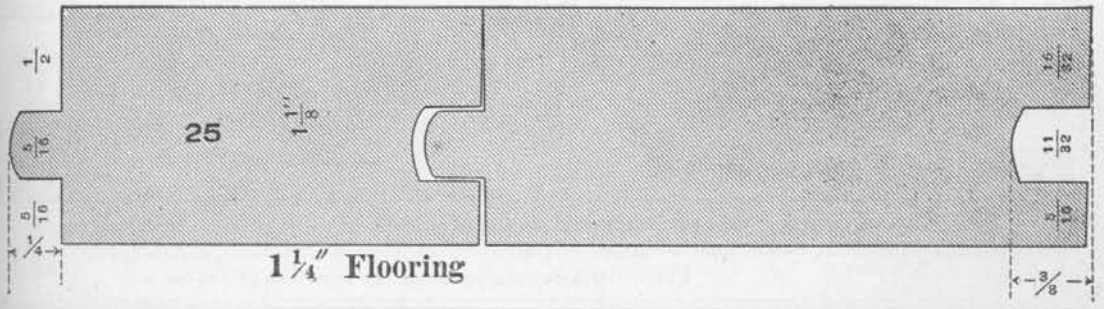
1¼" Flooring



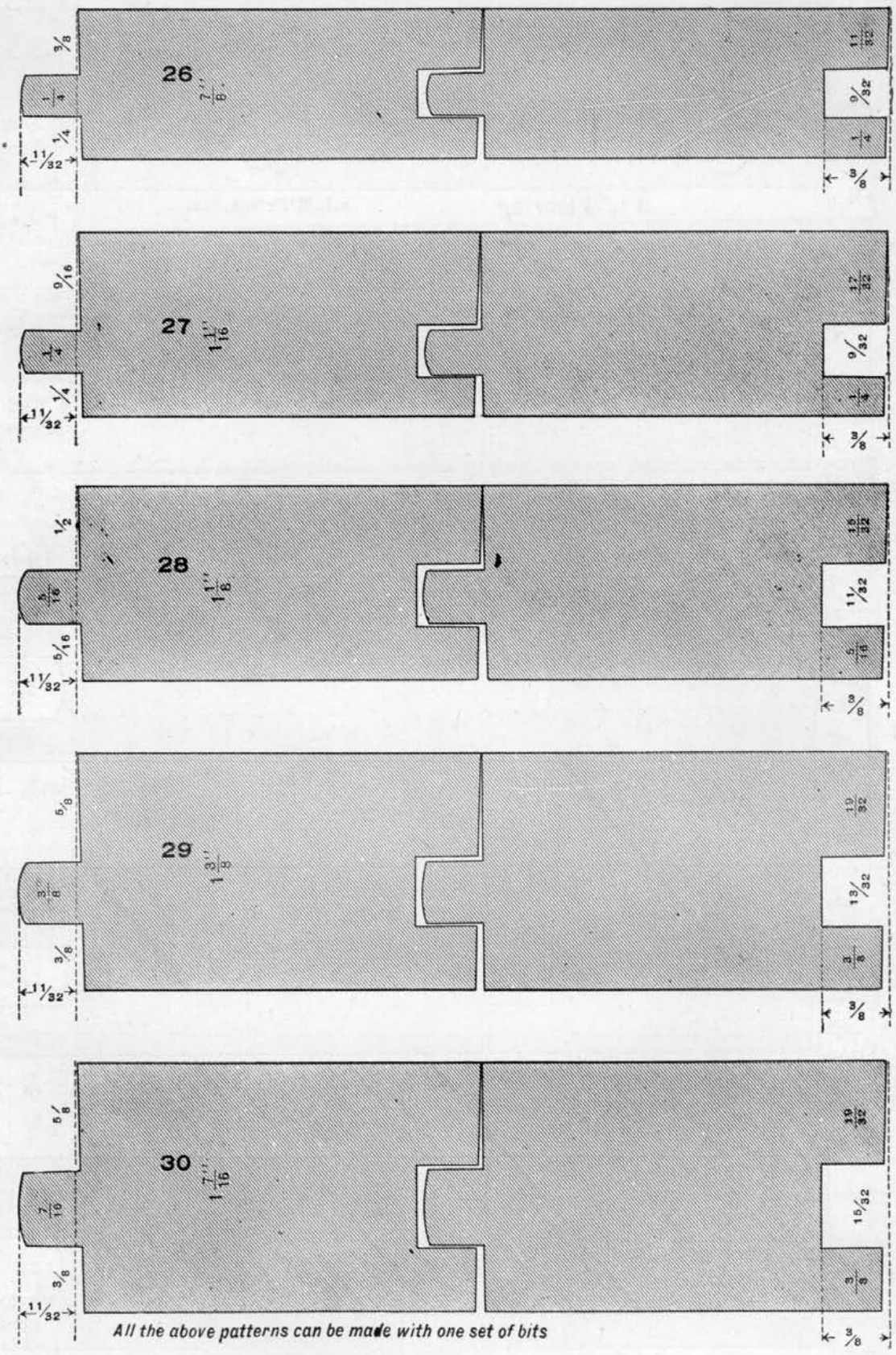
1¼" Flooring N.Y.Sta.



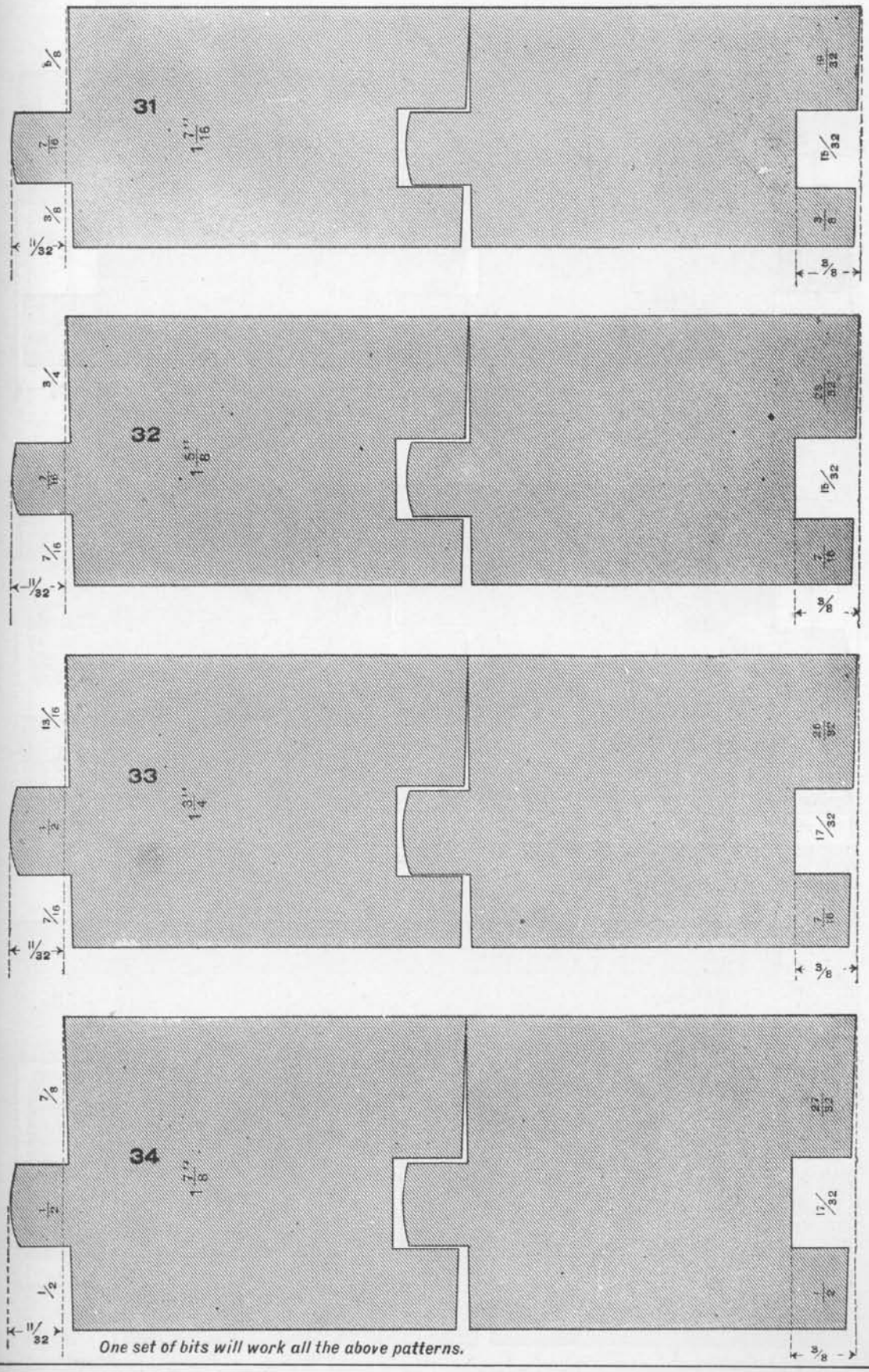
1¼" Flooring



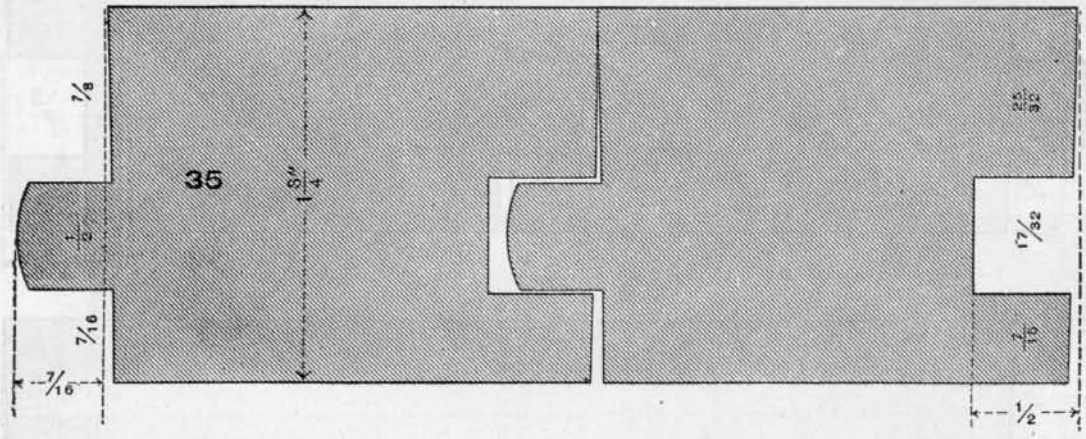
1¼" Flooring

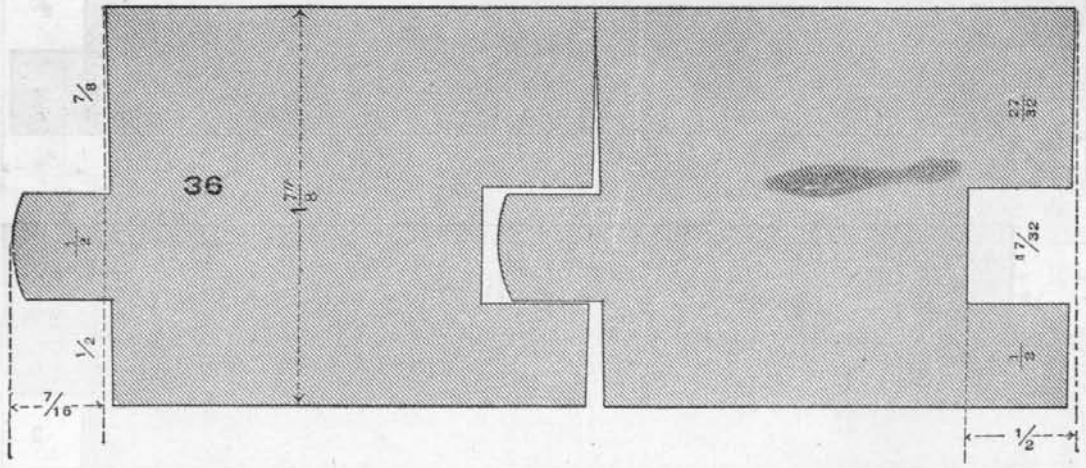


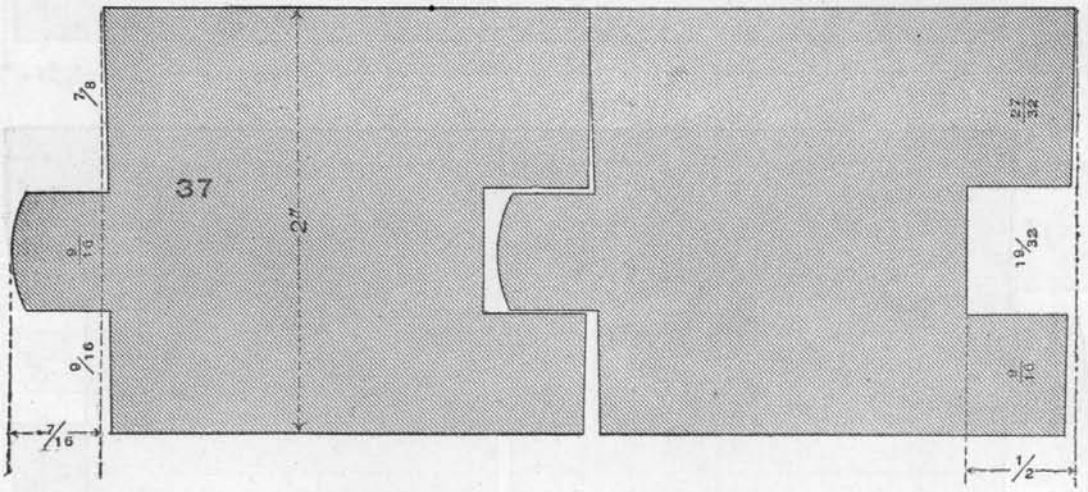
All the above patterns can be made with one set of bits

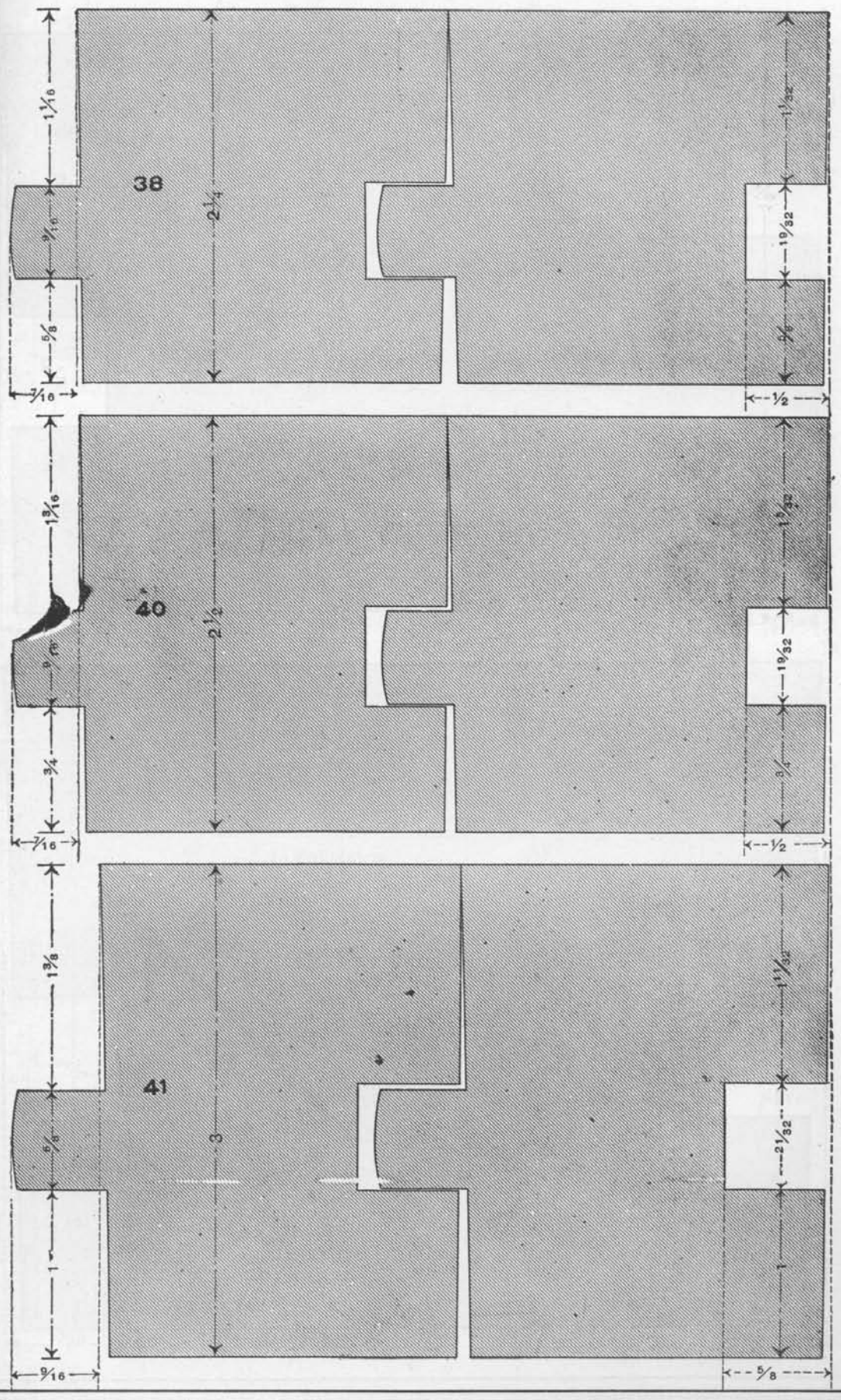


One set of bits will work all the above patterns.

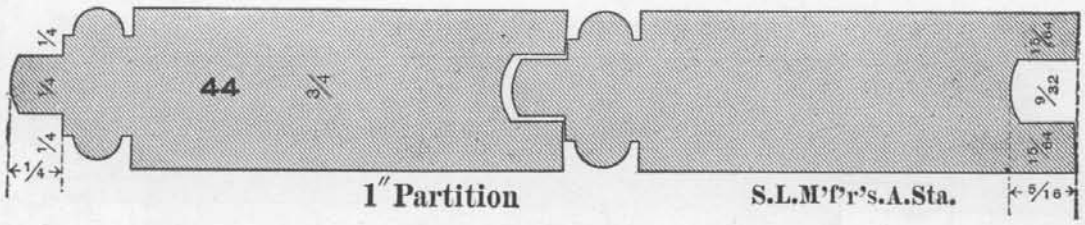

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1/2
7/16
7/16
25/32
17/32
7/16
1/2

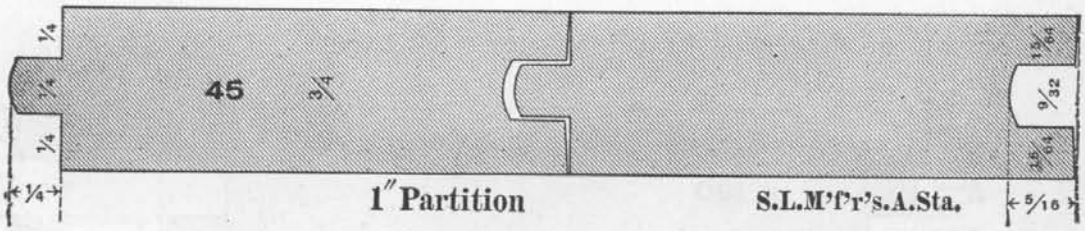

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1 7/8"
7/8
1/2
1/2
7/16
27/32
17/32
1/2
1/2

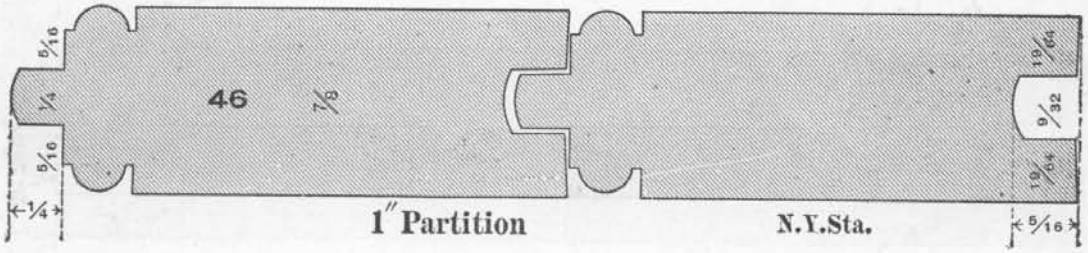

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2"
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9/16
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27/32
19/32
9/16
1/2

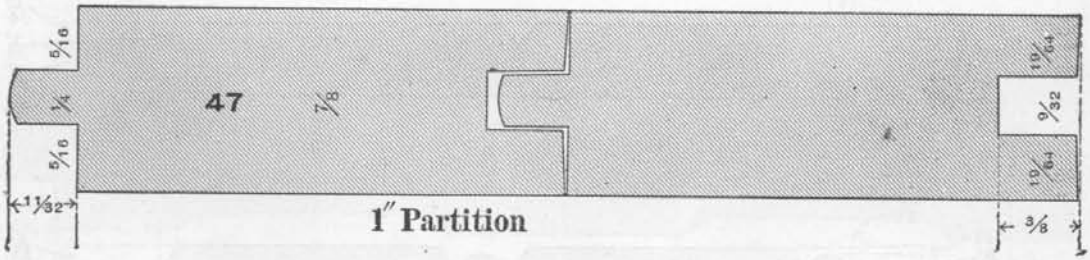

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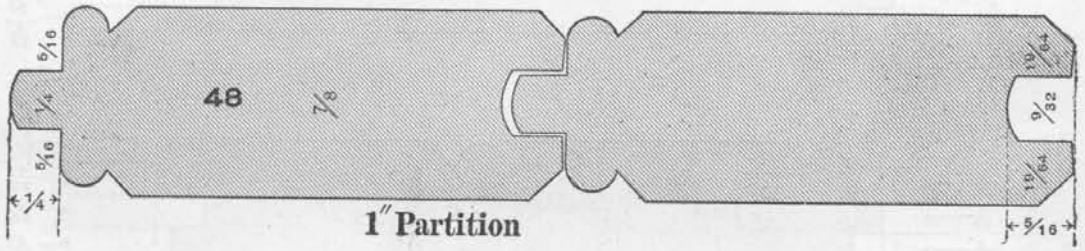
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1 1/8
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3 1/2
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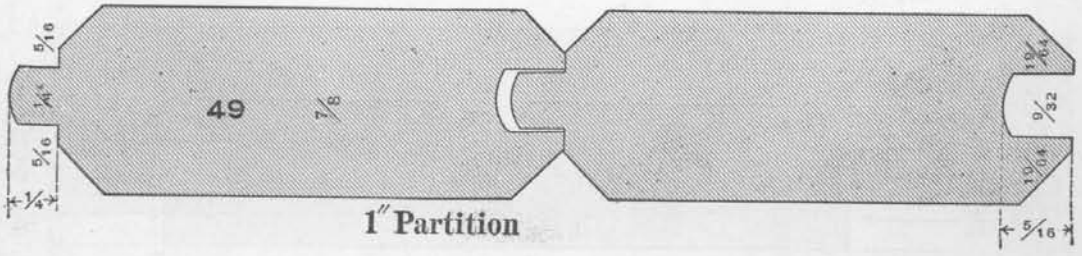

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5/16
1" Partition
S.L.M'f'r's.A.Sta.

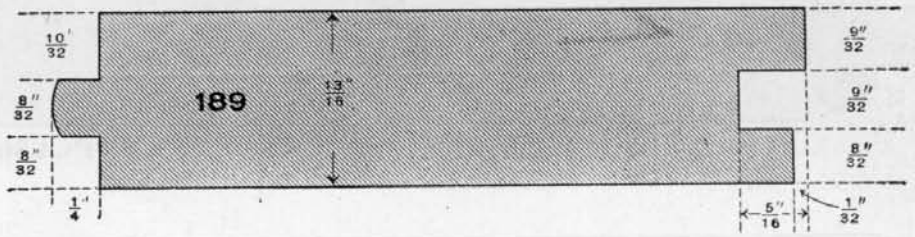

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1" Partition
S.L.M'f'r's.A.Sta.

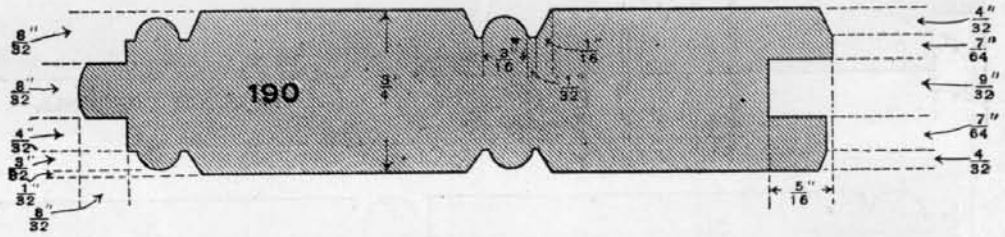

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1" Partition
N.Y.Sta.

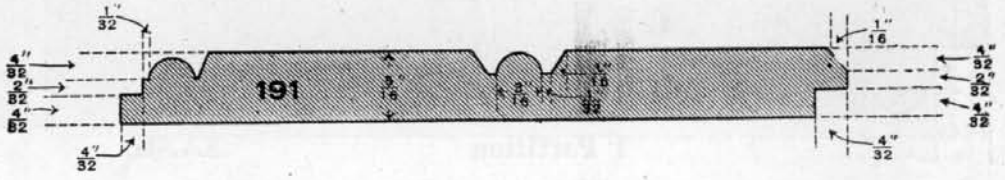

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3/8
1" Partition

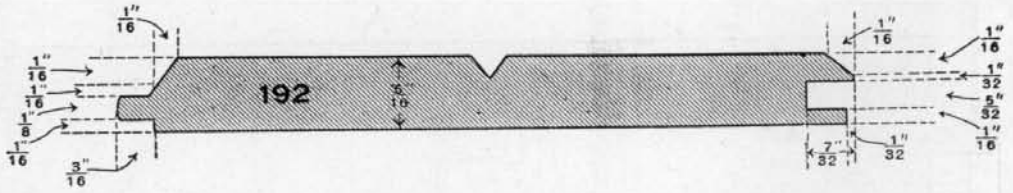

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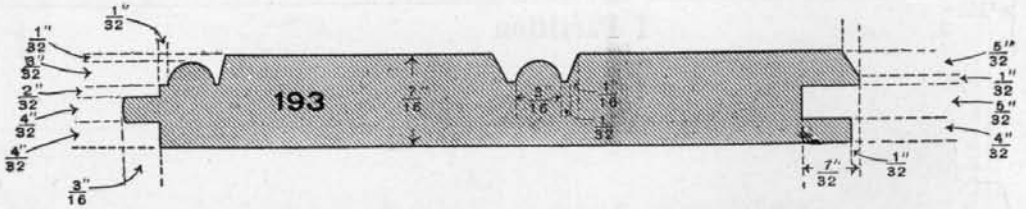

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1" Partition

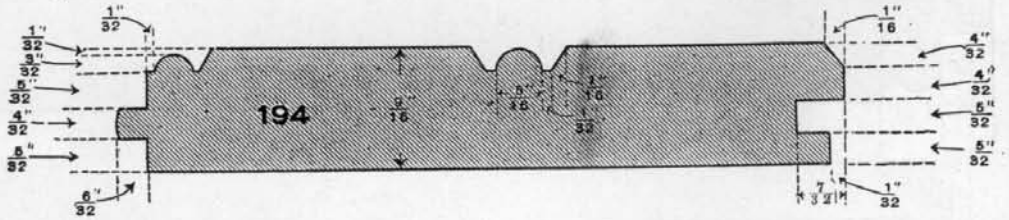

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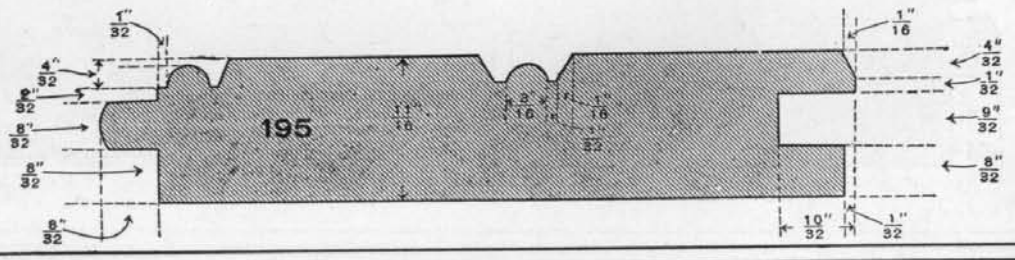

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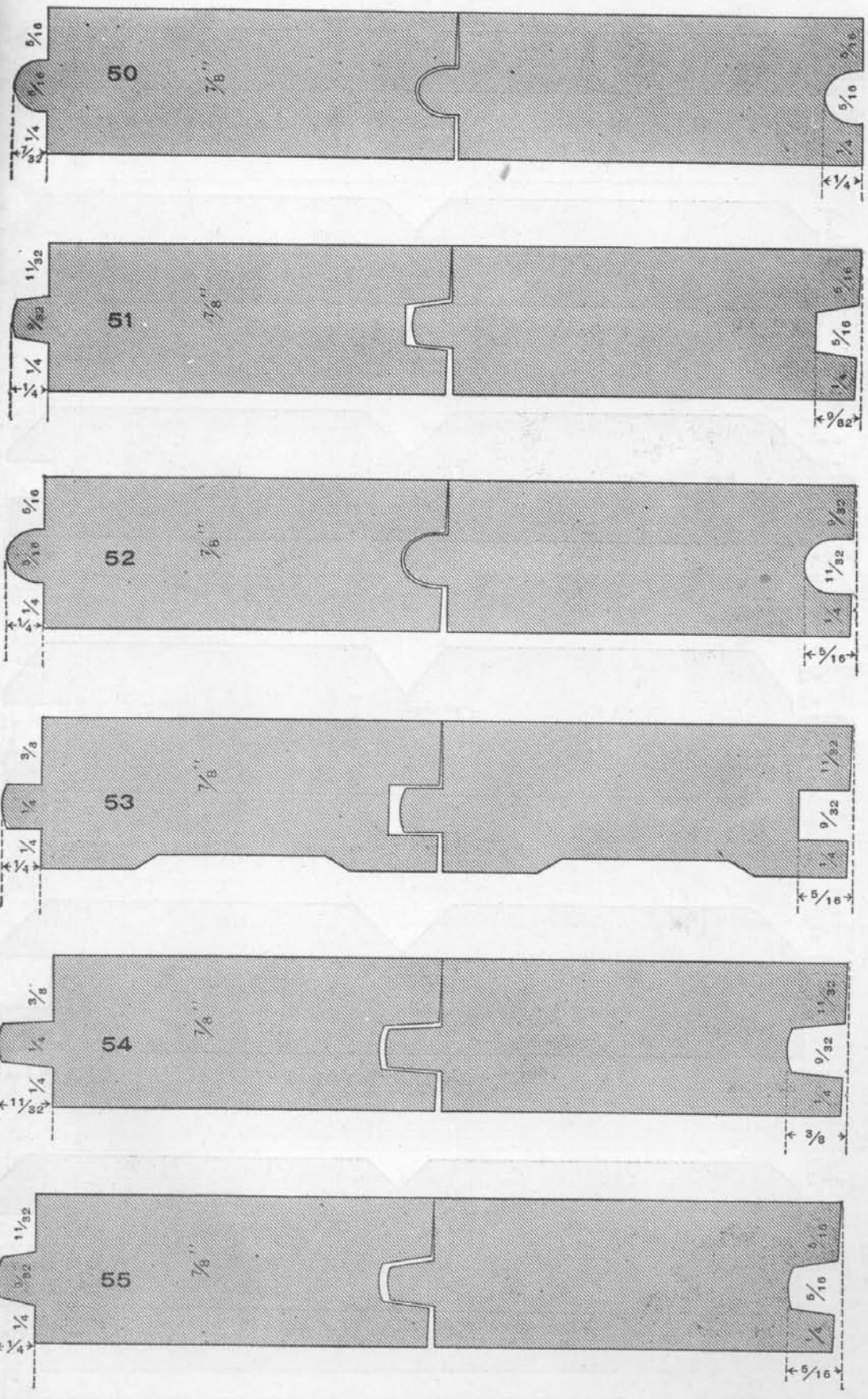

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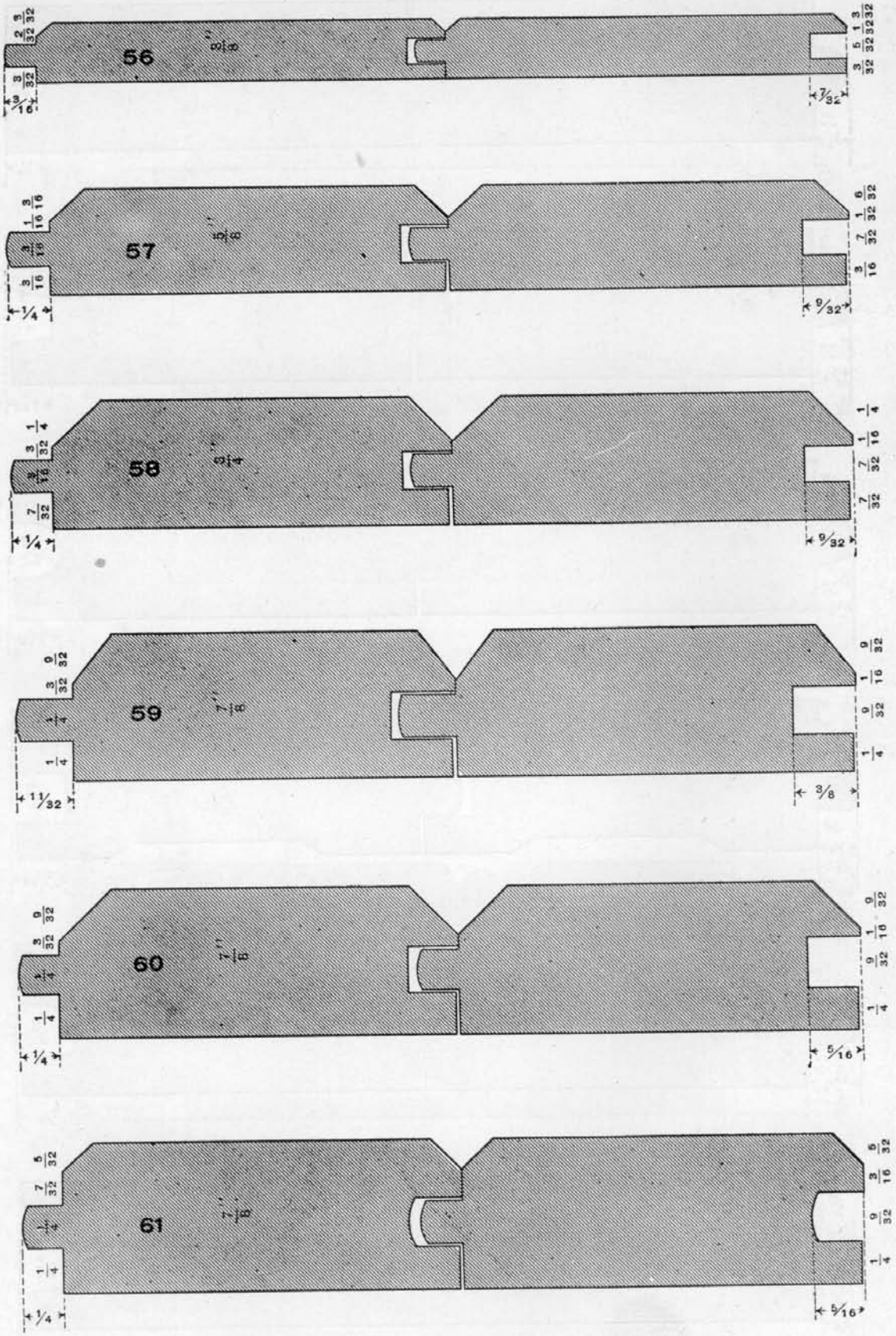

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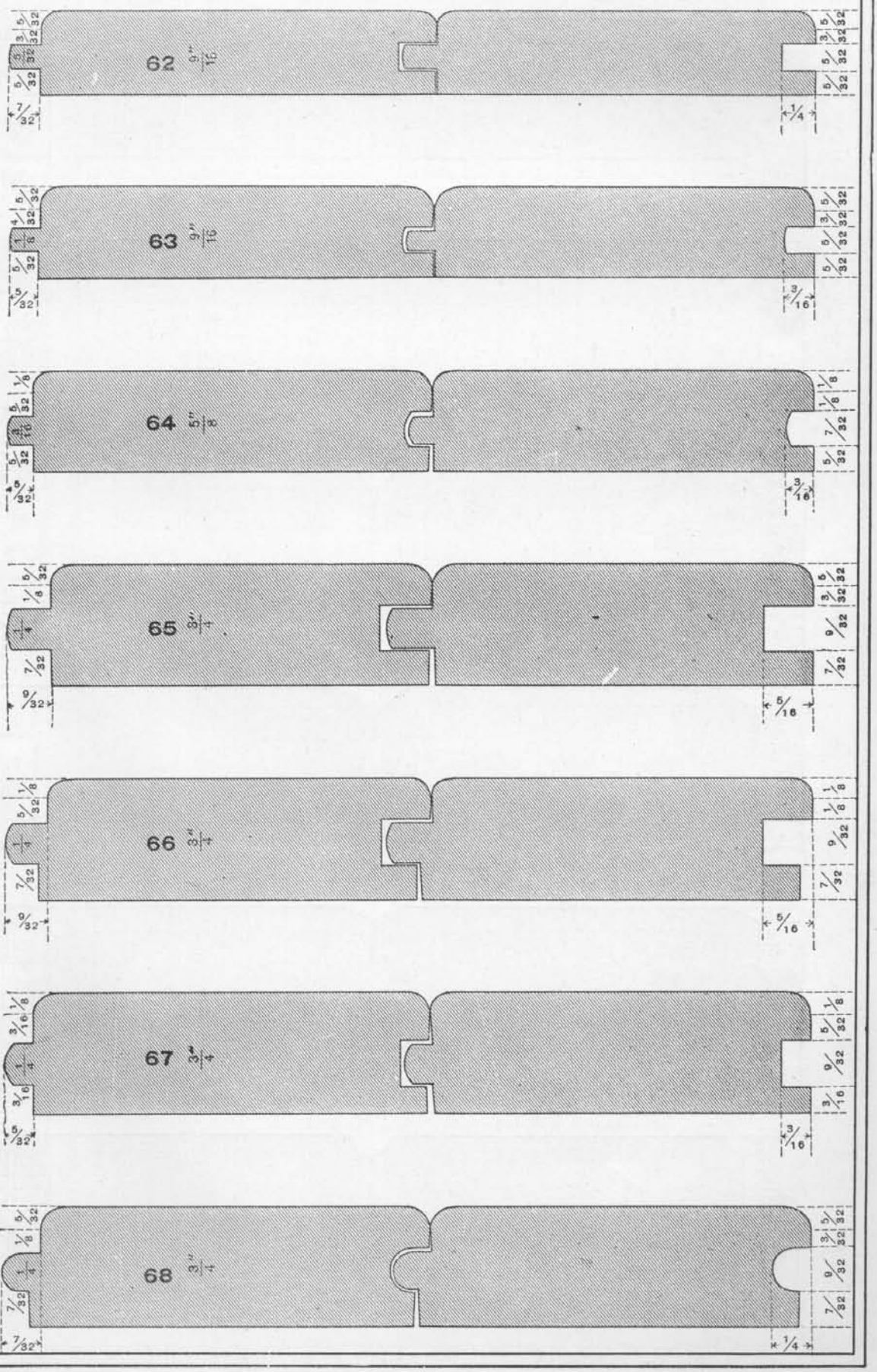

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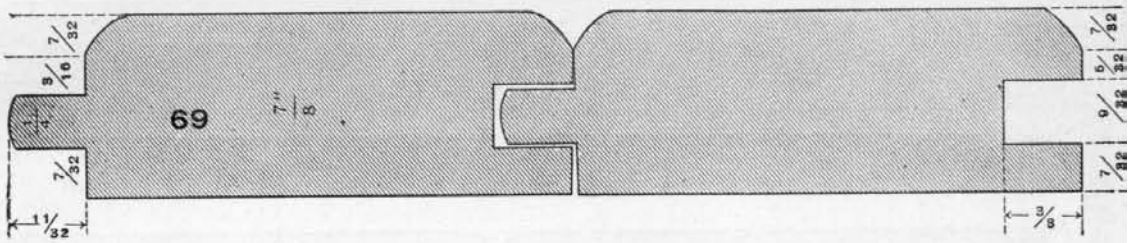

50
7/8"
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51
7/8"
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52
7/8"
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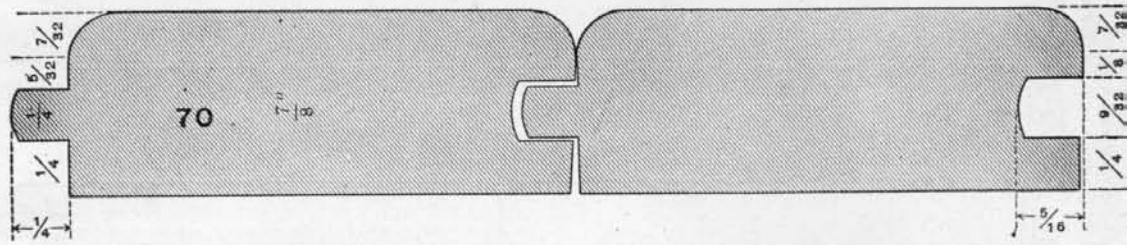
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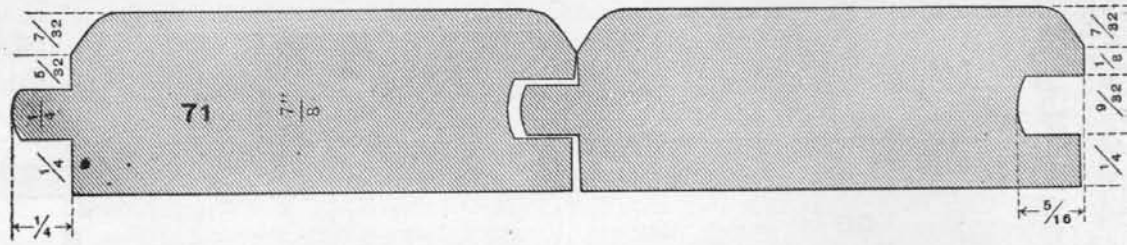


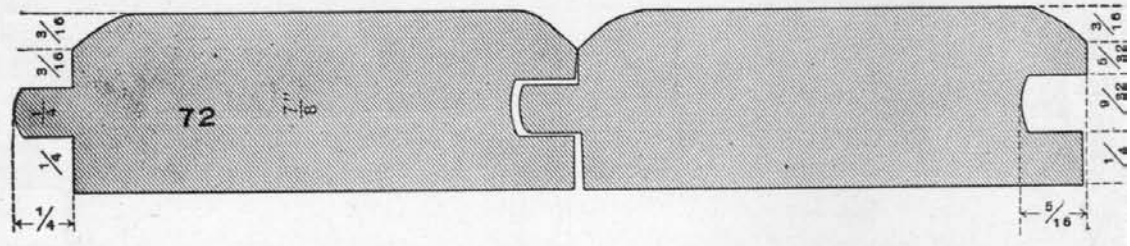

62 9/16
63 9/16
64 5/8
65 3/4
66 3/4
67 3/4
68 3/4

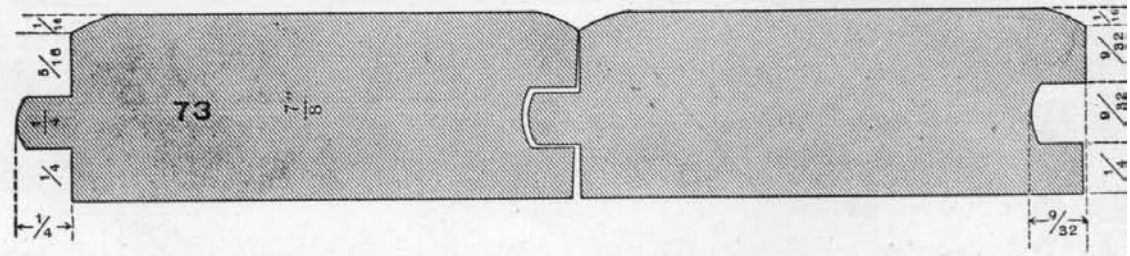
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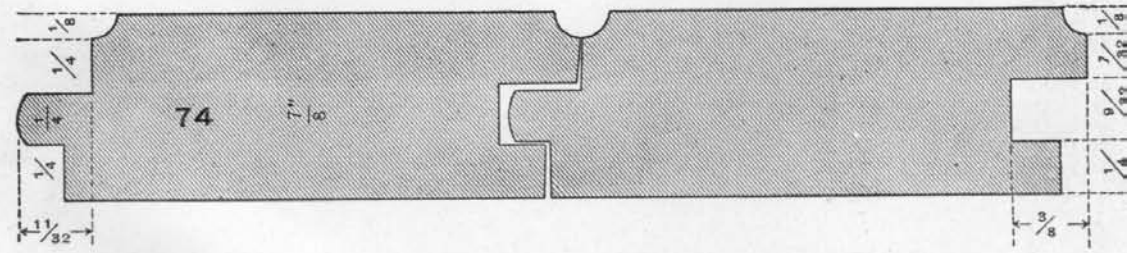

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1 1/32
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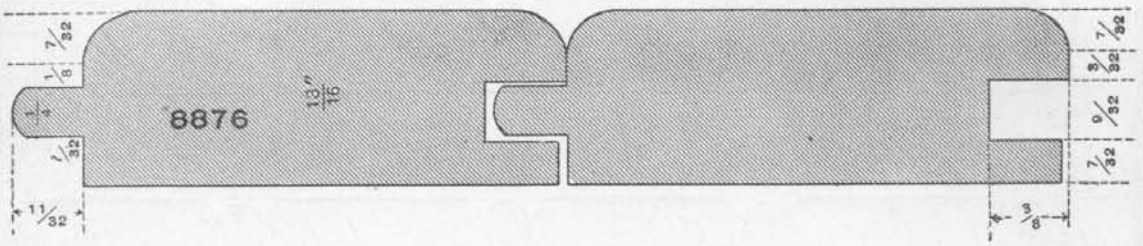

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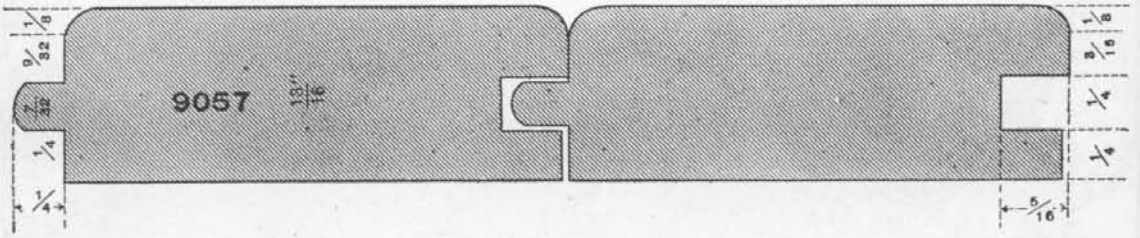

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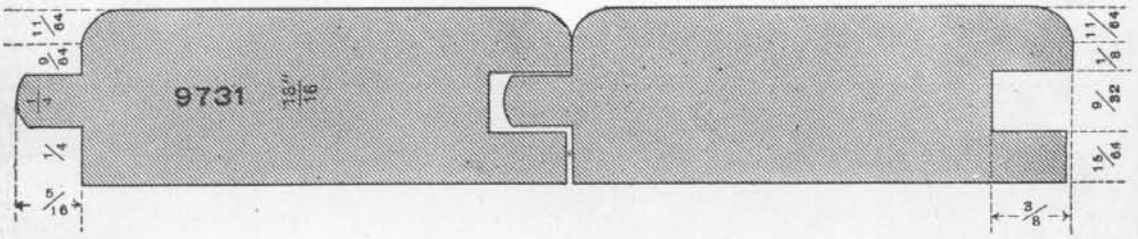

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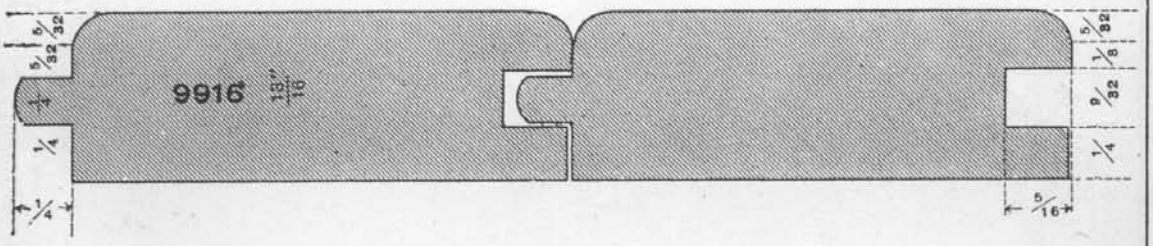

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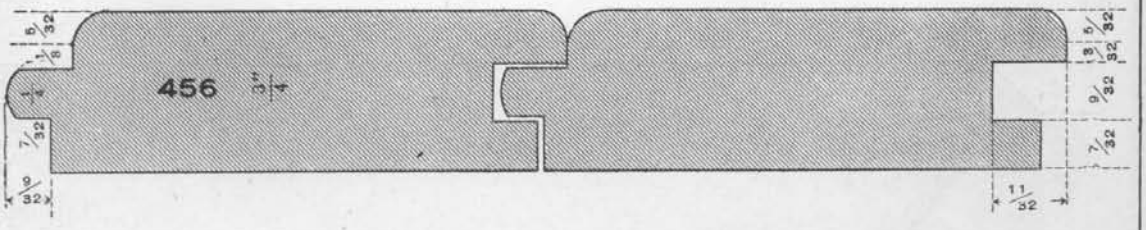

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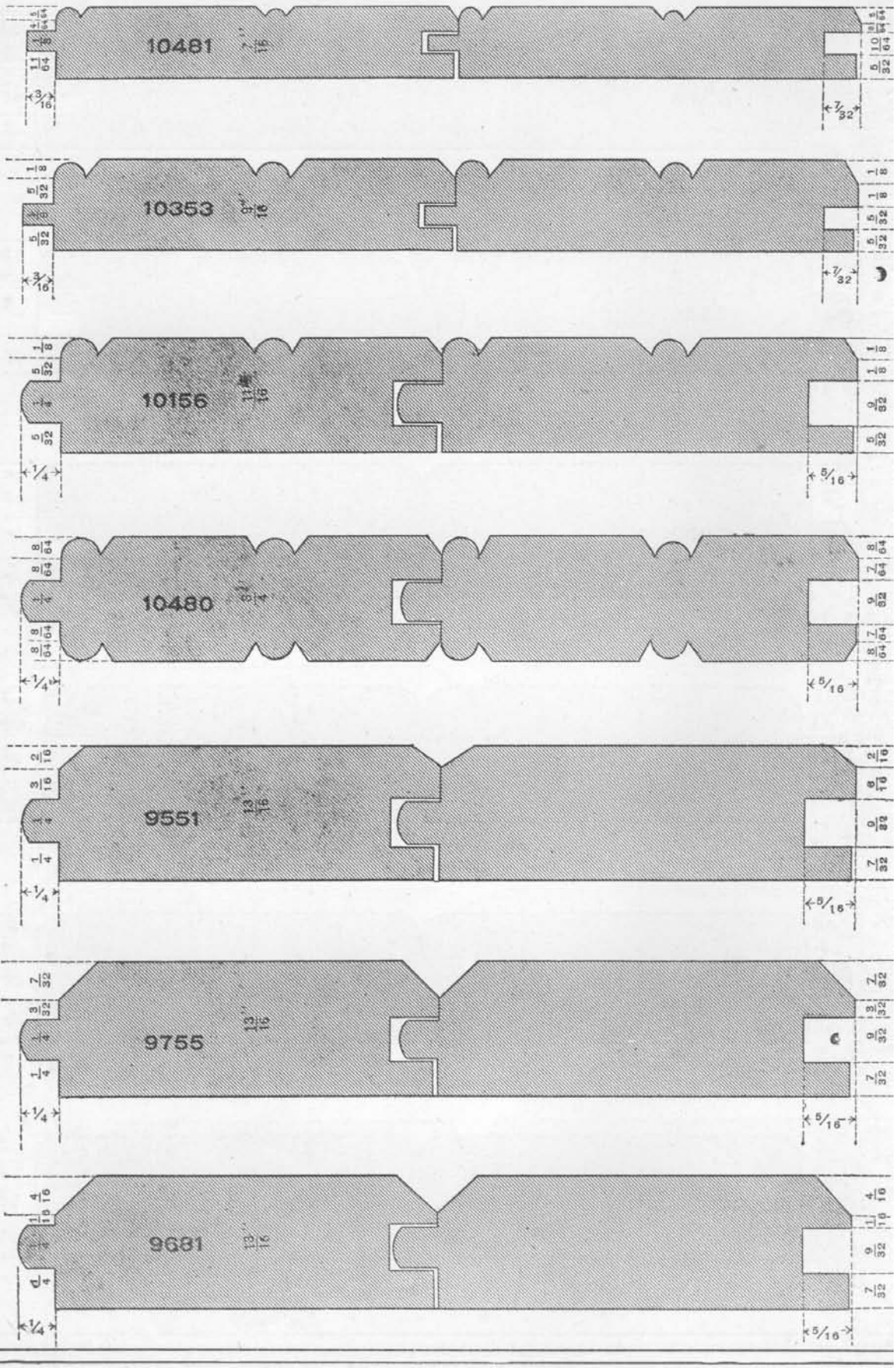

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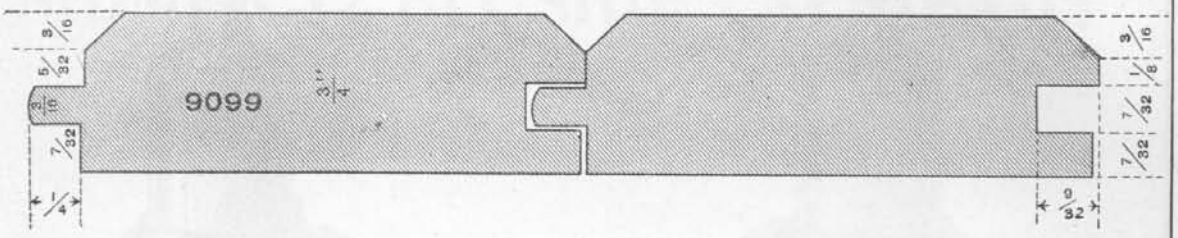

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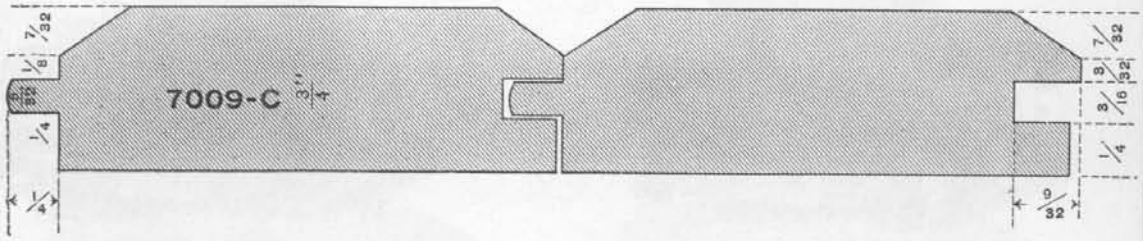

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15/64
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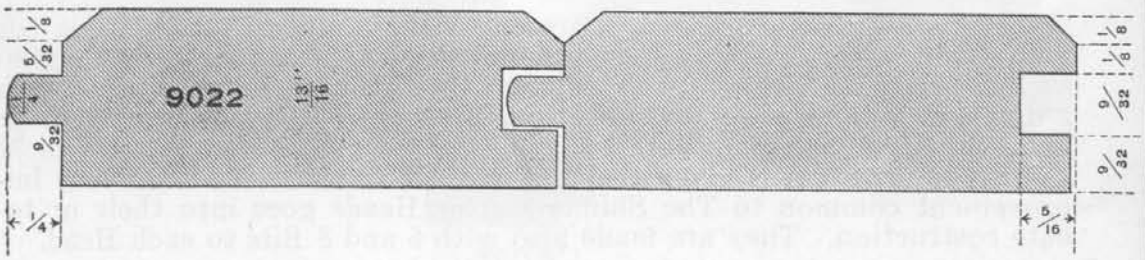

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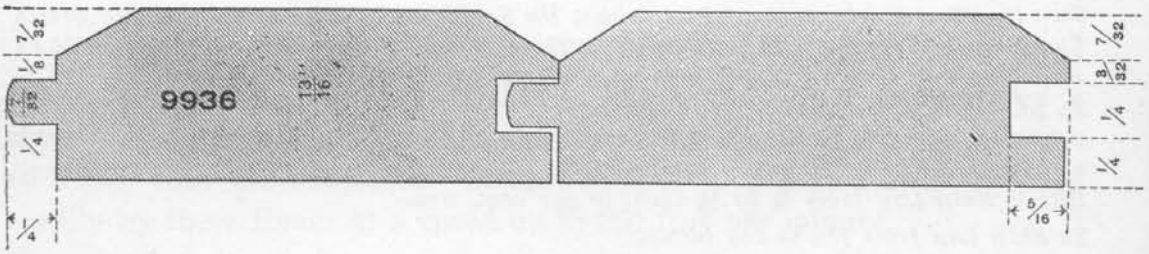

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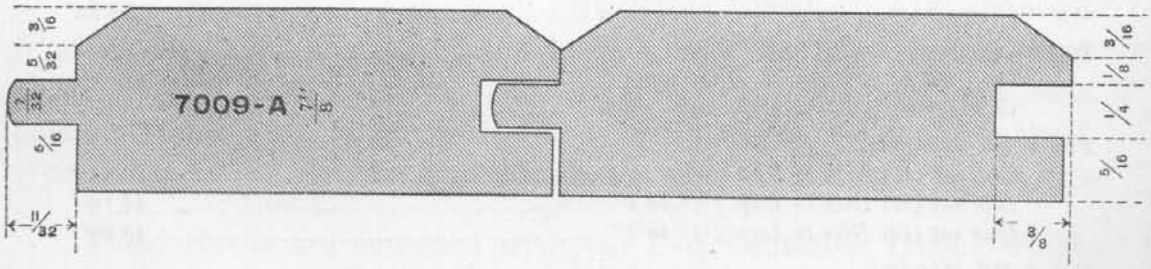

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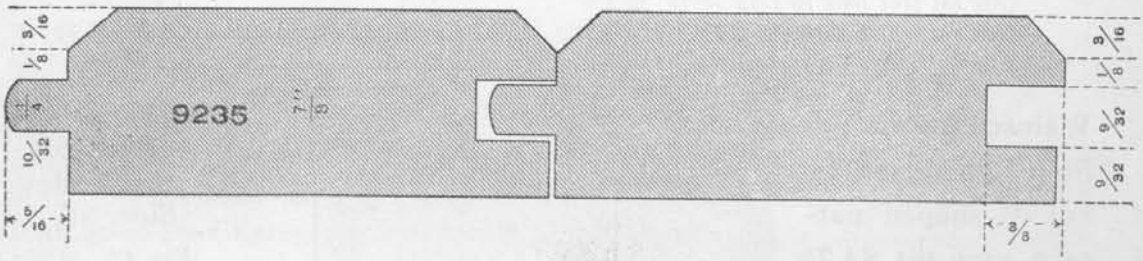

9099
3 1/4"


7009-C
3 1/4"


9022
13 1/16"


9936
13 1/16"


7009-A
7 1/8"


9235
7 1/8"

THE SHIMER CUTTER HEADS FOR SHIP LAP.

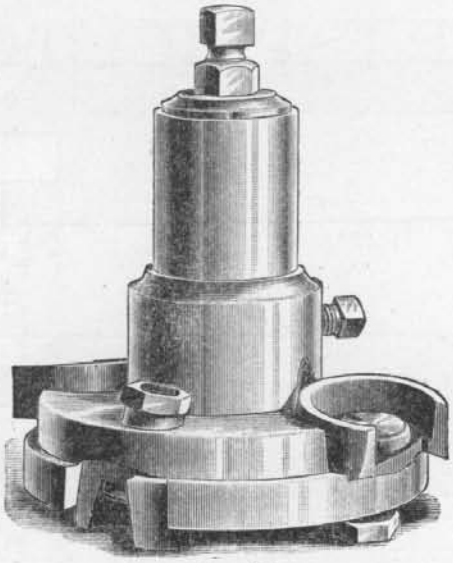


Fig. 38

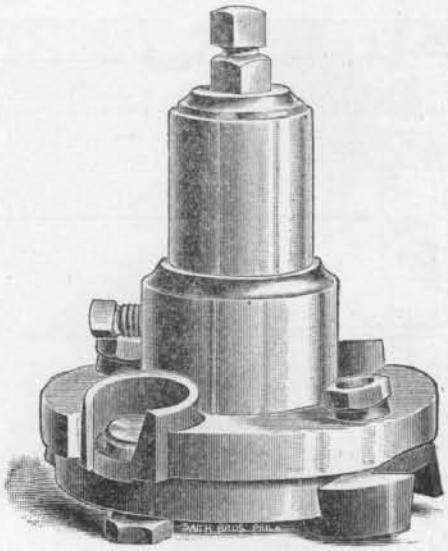


Fig. 39

These two illustrations represent 4 Bit Shimer Cutter Heads for Ship Lap. They are provided with flat duplex bit seats to proportion each Bit with its largest diameter upon the bit seats, where in line with a diamond pointed edge the rabbeting Bits have the heaviest work to do upon the dividing line of cut.

The draw cut is given the Bits to their fullest limit and every improvement common to The Shimer Cutter Heads goes into their up-to-date costruction. They are made also with 6 and 8 Bits to each Head.

THESE ARE OUR NET PRICES

Two Heads complete, without Bits, with 4 Bit Seats $56.74, *with Self Centering* $84.58
Two Ship Lap Heads with 6 Bit Seats, without Bits 62.78 *with Self Centering* 90.62
Two Ship Lap Heads with 8 Bit Seats, without Bits 68.92 *with Self Centering* 96.76

To Ship Lap from 15-16 to 1½ inches:
One set of 4 Jointer Bits, each $2.91
One set of 4 Rabbeting Bits, each 3.73 $26.56

Bits to Ship Lap from ⅜ to ½ inch, 10 per cent. less.

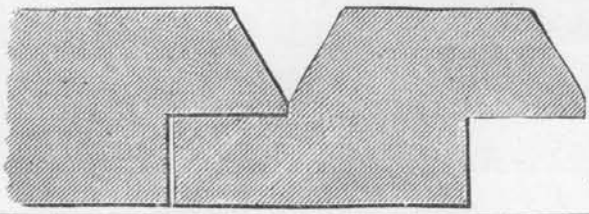
To Ship Lap from 1½ to 2½ inches:
One set of 4 Jointer Bits, each 3.26
One set of 4 Rabbeting Bits, each 4.10 29.34

To Ship Lap from 2½ to 4 inches:
One set of 4 Jointer Bits, each 3.84
One set of 4 Rabbeting Bits, each 4.39 32.92

For 6 Bit Heads:
One set (12) Bits to Lap 15-16" to 1½" $39.84
One set (12) Bits to Lap 1½" to 2" 44.16
One set (12) Bits to Lap 2½" to 4" 49.28

For 8 Bit Heads:
One set (16) Bits to Lap 15-16" to 1½" $53.12
One set (16) Bits to Lap 1½" to 2" 58.68
One set (16) Bits to Lap 2½" to 4" 65.84

Wainscoting on Ship Lap Heads, to cut V shaped pattern, each Bit, $4.75



This is preferably the Guide Side.

Fig. 41

SHIMER 12 BIT SHIP LAP HEADS

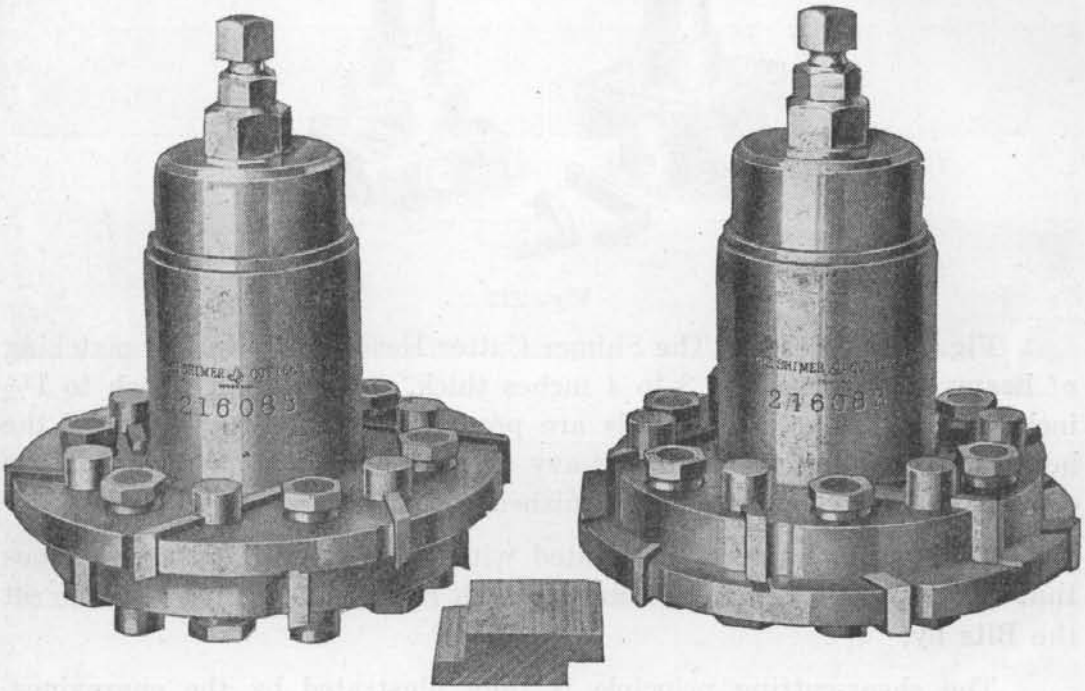


Fig. 651

The illustration represents our 12 Bit Ship Lap Heads constructed for RAPID FEEDING MACHINES. These Heads have been given a severe test and have proved that they are adaptable for the heavy work to which they are subjected. From one to 2 inch Ship Lap is handled readily by these Heads at a speed up to 250 feet per minute.

They are constructed as are all SHIMER CUTTER HEADS of tough forgings which makes a lasting and durable tool. The bits are of the best HIGH SPEED STEEL giving them maximum of endurance and edge holding. They are held in the Heads by our patented bolt giving them a perfect grip for rigidity throughout.

These Heads are equipped with our Self Centering Device which centers the Heads on the Spindle and gives them a perfect grip to it—a most desirable feature to have built in your Cutter Heads.

THESE ARE OUR NET PRICES

Steel Forged Ship Lap Heads Fig. 651 with Self Centering Device, 12 Bit Seats (no bits)	$182.88
High Speed Steel Knives for Ship Lap to 2" stock, each	2.27

SHIP LAP HEADS FOR HEAVY WORK

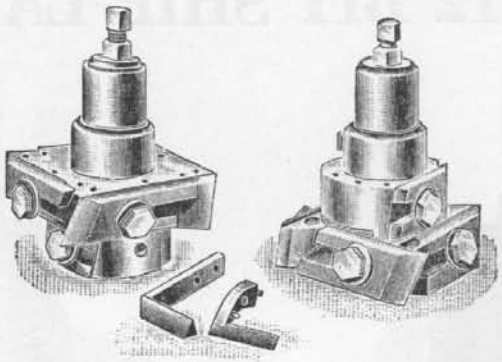


Fig. 222

Fig. 222 represents The Shimer Cutter Heads for Ship Lap matching of heavy mill floors from 3 to 4 inches thick, cutting from 1 inch to 1½ inches deep. The Cutter Heads are provided with 4 Bits in line of the heaviest cut, that work with a heavy shear cut away from the incut line of division. The jointed edge is finished with 2 Bits in line of cut.

The two little pieces illustrated with the Cutter Heads are gauges that determine the edge curvature for each Bit. You also use them to set the Bits by.

The shear-cutting principle is fully illustrated by the engravings. Recommended when the lap must be cut deeper than ¾ of an inch.

THESE ARE OUR NET PRICES

For Fig. 222, Steel Forged Head and Gauges for Ship Lap.	
Net price for Cutter Heads complete without the Knives	$105.88
One set (4) Jointer Knives to cut 1½ to 2 inches wide	12.96
One set (8) Rabbeting Knives to cut 1½ to 2 inches wide	25.92
One set (2) Heads complete with 4 Jointer and 8 Rabbeting Knives	144.76

Diagram of Work

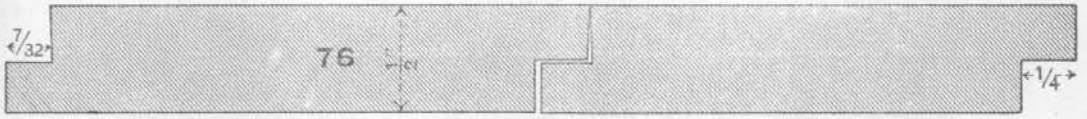


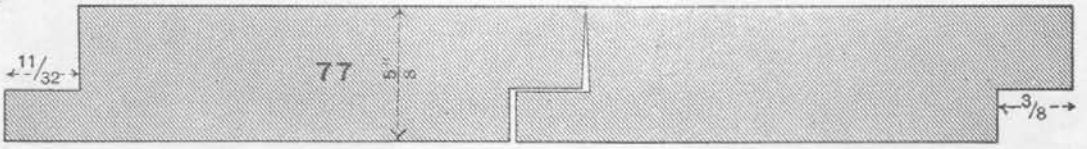
Guide Side

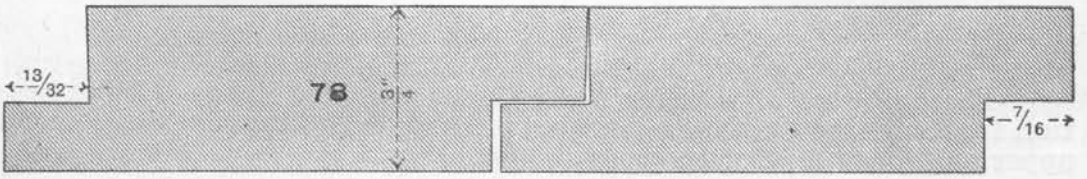
Fig. 40

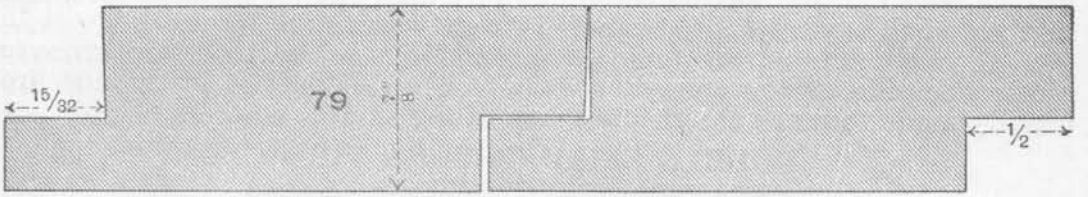
Fig. 40 illustrates the way Ship Lap is usually made, with the undercut on the right or guide side, so that should the face of the board not be quite full the left side rabbet will show clean cut edges in the surface. Fig. 41, page 54, illustrates the work of beveling the upper edges of Ship Lap for Wainscoting (other patterns are illustrated in the pattern portion of this catalogue.) The lower half of the pattern is cut with regular Ship Lap Bits. The upper half is special and takes two special Bits to each Cutter Head, usually made sectional when the cut is deep.

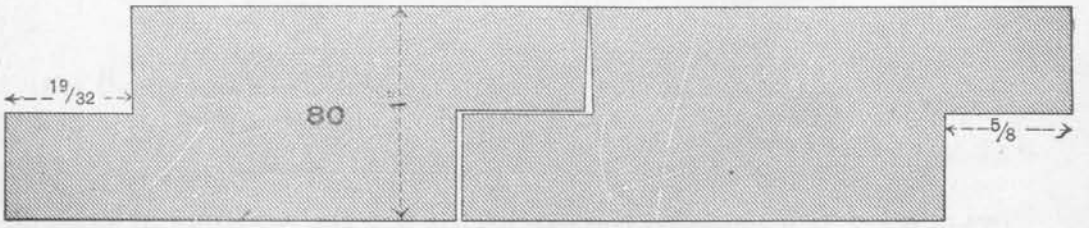

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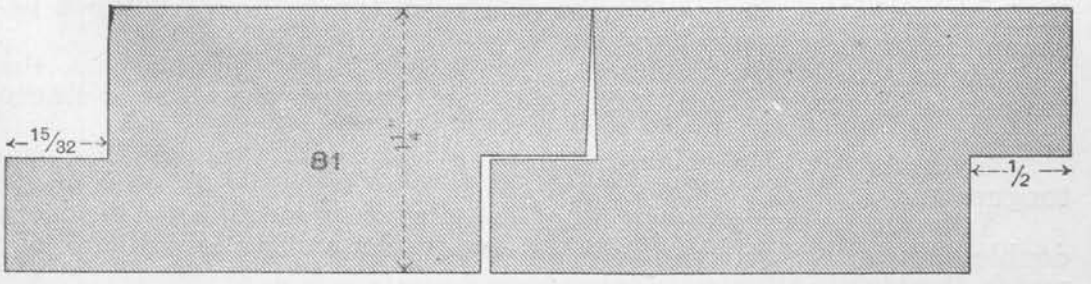

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13/32
78
3/4
7/16


15/32
79
1/2


19/32
80
1"
5/8


15/32
81
1 1/4"
1/2

HEADS FOR DOUBLE CEILING

To Fit Side Spindles of Matcher or Moulder

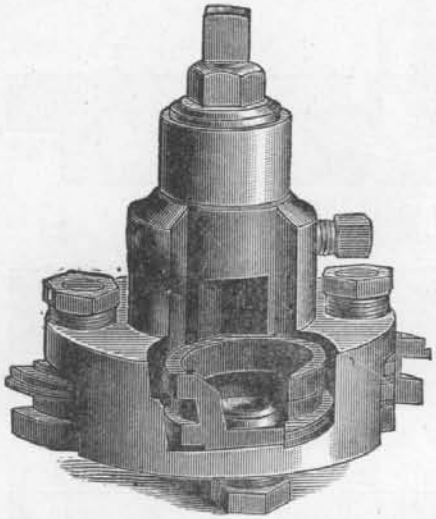


Fig. 45

For Prices See Next Page

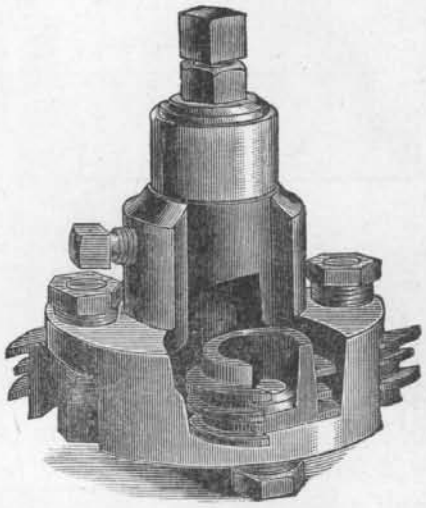


Fig. 46

These illustrations represent The Shimer Cutter Heads in Solid Section for matching Ceiling in double thickness with Circular Bits on each upper and lower side of the head flange.

The upper Bits cut into and make part of the lower tongue and groove. The lower Bits cut into and make part of the upper tongue and groove, and for that reason these Cutter Heads cannot be expanded, and neither will they take Bits to match single tongue and groove.

Circular Bits for matching double thickness, cutting two grooves along one side of the strip and two tongues along the other side are usually made to mark the saw cut line of division.

DOUBLE CEILING—PLAN VIEW

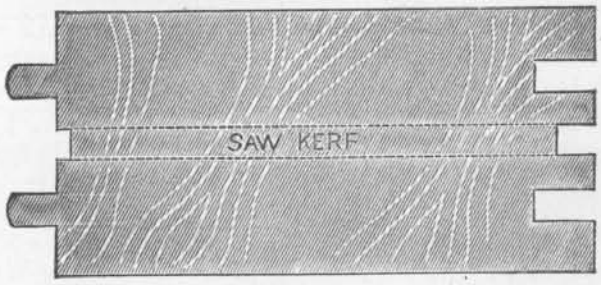


Fig. 47

This mark is a guide to the eye of the sawyer, who can at once dedect the least variation of the saw and correct it as the board is passing through. Two strips of like thickness are thus produced—otherwise difficult to make, as the eye cannot determine the half-way distance between the tongues without the mark.

To match double thickness, $\frac{3}{8}$ or $\frac{1}{2}$ inch, with Circular Bits, the tongues and grooves are (and must be) located the same distance apart.

To match double thickness, $\frac{5}{8}$ or $\frac{3}{4}$ inch, with Circular Bits, the tongues and grooves are (and must be) located the same distance apart.

This rule governs the scope of a set of Circular Bits made to cut double thickness, therefore Bits to match Double $\frac{3}{8}$ Ceiling will not match Double $\frac{7}{8}$ Ceiling.

EXPANSION HEADS FOR DOUBLE CEILING

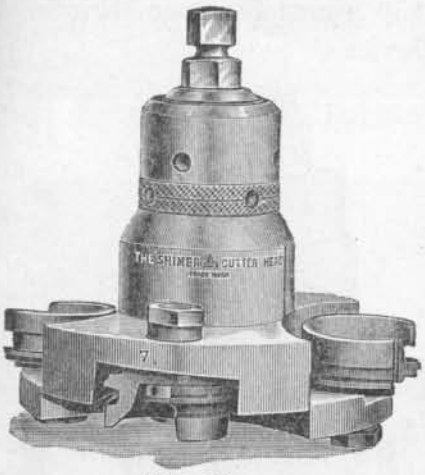
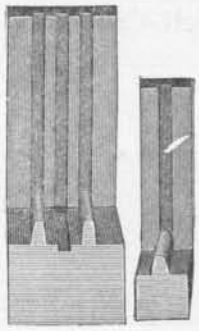


Fig. 42
Double Ceiling Tongue Head in Two Part Section.



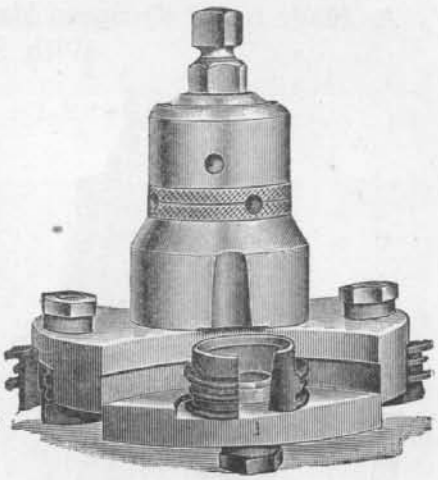


Fig. 43
Double Ceiling Groove Head in Two Part Section.

These two illustrations Fig. 42 and Fig. 43, represent The Shimer Cutter Head construction in two part sections to match Double Ceiling.

A loose collar is placed between the head sections to line the upper and lower bit seats relatively to locate Double Ceiling Bits. The upper series of Bits must cut into and make a part of the lower tongue and groove. The lower series of Bits must cut into and make part of the upper tongue and groove. In operation these two Cutter Heads work like Fig. 45 and Fig. 46, and with double ceiling Bits upon the seats their sections dare not be placed further apart or nearer together, because the Bits (cutting into both tongues and grooves, being solid) will not admit of any change. When you remove the loose collar from between the Cutter sections you locate the bit seats in line to cut with single tongue and groove Bits.

THESE ARE OUR NET PRICES

For Cutter Heads in Solid Section, Fig. 45 and Fig. 46.

Net price for Cutter Head, with 4 bit seats, without Bits....per set	$57.33
One set (2) solid Cutter Heads, with 4 Bits complete for double ceiling per set	95.20

For Cutter Heads in Two Part Section, Fig. 42 and Fig. 43, made to cut single or double tongue and groove.

Net price of Cutter Head, with 4 bit seats, without Bits....per set	80.78
One set (2) Cutter Heads, with 4 Bits complete to match single ceiling	103.02
One set (2) Cutter Heads, with 4 Bits complete to match double ceiling	118.62
One set (8) Bits to match double ⅜ ceiling, with double tongue and groove	37.84
One set (8) Bits to match double ⅝ ceiling, with double tongue and groove	39.84
One set (8) Bits to match single ⅜ to ½ ceiling, with single T. and G.	22.32
One set (8) Bits to match single ⅝ to ¾ ceiling with single T. and G.	22.32
One set (8) Bits to match single 15/16 to 1½ ceiling, with single T. and G.	24.80

Self Centering $13.92 extra each head

SHIMER CUTTER HEADS FOR DOUBLE FLOORING

As Made for High Speed Matchers to Feed 150 Lineal Feet per Minute With Self-Centering Device

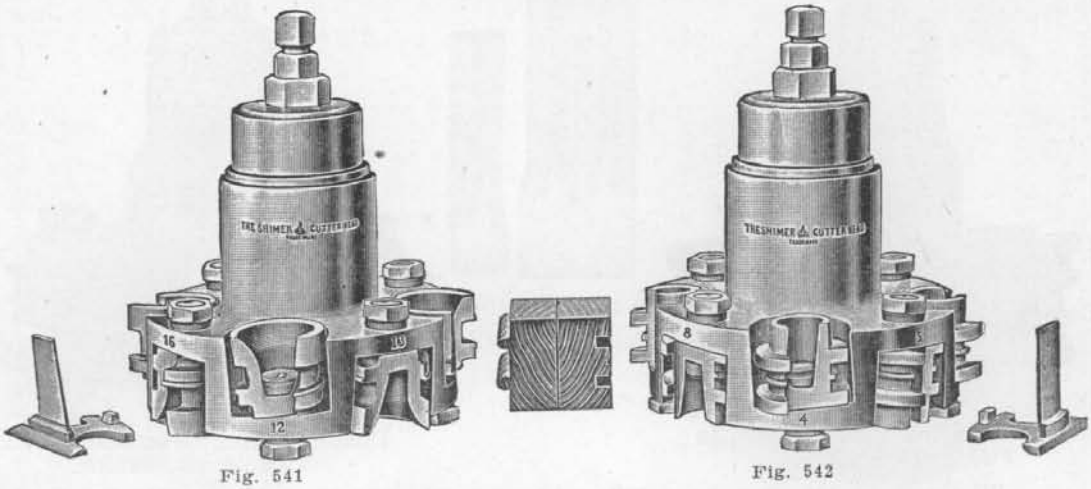


Fig. 541 Fig. 542

THESE ARE OUR NET PRICES

For Self Centering Double Flooring Heads, Figs. 541-542, net price for one set Cutter Heads with six seats, without bits	$113.07
Net price for Set Cutter Heads with eight bit seats, without bits	126.14
Bits to match Double 13/16 inch Flooring, with Double Tongue and Groove each Bit	5.99
Bits to match Double 3/8 inch Flooring, with Double Tongue and Groove, each Bit	5.67
Bits to match Double 5/8 inch Flooring, with Double Tongue and Groove, each Bit	5.67
Six Bit, Self Centering Triple Tongue and Groove Heads, (without bits) net	130.08
12 Bits for Triple Tongue and Groove Flooring	82.94
12 Bits for Triple Tongue and Groove Ceiling	73.60

MULTIPLE GLUE JOINTING HEADS Bored to Fit Side Spindles

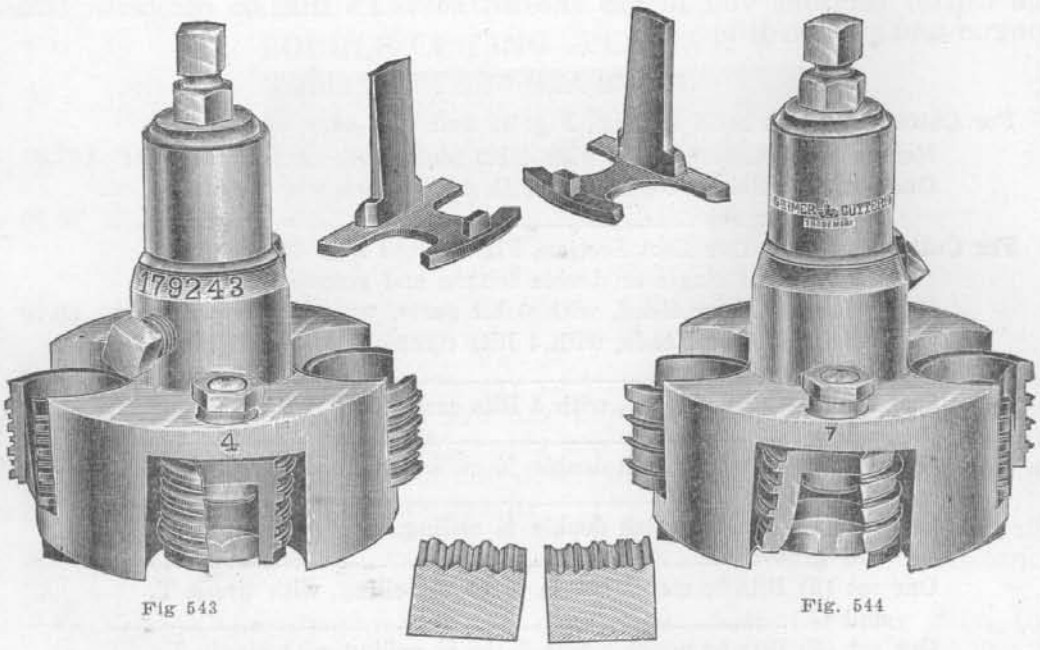
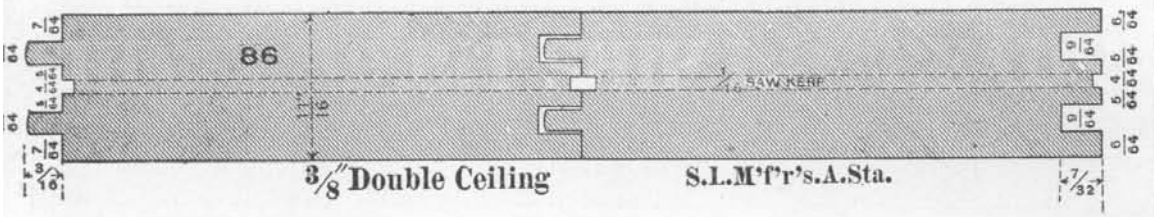


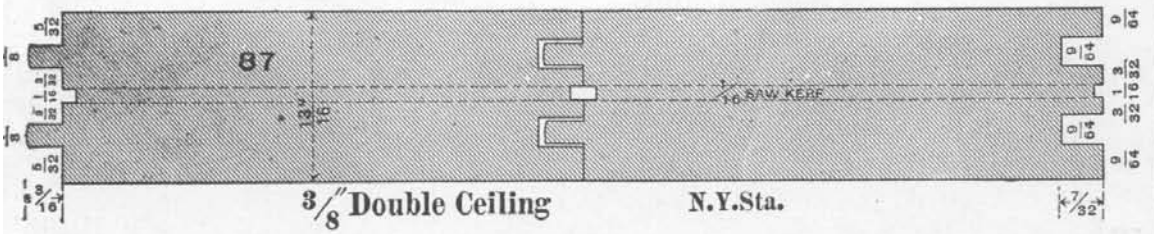
Fig 543 Fig. 544

THESE ARE OUR NET PRICES

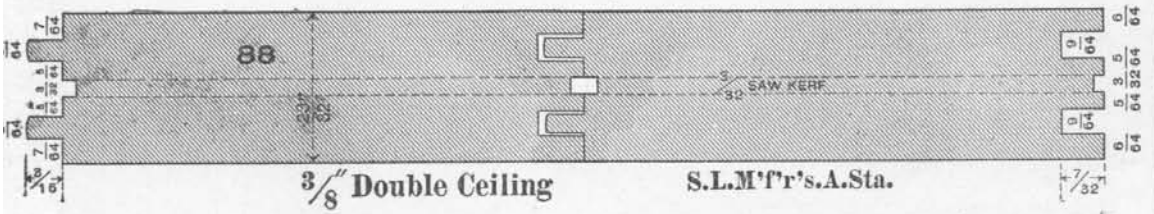
For Cutter Heads in Solid Section, Fig. 543 and 544, net price of Cutter Heads with four Bit seats, without the Bits	$78.75
Bits to Match Glue Joint 2 inches, each	5.62
Bits to Match Glue Joint 2 1/2 inches, each	6.90
Bits to Match Glue Joint 3 inches, each	8.43



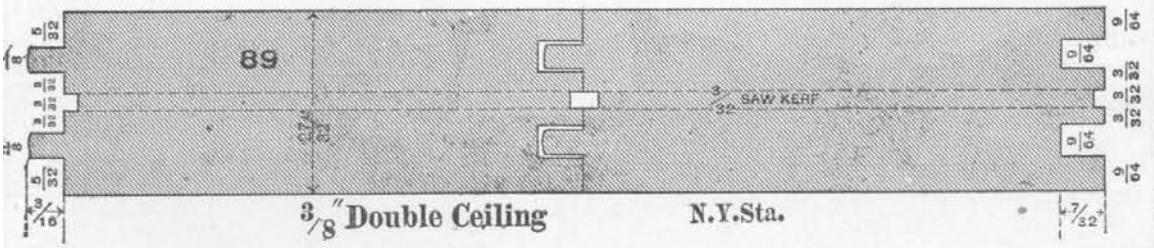
3/8" Double Ceiling S.L.M'f'r's.A.Sta.



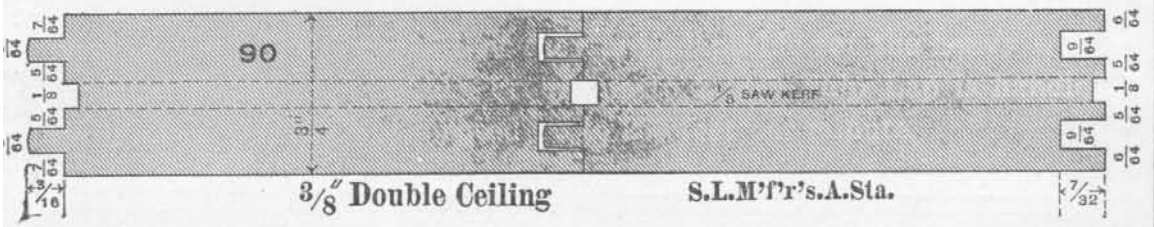
3/8" Double Ceiling N.Y.Sta.



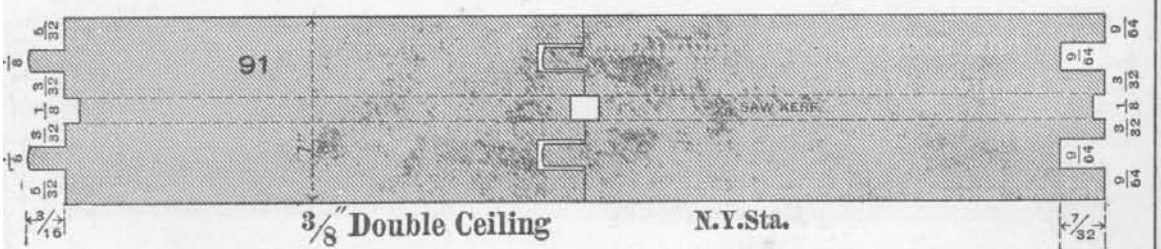
3/8" Double Ceiling S.L.M'f'r's.A.Sta.



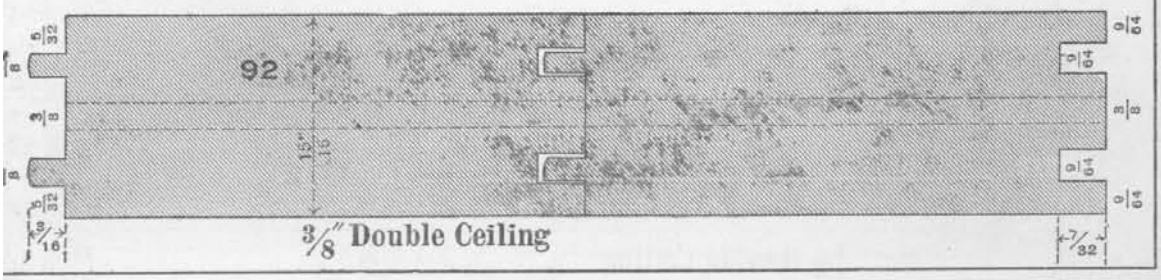
3/8" Double Ceiling N.Y.Sta.



3/8" Double Ceiling S.L.M'f'r's.A.Sta.

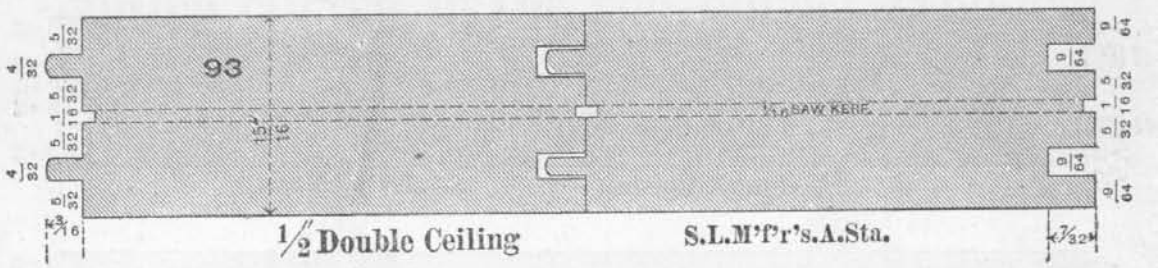


3/8" Double Ceiling N.Y.Sta.

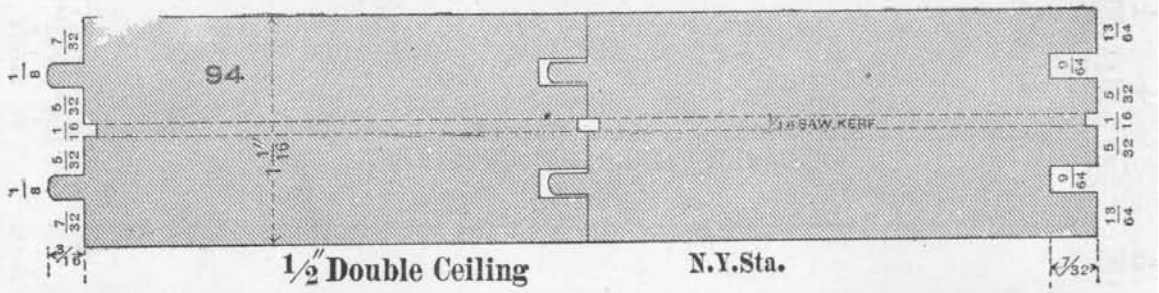


3/8" Double Ceiling

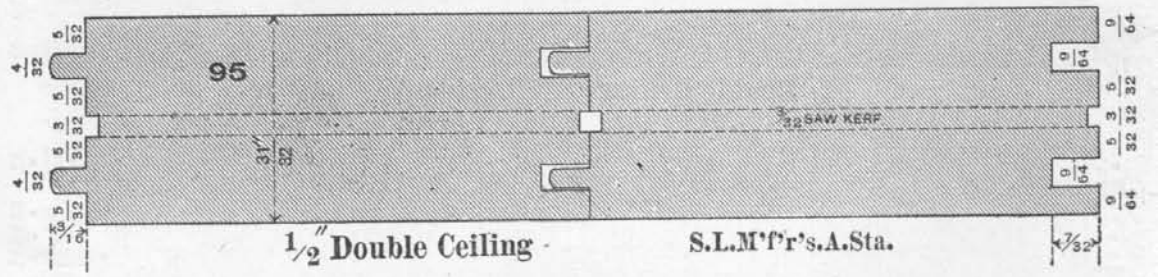
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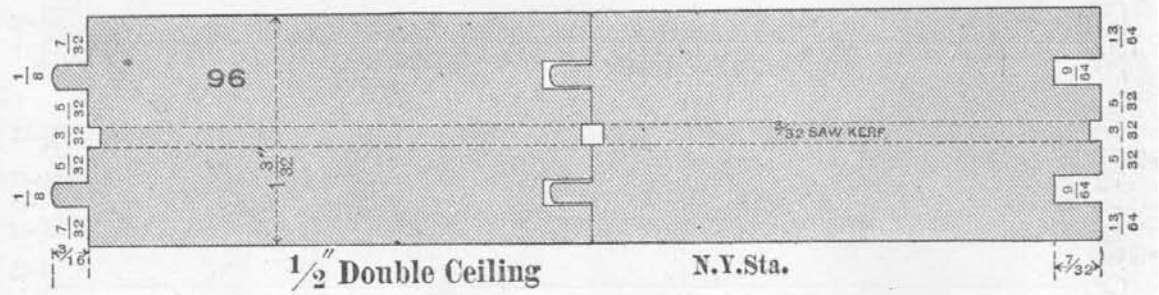
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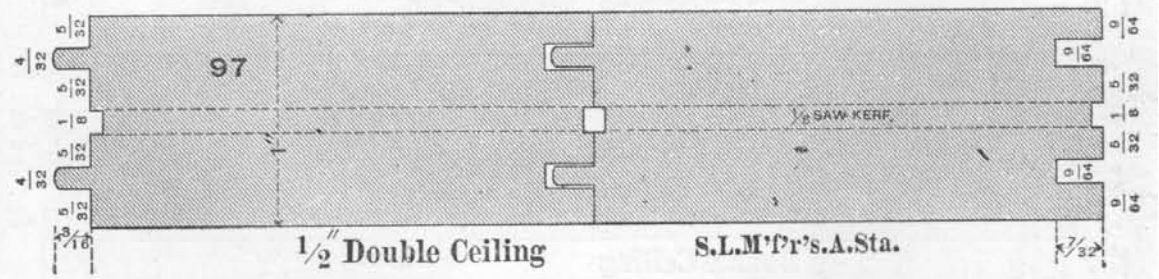
1/2" Double Ceiling N.Y.Sta.



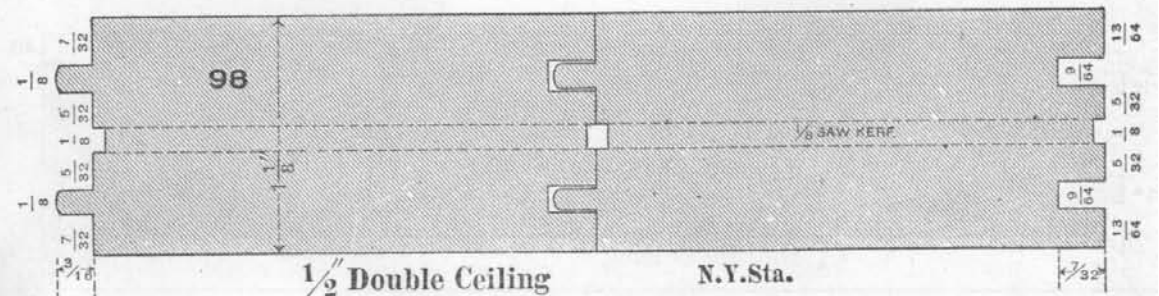
1/2" Double Ceiling S.L.M'f'r's.A.Sta.



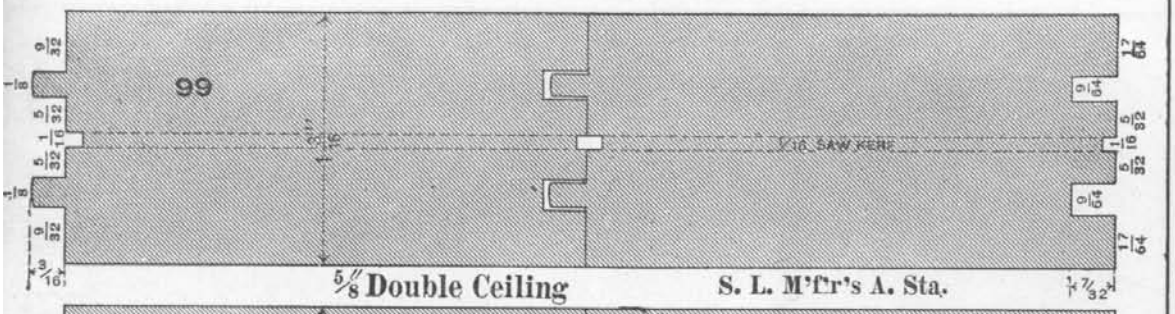
1/2" Double Ceiling N.Y.Sta.



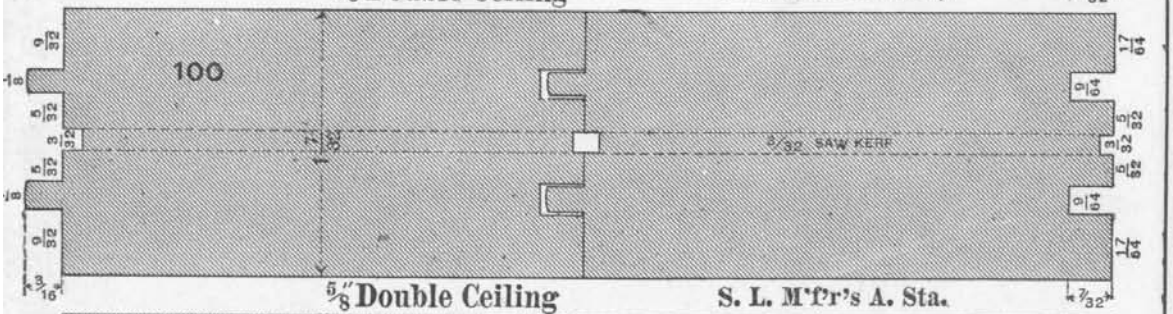
1/2" Double Ceiling S.L.M'f'r's.A.Sta.



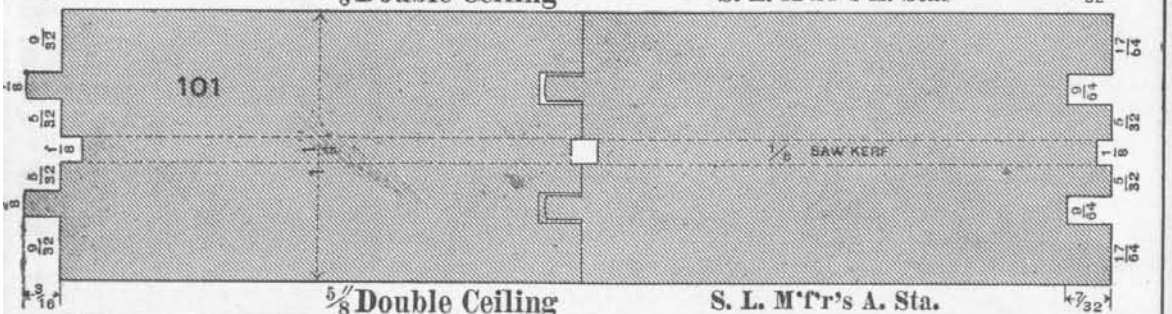
1/2" Double Ceiling N.Y.Sta.



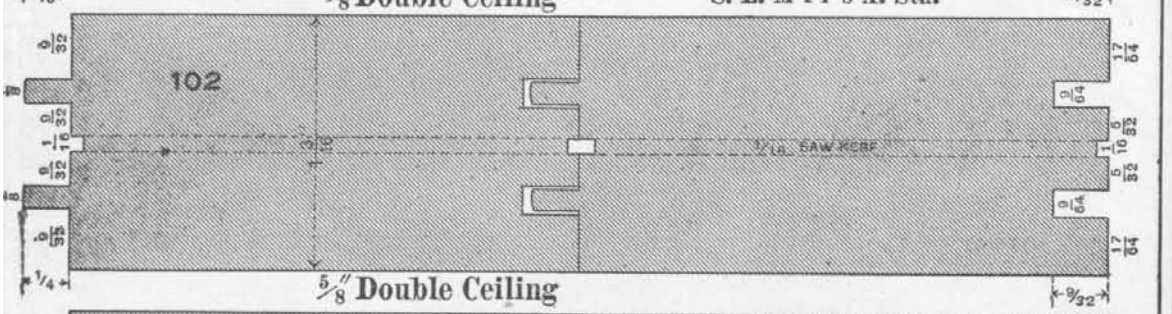
5/8" Double Ceiling S. L. M'f'r's A. Sta.



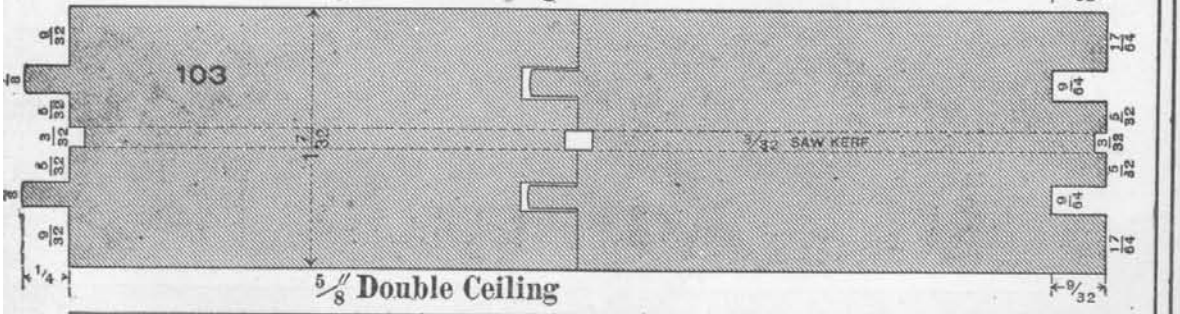
5/8" Double Ceiling S. L. M'f'r's A. Sta.



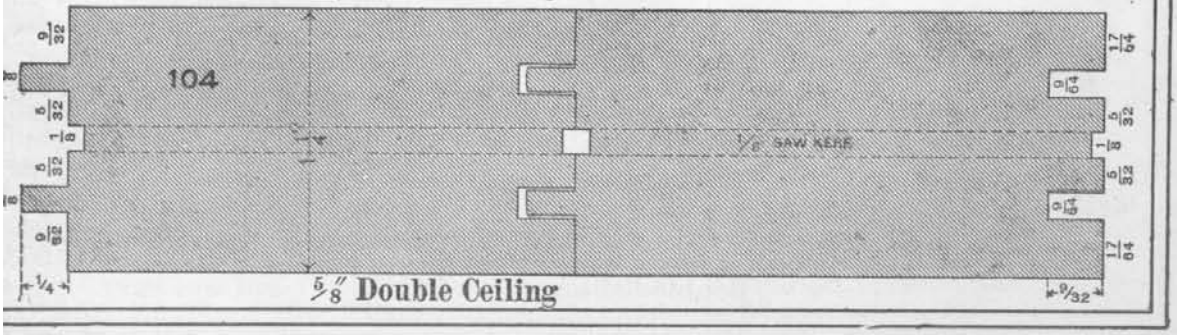
5/8" Double Ceiling S. L. M'f'r's A. Sta.



5/8" Double Ceiling

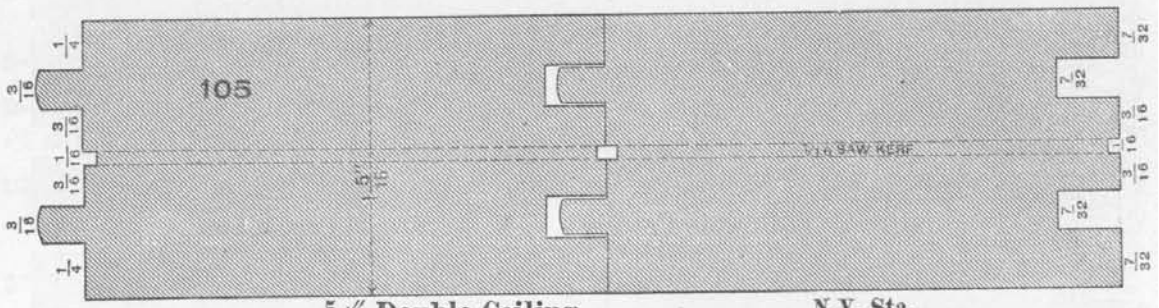


5/8" Double Ceiling

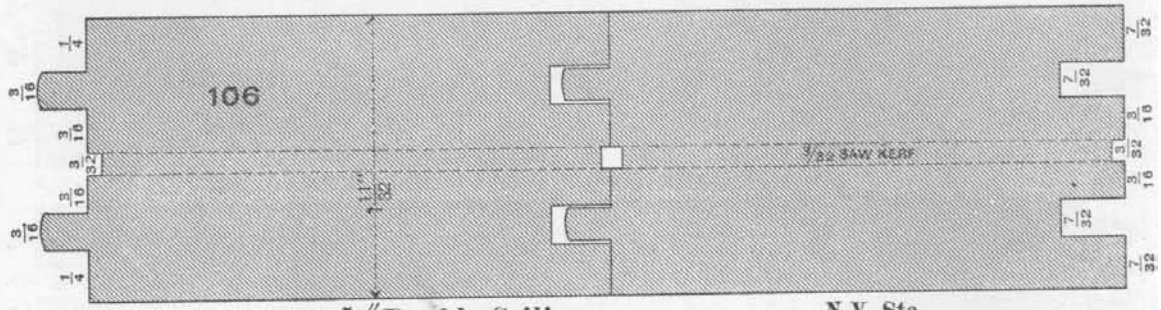


5/8" Double Ceiling

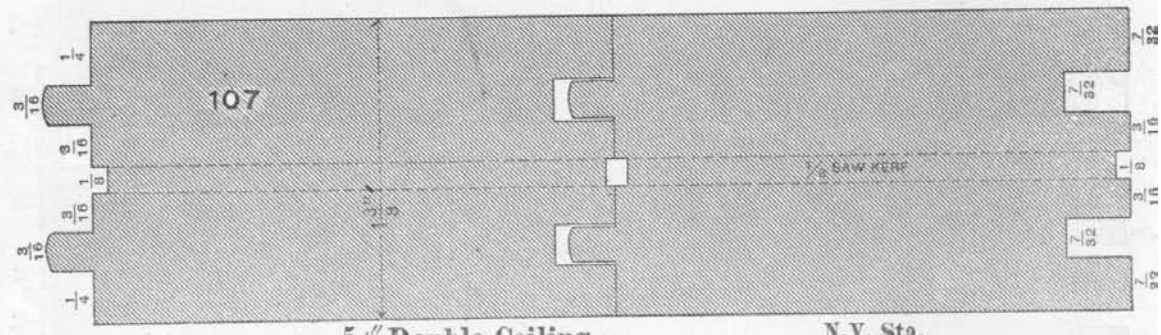
DOUBLE CEILING



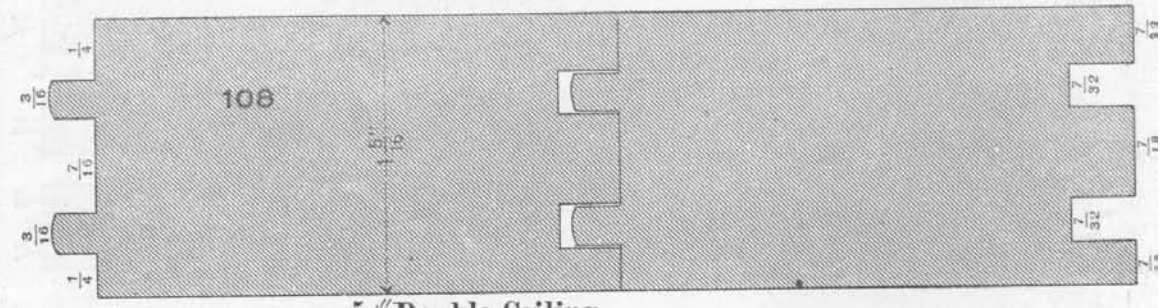
5/8″ Double Ceiling N.Y. Sta.



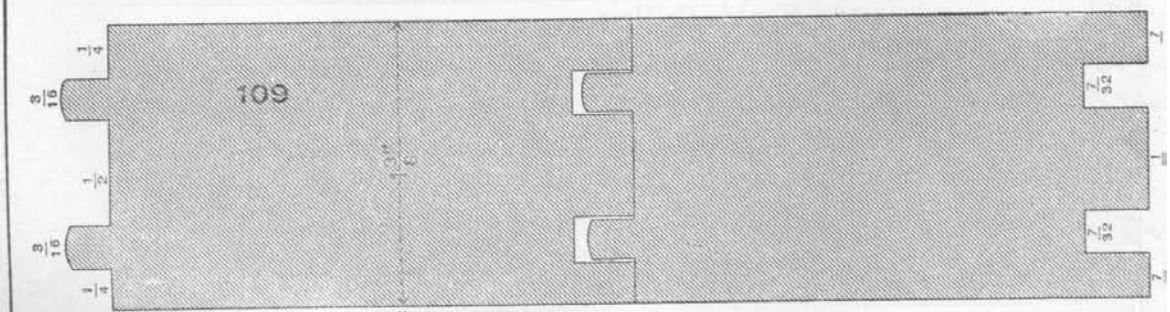
5/8″ Double Ceiling N.Y. Sta.



5/8″ Double Ceiling N.Y. Sta.



5/8″ Double Ceiling



5/8″ Double Ceiling

The Shimer Intermediate High Speed Jointer Heads.

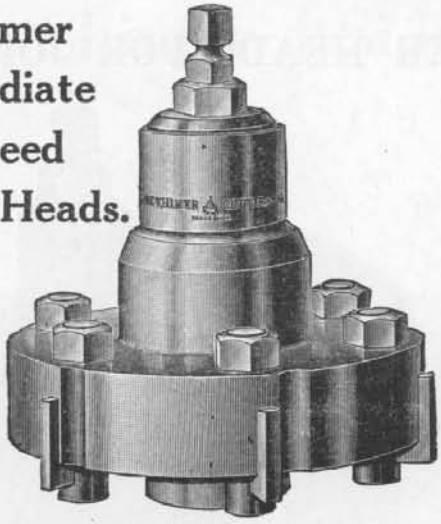


Fig. 517

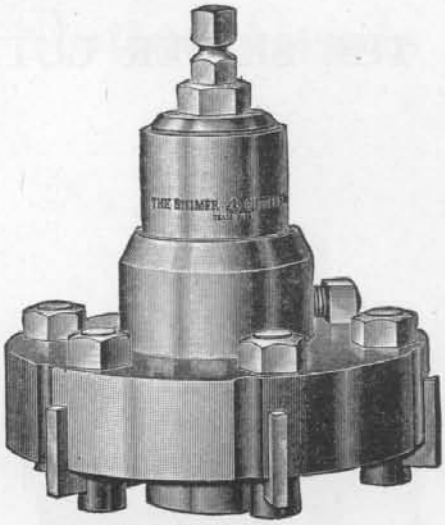


Fig. 518

Following the plan of the Shimer Intermediate Cutter Head for high speed matchers for making flooring we show here a pair of High Speed Jointer Heads for 2 inch material or less, developed along the same lines. The Heads are made in solid section of high tensile steel, mortised to receive the high speed steel knives as shown, which are held in place by the mortised knife bolts, also made of special steel, guaranteed to hold firmly in place during high speed work on any hard lumber. The Heads will also receive knives for other special purposes but they depend largely upon the skill of the operator to keep them in perfect order. However, all who desire a first class tool at a very reasonable price will find this a tool containing excellent materials, good workmanship and one capable of doing superior work in the hands of a skilled operator.

THESE ARE OUR NET PRICES

SHIMER INTERMEDIATE JOINTER HEADS, FIG. 517 AND 518

For jointing 2 inch or less, with 4 Bit Slots, without bits, each	$84.03
For jointing 2 inch or less, with 6 Bit Slots, without bits, each	92.46
For jointing 2 inch or less, with 8 Bit Slots, without bits, each	101.42
Knives to joint 2 inch, each	2.21

Self Centering $27.84 per set extra

LIGHT SHIMER JOINTING HEAD FOR SHAPER

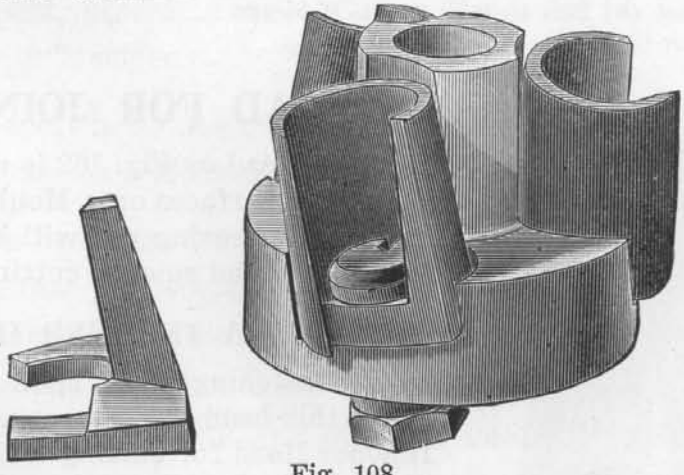


Fig. 108

This cut represents a small size Jointer Head for use on a Shaping Machine and differs only from our larger Heads for this purpose in the number of Cutters used. The larger Heads are made with four Bits in line of work, whereas, these have but three Bits in line of work. The excellent cutting qualities of this Head has made it a particular favorite.

Price each Head, to joint 2 in. wide, complete with Bits 2 in. wide and gauge, net	$39.66
Price each Head, complete without the Bits, net	26.28
Price new Bits 2 inches wide, net each	4.46
Price new Bits 1 to 1¼ inches wide, net each	3.66

THE SHIMER CUTTER HEADS FOR JOINTING

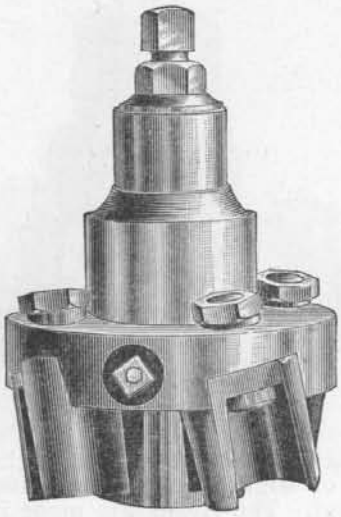


Fig. 54

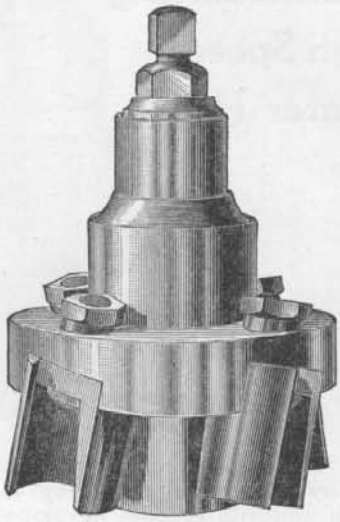


Fig. 55

Fig. 54 and Fig. 55 represents The Shimer Cutter Heads for jointing the edges of a board or plank. The Bits begin cutting at the top, after heavy shear cutting angles downward, leaving the upper corner of the plank full, with a clean cut finish across the edge. These Cutter Heads are made with Circular Bits to cut 2 inches thick and under.

THESE ARE OUR NET PRICES

The Shimer Cutter Heads, Solid Steel Forged, for Jointing with Circular Bits	
Net Price for Cutter Heads with (4) Bit Seats, without Bits	$55.94
One Set (8) Bits to joint 15/16 to 1¼ inches or less	29.28
One set (8) Bits to joint 1½ to 2 inches	35.71
One set (8) Bits to joint 3 inches	55.52



Fig. 162

HEAD FOR JOINTING

This Head as Fig. 162 is used for Jointing square surfaces on a Moulding Machine. Its special shearing cut will be appreciated for its easy and smooth cutting.

AS A TENONER HEAD

By fastening a saw upon the top of the flange this head also serves as an excellent Tenoner Head for cutting the tenons on the ends of door rails and mullions as also every other class of tenoning done on machines of that kind.

Give length and diameter of a head to suit your purpose and let us give you price for one of these special heads.

The Shimer 4 Side Slotted Heads

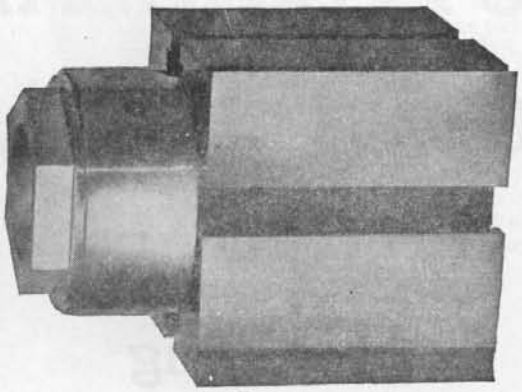


Fig. 680

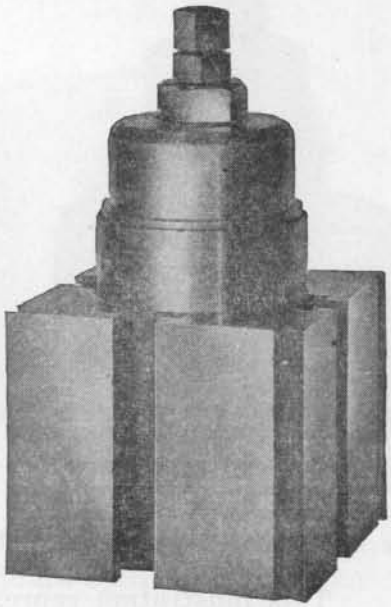


Fig. 681

At the right we show a Steel Forged, carefully tooled, T-Slotted Side Head, Fig. 681, with a Self-centering Collet with which the Head fastens firmly to the spindle, without the use of a set screw.

You can attach the common slotted jointer knives or moulder knives. It also receives for use the slotted Milled-to-Pattern Knives. A very convenient, general purpose Cutter Head for the side spindles of any Matcher or Moulder.

At the left is a Cutter Head of the same general construction, but arranged for use on a Moulder or a profile spindle of a Matcher.

To this tool Fig. 680 you may attach any Moulder Knives slotted for a T-bolt, that you would use on the profile spindle. The knives may be of the common moulded-in-edge variety or the milled-to-pattern kind.

THESE ARE OUR NET PRICES:

The Shimer Four Side Slotted Heads with Self Centering Device Bolts and wrench

4 inch High the set $119.44

Same 6 inch High the set 138.24

Jointer Knives for Heads at Regular Knife Prices.

Heads furnished without Self Centering at $13.92 less, each Head.

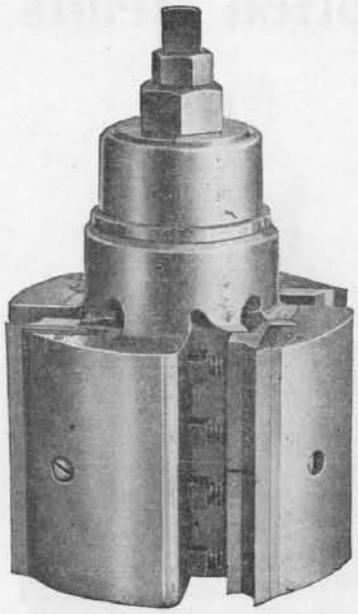


Fig. 636

MULTI-BIT CUTTER HEAD

For Side Jointing, Profiling and Moulding

This illustration represents our Multi-Bit Side Profiling and Moulding Head. The Heads are made of high tensile steel forgings, bored and turned to fit our Self-Centering Device, which clamps it fast to the spindle without the use of a set screw or other objectionable feature.

The Heads are grooved longitudinally to receive the high speed steel knives and patent knife jacks.

The screws in the jacks have their bearing against the square shoulder on the opposite side of the slot and this holds the knives from displacement during all kinds of hard work. The good work of these Heads has brought us many duplicate orders by reason of the convenience and usefulness by which high speed is handled.

Each knife jack is made in two parts, the one part interlocking with the Head forging and the other part interlocking with the first named part, so that in case a screw should become loose in operation the parts will still remain in place. There is little likelihood, however, of a screw becoming loose if they are properly drawn up when making the change of knives. The very firm grip this set screw has upon the knife keeps all the parts in perfect alignment and there is little possibility for accident or derangement of the parts.

The knife jacks being made in two parts are expansible so that two thicknesses of knives can be used between the same two sections of the knife jacks if desired, permitting the use of jointing knives, beading knives or other profiling knives in connection therewith, simplifying the combinations whereby special work is made, whether for the side spindles of a matcher or the top spindle of a moulder.

THESE ARE OUR NET PRICES

1 Set 4 Knife Jointer Heads, 2″ High complete with Knives	$131.06
1 Set 4 Knife Jointer Heads, 3″ High complete with Knives	140.70
1 Set 4 Knife Jointer Heads 4″ High complete with Knives	149.62
1 Set 4 Knife Jointer Heads 6″ High complete with Knives	200.28
1 Set 6 Knife Jointer Heads 2″ High complete with Knives	173.30
1 Set 6 Knife Jointer Heads 3″ High complete with Knives	191.29
1 Set 6 Knife Jointer Heads 4″ High complete with Knives	207.90
1 Set 6 Knife Jointer Heads 6″ High complete with Knives	261.58

Deduct $27.84 per set if self centering is not required

SQUARE AND ROUND MOULDER HEADS

with open ends, for use on moulding machines, shapers, etc.

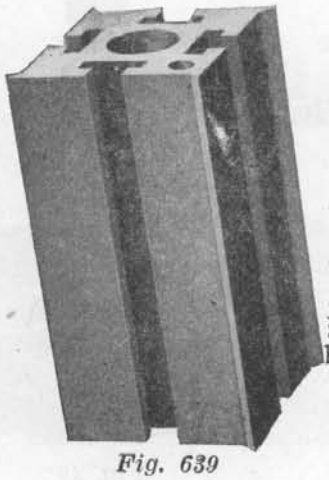


Fig. 639

For Profile Heads with open top and self centering Dievice add to the prices below $18.20 each head.

For side heads with top screw adjustment and Self Centering Device add to prices below $21.60 each head.



Fig. 660

Here are shown Steel Forged Heads for moulder or shaper, made with the same accuracy as the round and square cylinders we make, for the large matching and moulding machines.

Steel forgings hammered down from the open hearth steel billets, are unequalled for solidity of grain and texture. They have strength and endurance, being free from blow holes or similar defects, and as cutter heads maintain a good running balance, hence, give the user every satisfaction.

THESE ARE OUR NET PRICES FOR HEADS UP TO 5½" CUTTING CIRCLE

Fig. 639, Four Sided Slotted Head without Bolts or Knives.

4	*inches*	*long*	$38.13	8	*inches*	*long*	$52.05
5	"	"	41.65	9	"	"	55.46
6	"	"	45.16	10	"	"	58.98
7	"	"	48.67	12	"	"	65.89

Two Sided Slotted Heads without Bolts or Knives.

4	*inches*	*long*	$27.15	8	*inches*	*long*	$37.80
5	"	"	29.83	9	"	"	40.46
6	"	"	32.50	10	"	"	43.15
7	"	"	35.42	12	"	"	48.51

Fig. 660, Four Knife Round Safety Heads with Jacks but no Knives.

4	*inches*	*long*	$40.96	8	*inches*	*long*	$56.80
5	"	"	44.94	9	"	"	60.81
6	"	"	48.91	10	"	"	64.78
7	"	"	52.87	12	"	"	72.70

Two Knife Round Safety Heads with Jacks but no Knives.

4	*inches*	*long*	$31.22	8	*inches*	*long*	$42.45
5	"	"	33.93	9	"	"	45.28
6	"	"	36.77	10	"	"	48.11
7	"	"	39.23	12	"	"	53.77

Self-Centering Device extra $13.92

The Shimer Heads to Mould O. G. Batten and Siding

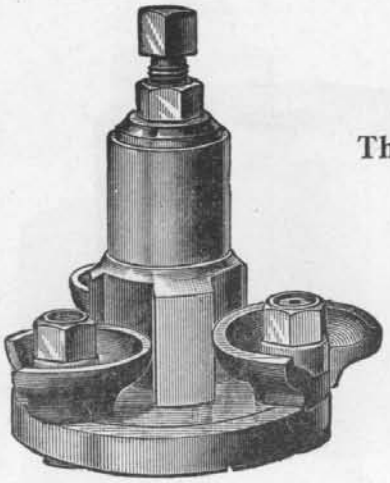


Fig. 48

TRADE

The Shimer Cutter Head

MARK

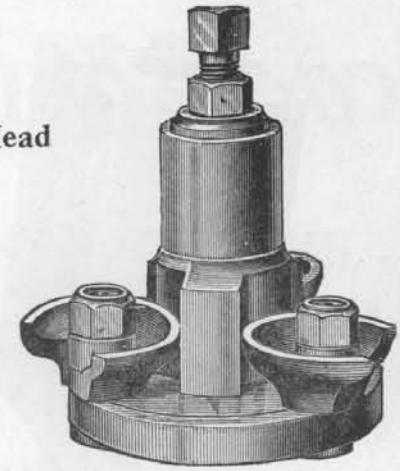


Fig. 49

The two electros, Figs. 48 and 49, represent The Shimer Cutter Heads that apply to regular flooring and moulding machines to mould O. G. Batten, with three Circular Bits in line of cut on the upper side of the Cutter Head flange. For patterns in cross section see O. G. Batten designs on page 70. In ordering give Record Numbers of our make of Flooring Heads in use, or send us measurements in detail

To make O. G. Siding like Fig. 51, you will need one special Cutter Head with the O. G. Bits below the head flange like Fig.52. Fig. 53 is like Fig. 49 in every particular, excepting possibly the shape of the O. G. Bits.

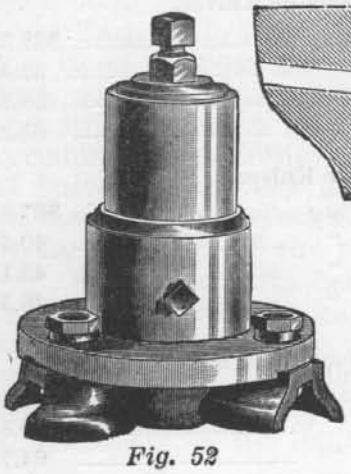


Fig. 52

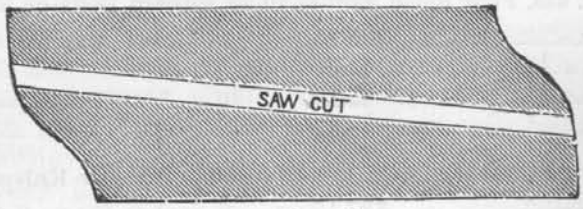


Fig. 51

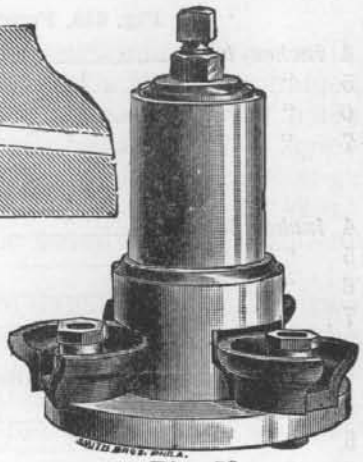
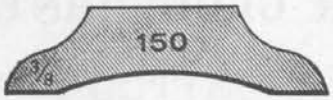
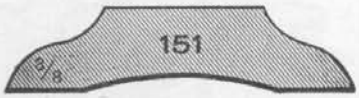


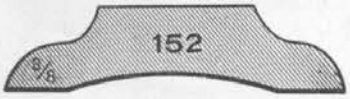
Fig. 53

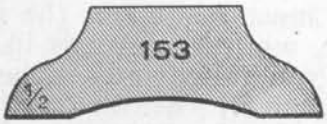
THESE ARE OUR NET PRICES

	Each
The Shimer Cutter Heads with plain head flange, Figs. 48 to 53 inclusive (These Cutter Heads will not take Circular Bits to cut 1¼ deep.)	
Net price for each Cutter Head without the Bits	$28.71
O. G. Batten Bits to mould ¾ deep or less	4.75
Net price for each Cutter Head complete with 3 Bits	42.96


150
3/8

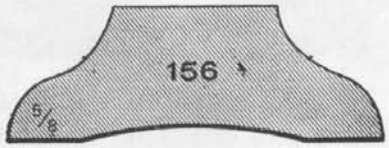

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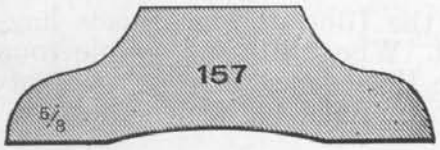

152
3/8


153
1/2

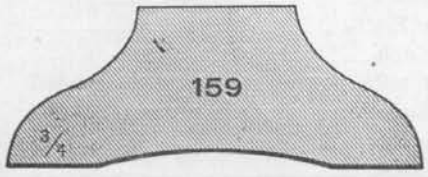

154
1/2

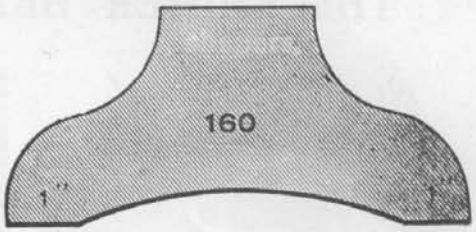

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1/2

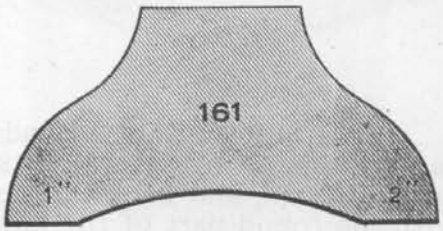

156
5/8

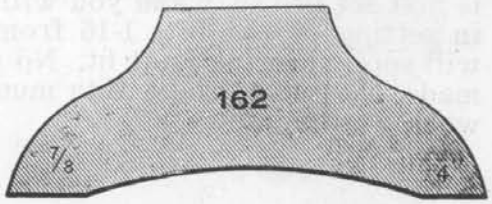

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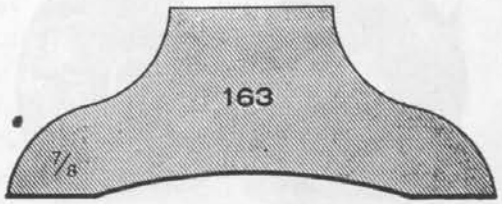

158
5/8


159
3/4

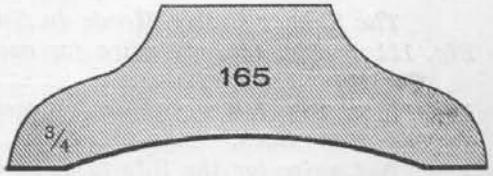

160
1"

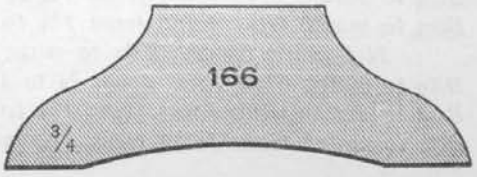

161
1"
2"


162
7/8
4"


163
7/8


164
7/8


165
3/4


166
3/4

THE SHIMER HEADS FOR GLUE JOINT.

Tongue Head

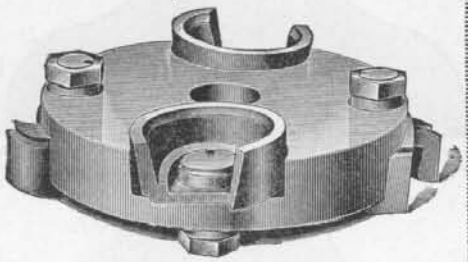


Fig. 144

See patterns of Glue-Joints on page 74 or send sample.

Groove Head

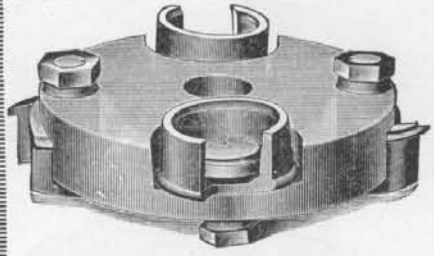


Fig. 145

The Shimer Cutter Heads to match for Glue Joint require a very careful setting of several Bits. The gauge must rest upon the flange, both in front and back of the cutting edge, while the arm is in touch with the round part of the nut, from which you gauge and set the shear cutting edge of each Bit. (Refer to Fig. 16, page **8.**) See that the gauge is first set properly and you will have no trouble to set the Bits. To fail in setting of the Bits 1-16 from the true position the gauge indicates, will spoil the glue joint fit. No matter how carefully the Cutter Head is made, the set of these Bits must be exact or the Cutter Head will not work a glue joint.

Tongue Head. Groove Head.

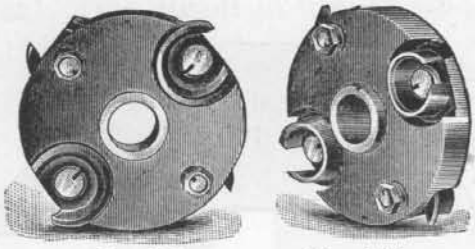


Fig. 146 *Fig. 147*

Plan view of Glue Joint with 4 Bits complete.

Tongue Head. Groove Head.

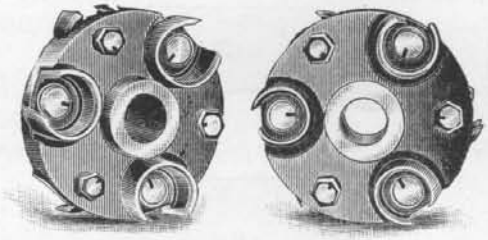


Fig. 148 *Fig. 149*

Plan view of Glue Joint Head with 6 Bits complete.

The above engravings represent the Glue Jointer Heads having Bits for single tongue and groove joint. When Bits for double tongue and groove are desired we construct the Heads special to suit, therefore the Bits apply only to the special design of Head for which they are intended.

THESE ARE OUR NET PRICES

The Shimer Cutter Heads in Solid Section for Glue Joint.

Fig. 144 or Fig. 145, net price for each Cutter Head with 4 bit seats without the Bits Each,	$27.52
Fig. 148 or Fig 149 net price for each Cutter Head with 6 bit seats without the Bits Each,	33.08
Net price for the Bits to make Glue Joint with single tongue and groove.	
Bits to match Glue joint from ¾ to 1¼ inches Each	3.69
Bits to match Glue joint from 1¼ to 1¾ inches Each,	4.01
Bits to match Glue joint from 1¾ to 2 inches Each,	4.46
Net price for the Bits to make Glue Joint with double tongue and groove.	
Bits to match Glue Joint from ¾ to 1¼ inches Each,	4.18
Bits to match Glue Joint from 1¼ to 1¾ inches Each,	4.65
Bits to match Glue Joint from 1¾ to 2 inches Each,	5.32

THE SHIMER

CUTTER HEADS for Matching Reversible Glue Joints

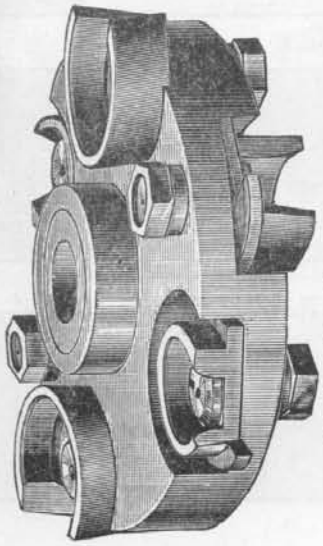


Fig. 66

See patterns of Glue Joints on page 74 or send sample.

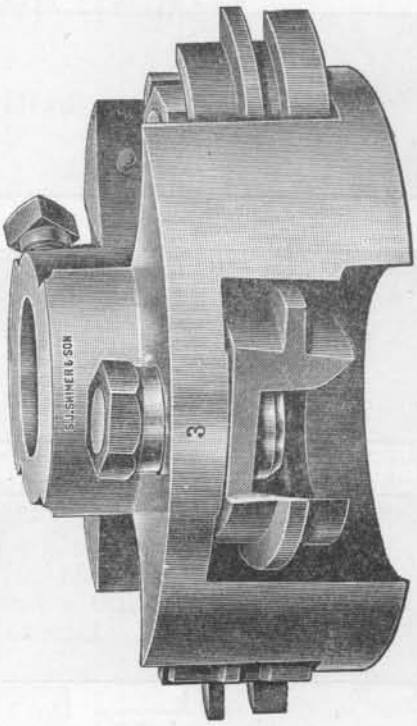


Fig. 66 A

Reversible Glue Joint.

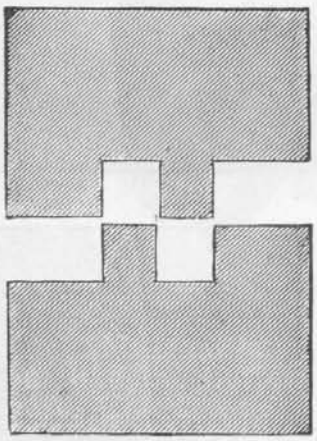


Fig. 67

This glue joint is a common reversible pattern that makes a neat and strong joint, fitting and interlocking from the same piece of matched material, requiring but one Head with Bits to produce. The jointed material will fit together when pieces are sawed to length by turning the one piece end for end.

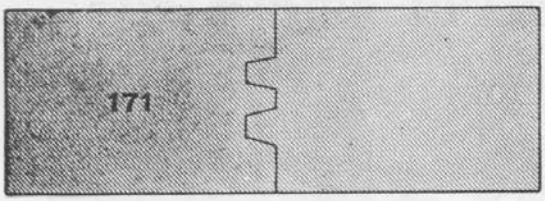
We make two styles of the Head as shown in the cuts, Fig. 66 having 6 Bits to complete the work, Fig. 66 A having but four Bits to do the same work. The difference is accomplished by a change in the division of the Bits upon their bit seats. Both tools are well made, and either tool will give its user complete satisfaction.

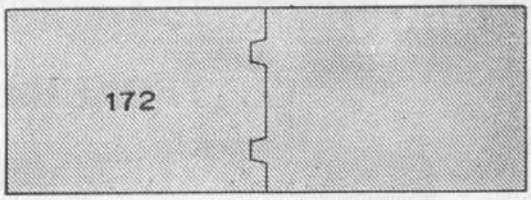
THESE ARE OUR NET PRICES

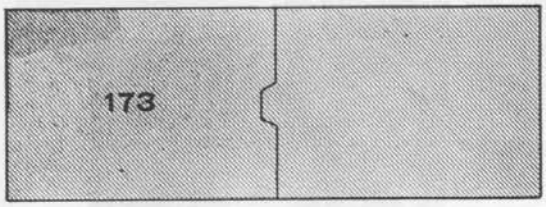
The Shimer Cutter Heads in Solid Section for Glue Joint.

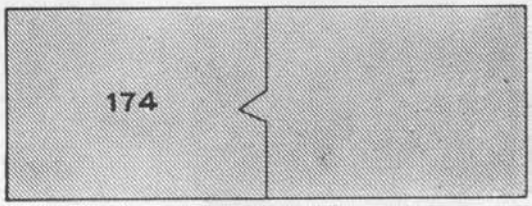
Fig. 66A, net price for each Cutter Head with 4 Bit Seats (without the Bits) Each	$33.20
Fig. 66, net price for each Cutter Head with 6 Bit Seats (without the Bits) Each	36.81
Net prices for the Bits to make Glue Joint with single tongue and groove.	
Bits to match Glue Joint from ¾ to 1¼ inches Each	3.69
Bits to match Glue Joint from 1¼ to 1¾ inches Each	4.01
Bits to match Glue Joint from 1¾ to 2 inches Each	4.46
Net prices for the Bits to make Glue Joint with double tongue and groove.	
Bits to match Glue Joint from ¾ to 1¼ inches Each	4.18
Bits to match Glue Joint from 1¼ to 1¾ inches Each	4.65
Bits to match Glue Joint from 1¾ to 2 inches Each	5.32

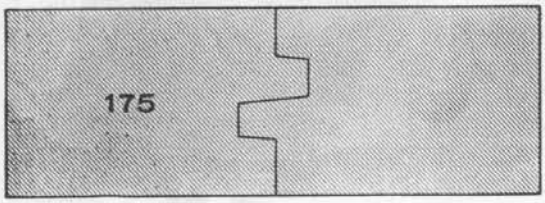
GLUE JOINT

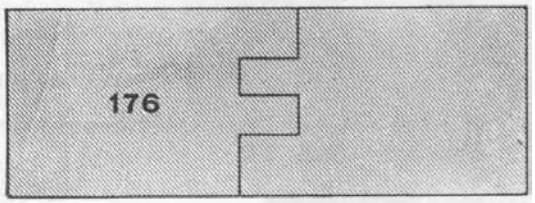


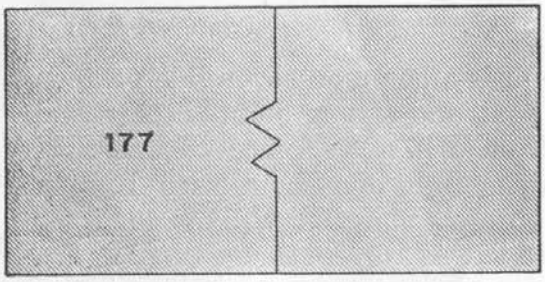


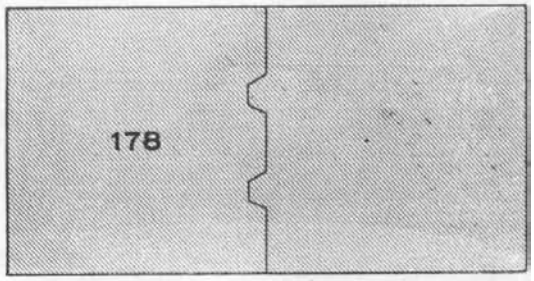


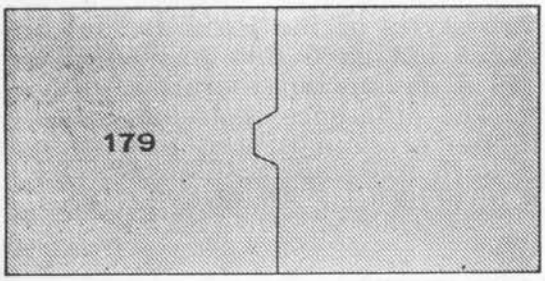


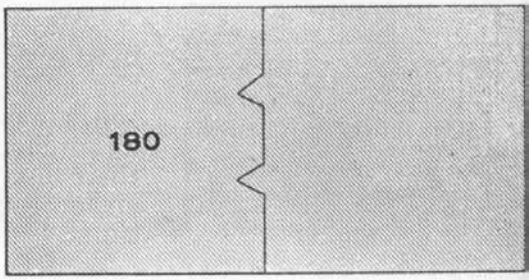


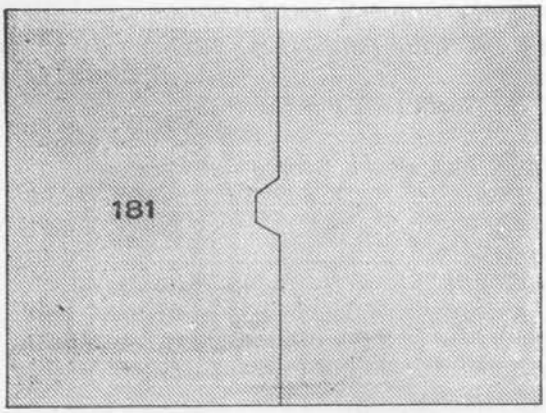


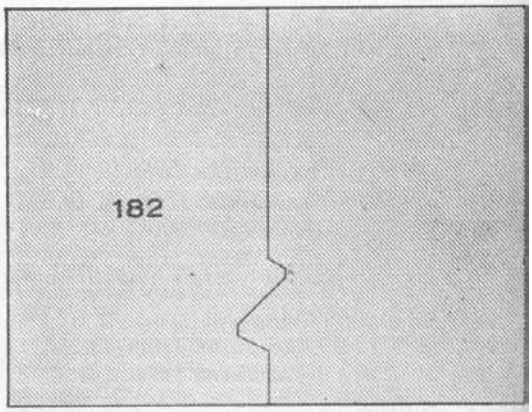












BOX BOARD MATCHER HEADS

We also furnish special heads for box board matching double and triple thickness for re-sawing into thinner tongue and groove boards. Send sample. Write us about your requirements.

TRADE

The Shimer Cutter Head

MARK

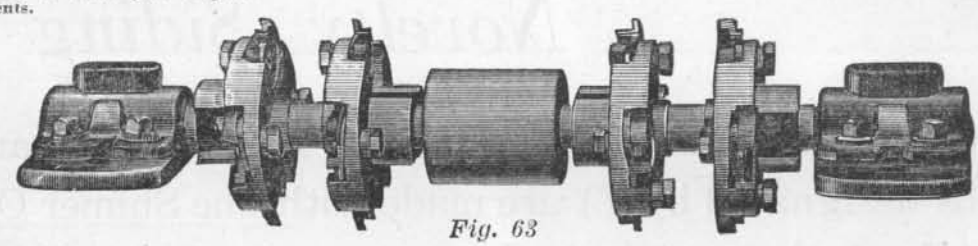


Fig. 63

This illustration represents two set of The Shimer Cutter Heads upon one mandrel with drive pulley between them. They are provided with Bits to match Box Board material work that must hold together by the neat fitting of tongue in groove. The Shimer Cutter Heads will make a uniform cut and close fit in every instance, as well after years of use as when the Bits are new. There is no friction upon the Bits therefore no loss of power, no waste of material.

Tongue Head

Groove Head

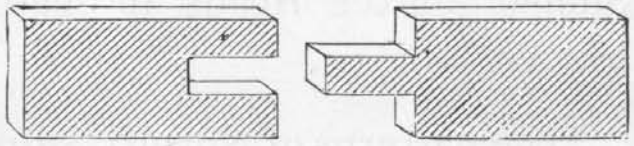


Fig. 61

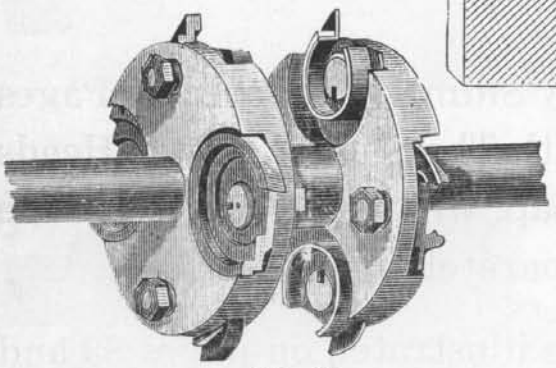


Fig. 62

Fig. 61 represents a tongue and groove with clean cut edges for a drive fit to hold the pieces together for handling.

Fig. 62 represents two of The Shimer Cutter Heads as arranged side by side in a machine.

THESE ARE OUR NET PRICES

For Cutter Heads in Solid Section:	Each	The Set
Net price for each Cutter Head with 4 bit seats complete, without the Bits	$25.20	$50.40
Net price for each Cutter Head with 6 bit seats complete, without the Bits	28.20	56.40
One set (8) Bits to match ⅜ to ½ inch	2.79	22.32
One set (8) Bits to match ⅝ to ¾ inch	2.79	22.32
One set (8) Bits to match ⅞ to 1 inch	3.10	24.80
One set (2) Cutter Heads with 4 Bits each to match ⅜ to ½ inch		72.72
One set (2) Cutter Heads with 4 Bits each to match ⅝ to ¾ inch		72.72
One set (2) Cutter Heads with 4 Bits each to match ⅞ to 1 inch		75.20

The Patterns of Novelty Siding

illustrated on the following pages (Yellow Pine Standards designated by Y) are made with The Shimer Cutter Heads that match single tongue and groove–with or without Expansion. The dotted line portion of the work is cut with top Cylinder. The cost of Heads for this work is the same as the price quoted for The Shimer Cutter Heads to match single tongue and groove.

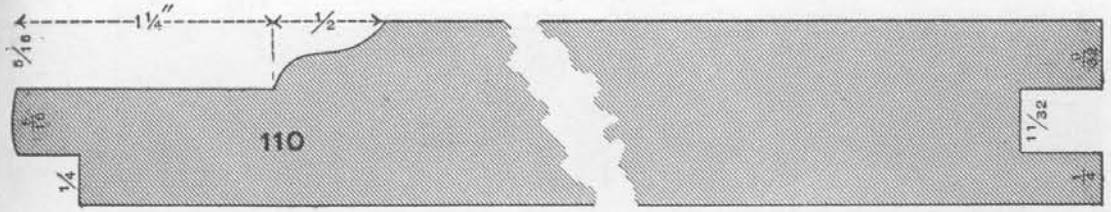
The patterns of Novelty Siding illustrated on Pages 79, 80 and 81 are made with The Shimer Cutter Heads that make regular Ship Lap, where the prices for the Heads and the Bits are separately quoted.

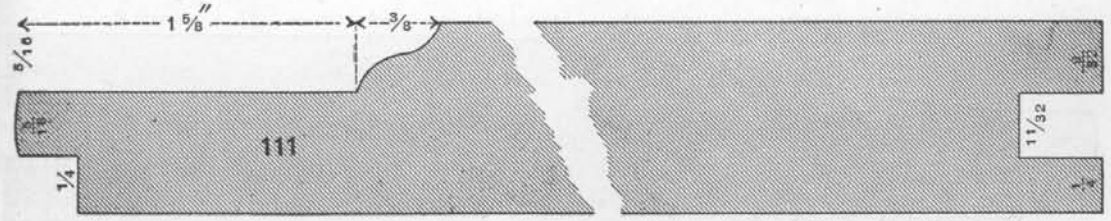
The Bed Rail patterns illustrated on pages 83 and 84 come under the head of Door Mouldings and the Bits take the same price.

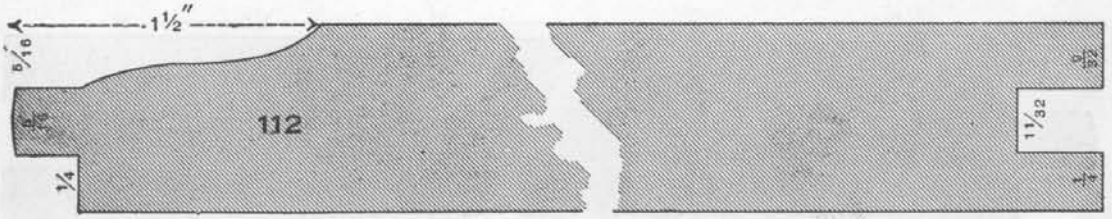
For the price of any one set of Heads complete without the Bits see prices quoted on pages 18 and 19.

These Are Our Net Prices for Bed Rail Heads

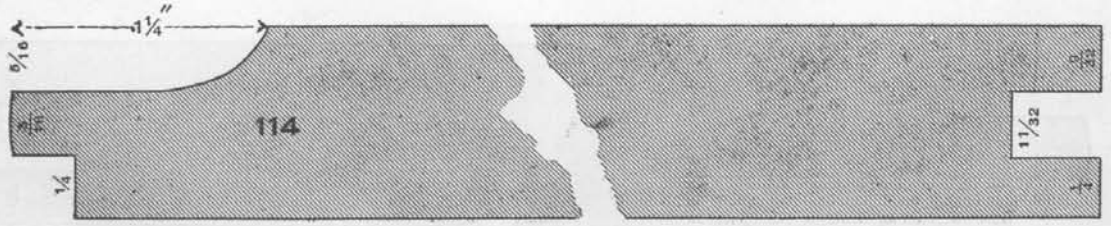
Fig. 13, to groove ½ or 9/16 in. deep, in Solid Section, with flat bit seats) each, without Bits	$27.90
Fig. 213, to groove ½ or 9/16 in. in Expansion Section, (with flat bit seats) each, without Bits	49.12
Price for Bits to match plank 2 to 2¼ inches thick, each	4.34
The price of Bed Rail Moulded Bits, each	4.85
The price of Bed Rail Plain Bits, each	3.84

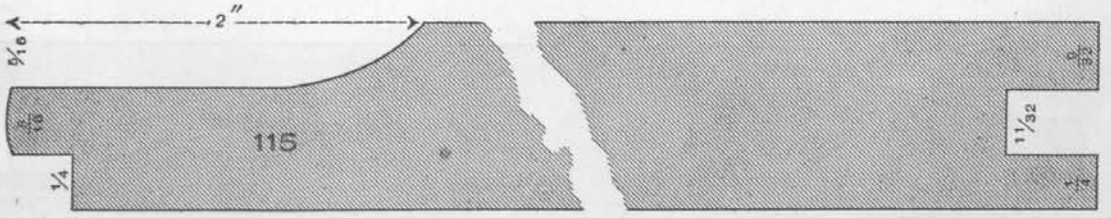

1¼"
½
5/16
110
1/4
11/32
1/4


1 5/8"
⅜
5/16
111
1/4
11/32
1/4

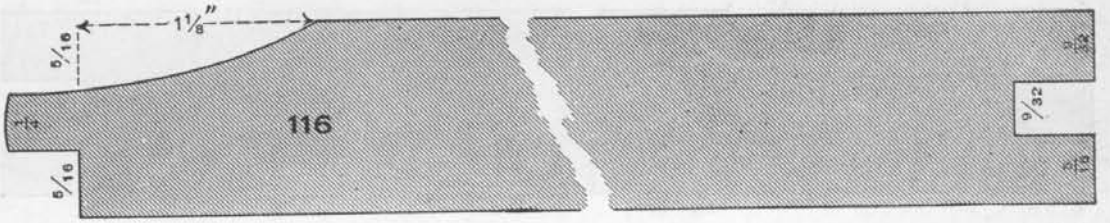

1½"
5/16
112
1/4
11/32
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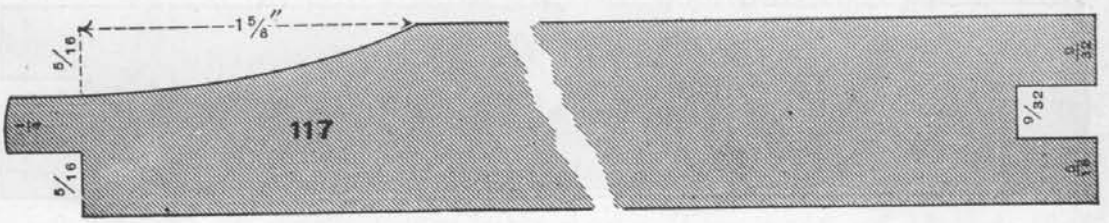

1¼"
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113
1/4
11/32
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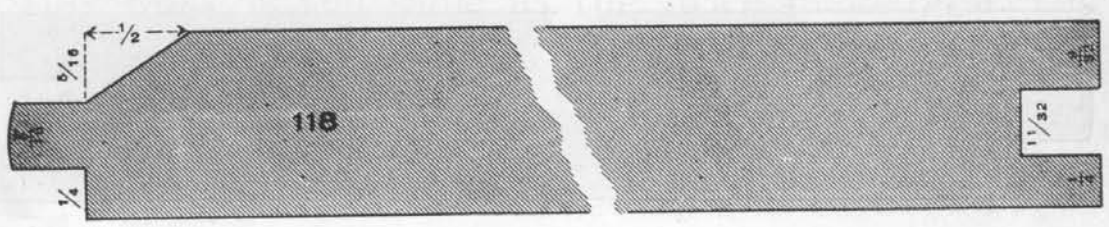

1¼"
5/16
114
1/4
11/32
1/4

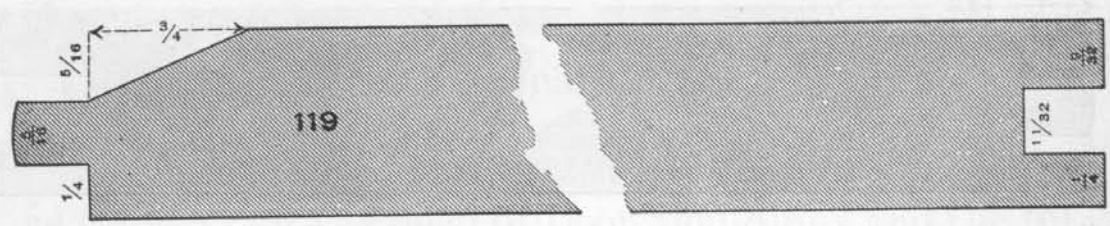

2"
5/16
115
1/4
11/32
1/4

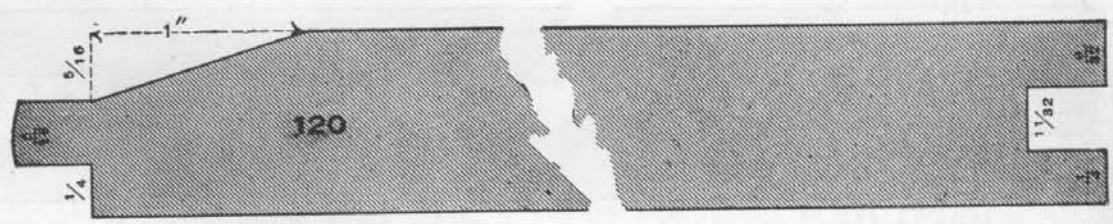
NOVELTY OR DROP SIDING

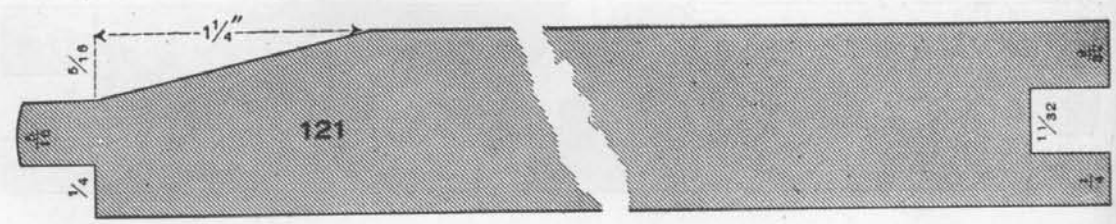


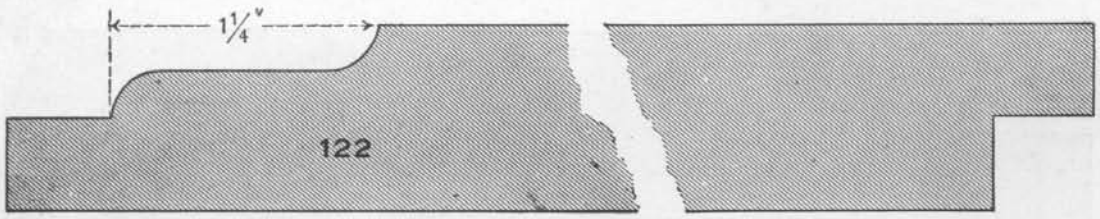


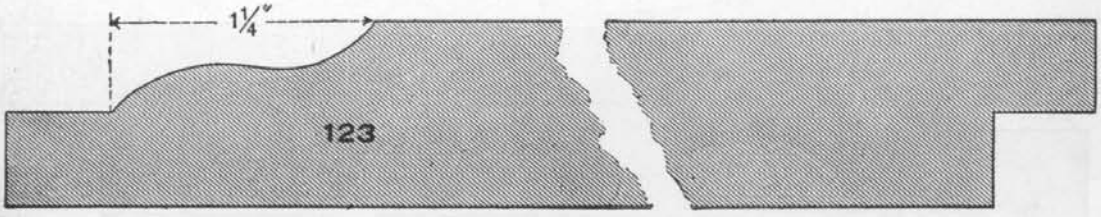


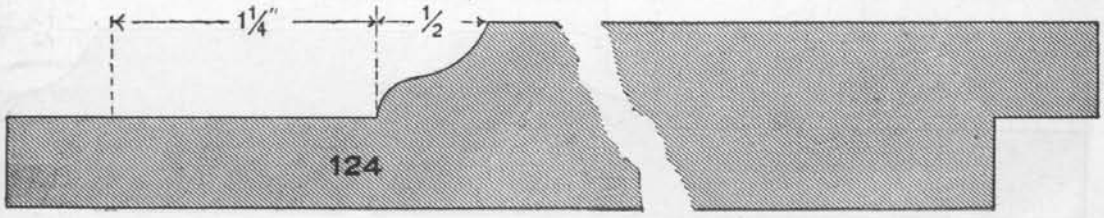


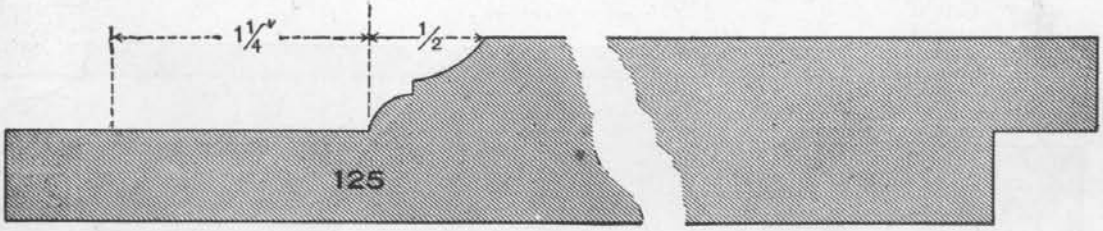


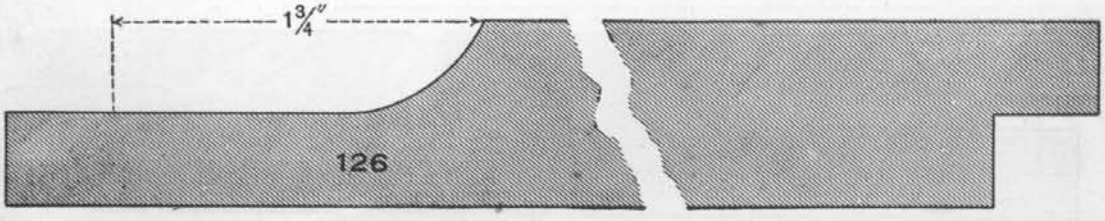


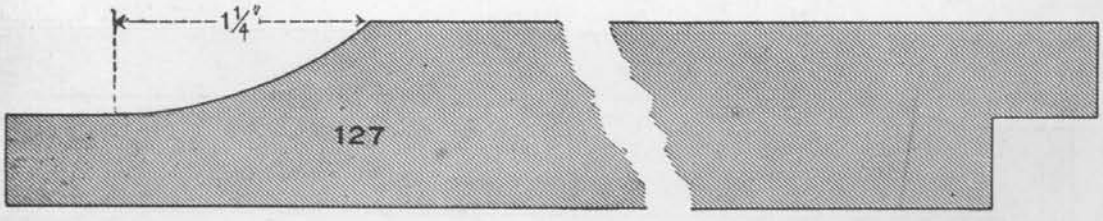

1¼"
122

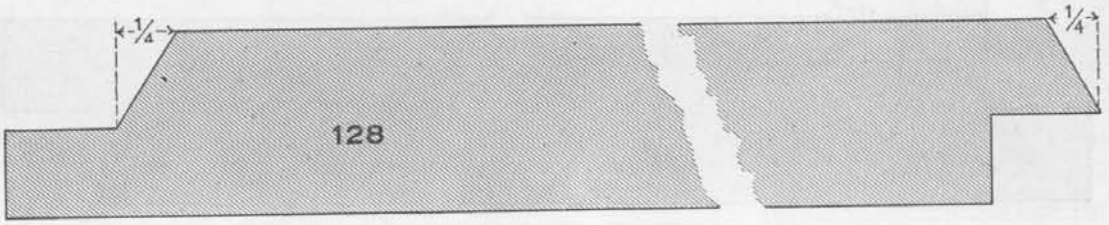

1¼"
123

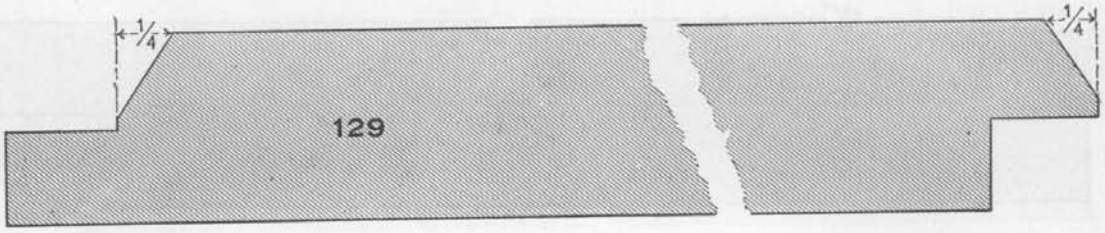

1¼"
½
124

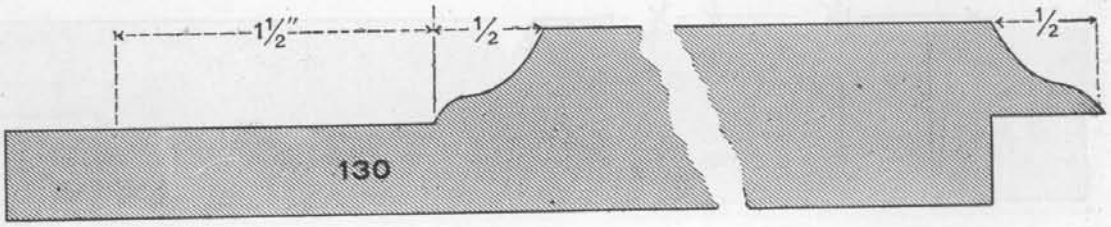

1¼"
½
125

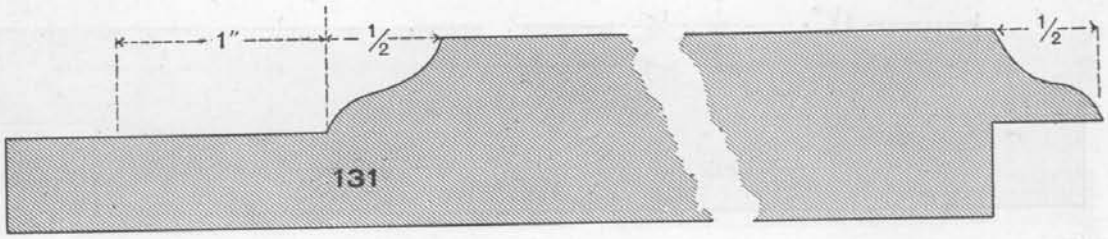

1¾"
126

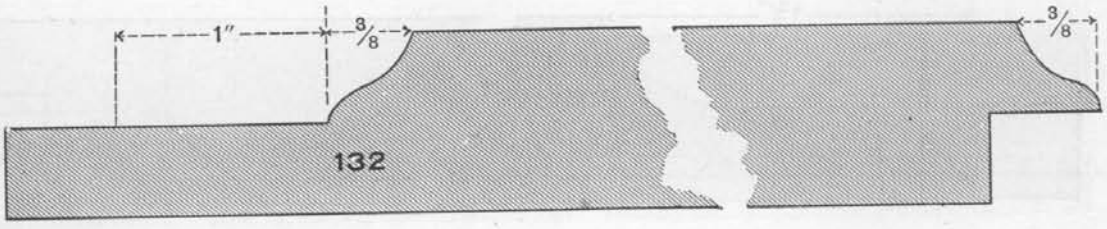

1¼"
127

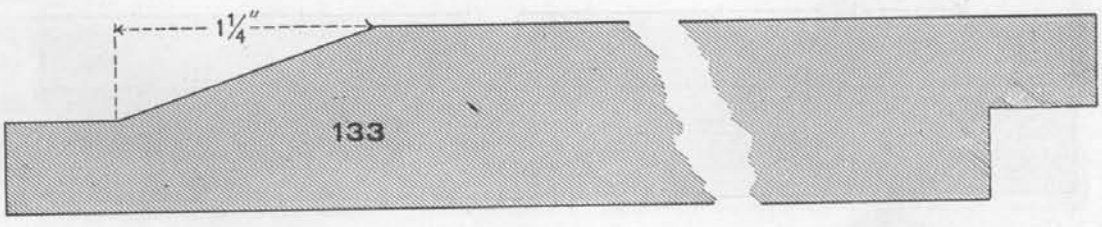

1/4
128
1/4

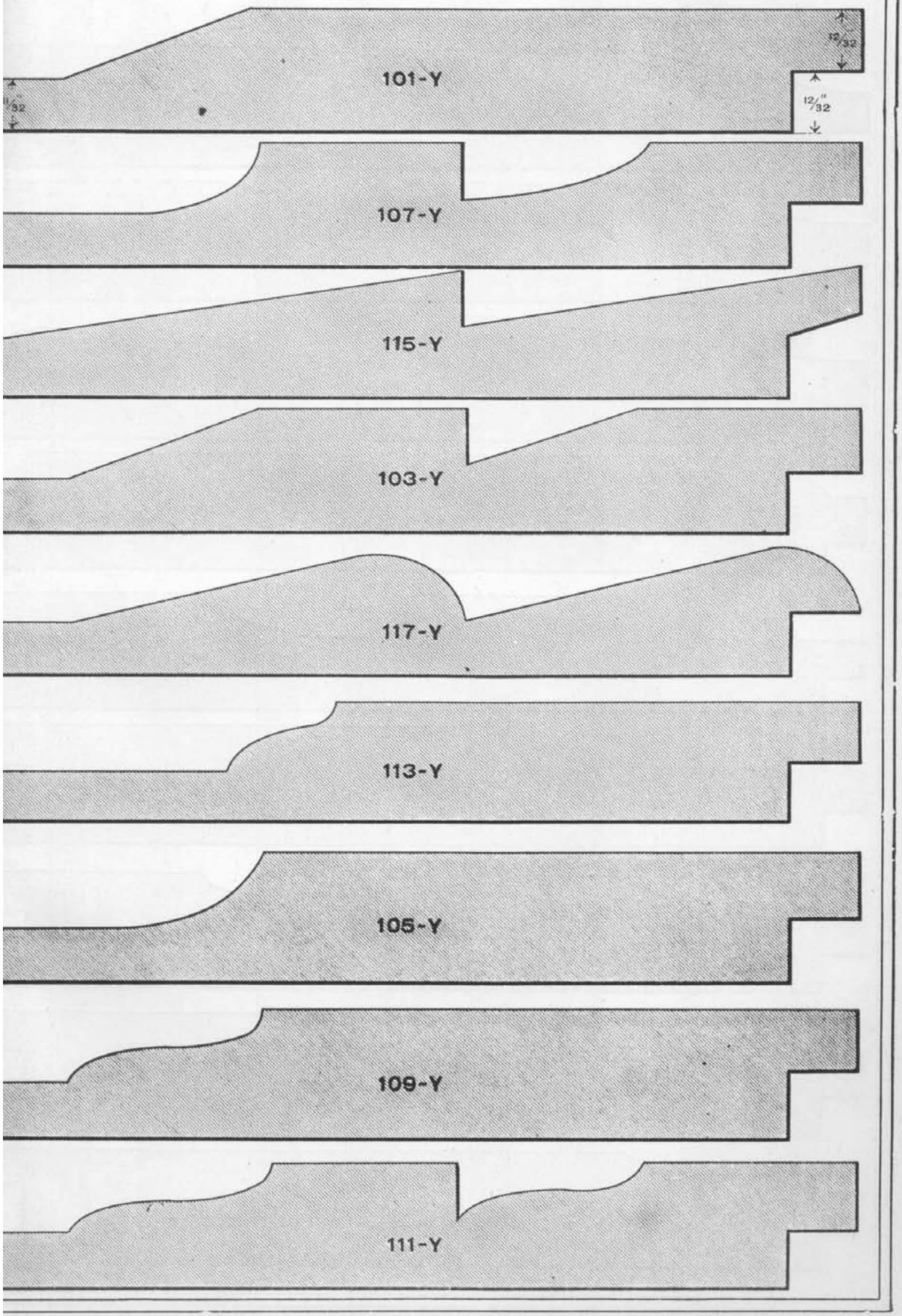

1/4
129
1/4


1 1/2"
1/2
130
1/2

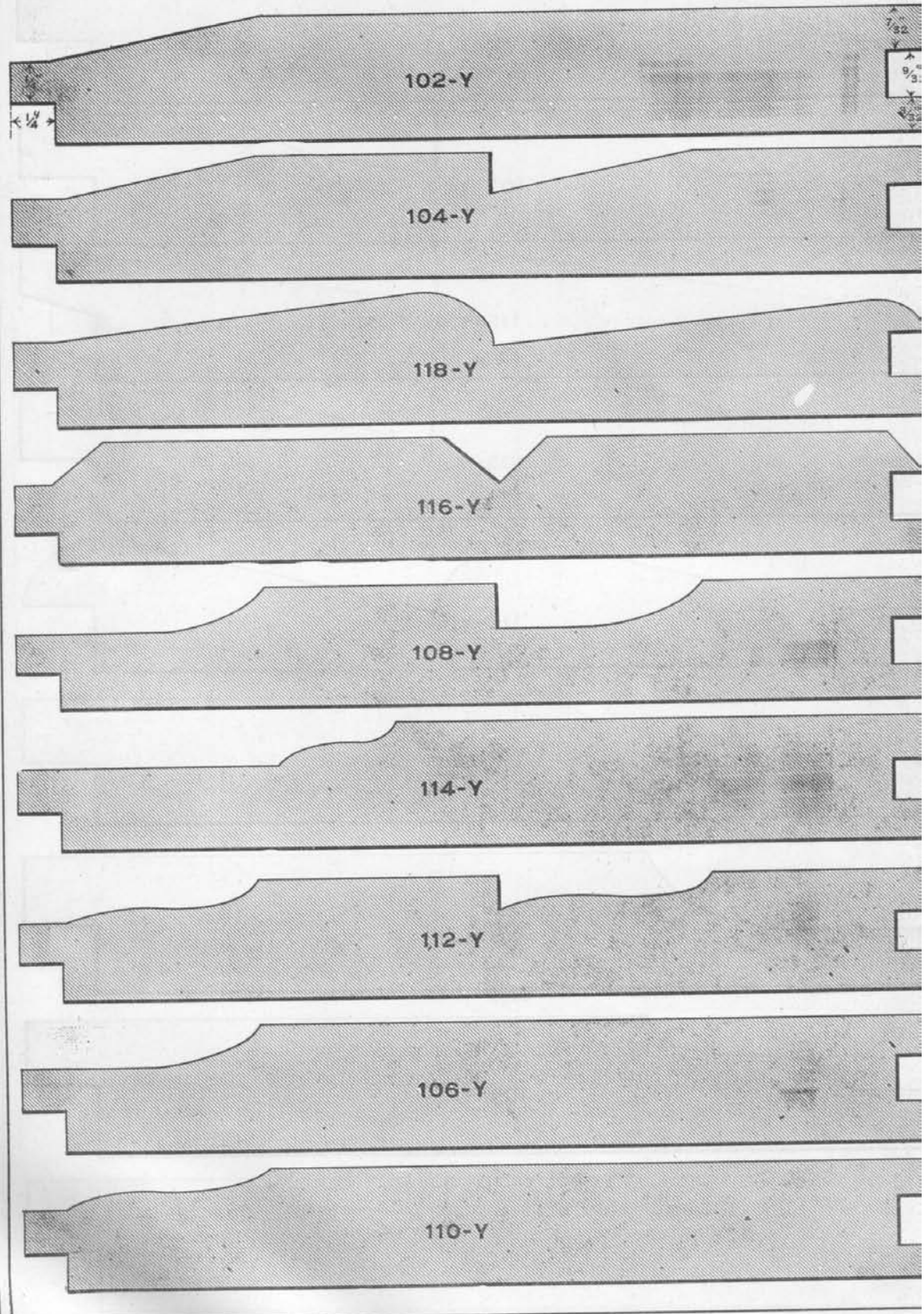

1"
1/2
131
1/2


1"
3/8
132
3/8


1 1/4"
133


101-Y
12/32
12/32
107-Y
115-Y
103-Y
117-Y
113-Y
105-Y
109-Y
111-Y

NOVELTY OR DROP SIDING



137
136
135
134
141
140
139
138

BED RAILS

The Shimer Square Moulder Head with Milled to Pattern Bits.

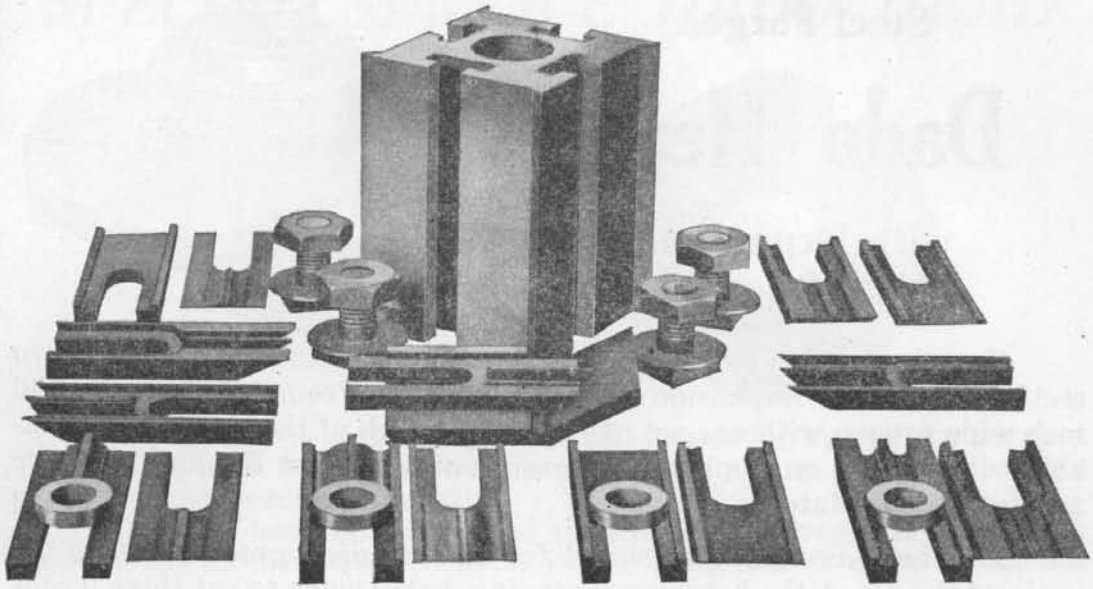


Fig. 693

This outfit consists of our regular 4-Side Slotted Head as shown on Page 69 and special milled to pattern bits.

These bits can be made to match any pattern of moulding. We will gladly quote prices of Milled Bits.

Grooving and Jointing Head.

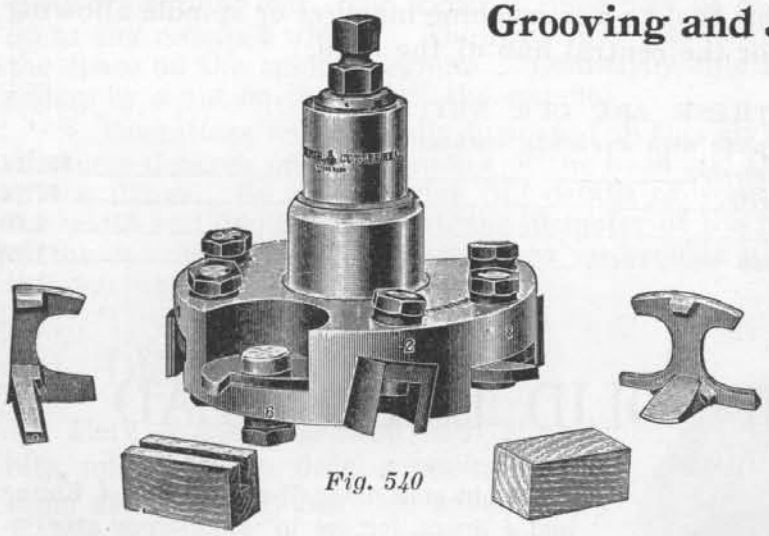


Fig. 540

This engraving represents our special grooving head with 8 bits each. It is quickly converted into a plain jointing head by removing the grooving bits and therefore does service for each purpose as shown by the cut.

The head is made of Steel Forgings in a most careful manner and the bits are of high carbon tool steel.

The bit seats are inclined and give to the bits that special and valuable shearing effect that has made the Shimer Cutter Head famous.

As a rapid cutting tool, having a perfect side clearance for each cutter, this tool is most complete and second to none.

We make it to suit all requirements for grooving of furniture or other special parts.

THESE ARE OUR NET PRICES

Heads, Fig. 540 with 8 bit seats and no bits, net, each head	$39.06
Bits to joint 1¼ inch thick, each	3.66
Bits to joint 1¾ inch thick, each	4.11
Bits to joint 2 inch thick, each	4.65
Bits to groove ¼x½ inch deep each	2.73
Bits to groove ½x½ inch each	2.97

Steel Forged

Dado Head

with Expansion

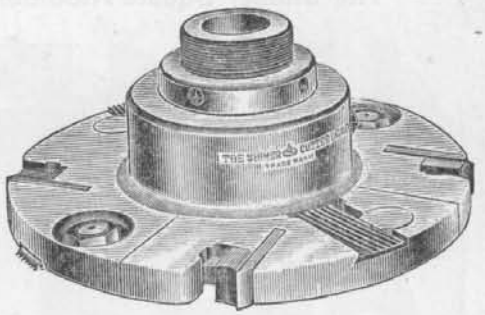


Fig. 535

Here is our Steel Forged Dado Head Fig. 535. It is made in two sections upon the Expansion principle working from 1 inch to 1 15-16 inch wide groove with one set of bits. The width of the groove is adjustable with the nut on the hub and consists of our latest Expansion device as used on our Matcher Heads.

This head is especially suited for cutting deep grooves across the grain of the wood, the head per engraving, being made to cut three inches deep.

The knives are firmly held in place with bolts and means whereby all projections of parts at the side of flange is avoided.

We can apply this tool to any machine mandrel or spindle allowing five inches or more for the central hub of the head.

THESE ARE OUR NET PRICES

Dado Head Fig. 535 complete with wrenches, without the bits, to cut on a 10 inch circle,	$72.14
to cut on a 12 inch circle,	77.74
Extra saw Bits, each,	2.80
Extra straight Bits, 1 inch wide, each,	1.72

SHIMER SOLID DADO HEAD

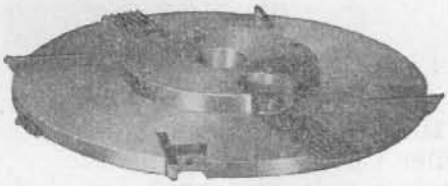


Fig. 690

This thin steel Dado Head is given 4 Knives and 4 Spurs, for use in very narrow grooves. The high speed knives are held in place by the wedge clamp. The Spurs are arranged two on each side of the flange to properly smooth up the edges of the groove.

This Head may be used on any saw arbor, singly or in multiples. It may also be used for check rail on a large Tenoner in connection with our large Cope Heads.

This head may also carry the knives shaped to cut a desired pattern such as check rail coping. It is an ideal tool for the operator who is making check rail sash or narrow, deep grooves in quantity.

Prices will be quoted on a head of the proper size for your purpose when you send us full details. Be sure to give us the large diameter of the head, the thickness of the groove and the spindle diameter.

SPECIAL SERVICE DADO HEAD



Fig. 689

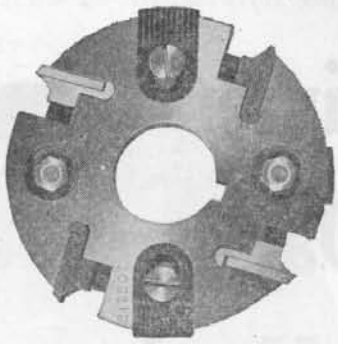


Fig. 689 represents a special Dado Head made for a particular purpose. This Head is ideal for cutting grooves either singly or in multiples, using a group of these Heads on a spindle.

The head has four high speed steel jointing knives held securely in place by the Shimer patented knife jack. These knives serve to cut out the wood the exact width of the groove required.

The spur or saw bits are mounted between the knives—two on each side of the head to properly smooth out the cut. These bits are bolted in a groove so that they cannot change position during operation of the head.

This Head may be made small or large according to the swing of Head or depth of cut. The width of Head may be had in sizes from 1 inch up to any required width. The head may also be made self-centering if the space on the spindle permits. Ordinarily this head is held between collars by a nut on the end of the spindle.

Quotations will be gladly furnished on this style of Head. The price of course depends on the diameter of the head and the height or thickness of the flange. Be sure to give full details of your requirements. State the width and depth of the cut, the diameter of the head and the diameter of the spindle. For your convenience we provide a blank on page 89 for this purpose.

DEEP GROOVER

Here is a special head with spurr bits, milled, to do deep grooving the same as a saw. It has this advantage over a saw, that it does not become smaller in its cutting diameter as it is used, but the spurr bits (which are saw bits) are adjusted outwardly as wear occurs, so as to keep the cutting diameter uniform in size.

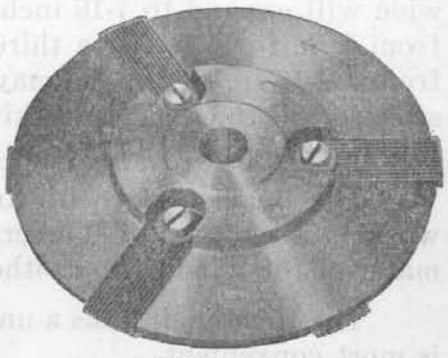


Fig. 692

The spurr bits are arranged to cut alternately, first on one side, the next on the other and overlapping the central line, make a clean cut groove with the grain, across the grain or in the end of the grain. Used on any machine for grooving where it is desirable to hold to a uniform working diameter. The Spurr bits may be made of Hi-Speed Steel for the longer wear.

Prices and any other particulars desired will be given on request.

The Shimer Dado Head

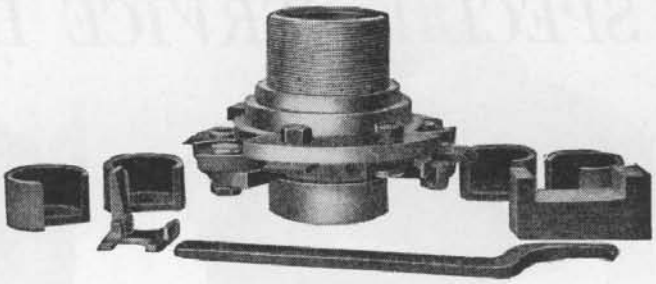
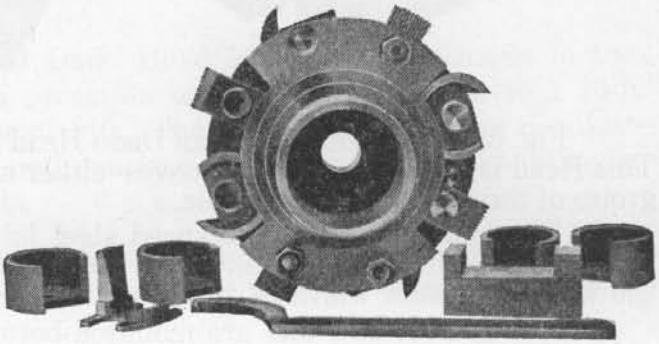


Fig. 507

For use on a Saw Bench, with Short Spindle.

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Bottom View of *Fig. 507*

This Dado Head is built especially for short spindles, such as used in the usual saw bench. It is held to the spindle between the usual collars, the nut passing into the recess of the hub.

The Head is made in two sections, one sliding over the other, and the flanges interlock in a substantial manner. The movement of the head sections is under control of the neatly devised expansion ring with automatic locking mechanism similar to that in use in The Shimer Expasion Head for flooring.

The Head will expand from ¼ to 2 inches and will cut grooves any width for which suitable Bits are had. A set of Bits for cutting ¼ inch wide will expand to 7-16 inch. A second set of grooving Bits will work from ½ in. to 15-16 in.; a third set will work from 1 in. to 1 15-16 in. or from 1 1-16 in. to 2 in. as may be preferred. The same Saw Bits will answer for all thicknesses, making it necessary only to change the Circular Bits in changing for different thicknesses.

The Head works with and across the grain, producing the best of work in all classes of lumber, and is particularly useful in working out material for window and other frames.

The Head maintains a uniform cutting diameter and on this account is most convenient.

THESE ARE OUR NET PRICES

Head (made of bronze castings) 9 inch cutting diameter or less, with 4 Saw and 4 Circular Bits	$84.73
Extra Saw Bits, each	2.80
Extra Circular Bits, ¼ inch wide, each	3.66
Extra Circular Bits, ½ inch wide, each	3.66
Extra Circular Bits, ¾ inch wide, each	4.65
Extra Circular Bits, 1 inch wide, each	4.65

THE SHIMER CUTTER HEAD

After the plan of the Combination Head as illustrated on page 98

Made to order to fit any Saw Mandrel

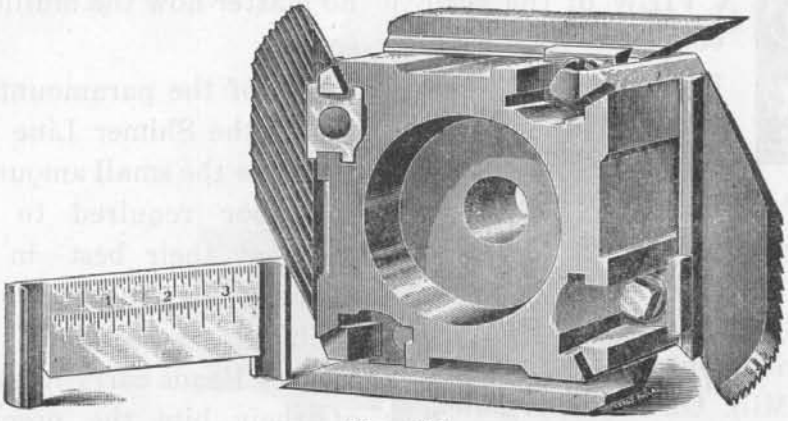


Fig. 103

A Dado Head with Adjustable Bits

The Bits that cut the outer limit of the Dado work have spurs as part of the Bit, serated along the sides, which when brought to an edge, make very durable Cutters like saw teeth, as shown in the cut. These Bits are set to cut wide or narrow. Other plain Bits are used to clean up the remaining portion of the cut.

THESE ARE OUR NET PRICES

One Dado Head (Combinaton) without the Bits		$45.17
The Grooving Bits ½ inch wide	Each	$3.62
The Grooving Bits ¾ inch wide	Each	3.62
The Grooving Bits 1 inch	Each	3.62
The Grooving Bits 1¼ inch wide	Each	4.02
The Grooving Bits 1½ inch wide	Each	4.92
The Grooving Saw Bits	Each	5.66
The Dado Head, Fig. 103, complete to cut 1¼ wide		$64.53

HOW TO ORDER DADO HEADS

1. File a wire the length of which will give the exact diameter of the Mandrel .....
2. Give length of mandrel from collar to nut.....
3. Give diameter of collar .....

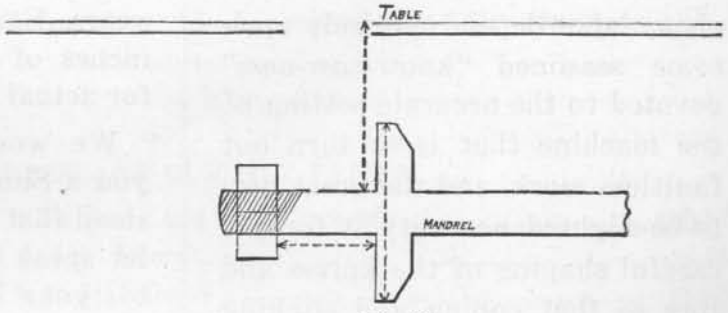


Fig. 81

4. Give diameter of nut .....
5. Give distance from mandrel to top of table when properly adjusted .....
6. How wide do you want to cut the groove .....

THE SHIMER CUTTER HEADS FOR THE SASH AND DOOR MILL.

IN VIEW of the keen competition that must ever be met and which cuts down the margin of profit to a point that renders mistakes extra costly, there is no branch of manufacturing that demands a greater uniformity of excellence in its output than a Sash and Door Mill. On the other hand, the returns from such a plant, when equipped with down-to-date machinery that is incessantly kept up to its maximum of efficiency, are ample and satisfactory.

Take a Sash for instance with its may small pieces—all of which are to be assembled accurately, by cheap labor. Upon the ease and accuracy of their coming together the output in finished work depends and the volume of that output is the infallible gauge of the income from the plant.

The satisfactory returns from cheap labor depend entirely upon some seasoned "know-how-ness" devoted to the accurate setting of the machine that is to turn out faultless work, and the great not-to-be-slighted necessity is for the careful shaping of the knives and Bits so that coping and sticking may ever meet on 'friendly terms' no matter how the mullion be presented.

One of the paramount advantages of the Shimer Line of Cutter Heads is the small amount of skilled labor required to maintain them at their best—in fact, the process of sharpening them is just ordinary "horse-sense" grinding. Shimer Heads carry in the contour of their bits the precise shape to be imparted to the work and that contour never changes. When sharpened they are first filed and accurately set with a gauge and when this is properly done the coping and sticking fit continuously.

In view of its term of efficient service, the Shimer Cutting Head is the cheapest tool of its class in existence. The body or "Chuck" will last indefinitely (some have been used 30 years) while the working life of the cutting bits, varies according to their treatment, in some mills they last 10 years. Each bit gives three to five inches of available cutting edge for actual service.

We would be pleased to send you a Shimer Door Sash or Cope Head that we are quite content to let speak for itself or will make to your measurements any of these tools and send it on 30 days trial.

SAMUEL J. SHIMER & SONS, Milton, Pennsylvania.

Shimer 8 Bit Expansion Door Head with Self Centering Feature

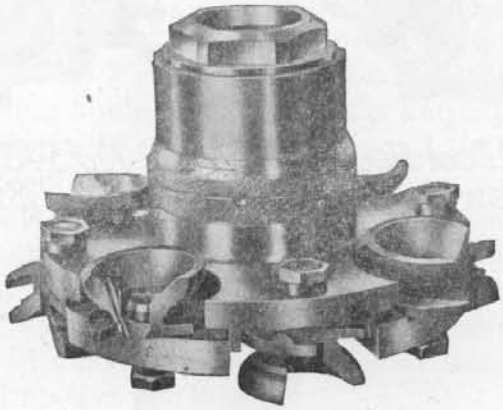


Fig 675

This Shimer Door Head has been developed to meet the requirements in the high speed production of doors. The same convenient features are offered as in the smaller heads—the convenient gauge for setting the bits—the expansion for changing the width of the groove—the Circular Bit for long life, better clearance and constant accuracy. These all combine for greater ease in making ready and resetting the machine.

The Shimer 8 Bit Expansion Door Head will work well on any high speed moulder and produce clean cut work.

Bits may be formed to any pattern of door either standard as found in the book or special sample, blue print, or drawing.

This head is fitted with the self centering device for clamping to the spindle, making possible better balance and greater accuracy.

These features all form an ideal combination for the particular operator.

THESE ARE OUR NET PRICES

Expansion Door Head with 8 Bit Seats and Self Centering	$90.14
One Set of 8 Bits to make 1 to 1¼" Doors	34.24
One Set of 8 Bits to make 1⅜ to 1½" Doors	38.80
One Set of 8 Bits to make 1¾ to 2" Doors	43.52
One Set of 8 High Speed Bits to make 1 to 1¼" Doors	42.80
One Set of 8 High Speed Bits to make 1⅜ to 1½" Doors	48.50
One Set of 8 High Speed Bits to make 1¾ to 2" Doors	54.40

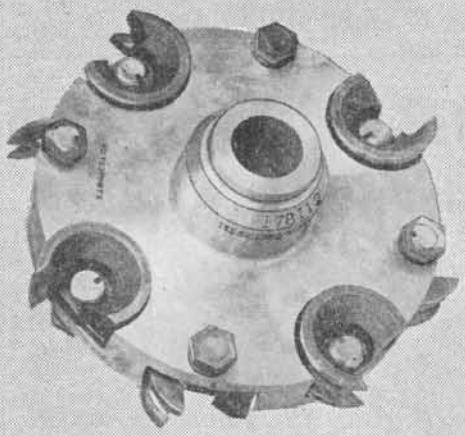


Fig. 547. 8 Bit Door Head
Top View

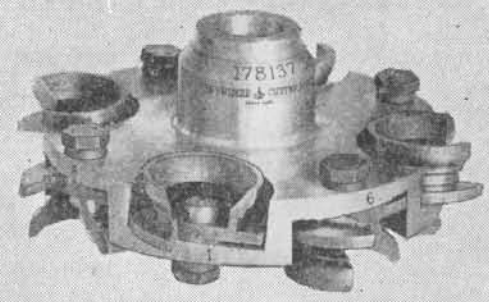


Fig. 548. 8 Bit Door Head
Side View

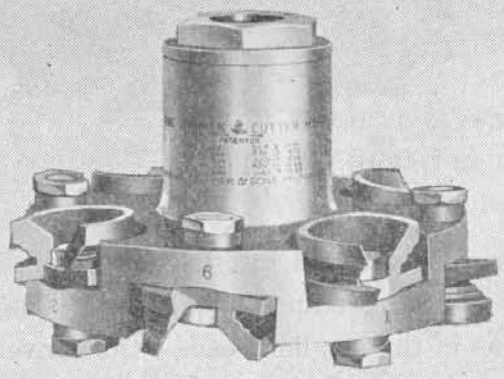


Fig. 555. 8 Bit Door Head
Self Centering Device

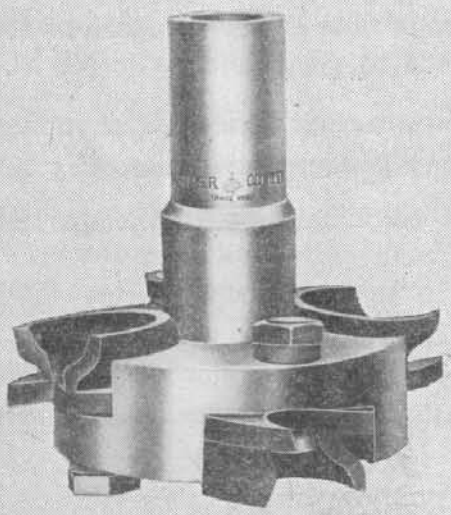


Fig. 82. 4 Bit Solid Door Head

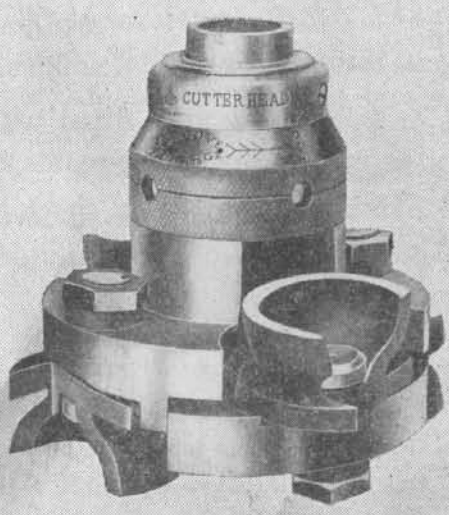


Fig. 84. 4 Bit Expansion Door Hea

Shimer Cutter Heads for Doors

SHIMER DOOR CUTTER HEADS
No. 82, 84, 547 and 555

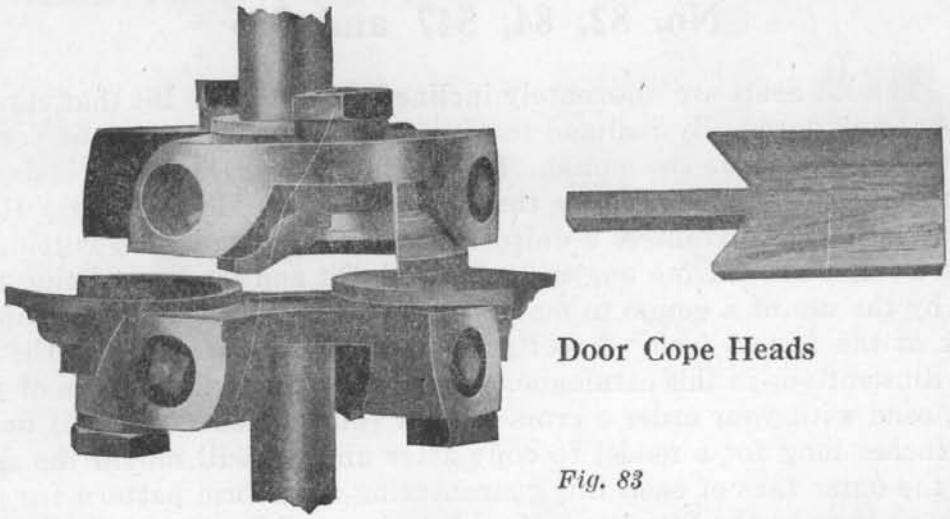
The Bit Seats are alternately inclined (to clear the Bit that cuts the groove) and outwardly inclined to give clearance to the overcut portion of the bits that make the mould. **This all around clearance cut** is part of the very important make-ready that goes with The Shimer Cutter Heads exclusively, and guarantees a uniform wear on the Bits. The cutting edges are taken at shearing angles across each Bit and set into cutting position by the use of a gauge to make a shearing cut that will not chip the work at the fastest feed. Select your pattern by number from the pattern illustrations in this catalogue. If you want a special pattern of your own, send with your order a cross section (of your door pattern) one or two inches long for a model to copy after and we will mould the shape into the outer face of each Bit, guaranteeing a uniform pattern for your Doors as long as the Bits last. Moulded pieces of Doors and Coping left over at any time will always work in.

The Expansion changes the width of the groove only, and is usually limited to 3-16 of an inch. A set of Bits to make Doors, cutting the groove ¼ inch wide by ½ inch deep, can be expanded to cut a groove 7-16 wide by ½ inch deep. The mould that goes with a set of Bits cutting the groove ¼ inch wide by ½ inch deep will have passed its limit of neatness when the Expansion of the groove materially exceeds 3-16 of an inch. Much depends, however, upon the style of the pattern selected.

THESE ARE OUR NET PRICES

Solid Flange Door Head Fig. 82, with 4 Bit Seats, without Bits			$31.05
Solid Flange Door Head Fig. 82, with 6 Bit Seats, without Bits			36.58
Expansion Door Head Fig. 84, with 4 Bit Seats, without Bits			$52.65
Expansion Door Head Fig. 84, with 6 Bit Seats, without Bits			56.06
Solid Flange Door Heads, Fig. 547 and Fig. 548, net price of heads with (8) bit seats, each			$49.89
Solid Flange Door Head Fig. 555, with Self Centering			63.81
Expansion Door Head with 8 Bit Seats, without Bits			$72.57
Expansion Door Head with 8 Bit Seats and Self Centering			$90.14
One Set of 4 Bits to make 1 to 1¼" Doors	$17.12	Each	4.28
One Set of 4 Bits to make 1⅜ to 1½" Doors	19.40	Each	4.85
One Set of 4 Bits to make 1¾ to 2" Doors	21.76	Each	5.44
One Set of 6 Bits to make 1 to 1¼" Doors			$25.68
One Set of 6 Bits to make 1⅜ to 1½" Doors			29.10
One Set of 6 Bits to make 1¾ to 2" Doors			32.64
One Set of 8 Bits to make 1 to 1¼" Doors			$34.24
One Set of 8 Bits to make 1⅜ to 1½" Doors			38.80
One Set of 8 Bits to make 1¾ to 2" Doors			43.52
One Set of 8 High Speed Bits to make 1 to 1¼" Doors			$42.80
One Set of 8 High Speed Bits to make 1⅜ to 1½" Doors			48.50
One Set of 8 High Speed Bits to make 1¾ to 2" Doors			54.40

The Shimer Coping Head for Tenoners



Door Cope Heads

Fig. 83

Figure 83 represents a pair of Door Cope Heads as furnished with Bits, as they appear on the spindles of the Tenoner. The Heads are made to fasten with two set screws, and by loosening them the Head is readily lifted off, as in sharpening, without in any way interfering with the machine adjustments. The Bits carry exact pattern, therefore cut uniformly and by filing the Bits to gauge they are easily cared for. The lower Door Cope Head will also receive Bits for coping Sash.

THESE ARE OUR NET PRICES

One Set of 2 Door Cope Heads, Fig. 83 without Bits	$36.94	Each	$18.47
One Set of 4 Door Cope Bits to cope 1 to 1¼ Doors	14.96	Each	3.74
One Set of 4 Door Cope Bits to cope 1⅜ to 1½ Doors	14.96	Each	3.74
One Set of 4 Door Cope Bits to cope 1¾ to 2 Doors	17.64	Each	4.16
Cope Heads over 7" Diameter, Extreme Swing, each, without Bits			22.94
Cope Heads with 4 Bit Seats, without Bits, per set of 2, 7" Ex. Swing			48.82
Cope Heads with 4 Bit Seats, without Bits, per set of 2 over 7" Ex. Swing			50.84

THE SHIMER HIGH SPEED COPE HEADS.

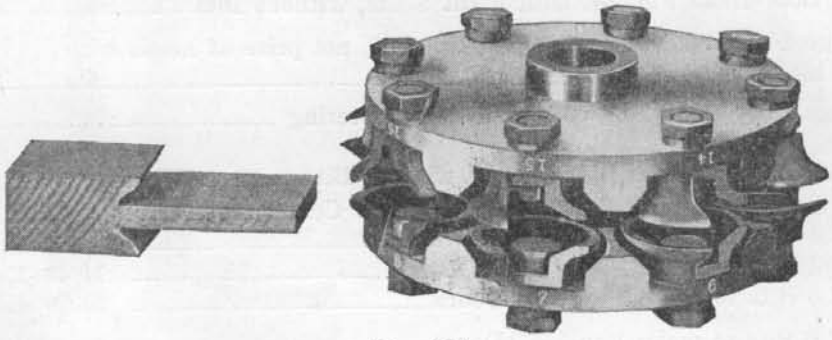


Fig. 670

The Shimer High Speed Cope Heads are designed to cope on the improved high speed tenoners. The bits cut free and smooth across the grain and make a good close fitting cope.

THESE ARE OUR NET PRICES

Shimer High Speed Door Cope Heads, per pair	$56.88
One Set 16 Bits to Cope 1" to 1¼" Door	59.84
One Set 16 Bits to Cope 1⅜" to 1½" Door	59.84
One Set 16 Bits to Cope 1¾" to 2" Door	66.56

Built also in sections with Expansion.

The Shimer 4 Bit Cope Heads



Fig. 691

These four Bit Door Cope Heads are made for the single or double end tenoner taking a medium size cope head. They have the same features as the smaller Shimer heads as they are equipped with circular cutting bits which are made to retain the exact pattern. The bottom cope head can be fitted with Sash Cope Bits when making sash.

THESE ARE OUR NET PRICES

One Set 4 Bit Door Cope Heads, Fig. 691, without Bits per pair 7″ Extreme Swing and under	$48.82
One Set 4 Bit Door Cope Heads, Fig. 691, without Bits per pair over 7″ Extreme Swing	50.84
One Set of 8 Door Cope Bits to Cope 1″ to 1¼″ Doors	29.92
One Set of 8 Door Cope Bits to Cope 1⅜″ to 1½″ Doors	29.92
One Set of 8 Door Cope Bits to Cope 1¾″ to 2″ Doors	35.28
Sash Cope Bits per set of 4 Bits	15.48

CHECK RAIL HEADS
FOR LARGE TENONERS

We illustrate here a special check rail cutter head for use on large double end tenoners. The bottom or mould head is our regular cope head while the top is our special dado cutter head equipped with knives and spurs.

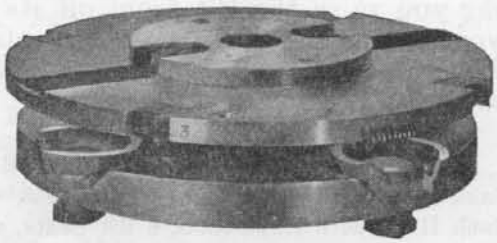
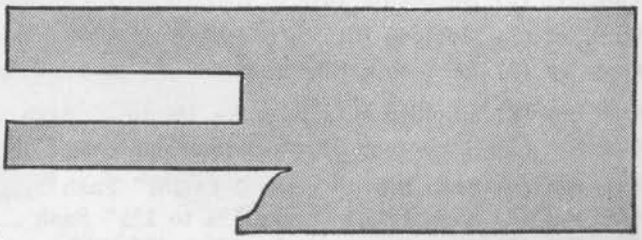


Fig. 695



The cope head is priced the same as those above.

The grooving head 10″ diameter complete with knives and spurs $62.73

or less according to diameter and thickness.

The Shimer Expansion Head for Sash



Fig. 206

Fig. 206 represents The Shimer Cutter Head in two sections with automatic stops and figures that regulate and limit the expansion by turning the Spanner Nut. You do not put washers under the Bits.

This Head has all of our latest improvements—the bolt locking device for holding the Bits between two fixed surfaces— the head seats concaved about their bolt centres to more truly centre and secure the Bits—the special incline of the head seats to give greater protection to the edge of the Bit and a better shear cut—the Expansion, by which the head sections change the overlap of Bits to cut a wide or narrow face.

The choice of pattern and the design of the Bits limit the adjustment.

The plan of using washers under the Bits to widen the cut is faulty in that you raise the Bit from off its seat after the incline of the bolt, and you set the Bit from the bolt center to the incline face of the gauge, which registers the true position for the Bit only when the Bit rests upon its seat.

THESE ARE OUR NET PRICES

One Sash Head with Expansion, 4 Bit Seats, without Bits			$52.81
One Sash Head with Expansion, 6 Bit Seats, without Bits			54.12
One Set (2) Moulded Bits to make 1 to 1¼″ Sash	Each	4.98	17.06
One Set (2) Rabbeting Bits to make 1 to 1¼″ Sash	Each	3.55	
One Set (2) Moulded Bits to make 1⅜ to 1½″ Sash	Each	5.45	18.00
One Set (2) Rabbeting Bits to make 1⅜ to 1½″ Sash	Each	3.55	
One Set (2) Moulded Bits to make 1¾ to 2″ Sash	Each	5.92	19.04
One Set (2) Rabbeting Bits to make 1¾ to 2″ Sash	Each	3.55	
One Set (6) Sash Bits to make 1 to 1¼″ Sash			$25.59
One Set (6) Sash Bits to make 1⅜ to 1½″ Sash			27.00
One Set (6) Sash Bits to make 1¾ to 2″ Sash			28.41
One Set (2) Sash Cope Bits to Cope above sizes			7.74

The Shimer Solid Head for Sash



Fig. 86

Fig. 86 represents The Shimer Cutter Head in one solid section. Washers are used under the Bits to change for thicker Sash.

The Bit contours are moulded to carry the shape of your pattern after a line crossing the Bit diagonally, so that the cut produced is a draw cut which makes the best finish and admits of a high rate of feed.

The "make-ready that goes with every one of these Heads is a guarantee that the work you may finish today will match with the work you may have done with the same Bits a year ago. Pieces left over will always work in.

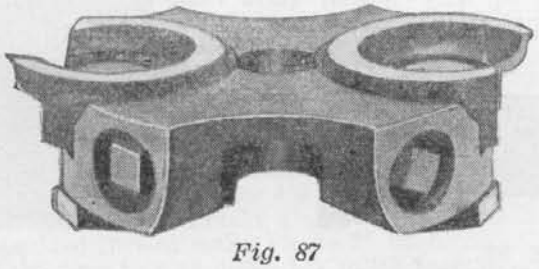
Sash Bits admit of being expanded, by either the washer or automatic stop adjustment, to a limit of about $\frac{3}{16}$ of an inch or more if wanted. The Cope Head will cope for any change of thickness so long as the shape of the mould is the same.

THESE ARE OUR NET PRICES

One Sash Head solid section with 4 Bit Seats, without Bits, net	$31.22
One Sash Head solid section with 6 Bit Seats, without Bits, net	36.80
One Set 2 Moulded Bits to make 1 to 1¼" Sash	17.06
One Set 2 Rabbeting Bits to make 1 to 1¼" Sash	
One Set 2 Moulded Bits to make 1⅜ to 1½" Sash	18.00
One Set 2 Rabbeting Bits to make 1⅜ to 1½" Sash	
One Set 2 Moulded Bits to make 1¾ to 2" Sash	19.04
One Set 2 Rabbeting Bits to make 1¾ to 2" Sash	
One Set 6 Sash Bits to make 1 to 1¼" Sash	25.59
One Set 6 Sash Bits to make 1⅜ to 1½" Sash	27.00
One Set 6 Sash Bits to make 1¾ to 2" Sash	28.41

For Putty Grooves add $1.00 to the price of each rabbeting bit.

SASH COPE HEADS



Made also with 4 and 6 Bits each Head.

Fig. 87

Fig. 87 represents the Sash Cope Head complete, price without Bits, each, net	$18.47
Price 2 Cope Bits at $3.87 each	7.74

THE SHIMER CUTTER HEAD COMBINATION

To Make Doors and Sash
With Interchangeable
Milled Bits

DESCRIPTION

The Combination Head is made with 4 sides slotted and provided with adjustable Bit seating clamps (see Fig. 95) to hold the Bits which are set by the scale gauge (Fig. 92 and 89) resting in guide ways in the end of the Cutter Head which sets the gauge a fixture at an angle agreeing with the inside bevel of the Bit. Against the face of this gauge the cutting edge of each Bit is carried along the Tee slot in the Cutter Head until the rule marks on the gauge indicate the place at which it is to be fastened to cut the pattern. The bolt in the clamp is then drawn up, and the Bit is seated to cut as wanted. The Bits are moulded at an angle to their clamping base illustrated by Fig. 90. This carries side clearance in the cut and guarantees a uniform wear and permanent shape to the mould.

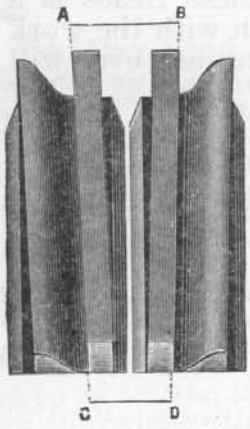


Fig. 90

These Bits When at Work

Overlap so that the Groove is made $\frac{3}{8}$ of an inch wide, or any width that may be desired. That overlap is not

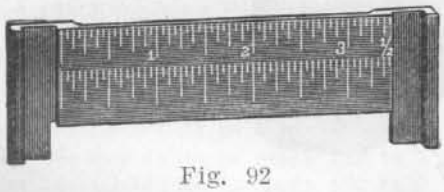


Fig. 92

The Bit Setting Gauge

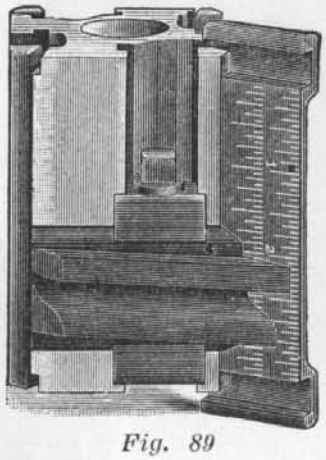


Fig. 89

Fig. 89 represents the Shimer Cutter Head with gauge in position having graduated scale to set the cutters by for any width of groove and the bit seating clamps to grip either Door Bits or Sash Bits.

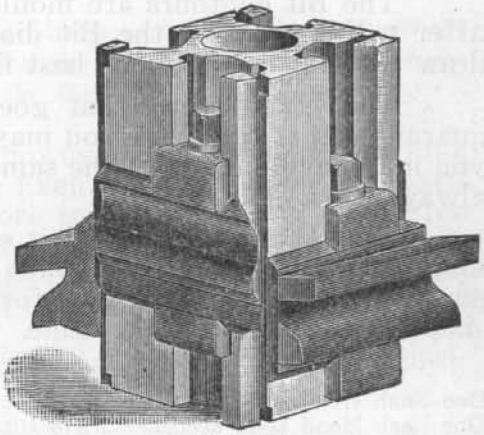


Fig. 91

Fig. 91 represents the Combination as a Door Head.

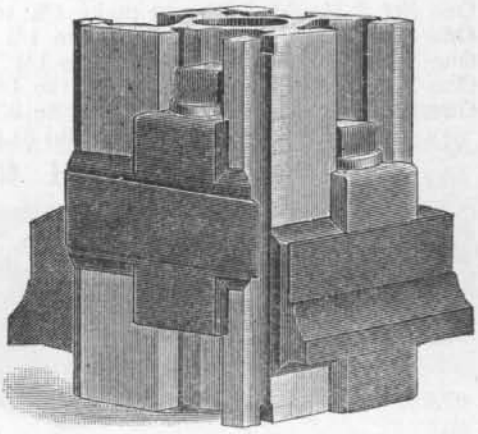


Fig. 88

Fig. 88 represents the Combination as a Sash Head.

Bottom View of Head.

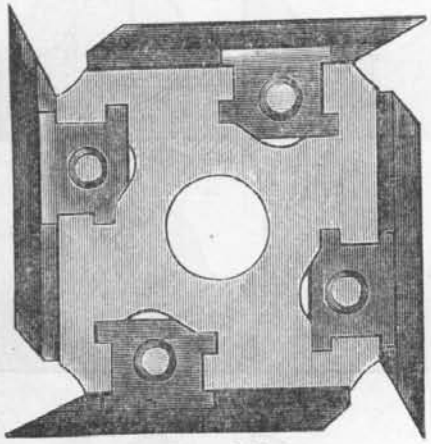


FIG. 93.

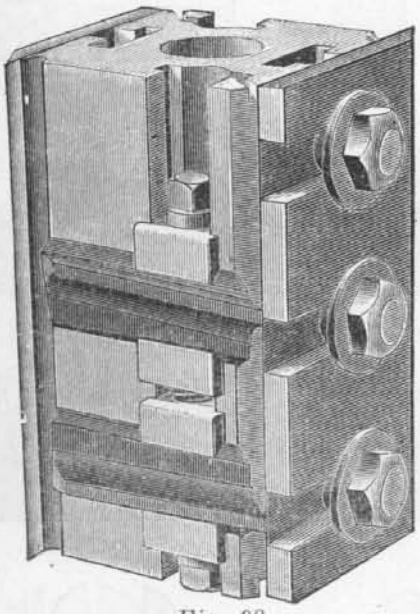


Fig. 98

necessarily central, but can be at any point and we therefore divide the cut upon the **clearance line,** giving the Bits a set for clearance and it is this feature that makes this Head with its combinations applicable to every class of work.

One Head will therefore, take Bits to make **Door, Sash** and various other mouldings, and these BITS ARE QUICKLY AND ACCURATELY changed and adjusted by the use of a gauge. **The strength of the Head admits of no comparison.** It is positively the strongest combination for a slotted Head ever brought out. The slot is along the edge of the side nearest the cut.

Fig. 93 illustrates the Combination Head in cross section showing how the clamps hold up the Bits and seat them securely to the head. One turn of the bolt will loosen the clamp and the Bits can be taken out and replaced with another kind at short notice.

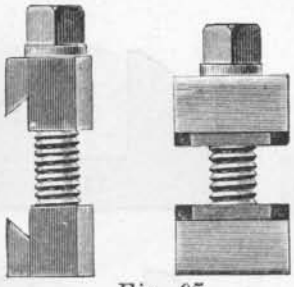


Fig. 95

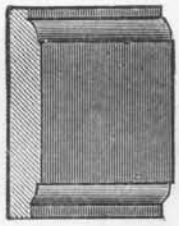


Fig. 99

The Bit Seating Clamps.

Fig. 98 illustrates a Special Cutter Head with two sides slotted for regular planer knives and the other two sides are slotted for the bit seating clamps suitable for the arrangement of sectional Moulding Bits, located as shown in Fig. 98, to finish a mould like that illustrated by Fig. 99. The Moulded Bits are sharpened from the under side and hold their shape until worn out.

THESE ARE OUR NET PRICES

For Square Combination Heads, for making Doors and Sash, using the Straight Milled Knife, interchangeably

One Combination Head, Fig. 91, without the Bits	$46.18
(With Bolts, Bit Clamps, Gauge and Wrench)	
One 6 Bit Combination Head, without Bits	78.00

THE BITS FOR MAKING DOORS

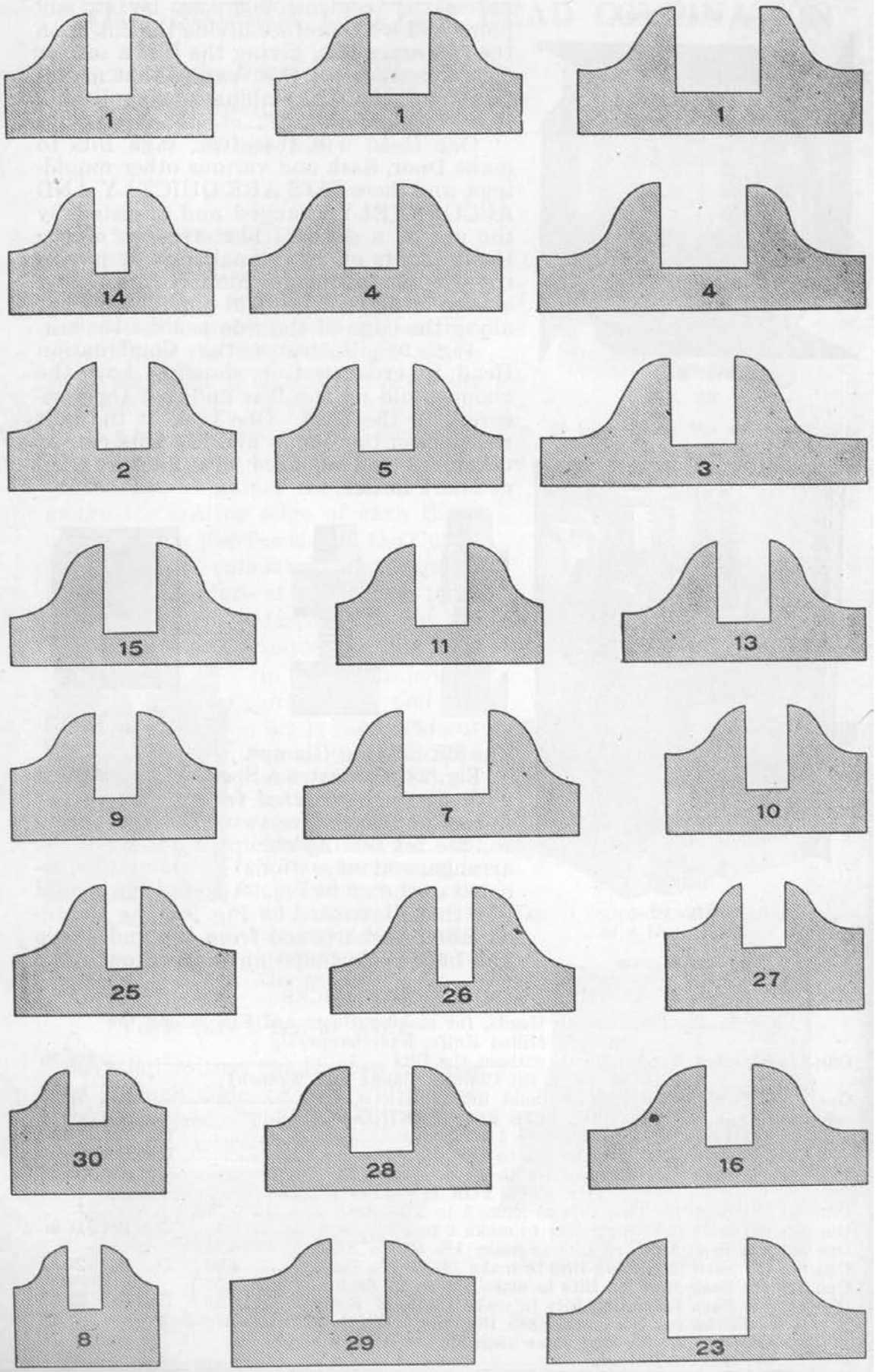
One Set (4) Door Bits to make 1 to 1¼" Doors	The Set $18.84
One Set (4) Door Bits to make 1⅜ to 1½" Doors	The Set 20.40
One Set (4) Door Bits to make 1¾ to 2" Doors	The Set 22.80

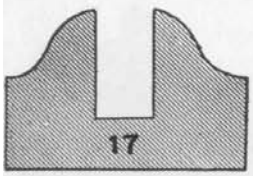
THE BITS FOR MAKING SASH

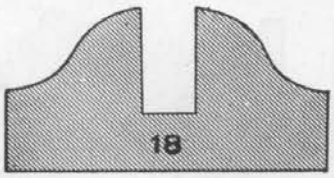
One Set (2) Sash Moulded Bits to make 1 to 1¼" Sash	5.75	The Set $18.00
One Set (2) Sash Rabbeting Bits to make 1 to 1¼" Sash	3.75	
One Set (2) Sash Moulded Bits to make 1⅜ to 1½ Sash	6.55	The Set 20.55
One Set (2) Sash Rabbeting Bits to make 1⅜ to 1½ Sash	4.00	
One Set (2) Sash Moulded Bits to make 1¾ to 2" Sash	7.56	The Set 22.62
One Set (2) Sash Rabbeting Bits to make 1¾ to 2" Sash	4.25	

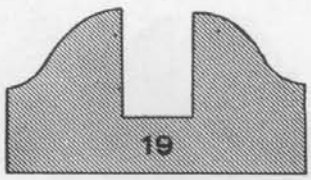
Prices for Door and Sash Bits for 6 Bit Combination Heads are the same each Bit as listed above.

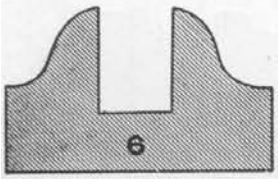
PATTERNS OF DOOR MOULDING

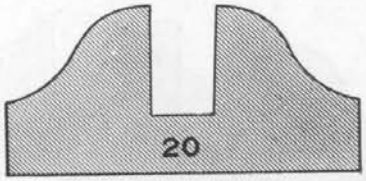


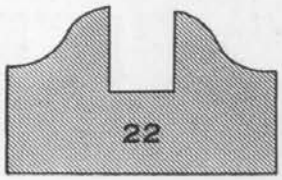

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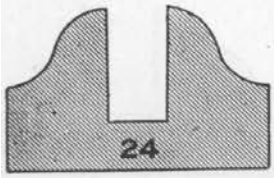

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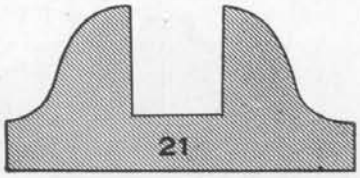

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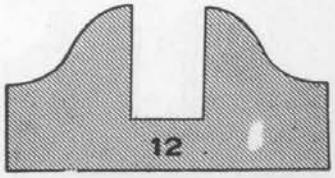

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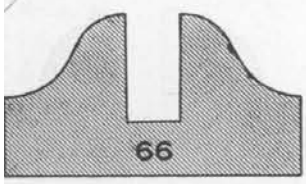

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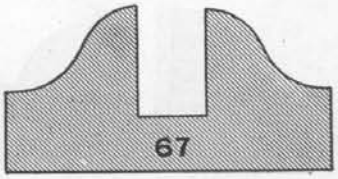

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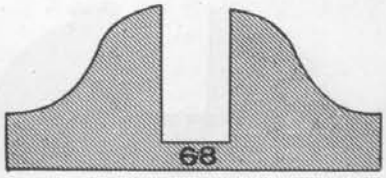

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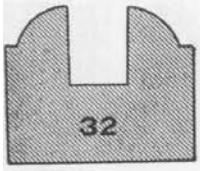

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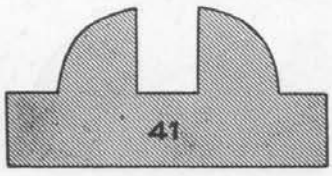

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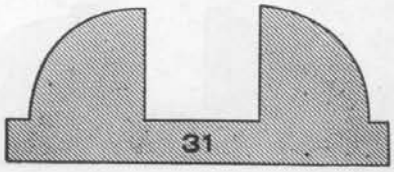

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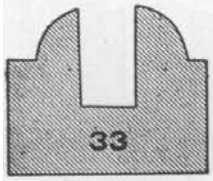

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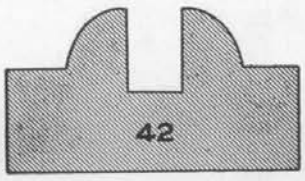

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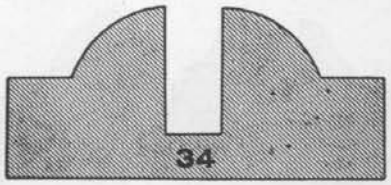

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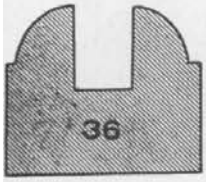

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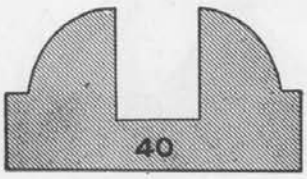

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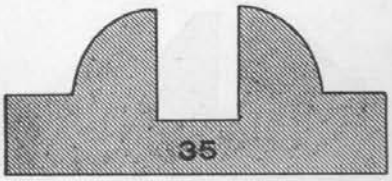

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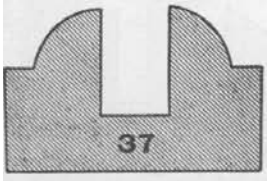

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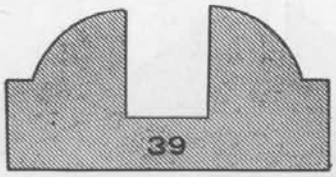

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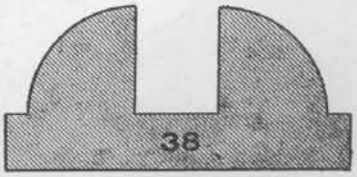

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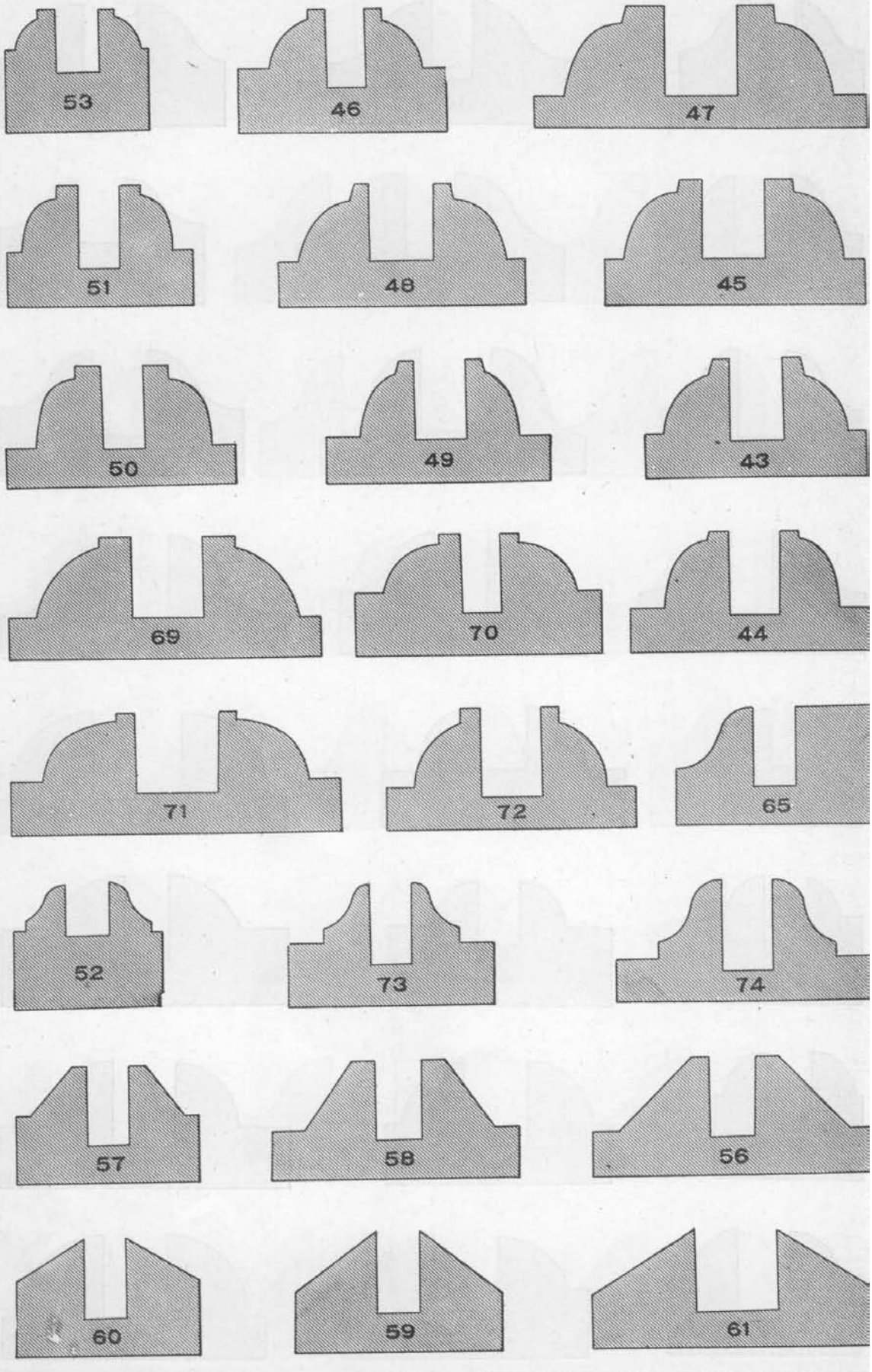

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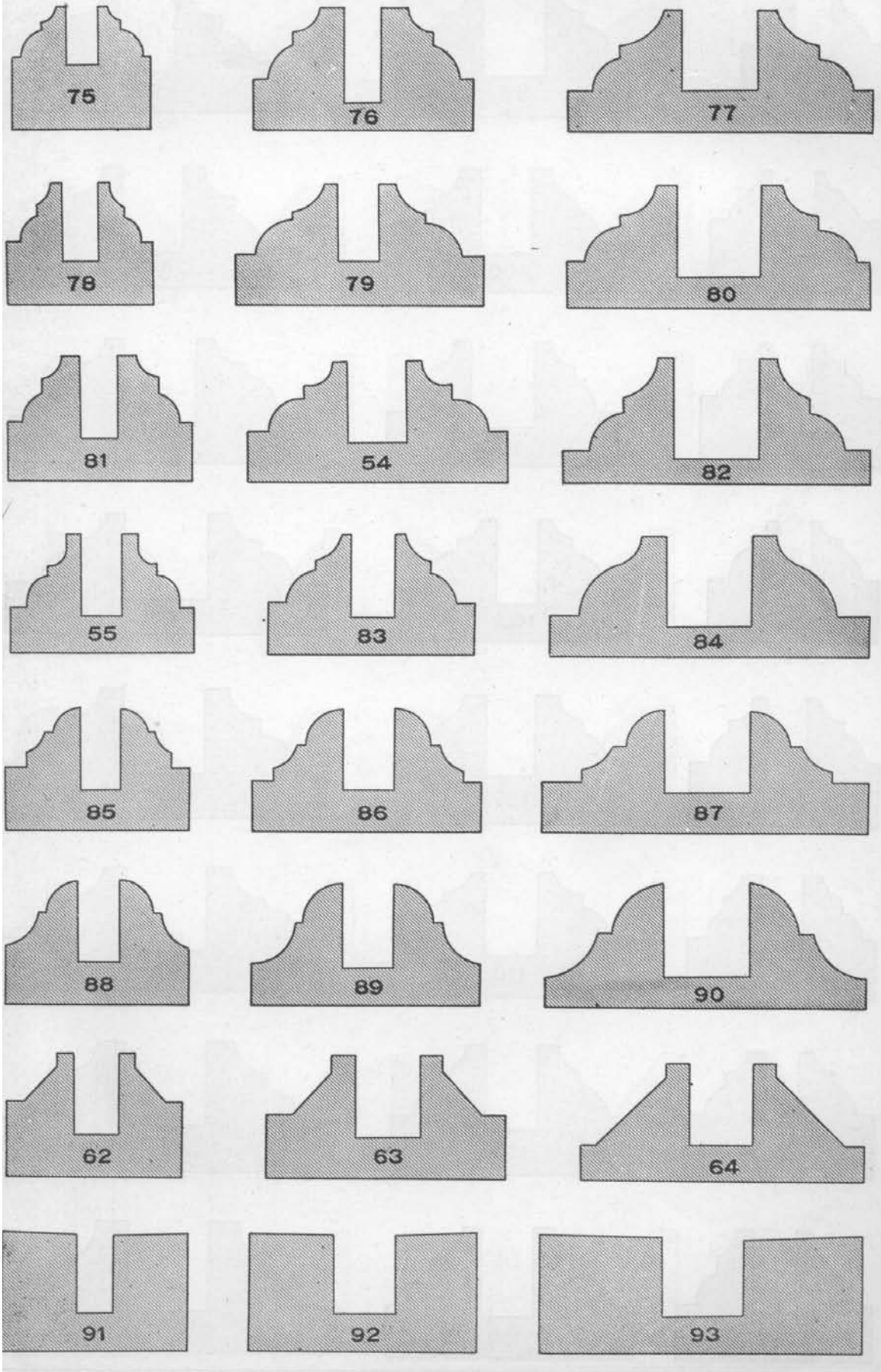

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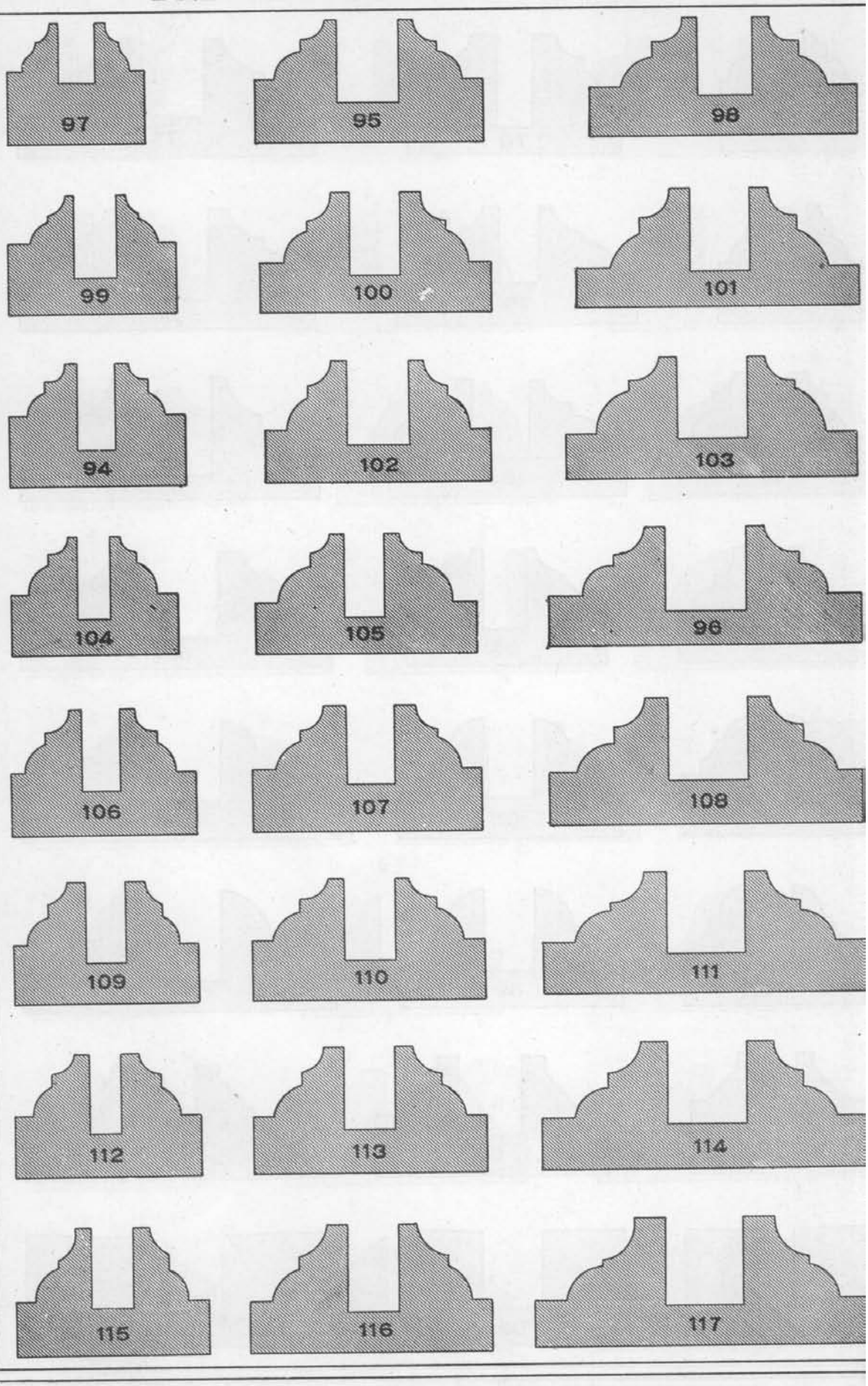

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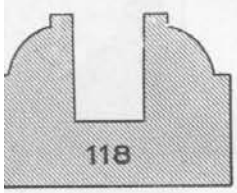
PATTERNS OF DOOR MOULDING

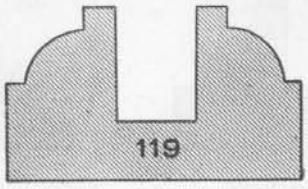


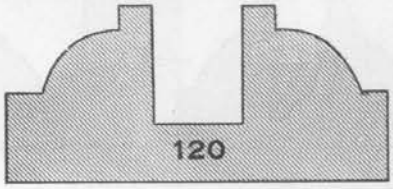

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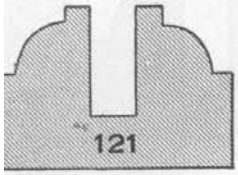
PATTERNS OF DOOR MOULDINGS

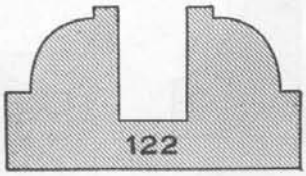


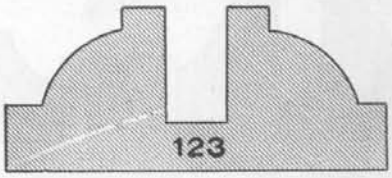

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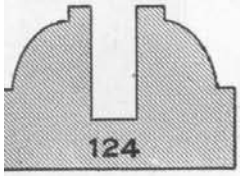

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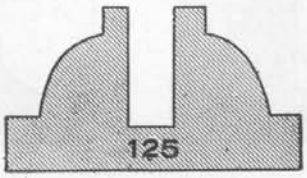

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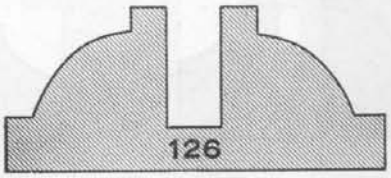

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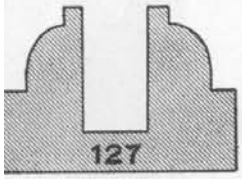

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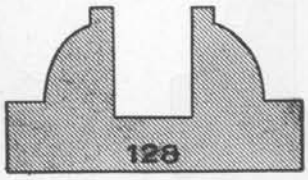

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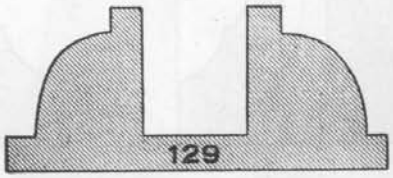

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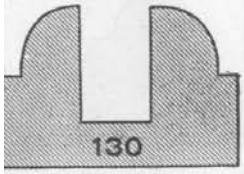

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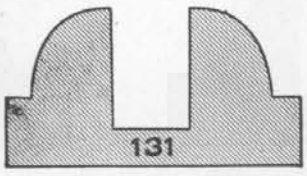

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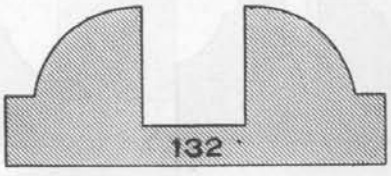

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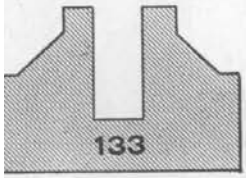

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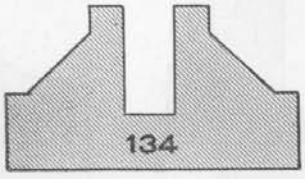

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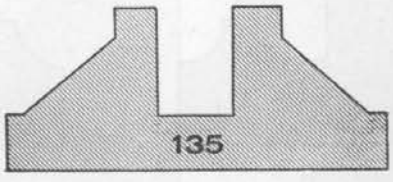

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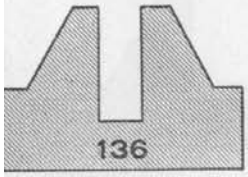

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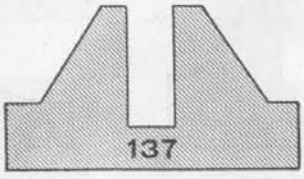

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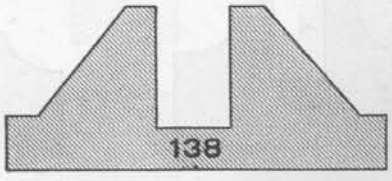

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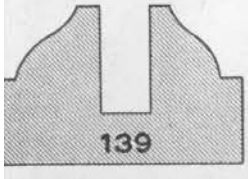

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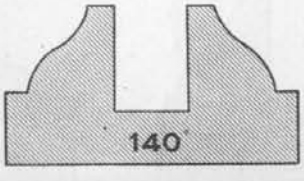

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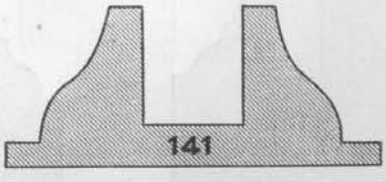

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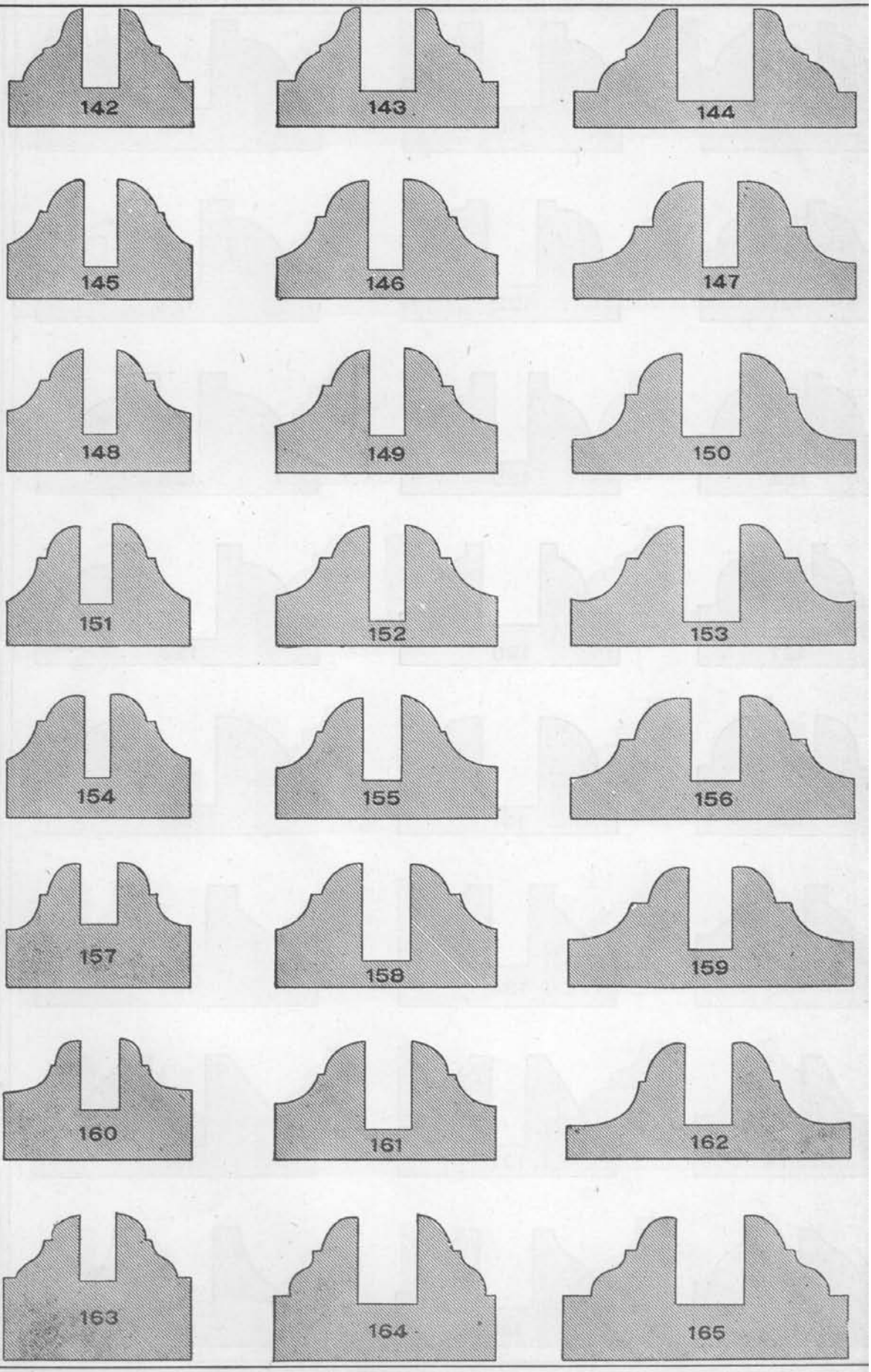

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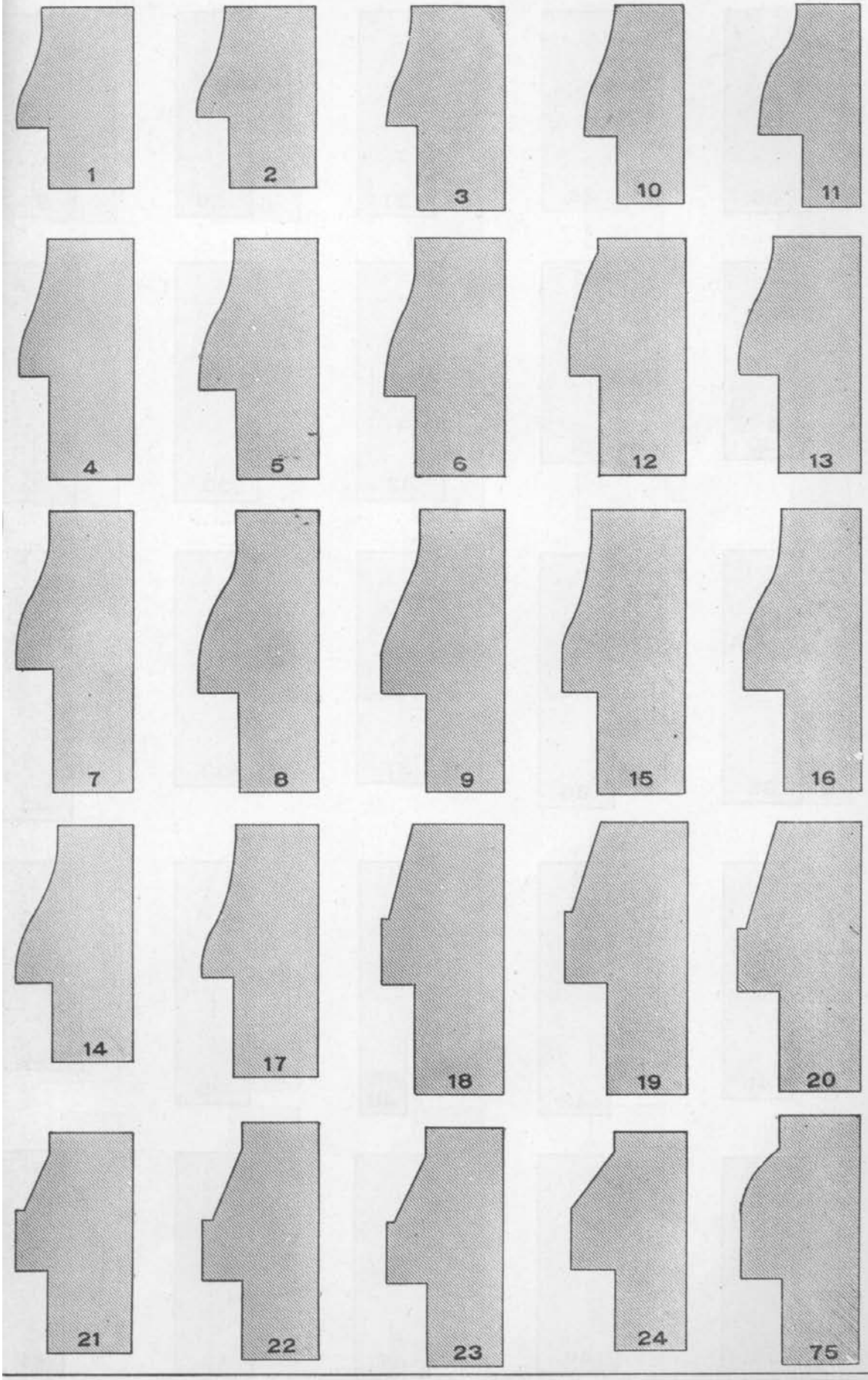

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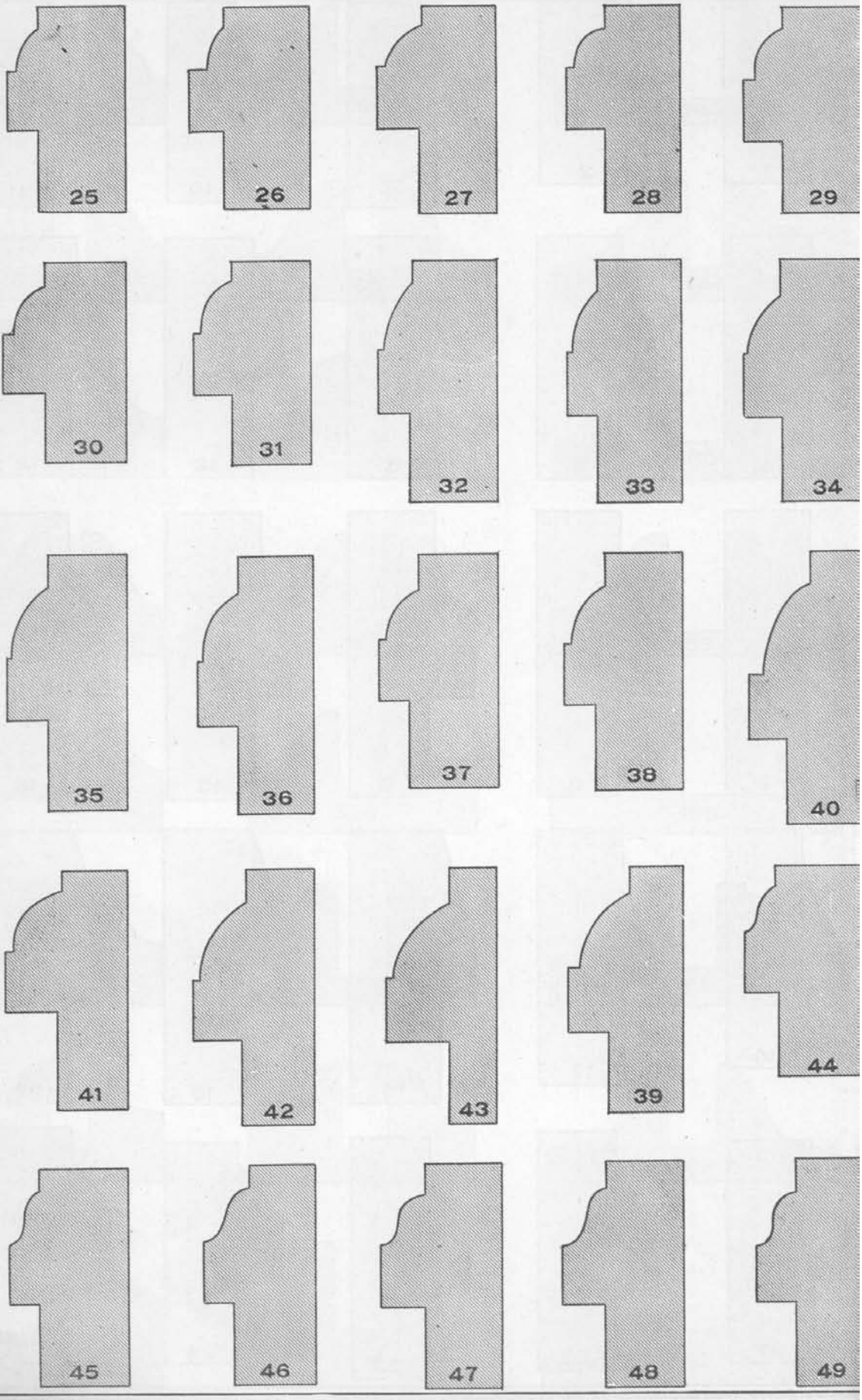

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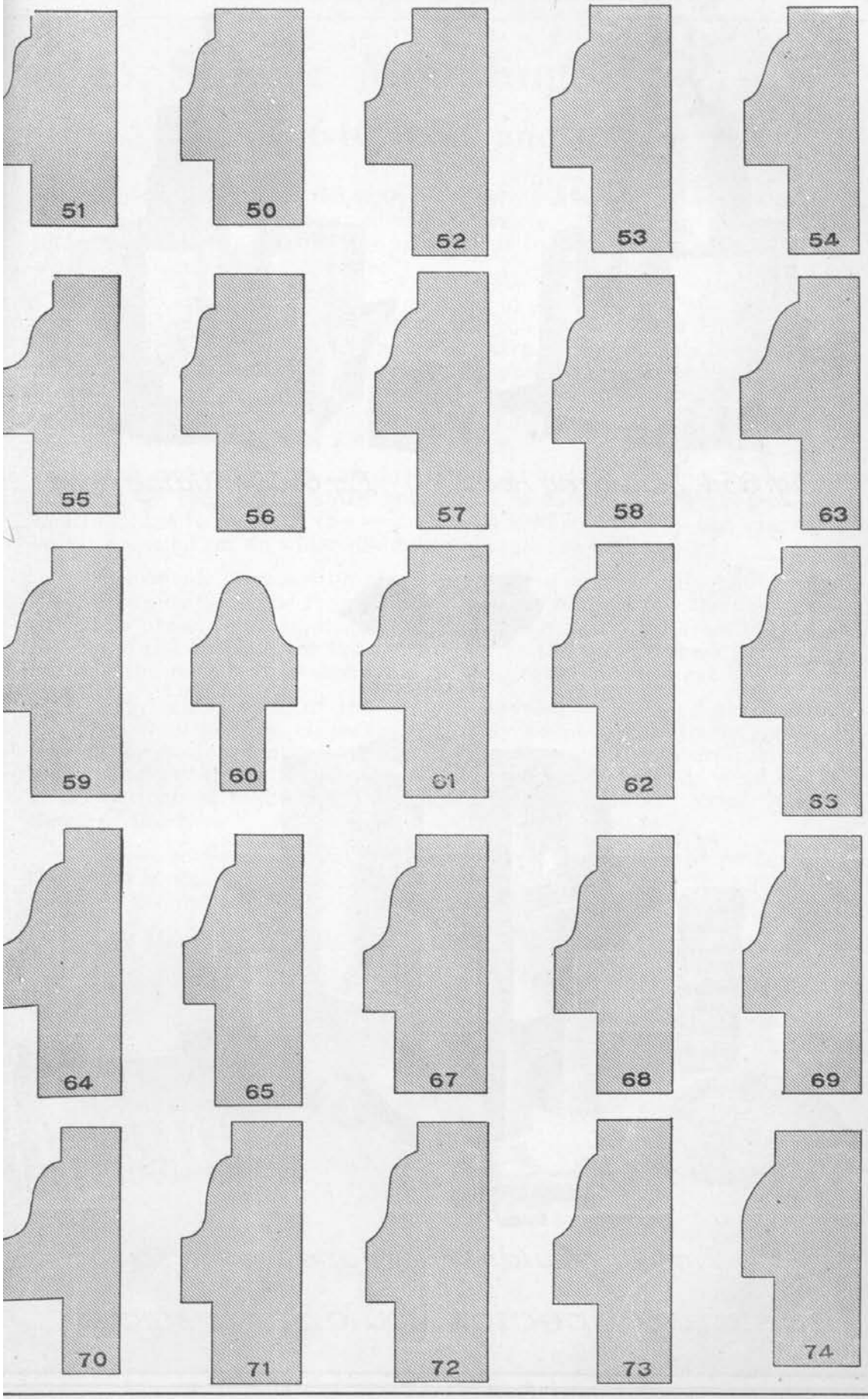
PATTERNS OF DOOR MOULDINGS




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PATTERNS OF SASH MOULDING




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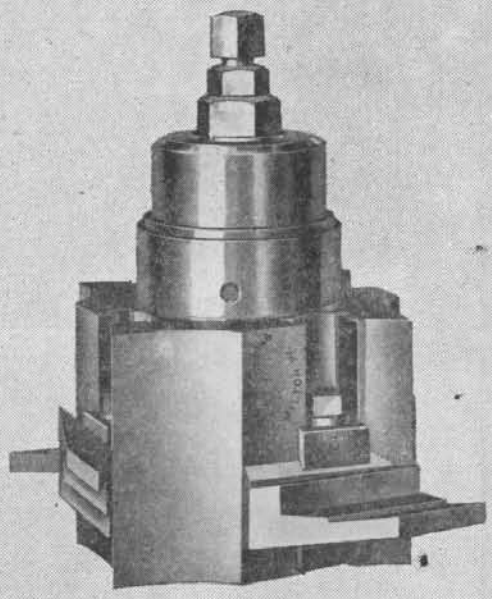


Fig. 654. Moulding Head

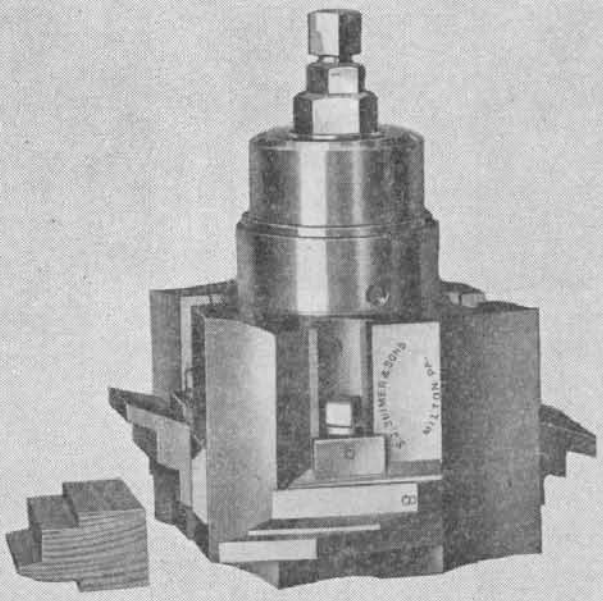


Fig. 655. Moulding Head



Gauge

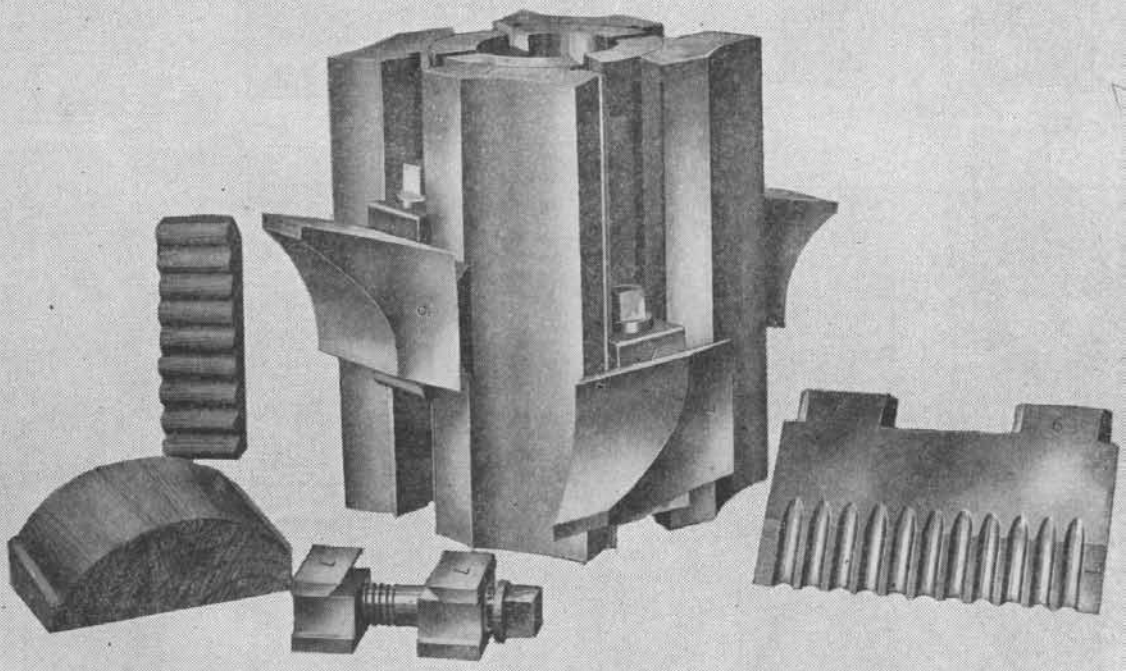


Fig. 640. Moulding Head and Special Bits

Shimer Special Moulding Heads.

Shimer Moulding Head

No. 640, 654 and 655

These Heads are fitted with the improved features—the self centering locking device—the patented combination bolts—and the moulded bit. They are filling a need for an efficient tool to cut intricate patterns, where uniformity is appreciated.

Their ease of operation is equaled by their ease of up keep. The moulded bit contains the pattern which you desire to cut and will produce it as long as the edge of the bit is sharp. To keep this in order it is necessary only to grind the face, keeping a solid fit in the gauge or cutter block. When sharpened the bits are placed in the bolt with the face tightly against the bevel of the head. This will maintain an absolute pattern each time the bits are sharpened.

The molded knives are dovetailed on the under sides to be held properly by the patent knife holding clamps referred to above. If a small mold is to be made the knife can be held securely by one clamping bolt. For a larger or wider mold two clamps are used.

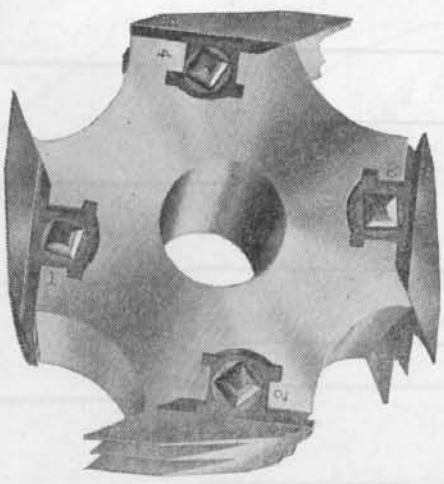
The mold is shaped on the back surface of the knife and ground for sharpening upon the front bevel, which bevel must be carefully maintained to preserve the uniform pattern of the knife. Besides the knife bevel and the bevel of the head side must be the same because the working position must not be destroyed or the knives will not cut uniformly.

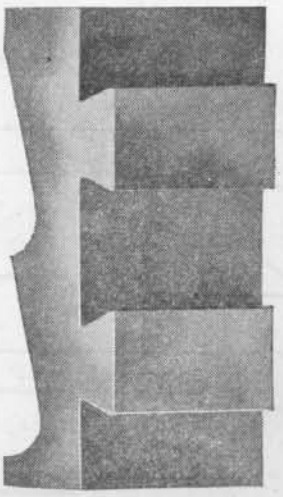
The molded back of the knife is beveled off to save unnecessary weight and to provide clearance that may be necessary to prevent the heel of the knife from striking. This cutting away of material does not reduce the working efficiency of the knife as each knife is good for about one inch of wear which will last indefinitely if the proper care is taken of the tool.

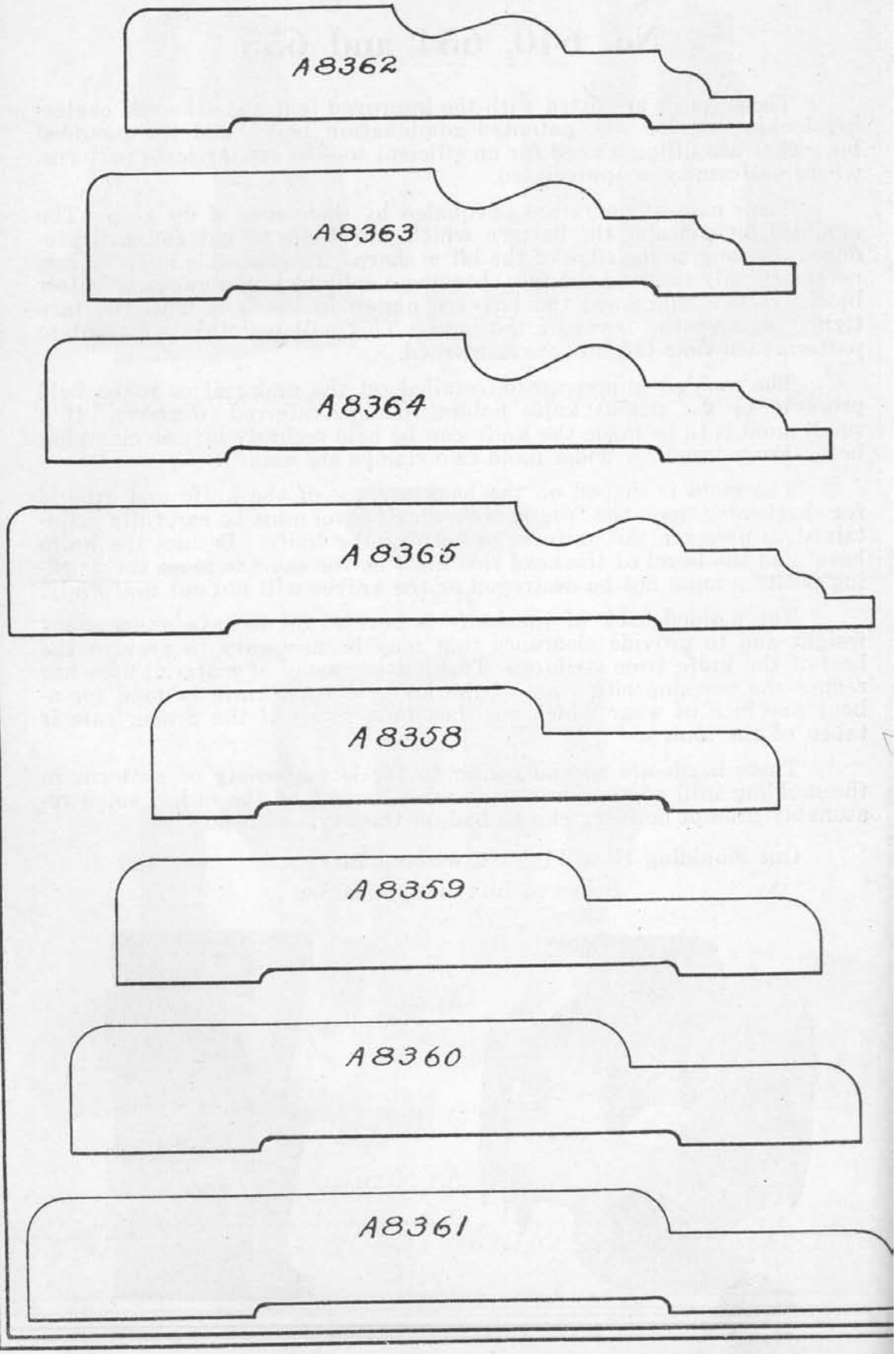
These heads are special owing to the large variety of patterns in the molding mill so they are made after receipt of the order, yet a reasonably prompt delivery can be had on this style of head.

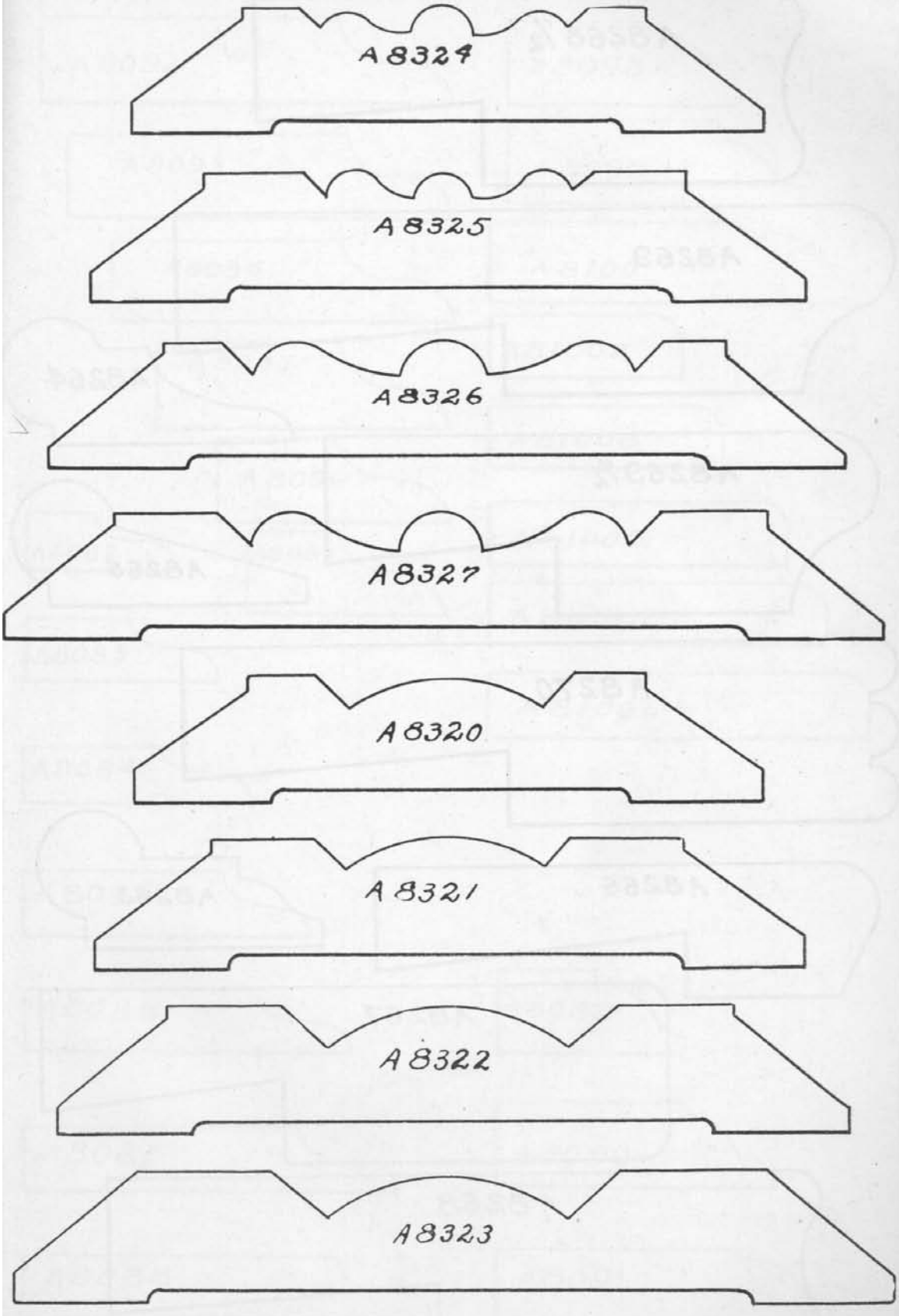
One Moulding Head Fig. 654, without Bits $71.20

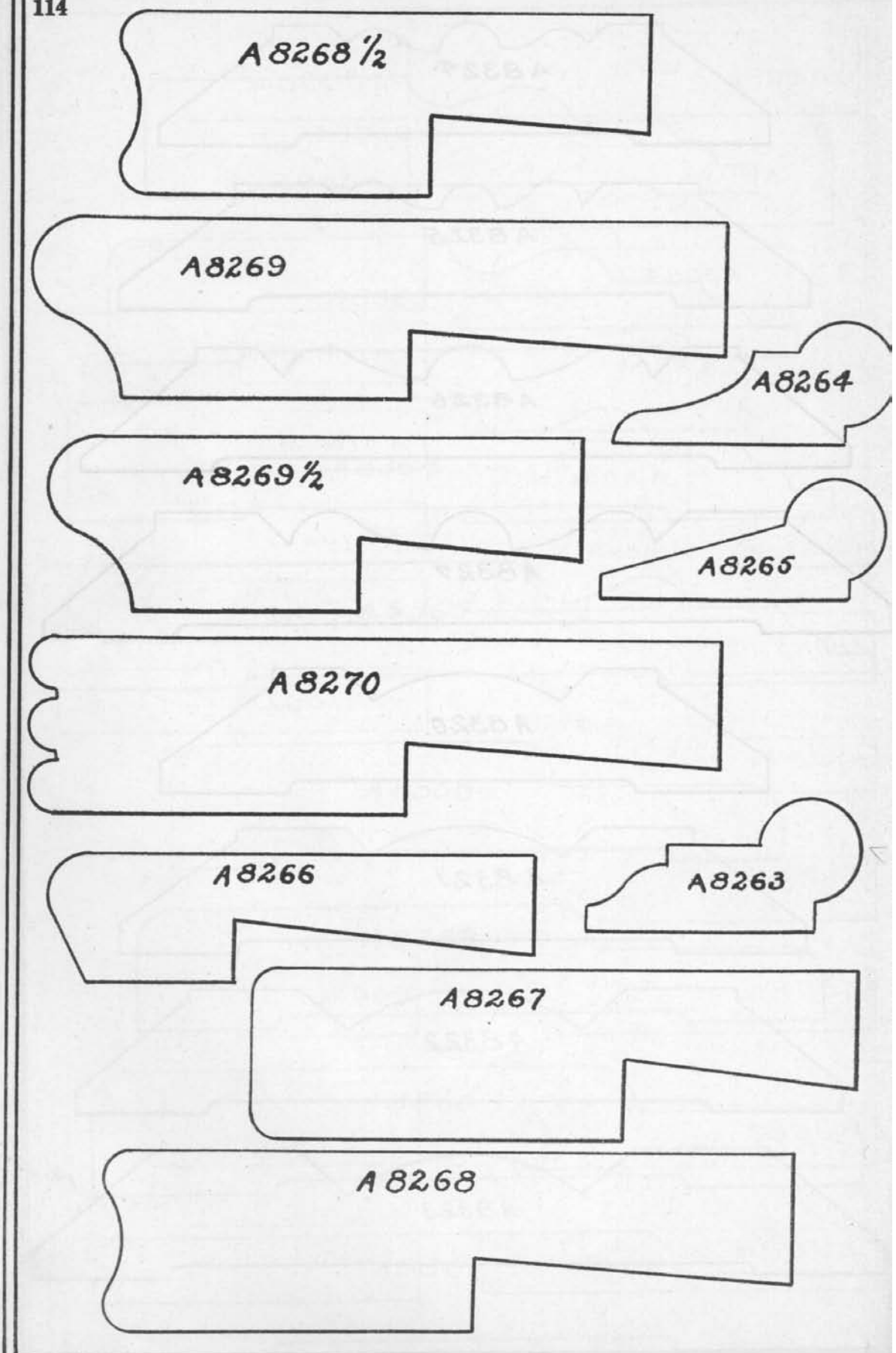
Prices of Bits on application.

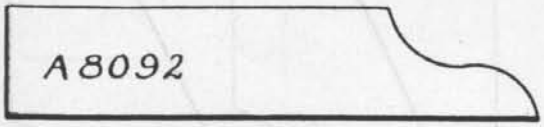


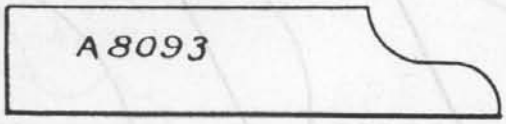


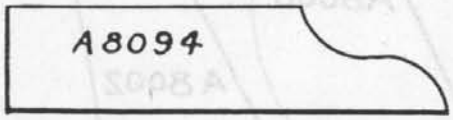

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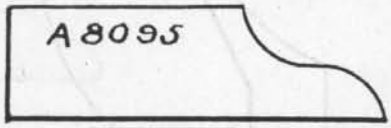

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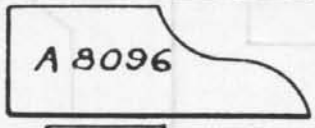

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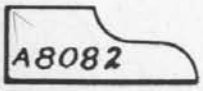

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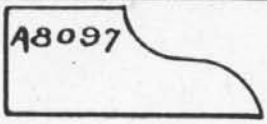

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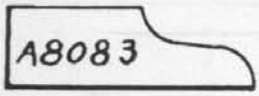

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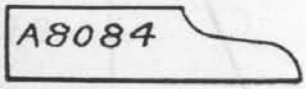

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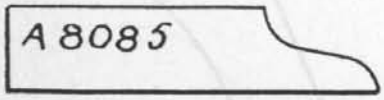

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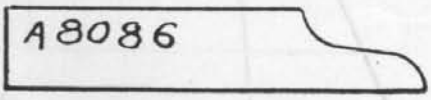

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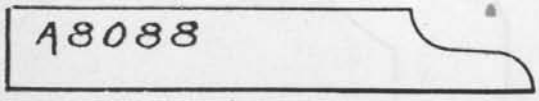

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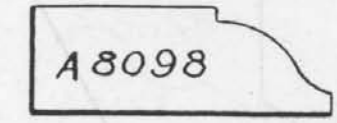

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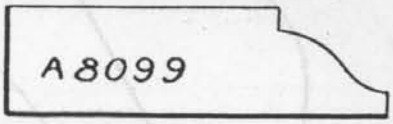

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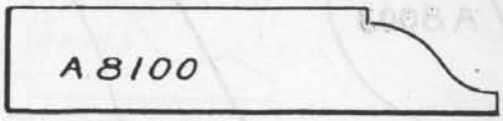

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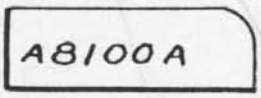

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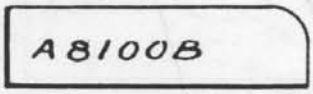

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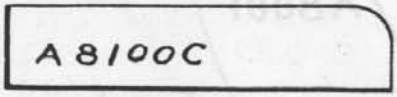

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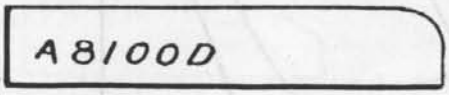

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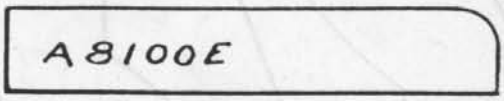

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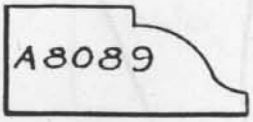

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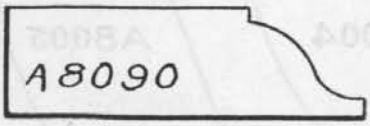

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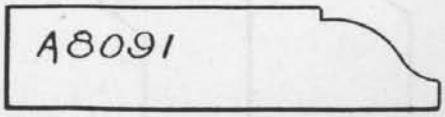

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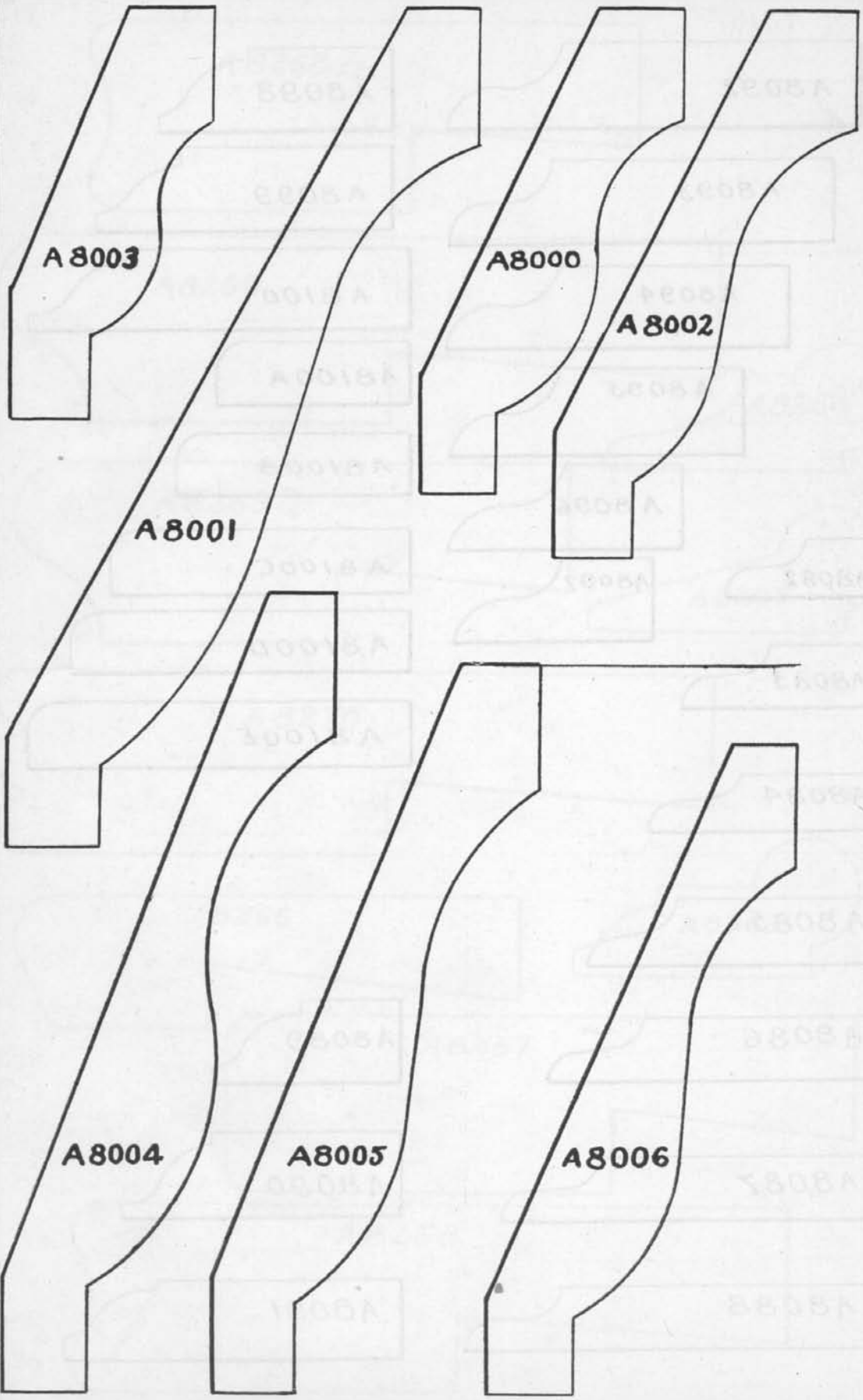

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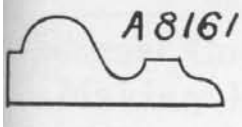

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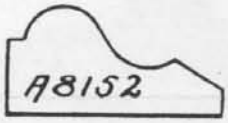

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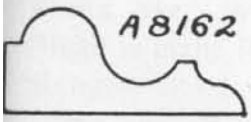

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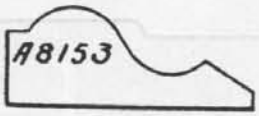
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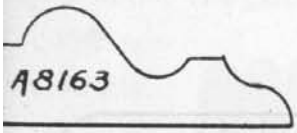


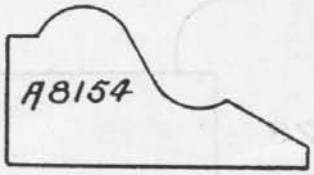

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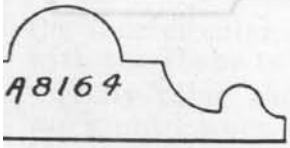

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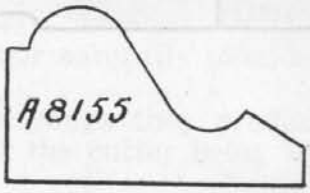

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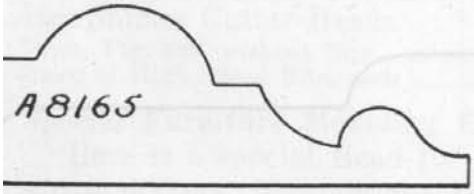

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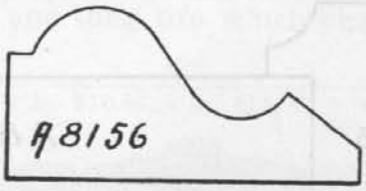

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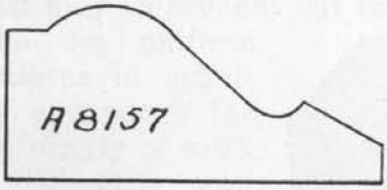

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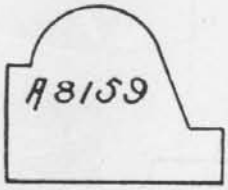

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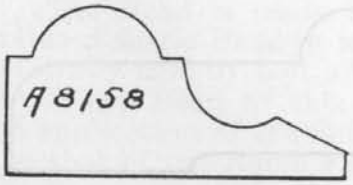

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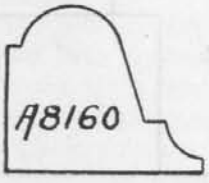

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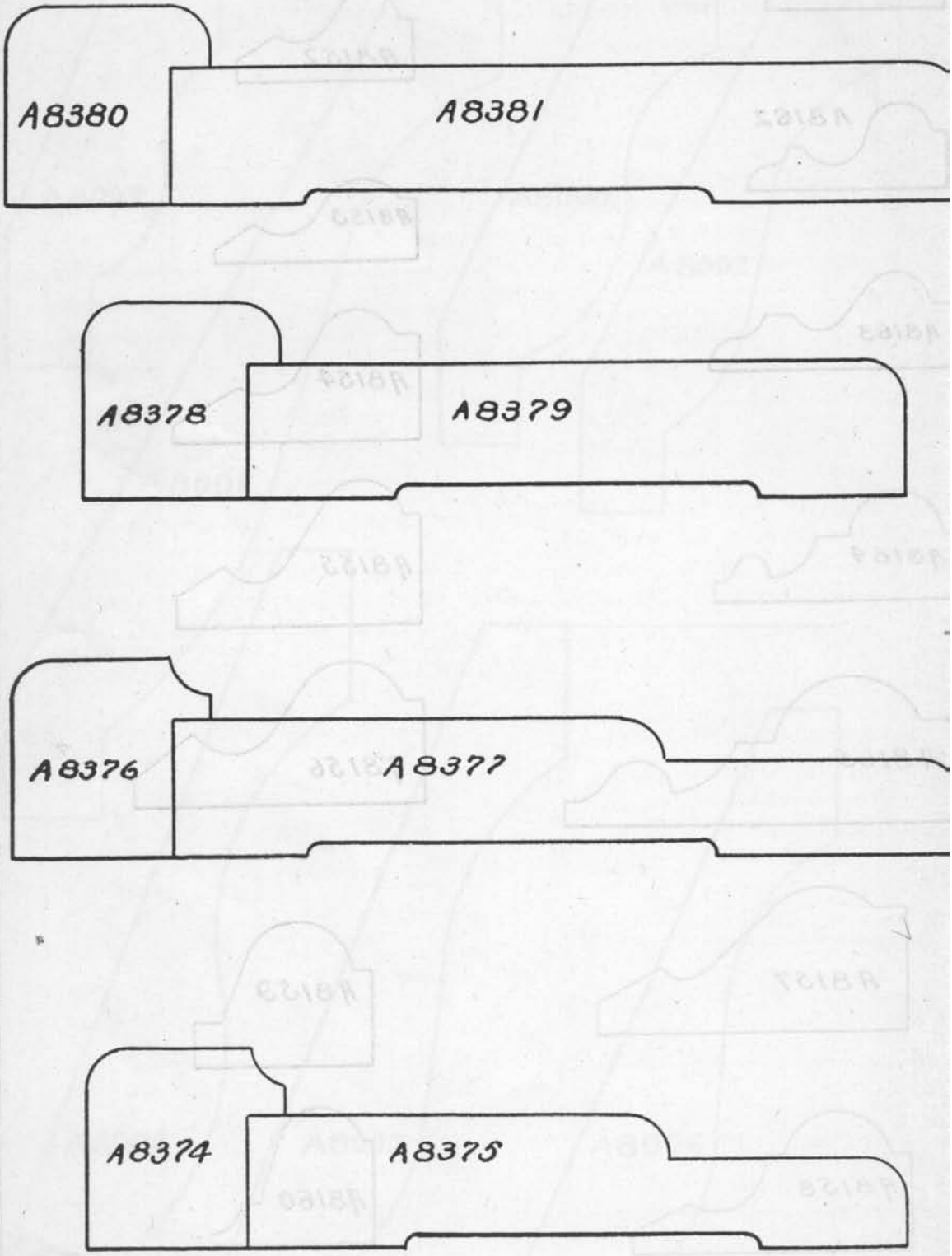

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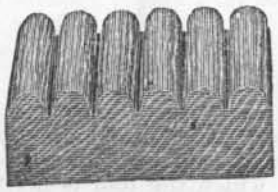

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A8375

Shimer Cutter Head for Making Round Rods.

This tool is intended for making round rods as for flag staffs, etc., in multiples. The Head is made in two sections or flanges, the lower section having a central hub into which is placed the spindle bore and at the upper end of which the second section fits.



Between the two sections

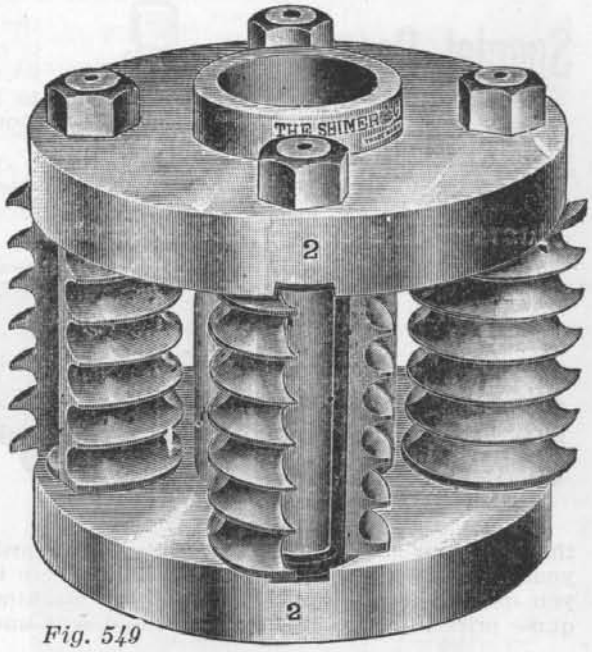


Fig. 549

the four circular cutters with their contour carefully moulded to agree with the shape to be produced.

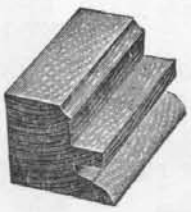
By filing the cutters carefully to a gauge they produce uniform work until worn out, the entire circle of the cutter being tool cutting edge.

In point of quality they are as nearly perfect as can be constructed, featuring the many points of endurance and long life which characterizes Shimer Cutter Heads.

Price, Fig. 549, without Bits $34.80
Price of High Speed Bits, each .....2 in. $7.11, 3 in. $10.66, 4 in. $14.06, 5 in. $17.72

Special Furniture Moulding Head.

Here is a special Head for Furniture makers. It represents one of many designs of a special character that may be brought out for those who use uniform patterns in quantity and where the uniformity of work easily and well maintained is appreciated.



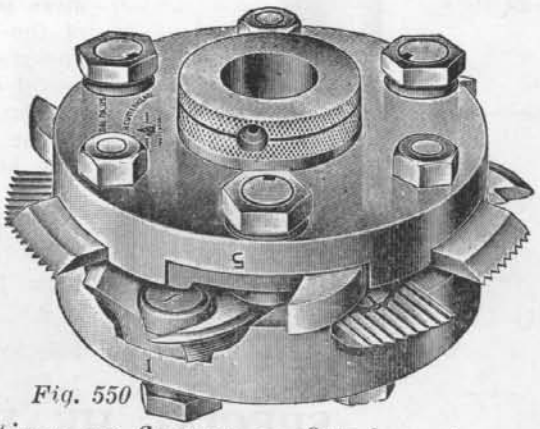


Fig. 550

The Head is made in two sections or flanges so fitted as to resemble a single Head in which are seated twelve Bits specially moulded, and firmly held by bolt and nut on clearance protecting seats.

Every Head of this character is designed for its special purpose. The application of the Shimer principles to all these are no less effective than that of our Rapid Feeding Flooring Heads to their special use.

The main object being that of saving time and labor in fitting and supplying a tool that will carry a more rapid feed than former ones.

Price, Fig. 550 with twelve bit seats without Bits..... $65.70
Price, Circular Moulded Bits, each..... 3.09
Price, Circular Grooving Bits, each 2.92
Price Spur Bits, each 2.80

Self Centering Device extra $13.92

Special Deep Moulding Head.

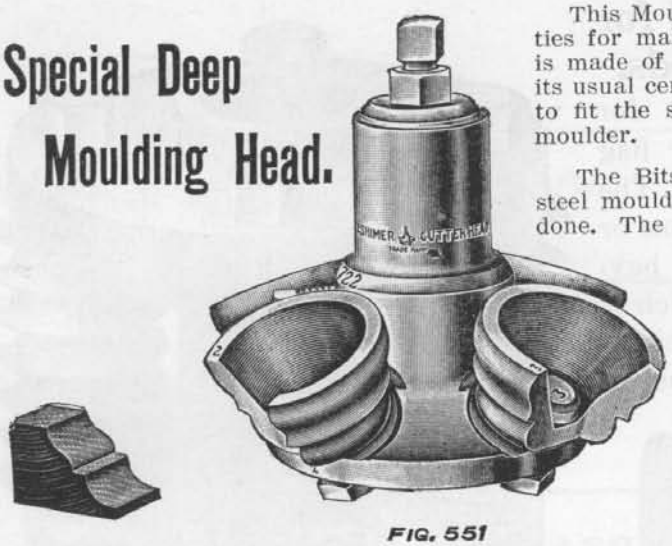


FIG. 551

This Moulding Head is one of our specialties for making deep mouldings. The Head is made of high tensile Steel Forgings with its usual central hub and top adjusting screw to fit the side spindles of any matcher or moulder.

The Bits are of special high grade tool steel moulded to agree with the work to be done. The four bits track in the cut perfectly and turn out mouldings of smooth finish under the most rapid feed.

The engraving is shown here to indicate that some of your special patterns made in quantities can be put through your machine as easily as a standard product and at no greater expense. If your patterns are larger or smaller than here indicated send us a sketch of the work as you use it and tell us the make of the machine for which the tool is needed and let us quote price . All tools guaranteed and sent under 30 days trial.

Price, Moulding Head, Fig. 551, without Bits, each $32.85
Price, Self-Centering device if desired, extra 13.92
Price, Bits, each 5.89

The Shimer Cutter Head for O. G. Batten

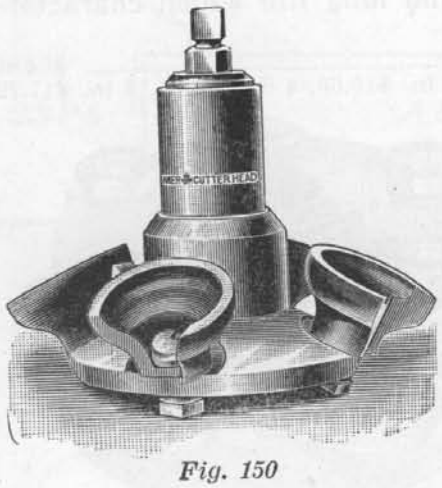


Fig. 150

This electro represents The Shimer Cutter Head with 4 Bits in line of cut to mould O. G. Batten 1¼ inches deep or less. The overcut as made by the Bits is fully illustrated. The conical head flange gives position to the Bits and also locates the nuts of the Cutter Head bolts within the bowl shaped under surface of the Cutter Head, which by the removal of the nuts from inside of the Bits (see the regular construction) clears away all obstructions to the free escape of the shavings, and the Bits take better cutting edges.

NET PRICES

The Shimer Cutter Head with Conical Flange, with 4 bit seats, Fig. 150, (without the Bits) each $32.85
Bits to cut 1¼ deep mould, each 5.89

SPECIAL HEADS FOR RUSTIC

This style of Head will also make excellent tool for Rustic, with two Bits upon upper side of flange to cut the extra depth of cove, and arranged with two tonguing Bits upon the lower side of the flange to complete the carve. For diagram of the Rustic, see page 35, Fig. 20.

This Head is made to interchange with any Matcher, Ship Lap or Jointer Head. When ordering, give numbers of Head in use and sample of the work.

Net Price for Rustic Head, 4 bit seats (without the Bits) $32.85
Net Price for 2 Rustic Bits, each 5.89
Net Price for 2 Tonguing Bits, each 3.24

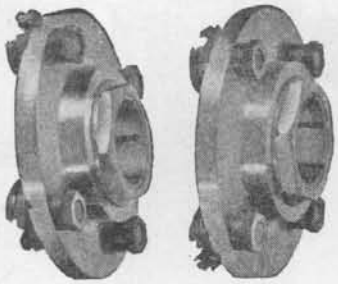


Fig. 683

THE SHIMER BEADER HEADS

These Heads, Fig. 683, are made with Self Centering Clamping Device for the Profile Spindle of any Matcher. The bits are formed to make the center or edge beads for ceiling and siding. Fig. 65 is a similar Head, but to be fastened between collars or with a set screw.

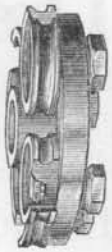


Fig. 65

THESE ARE OUR NET PRICES

One Set (2) Beader Heads Fig. 65 with 4 Bit Seats	$41.42
One Set (8) Beader Bits for these Heads	30.48
One Set (2) Beader Heads Fig. 65 complete	69.90
One Set (2) Beader Heads Fig. 683 complete	97.74

The Shimer Cutter Heads To Make Blind Slats

Fig. 70 represents a Head with Bits to cut Blind Slats, set for clearance. The shape of the Slat is turned into the outer surface of each Bit and the edge is formed at a shearing angle to cut in alternately opposite directions across the Slat thus producing a shave cut.

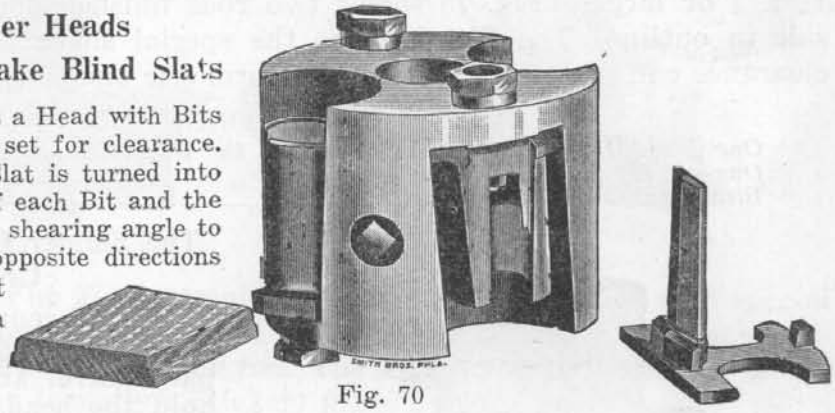


Fig. 70

THESE ARE OUR NET PRICES:

One Blind Slat Head, Fig. 70, without the bits	$27.32
One set (4) Bits for cutting Slat 1¾" wide	23.40
One set (4) Bits for cutting Slat 2" wide	27.76

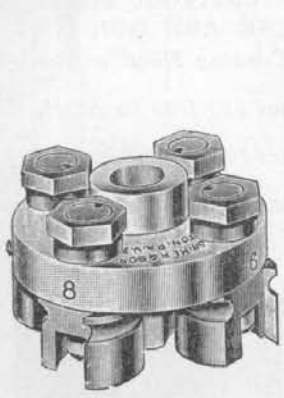


Fig. 545

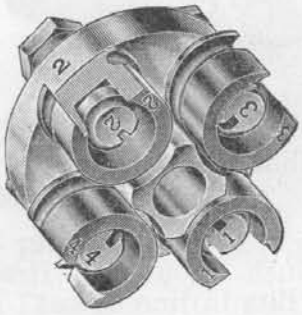


Fig. 546

These cuts represent a pair of special heads for making beaded edge moulding for furniture. The work represents only one of the many patterns that in the course of design and construction of certain kinds of furniture becomes a factory standard. The Shimer Cutter Heads produce such design in quantity. They are designed with special reference to side and edge clearance and the shape of the mould is uniform smooth and clean cut.

THESE ARE OUR NET PRICES:

For Cutter Heads in solid section, Fig. 545 and Fig. 546 net price of heads with (4) bit seats, without the bits, per pair	$41.42
Bits to make moulded edge bead 1¼ thick, each	3.98
Bits to match moulded edge bead 1¾ thick, each	4.35
Bits to make moulded edge bead 2¼ thick, each	5.21

The Shimer Cutter Head

To Make Blind Rods

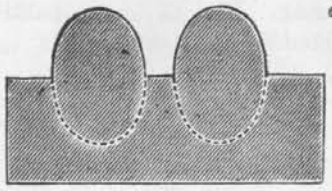


Fig. 75

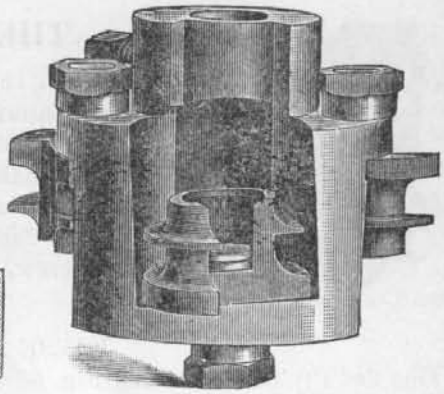


Fig. 76

Fig. 76 represents a Head for making two oval rods out of one piece $1\frac{1}{4}$ x $\frac{3}{4}$ or larger. Fig. 75 shows two rods finished one side—the other side in outline. The Bits hold to the special shape and work with a clearance cut, producing a rod of uniform size and shape until worn out.

THESE ARE OUR NET PRICES

One Blind Rod Head, Fig. 76, without the Bits	$27.32
One set (4) Bits two inches wide or less	23.40
Blind Rod Head complete	50.72

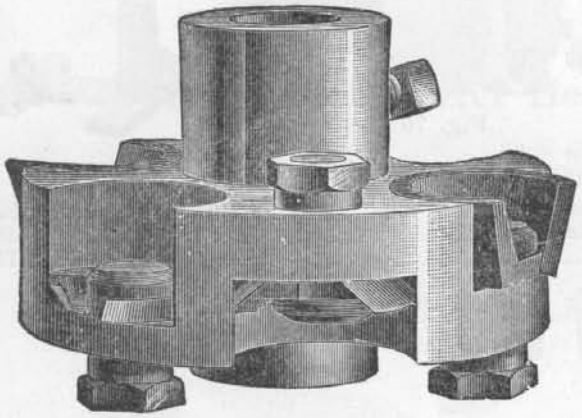


Fig. 77

The Shimer Cutter Head for Crozing

Fig. 77 represents a Crozing Head for coopers' use, to prepare barrel and keg staves to hold the head. A cut made across the grain of the wood is difficult to make with the common knife. These Bits have a backward shear cut and will always cut your standard shape.

THESE ARE OUR NET PRICES

One Crozing Head without the Bits		$31.69
One set (4) Bits to cut the V. each	$2.95	11.80
One set (2) Bits to bevel edge each	4.02	8.04
Crozing Head, Fig. 77 complete		51.53

The Shimer Cutter Heads To Make Flush Moulding

Fig. 78 represents our Improved Flush Moulding Head with three Bits in line of cut. The Bits have perfect clearance back of their cutting edges.

We make the Bits to cut any pattern you may desire.

THESE ARE OUR NET PRICES

Fig. 78 complete without the Bits,	$27.08
One Set (3) Bits,	18.43

Total net price for Head complete, $45.51

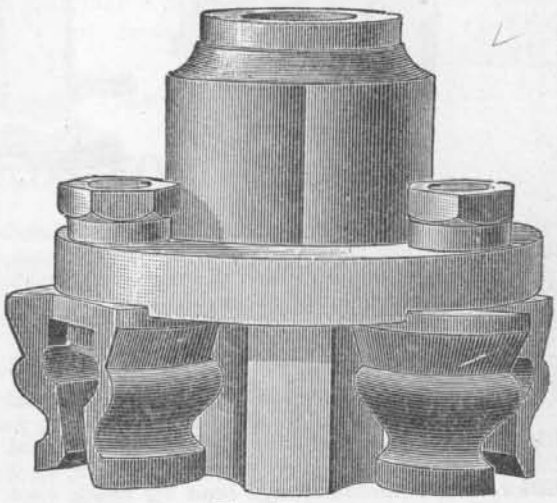


Fig. 78

The Shimer Heads for Sucker Rods and Hoops

TRADE

The Shimer Cutter Head

MARK

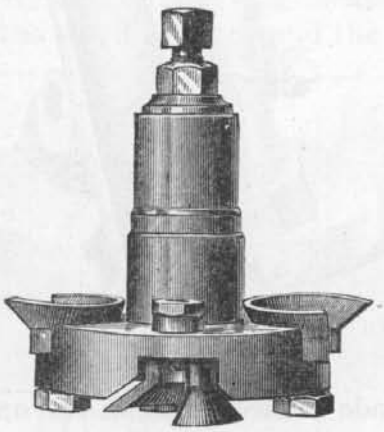


Fig. 56

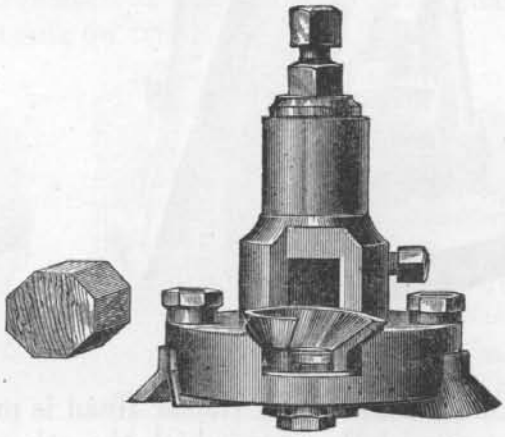


Fig. 57

Fig. 56 and Fig. 57 represent The Shimer Cutter Heads with special Bits to make Octagon Sucker Rods for pumps. The Bits upon each Cutter Head work three sides of the rod. The top and bottom sides are worked by the machine (usually a Sticker) fitted up for the purpose.

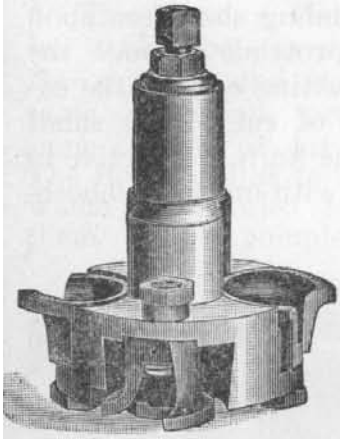


FIG. 59.



FIG. 58.

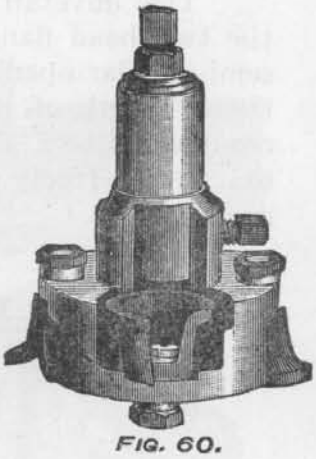


FIG. 60.

Keg and Barrel Hoops are also made with The Shimer Cutter Heads by cutting the splint to a shape like Fig. 58, which is afterwards resawed to make two beveled hoops from $1\frac{1}{4}$ to $1\frac{3}{4}$ wide. Special machinery is made for this purpose to which The Shimer Cutter Heads herewith illustrated are applied.

THESE ARE OUR NET PRICES

Net price for each Cutter Head without the Bits	$25.52	$51.04
One set (8) Bits to make Sucker Rods from $1\frac{3}{4}$ to 2 inches, octagon	5.40	43.20
One set (8) Bits to make Keg Hoops	4.95	39.60
One set (2) Cutter Heads complete to make Sucker Rods		94.24
One set (2) Cutter Heads complete to make Keg Hoops		90.64

THE SHIMER PANEL RAISING HEAD

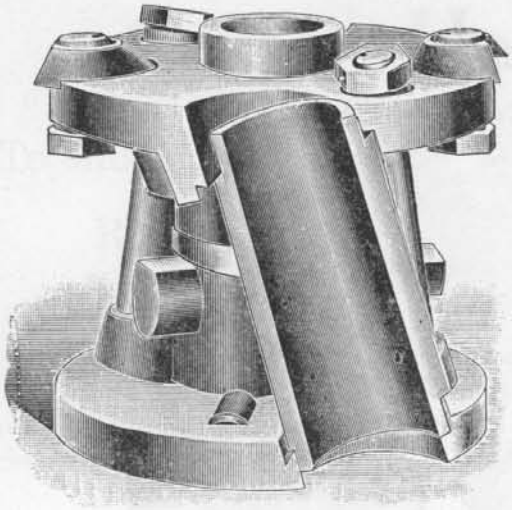


Fig. 160

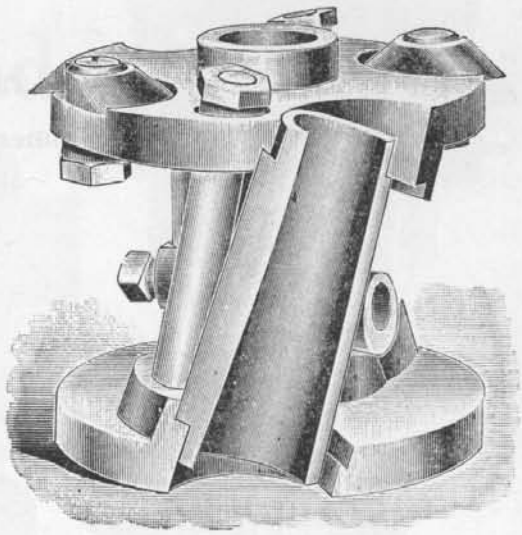


Fig. 161

Our Patent Panel Raiser Head is made in two sections, the one having a central hub, upon which the other section is slidingly mounted and fastened with a set screw.

The knives for Jointing extend from the flange of one section to the other, held by means of special dovetail shoulders which encircle each knife near its ends.

This dovetail shoulder matches with corresponding shoulders upon the two head flanges and the end of the knives protrude through the semi-circular openings in the flanges bringing the cutting edge to the extreme length of the Head to unite with the line of cut of the small moulded cutters. The heavy shearing position of the knife is effective in that it cuts freely cross-grained and knotty lumber with unusual smoothness.



Fig. 160 A

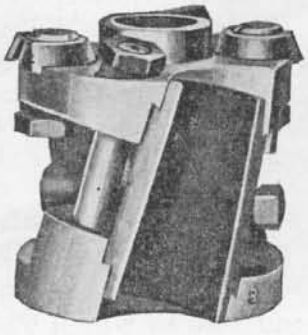


Fig. 161 A

THESE ARE OUR NET PRICES

Heads, each, without Bits	$28.60
Jointing Bits (2) *at* $5.35	10.70
Moulded Bits (2) *at* $2.92	5.84

How to order, see page 125

How to take Measurements of a Panel Raiser for a Pair of Heads

The diagram below represents the right and left hand spindle as you stand to operate machine with panel outline on bed plate fixed between.

By carefully giving measurements as called for we will guarantee to fit the machine, and send the tools on trial.

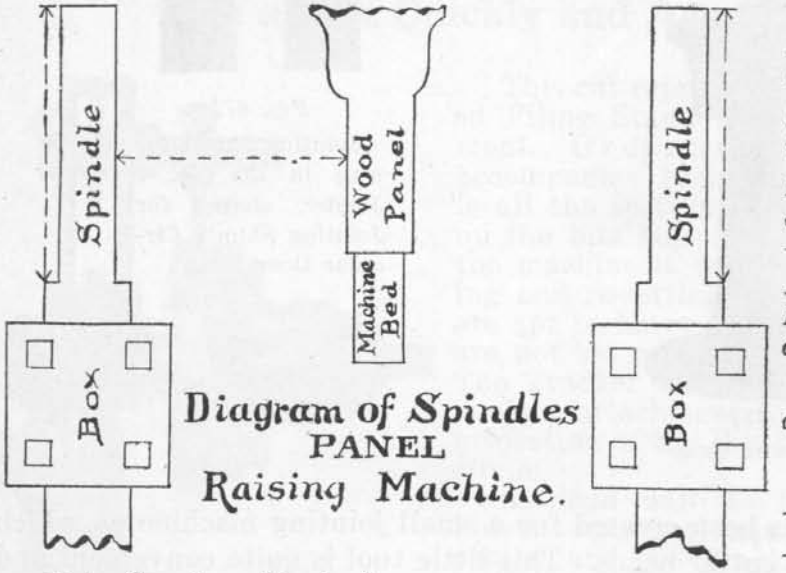


Diagram of Spindles
PANEL
Raising Machine.

For Measure Give

Diameter of Spindles (file a wire.)

Height of Spindles top of Shoulder.

Distance from Spindle to jointed Panel —see dotted line.

Are Spindles and Boxes movable in and out—how much?

Send sample or drawing of Panel.

Send Heads to .....

.....

.....

This Crozing Head, for crozing hard wood staves, cuts readily the chamfer and the groove at same operation, producing the same outline of cut continually. The Bits are filed to suit a gauge, which gauge also serves to set them. Simple, complete, accurate.

—Give us particulars regarding your machine, send sample, and let us quote you.

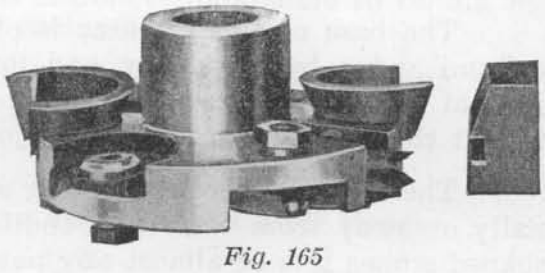


Fig. 165

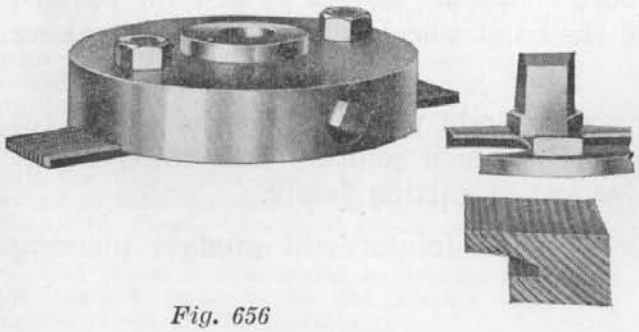


Fig. 656

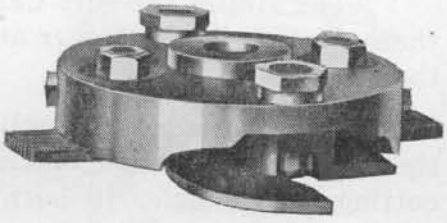


Fig. 657

The Heads Figs. 656 and 657 are the Cope Heads which are designed to make the coping for the special work shown above. This shows an especially deep moulding which is coped very easily with these Heads. If you require similar tools let us be of service to you.

The Shimer No. 4 Jointing Machine



Fig. 633
Jointer with Base

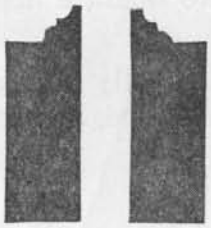


Fig. 671
Jointing Stones for use in the No. 4 Jointer, shaped for Jointing Shimer Circular Door Bits.

A demand has been created for a small jointing machine on which to joint the bits of cutter heads. This little tool is quite convenient and completes the operation in a minimum of time.

The base of this machine is of cast iron with an upright central column and a babbeted box and journal at the top. One end of the journal is fitted with a wheel adapted to be turned by hand, the other to suit the bore of the head to be jointed.

There is a holder for jointing stones with an adjustment longitudinally or away from or toward the head on the spindle. By the use of shaped stones bits of almost any pattern may be jointed.

The stones (of soft Carborundum) are shaped to suit the pattern then adjusted in the holder and the hand wheel is turned gently making the head revolve slowly.

The idea is to take only a very slight portion from the bits to get them all tracking and cutting. Too much jointing will cause a flat cutting edge which will burn instead of cutting freely.

Careful use of the Shimer No. 4 Jointer will produce pleasing results.

The net price of the No. 4 Jointer complete with
one stub and two Stones and Base .....
without Base .....

A Filing Stand

FOR THE BENCH

With Tracking Attachment by means of which the Bits are all set Quickly and Accurately.

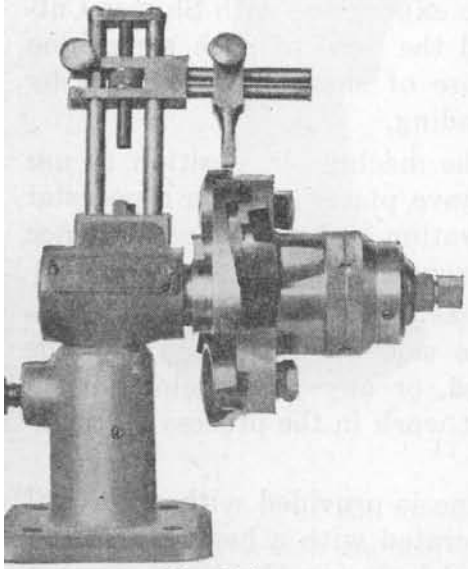


Fig. 31A

This cut represents a new and Improved Filing Stand with Tracking Attachment. Ordinarily the gauge that accompanies each Shimer Cutter Head is all the instrument needed for setting up the bits but in many instances when the machine is waiting for the sharpening and re-setting of the Bits, workmen are apt to hurry, and as a result the Bits are not set as closely as they should be. The Tracker above is a handy and convenient attachment to quickly bring the projection of the Bits to the same cutting circle.

A Head will do its best when the knives are set aquidistan from the centre, and the Tracking Attachment is intended to get that fine adjustment which is almost impossible to obtain by other methods.

Price, complete, with one Stub $30.75 Extra Plain Stubs, each, $3.60
Extra Nut Stubs, each, $5.76

Plain Filing Stand for Holding The Shimer Cutter Heads.

We represent herewith a Plain Filing Stand for holding the Shimer Cutter Heads in position when the Bits are being sharpened.

The Expansion Heads should not be clamped in the jaws of an iron vise, as is the practice with solid Head. The grip interferes with the movable head section. This Filing Stand consists simply of an iron base that will bolt to any ordinary vise bench. It has one vertical shaft adjustment to bring it to the height to suit the filer. This shaft is provided with a socket to take the stub of the mandrel that fits the Cutter Head. The Head shown on mandrel can take any position about the stand centre.

This Stand is also useful in holding any of the various patterns of the Shimer Cutter Heads shown in this Catalogue.

Net price, complete	$21.59
Extra Plain Stubs to fit Head	3.60
Extra Nut Stubs	$5.76

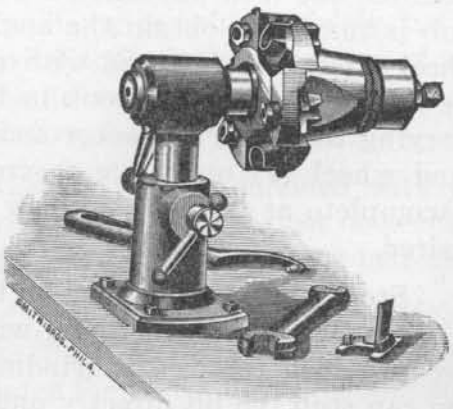


Fig. 31

SAMUEL J. SHIMER & SONS, Milton, Pa.

The No. 3 Cutter Head Grinder

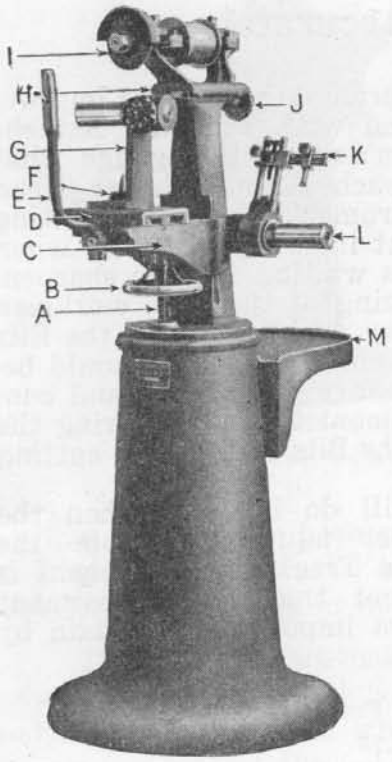


Fig. 634 A
With Counter Shaft

Here is our new No. 3 Cutter Head Grinding machine, having features brought out by a wide experience with Shimer Cutter Heads and the need of such a machine for the purpose of sharpening the bits by means of grinding.

To have the machine in position to use it freely we have placed it upon a pedestal to give it elevation and to add convenience in stepping around it.

The base has a convenient shelf **(M)** attached at one side upon which the heads may be placed, or any parts belonging to them, while at work in the process of grinding.

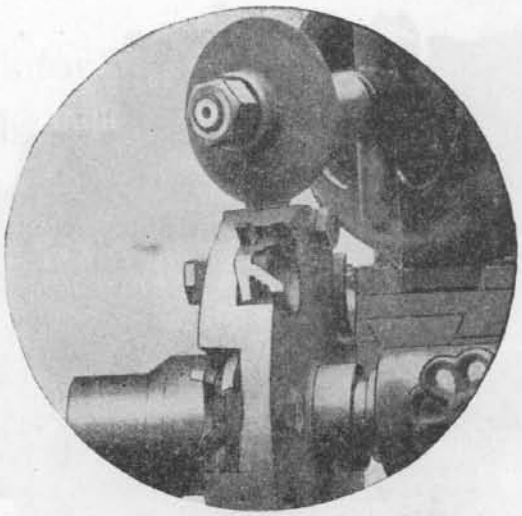
The machine is provided with a vertical screw **(A)** operated with a hand wheel **(B)** for raising and lowering the main carriage **(C)**. On the vertically adjustable carriage we arrange another carriage **(D)** having a lateral adjustment at right angle operated by means of the hand lever rack and pinion **(E)**. Upon this last named carriage is mounted the iron swivelled stub holding device for the head **(G)**. This stub is turned to obtain the angle for the cutter in presenting it to the wheel **(I)** and is fastened with nut **(F)** at any point desired. To obtain the adjustment for the hook in the bit we provide a movable frame **(H)** carrying the arbor or motor and emery wheel **(I)**. This is adjusted by a hand wheel **(J)** operating a screw. This makes possible an adjustment so complete as to leave nothing wanting to place the wheel where it is desired.

Stops have been placed on the movable frame **(H)** which can be set to the exact point which you wish the emery wheel **(I)** to go. A stop is also provided for use in grinding Heads with straight knives by which you can stop the bit directly under the grinding wheel.

Price, machine complete, including Countershaft, Tight and Loose Puleys, net, 634 A $345.00



Fig. 634 B



Giving the Bits the Hook and Slant

Motor Specifications (Standard Light System)
¼ hp. Motor, 3450 R. P. M.
110 Volt, Single Phase, 60 Cycle.

At the rear of the machine will be found a tracking attachment **(K)** by means of which each bit is placed in proper cutting position relative from the centre, after which operation the head is ready for use.

The Head is placed on the spindle **(L)** the adjustment **(K)** is set so that the cutting edge of the bit in proper relation touches it. The Head is then turned and each bit turned out to coincide. This places the bits in a proper cutting circle making jointing absolutely unnecessary.

Emery wheels used are either dished or flat (dished for circular bits and flat for straight bits), 4 inches in diameter with a fairly narrow point, coarse in grain and soft. They grind tool steel or high speed steel without glazing. Wheels that glaze should be avoided as they are frequently responsible for cracking and destroying the cutters.

The emery wheel of the belt driven grinder is shielded with iron casing carefully covering it to protect the operator from dust or accident. Run the wheel at about 2000 revolutions per minute and use a belt about 1¼ inch in width.

The improved No. 3 Grinder Fig. 634 B is fitted with an electric motor for convenience. This motor rotates the wheel at the proper speed for grinding, 2000 rotations per minute, and in all it is equally efficient

Price complete, including electric motor 634 B $345.00

A SHIMER PROFILE HEAD

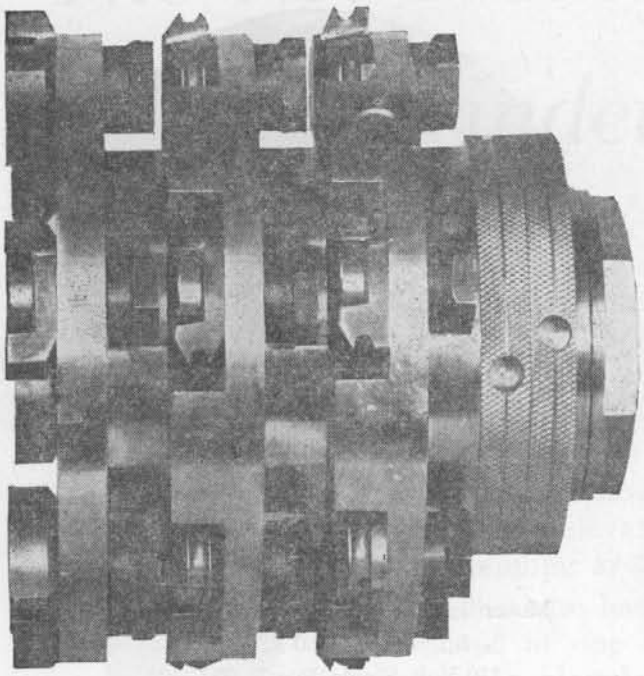


Fig. 683 A



Pattern No. 10156 Page 52

Here is a Head designed for the Profile Attachment of a large Matcher in production.

Its purpose is that of forming the edge and center beads as shown in cross-section pattern No. 10156.

There are three Heads so fitted as to work as one interlocking and under the control of a Self-centering Collet which fastens them centrally to the operating spindle.

To sharpen, file and set the Cutters, the Head is easily removed from the spindle, each of the three Heads is then handled as one in sharpening with a file—and the bits are reset to gauge.

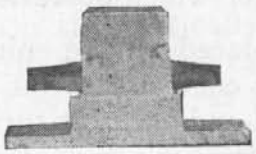


Fig. 14

When re-assembled all Cutters will be in their relative positions for another period of operation.

Heads of different design are supplied for the Profile Spindles to aid in quick changes and increased production.

Fig. 699 Wrench

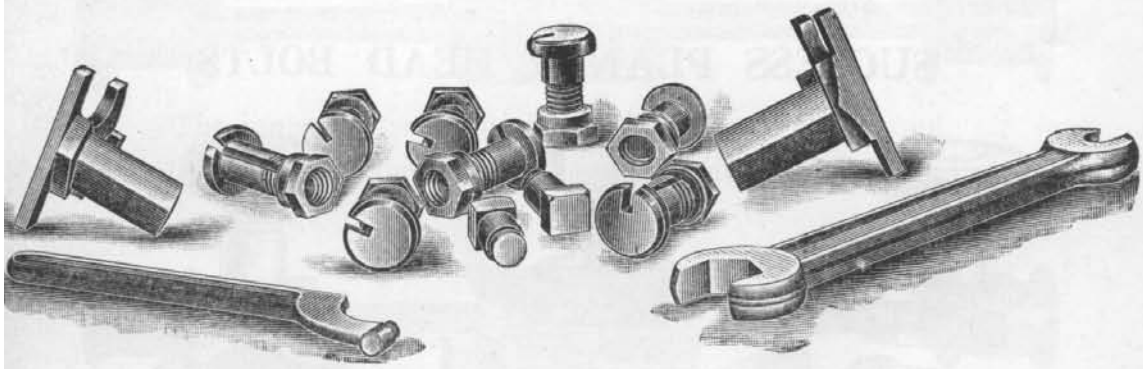
THESE ARE OUR NET PRICES

Price Fig. No. 683 complete with Bits and Self-Centering Device.	$155.30
Gauge Fig. 14	2.10
Wrench, Steel Forged Fig. 699	2.50
New Beading Bits (the set of 8)	30.48

SUPPLIES FOR SHIMER CUTTER HEADS

In ordering new Bits for Shimer Cutter Heads give the number of the Heads which you will find stamped on the hubs in large figures. A complete record of every Head sold enables us to fill promptly any order for supplies when the number is correctly given.

Prices of Bits are given in the preceeding pages of this catalog as well as prices for other supplies. We list below prices of some of the repairs which may be needed in connection with Shimer Heads.



This cut illustrates The Shimer Cutter Head Bolts, Nuts, Gauges and Wrenches

THE FOLLOWING ARE OUR NET PRICES

⅜ inch Tee Wrench, malleable	$1.00	Milled Nut, not case hardened	$ .25
½ inch Tee Wrench, malleable	1.00	Set Screw, case hardened	.25
Double End Cutter Head Wrench, steel forged	1.40	Cutter Head Bolt and Nut, slotted	.50
		Cutter Head Nut, case hardened	.20
Spanner Wrench, steel forged	1.10	One set of 8 Brass Washers, 1/64 thick for under bits	.72
Cutter Head Gauges, each	2.00	One set of 8 Brass Washers, 1/32 thick for under bits	.72
Top Screw for Cutter Head	.35		

THE SHIMER BEADING ATTACHMENT

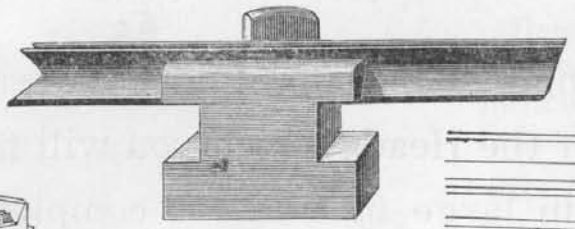


Fig. 137

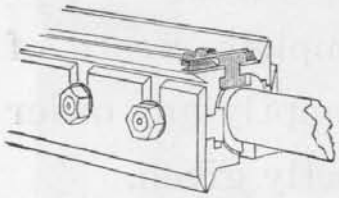


Fig. 138

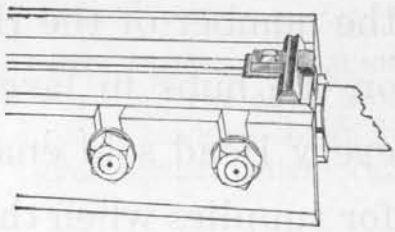


Fig. 139

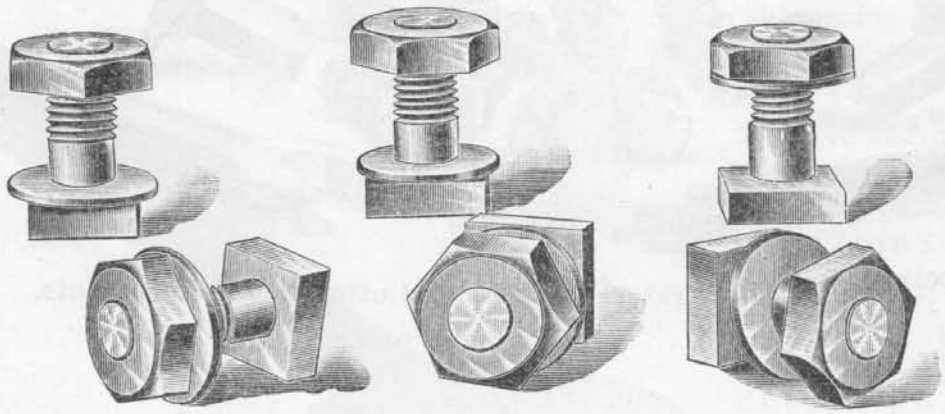
This Beading Attachment can be applied to any four-sided Planer Head. Two of the knives are removed as represented in the accompanying cuts. The Beading Tools are made of steel and formed to fit in the slots and take their place on the Head on opposite sides.

One bolt fastens the Cutter rigidly to the Head, anywhere along the line of the slot. The Cutter is taken out and filed so as to leave a lip on the lower side below the cutting edge, which serves as a chip breaker.

It is quickly and easily applied and just the thing for every Planing Mill.

Price, per set (2) complete with Bits.....$16.75 Net
Price, New Bits, each ..... 2.65 Net

SUCCESS PLANER HEAD BOLTS



SUCCESS BOLTS are made from the toughest and most fibrous material we can get hold of. They hold well in all manner of hard service. They have a good strong base and the threads do not strip easily.

The nuts are bright, being machined all around, true to size, uniform in thickness and weight. We believe our Success Planer Head Bolts and Nuts are superior to any others offered you. We try to make them so, because our experience has shown us the importance of good planer head bolts.

Users tell us the Success Planer Bolts are satisfactory and send us duplicate orders.

May we not serve YOU now?

A trial order will be appreciated. Be it large or small it shall have our best attention.

Price, Planer Head Wrenches, each, net..... $2.20
Price, Bolts, Nut and Washer, net..... .85

SHIMER PLANER HEADS

Square Slotted and Trapezoidal.

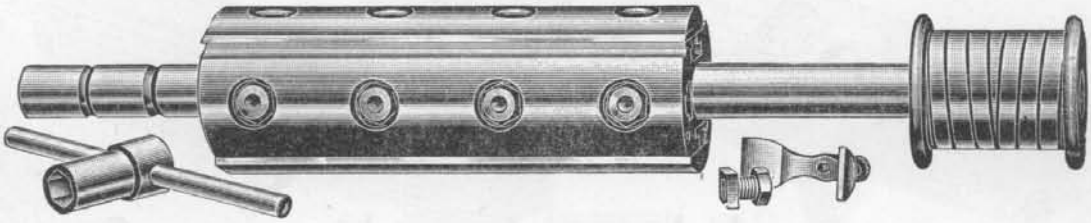
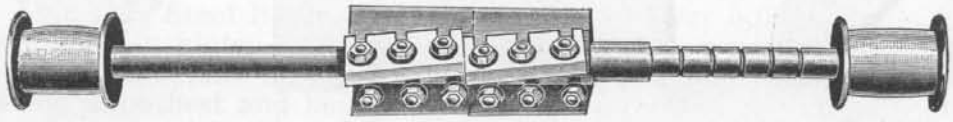
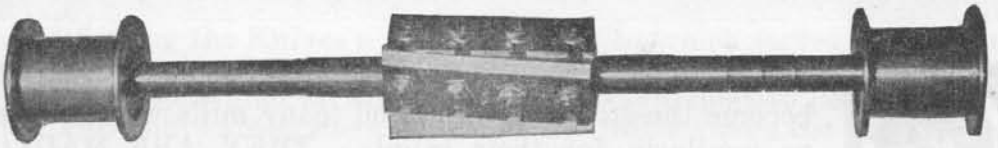


Fig. 666 Square Slotted Head with Caps



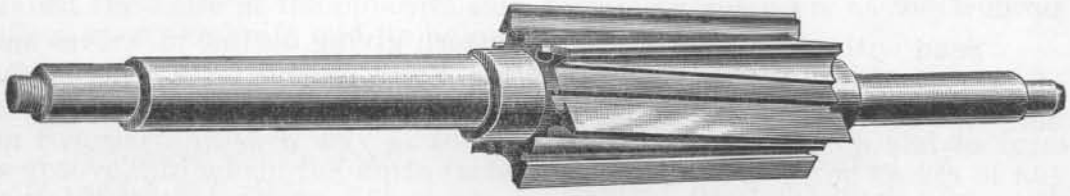
The Shimer Square and Trapezoidal Cylinders are made of forgings of high grade spindle steel—very tough and stiff.



The journals are ground to a finish, true and round.
The entire Head is tested at high speed and given a **Running Balance.**

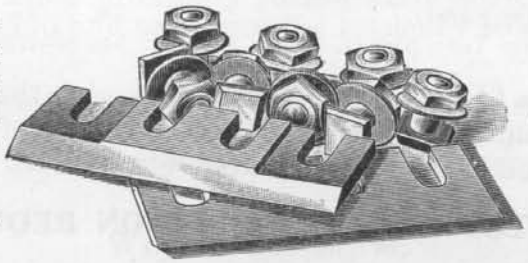


Satisfaction guaranteed. Send us your measurements and ask for prices.



We furnish Planer Head Bolts made of tough steel. They hold well under severest tests.

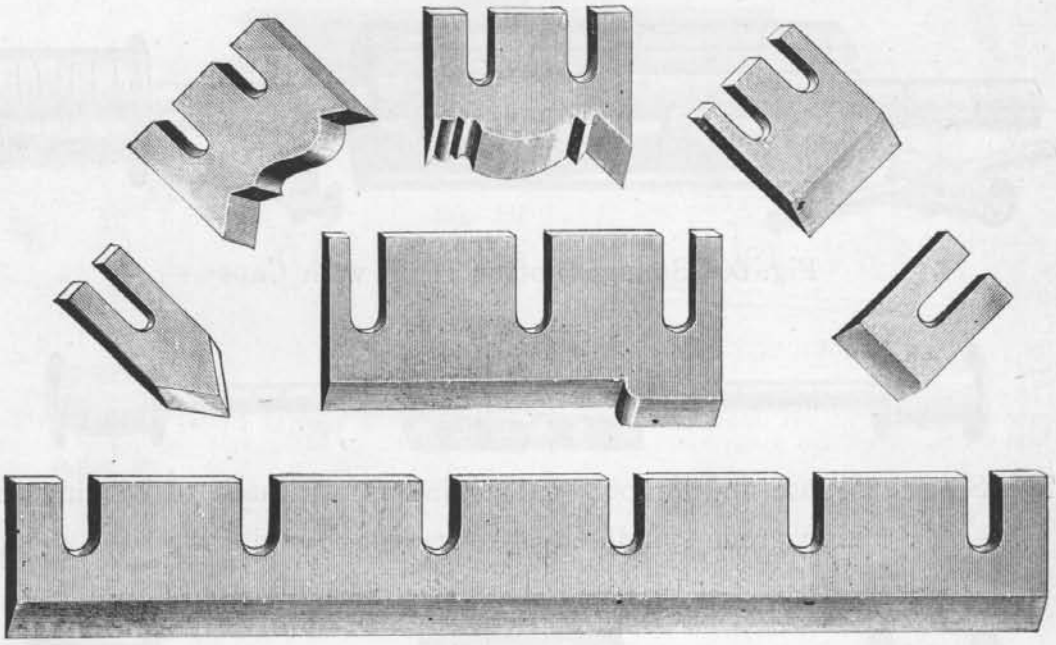
Send us your next order.



Planing Machine Knives with tool steel welded upon steel backs, for stiffness and strength. **Try us.**

HIGH GRADE MACHINE KNIVES

Superior Stock Finish and Temper



QUALITY KNIVES are the only kind we handle. They have become the standard in a good many mills which come to us regularly for their supply. THEY ARE MADE OF HIGH GRADE TOOL STEEL WELDED UPON STEEL BACKS—a guarantee of strength, durability and knife excellence.

Moulding Machine Knives and blanks are furnished promptly to pattern at lowest prices consistent with highest grade of material and workmanship.

The best Surfacer, Matcher or Moulder may prove a losing investment for the want of the right kind of Knives.

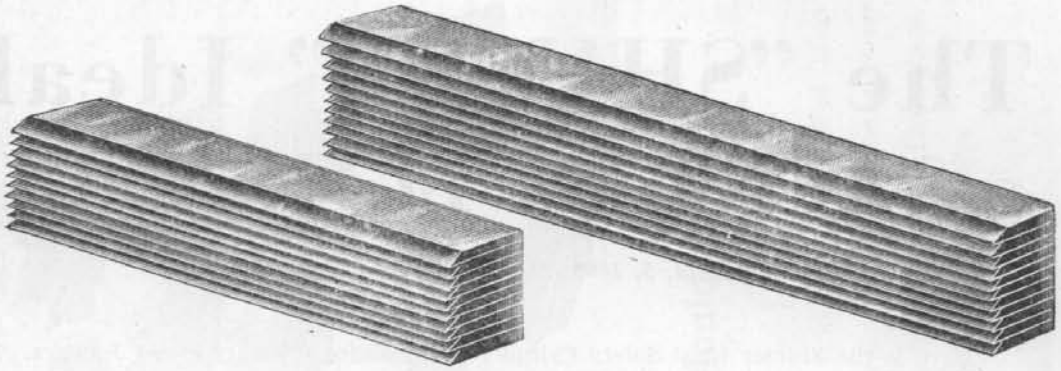
Quality Knives undoubtedly influence in your favor the cost of production.

Send with your order a Paper Pattern giving outline of knives and slots, give length width and thickness. State number of Knives to the set. We can furnish the following tempers:

No. 1—To File Very Easily.
No. 2—To File Fairly Easily.
No. 3—To File Rather Slowly.
No. 4—To File Slowly.
No. 5—To File Very Slowly.
No. 6—Can be Touched Up a Little With a Fine New File.
No. 7—To Grind Only.
No. 8—Kiln Dried Oak.

For knives to fit our make of Cylinders, give the head numbers. We keep all records and can furnish new knives without further information, unless some change is desired in temper, etc.

LOWEST PRICES QUOTED ON REQUEST.



Our Thin Steel Blades have no slots to fit over holding bolts. They consist of thin plates of **high duty steel,** light in weight, strong, tough and highly effectual in edge holding properties, and consequently produce the smoothest and best work.

They are slipped into the slots provided for them by the jigs thus imbedded in the tool steel holding devices, front and back when set in their proper cutting positions. The Strut Bolts in the jigs are turned so as to effect **Compression** upon the knives, when these parts, so vital to a good head are most securely held in place.

In Setting the Knives a gauge is provided which serves to locate the knife edges to keep the Head of a uniform cutting diameter. The knives are re-set by loosening all screws in the Jigs sufficient to permit slipping of the knife outwardly when by use of the roller gauge the edge is pushed back to its uniform or proper setting—a quick, simple and accurate method for general purposes.

When the strut bolts are again drawn up the knife will be in perfect holding and ready for best service.

This Cylinder introduces the strut bolts to clamp the knives by end thrust or compression, and has been in successful operation for several years. Beware of imitations and infringements.

When the knife Clamps or Jigs are inserted in the groove of a Head and the knife has been dropped into the slot provided, the strut bolt is turned as though unloosened until the head of bolt bears against the forward side of the groove and thus causes a pressure to be borne against the knife at the opposite side, forming a compress having a direct effect upon the knife and its holder.

The Knife Jigs are made of hard and tough carbon tool steel with tongue on back surface to fit channel in groove of Head. They are made in two parts in such way as to interlock when in position and to form a groove into which the knife fastens —thus providing for knives of any suitable thickness from 5-32 to ¼ inch. The forward part we provide with the chip break, in close proximity to the knife edge, which effectually serves to turn the chip and to reduce the tendency to eat into the woody fibres.

Our patent screw adjustment sets the knives out or in, just where you want them, with the use of a screw driver. With a little practice the adjustment of the knives will be made with accuracy in an instant of time.

Write us for Prices.

The "SHIMER" Ideal SAFETY CYLINDER

Patented Sept. 5, 1899; Dec. 24, 1907. Others Pending

Here is the Shimer Ideal Safety Cylinder as made for ordinary Hand Jointers. Its use is attended with great improvement in the machine equipment as a safety measure especially. The Cylinder being round there is not that liability of injury to workmen as found with the customary square heads frequently used in machines of this type. To guard the safety of men is an art and this tool should receive the careful consideration of all manufacturers whose interests are manifested in unique safety devices as a precautionary measure.

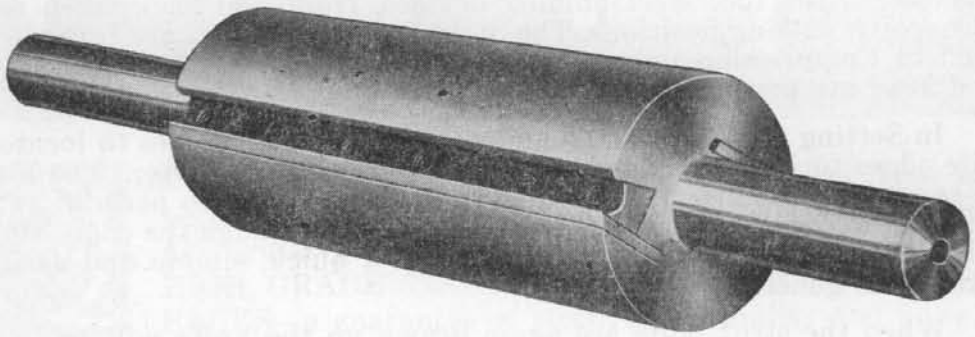


Fig. 615

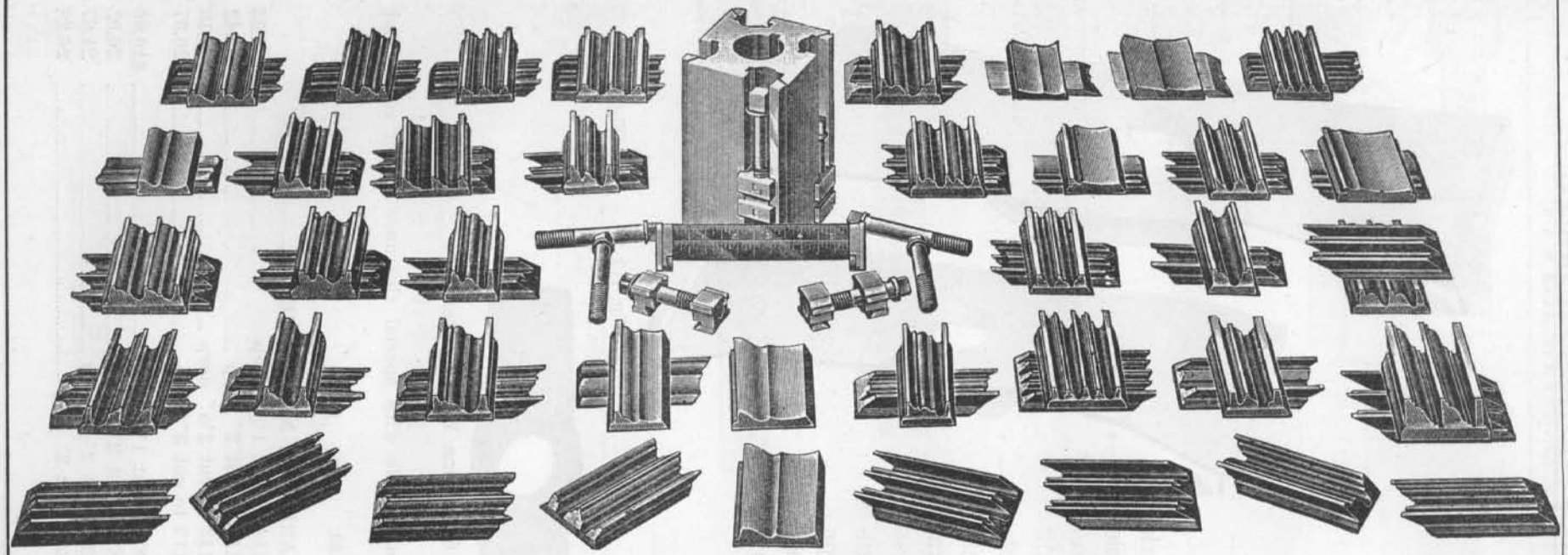
The Safety Cylinder is designed to meet the demand for Cylinders small in diameter suited for hand jointing machines and for Pony Planers where a well balanced round cylinder is desirable. It is carefully tooled from Steel Forgings of exceptional strength and arranged with a knife bar having a series of specially formed set screws therein. The Knife when dropped in place in the Head is clamped by means of the compression of the set screws against the bottom of the groove—note illustration. It will be noticed that the knife bar is also the chip-breaker and that ample space is given for the expulsion of the chips.

The Shimer Ideal Safety Cylinder is a remarkable tool for safety from accident and yet it has every advantage of a rapid and smooth cutting tool.

Made in all sizes for Jointer or Matcher

Give the length of Head desired, the cutting diameter and ask for price.

Pulleys extra, $11.25 each



The Shimer Combination and Moulding Heads for Small Mouldings.

This Head is described fully on pages 98, 99, 110 and 111 showing its application to Door and Sash Mouldings especially. We show here a few shapes of Moulding Cutters of small and medium size. The Cutters or Knives apply to this class of work to good advantage saving much time in filing and fitting.

Give size of your spindle and moulder Head also send drawings for our net prices. We will make this of interest to you if have work for a tool of this class.

Address, the Patentees and Manufacturers

SAMUEL J. SHIMER & SONS, Milton, Pennsylvania.

The Reversible and One Way Cutter as a Panel Raising Bit Applied to Variety Moulding Machines.

They are made to either work one way or for the reversible spindle according to the requirements of the machine. Fig 113 and Fig. 115 show the reversible class. All cutters are accurately ground for clearance, the central portion of the blade being hollowed out so as to have only the immediate cutting edges to come into contact with the lumber. They cut free and easy, throwing shavinges like a jack plane.

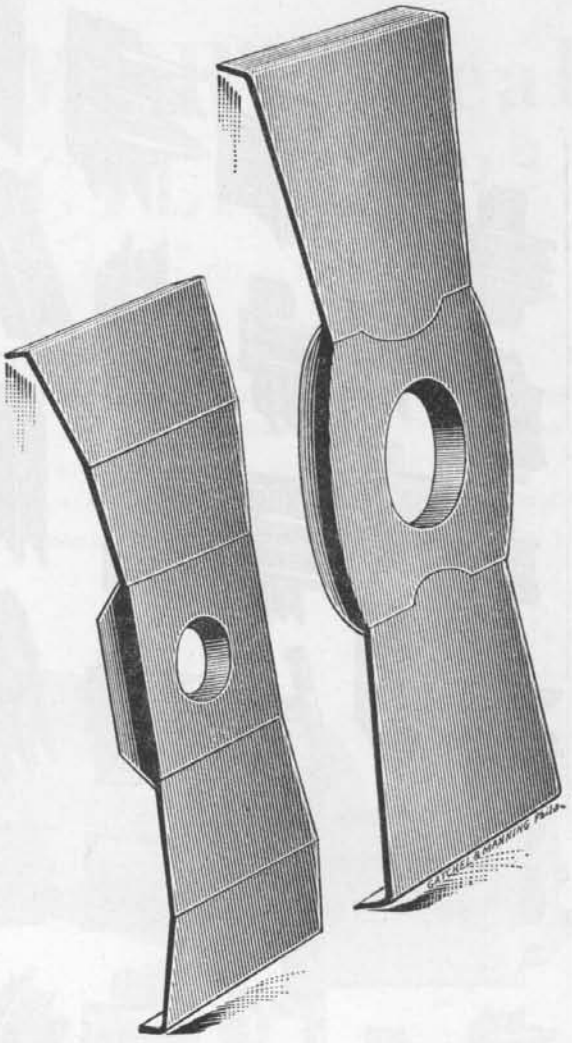


Fig. 113 Fig. 115



Fig. 682 One Way Cutter

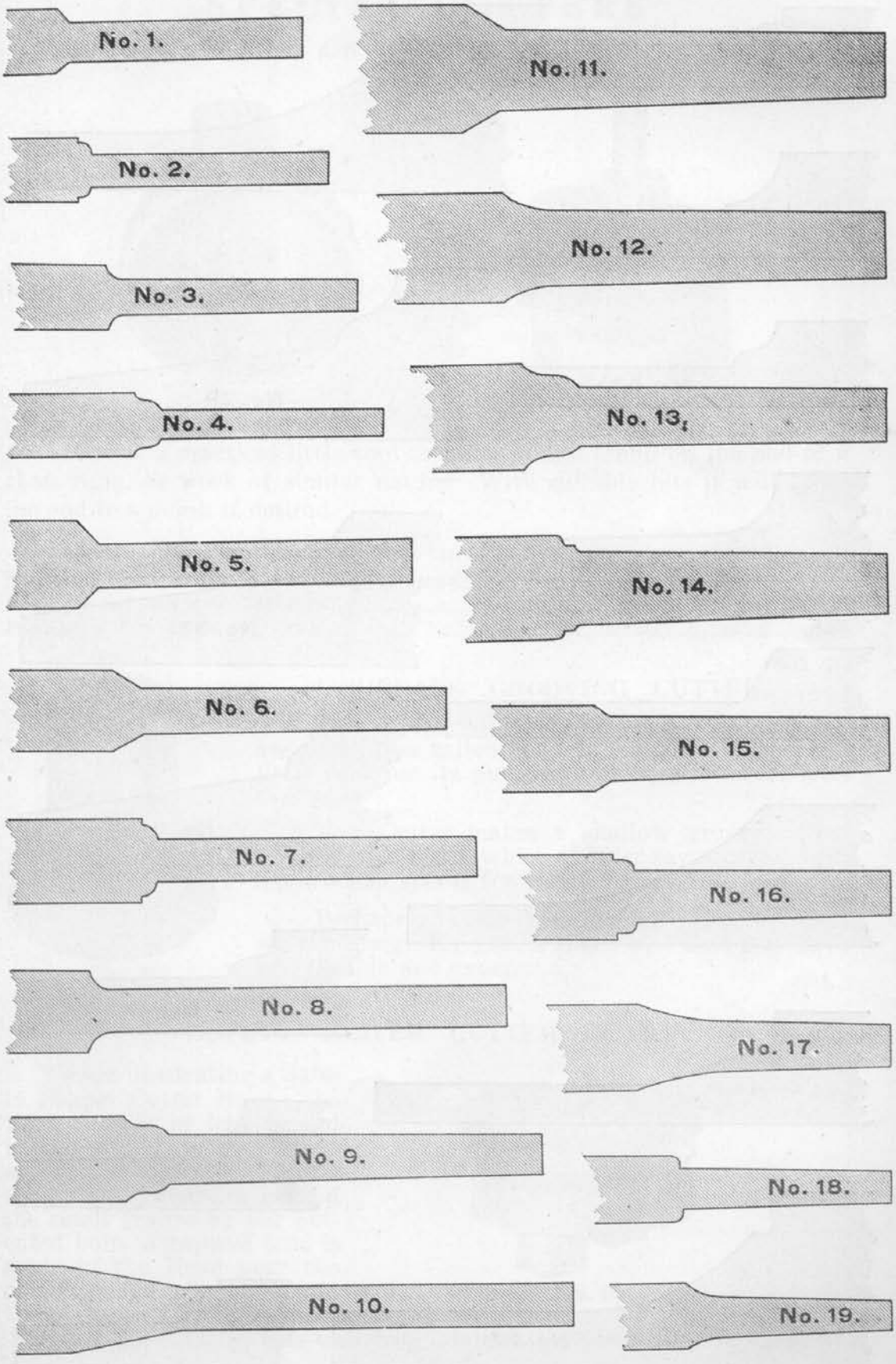
One way Cutters Fig. 682 are made with special clearance to cut easily and smoothly.

See Patterns on Page 139-140.

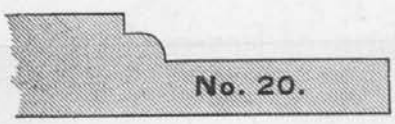
THESE ARE OUR NET PRICES

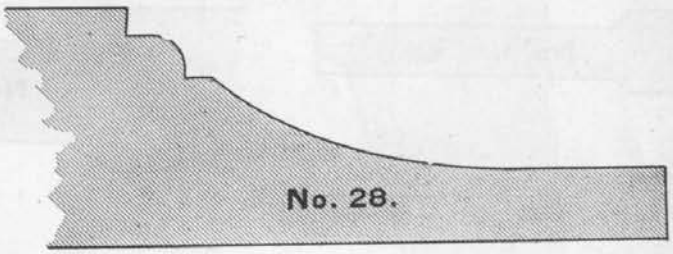
Price each Reversible Cutter Fig. 113 to cut 1½" deep	$17.05
Price each Reversible Cutter Fig. 113 to cut 2" deep	21.42
Price each Reversible Cutter Fig. 113 to cut 2½" deep	22.13
Price each Reversible Cutter Fig. 113 to cut 3" deep	26.37
Price each One Way Cutter Fig. 682 to cut 1½" deep	$16.06
Price each One Way Cutter Fig. 682 to cut 2" deep	20.92
Price each One Way Cutter Fig. 682 to cut 2½" deep	21.67
Price each One Way Cutter Fig. 682 to cut 3" deep	26.28

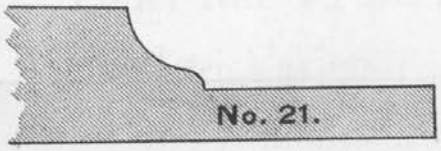
PATTERNS OF RAISED PANELS

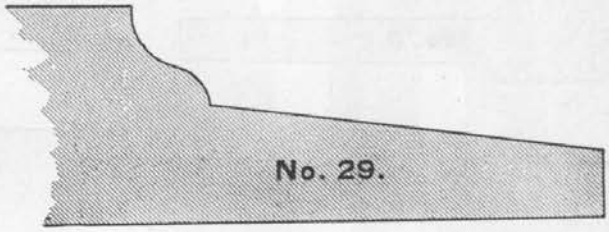


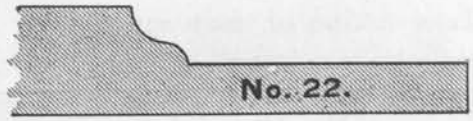
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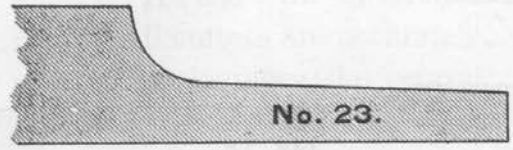


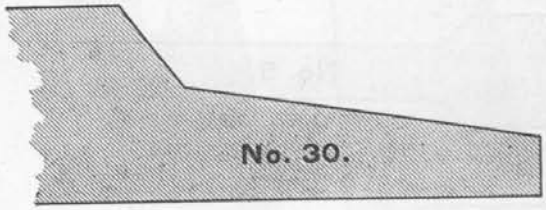


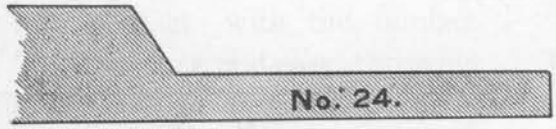


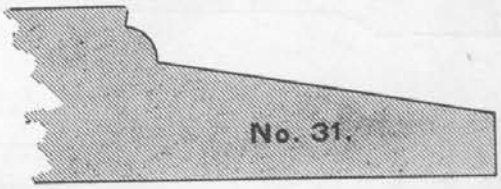


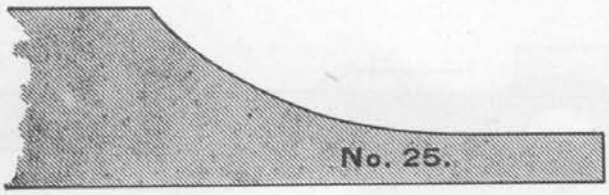


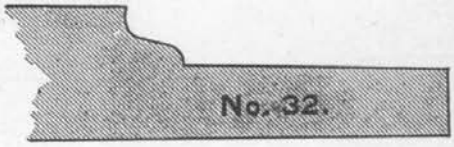


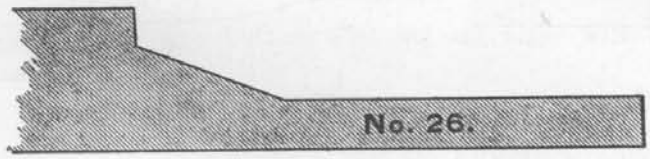


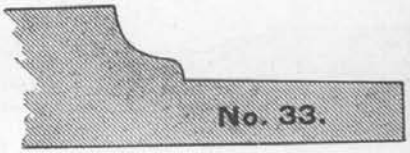


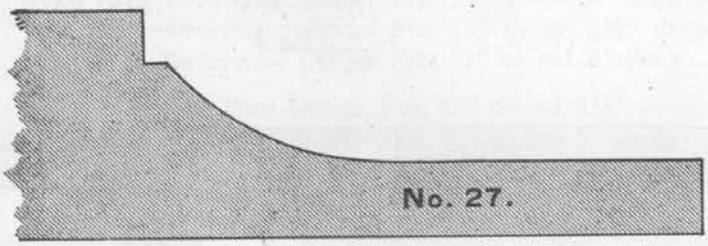


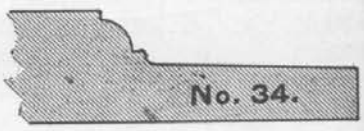












SPECIAL CUTTERS

TENON OR POINTING CUTTER

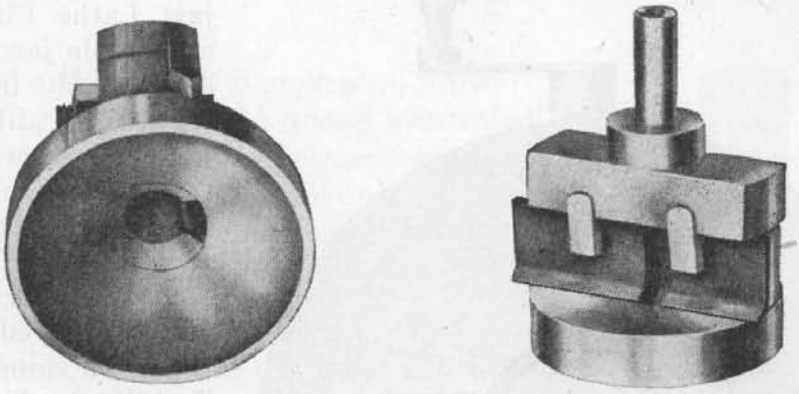


Fig. 650

Here is a practical little tool to put a round tenon on the end of a chair rung, or work of similar nature. With suitable bits it will taper the end to a point, if desired.

The tool will fit the chuck on a turning lathe, or other power driven machine, with ordinary revolving headstock or spindle.

Price for tool complete with Bits..... $40.12
Price New Bits (2 pieces) each,..... 4.36

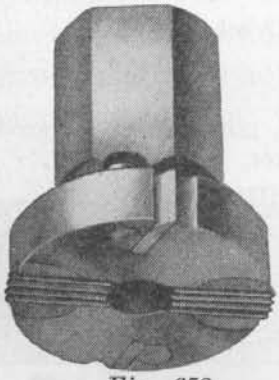


Fig. 652

SURFACE GROOVING CUTTER

This is one of the little specialties that we are sometimes called upon to make. It is an ideal little tool for its purpose and does its work perfectly.

This Cutter makes a shallow groove across the end of a block which is later sawed apart into flat wooden spools for twine, fishing line, etc.

Perhaps you are in need of a little tool that we can design for you, a small tool that may save you trouble and expense.

SAFETY SHAPER CUTTER HEAD

We are illustrating a Safety Shaper Cutter Head. The Head is made of Iron turned to the shape of the pattern and the small Knives or Bits are filed to shape and held in the small groove by our patented bolt. A tapered hole is made in the Head near the cutting edge of the Knife which throws out the shavings from the Head. This tool will minimize accidents to the hands of the operator.

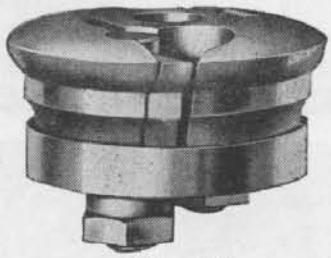


Fig. 653

For Centering and Holding Rosette Blocks

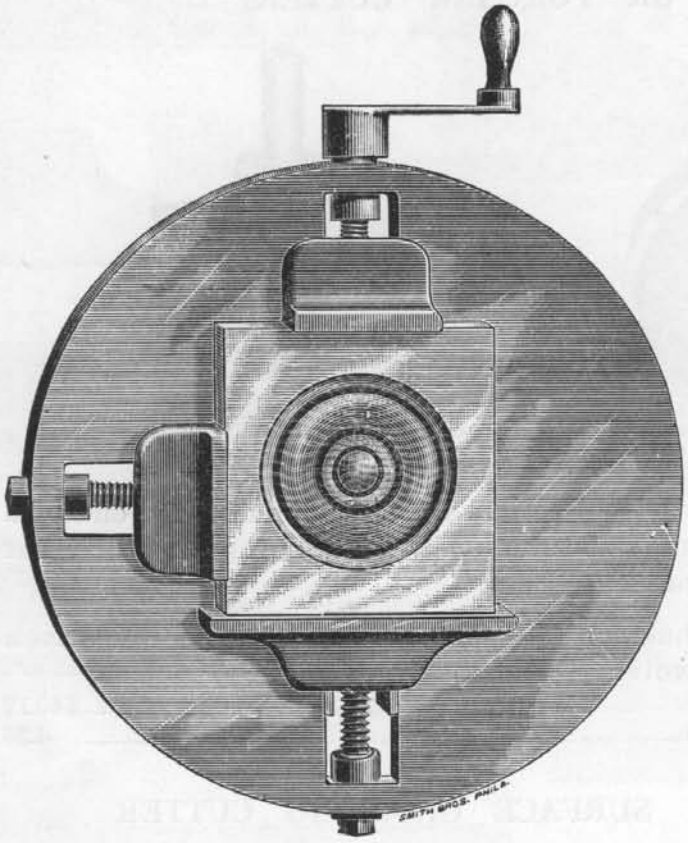


Fig. 111

We furnish a three-jaw Lathe Chuck with adjustable jaws accurately fitted into their ways, like illustration, Fig. 111, showing a Rosette Block in position with wrench for tightening the jaws. The chuck is provided with a hub which is bored out to fit over the spindle of the Tail Stock of your speed or turning lathe, and is movable towards and away from the Cutter by the hand wheel. Your wood turning lathe will become a very complete machine for the purpose, properly fitted up.

Price for the three-jaw Chuck, Fig. 111...

With your order send us the diameter of the movable spindle in tail stock and a wood sample of drawing of the pattern you prefer.

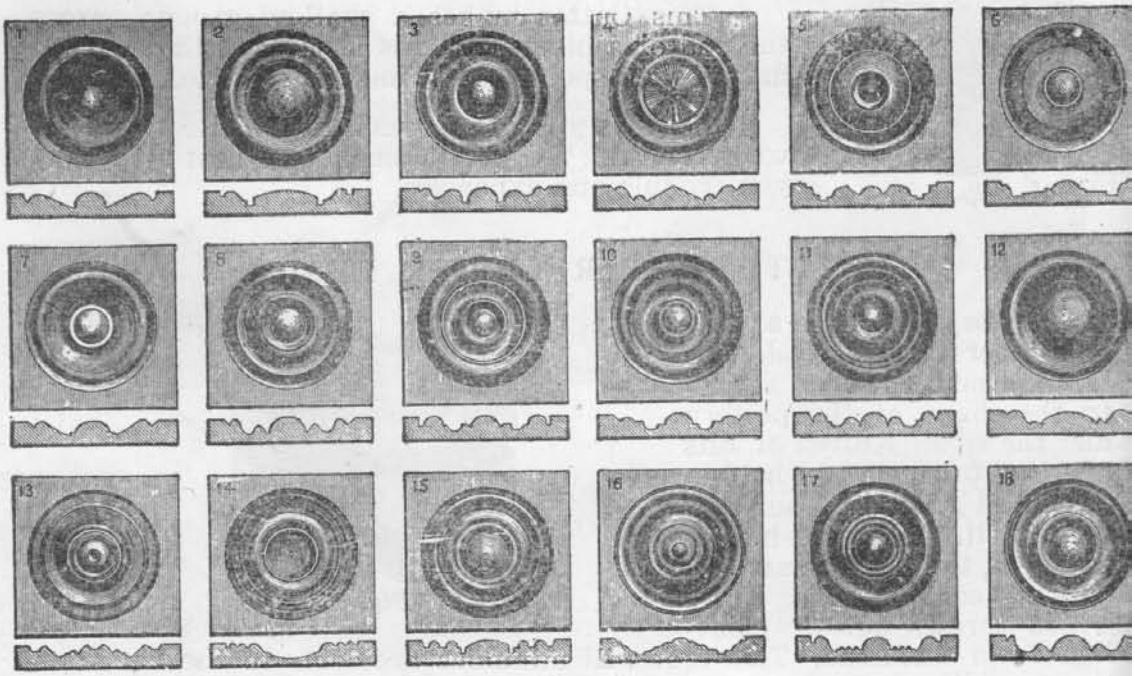


Fig. 112

Rosette Cutters

Fig. 109 and Fig. 110 B represent Cutters for moulding Rosettes like those illustrated by Figs. 111 and 112, or any other pattern of your own selection. With your order send us a block of wood or drawing representing the design and we will make the Cutter to match it.

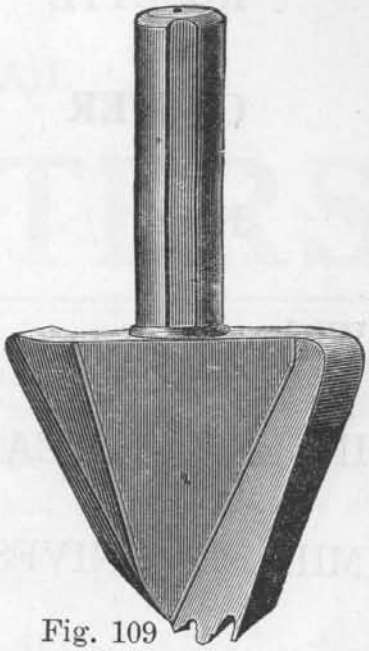
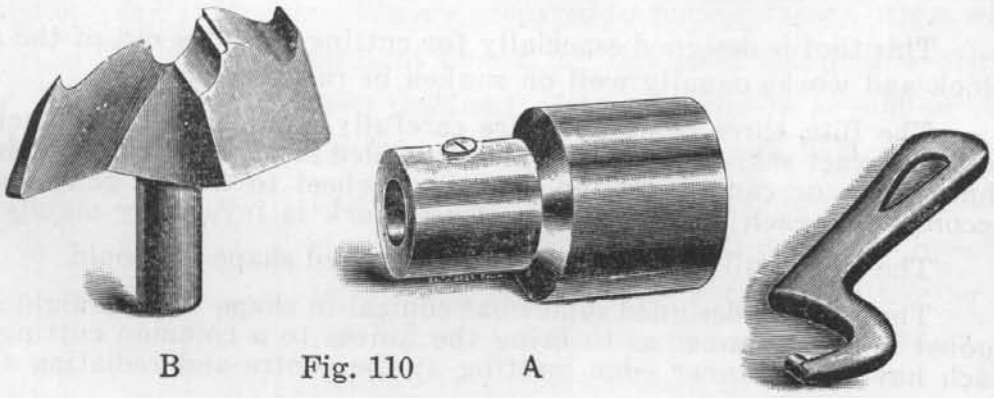


Fig. 109

The faster you can run the Cutter without tremble or end play the better. The block should be cut as it is taken from the dry kiln —even while it is yet warm from the kiln—the dryer the better.

For making large Rosettes we recommend the use of the turning lathe. The cut "A" represents a chuck which is bored out and threaded to fit over the threads of the lathe spindle; the other end of the chuck is bored straight through, into which the stem of the Cutter "B" is fastened with a set screw. This makes a strong and rigid holder for the Cutter, which must run free from all end vibratory motion.

Use dry lumber and you will always do good work.



B Fig. 110 A

PRICES

¾	*diam.*	$12.92	*net.*	1⅝	*diam.*	$14.98	*net.*	2½	*diam.*	$20.66	*net.*
⅞	"	13.12	"	1¾	"	15.30	"	2⅝	"	21.44	"
1	"	13.32	"	1⅞	"	15.74	"	2¾	"	22.60	"
1⅛	"	13.68	"	2	"	16.44	"	2⅞	"	24.66	"
1¼	"	14.00	"	2⅛	"	17.40	"	3	"	26.58	"
1⅜	"	14.34	"	2¼	"	18.36	"	3⅛	"	28.70	"
1½	"	14.66	"	2⅜	"	19.52	"	3¼	"	30.64	"

3⅜	*diam.*	$32.72	*net.*
3½	"	34 82	"
3⅝	"	37.92	"
3¾	"	39.20	"
3⅞	"	40.80	"
4	"	42.40	"
Chuck		9.75	"

Patent ROSETTE CUTTER Head

With——

INTERCHANGEABLE

MILLED KNIVES.

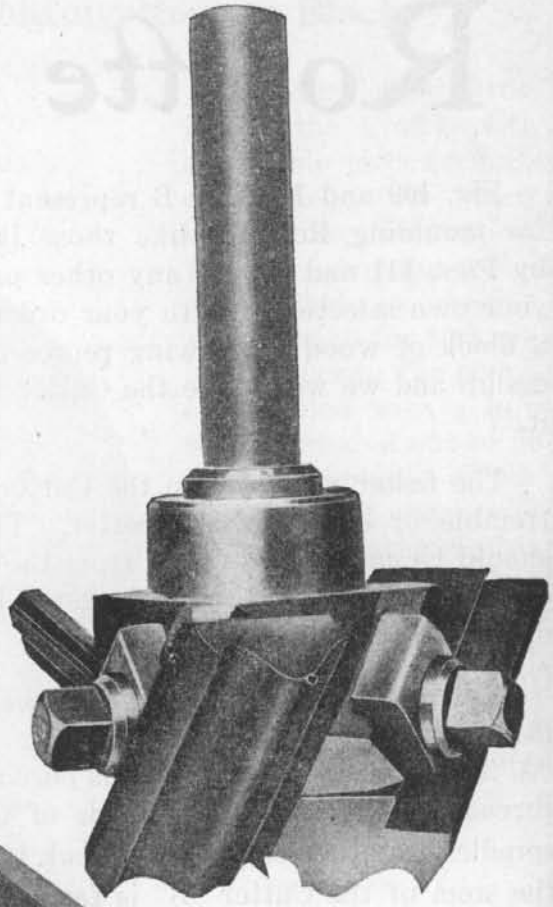
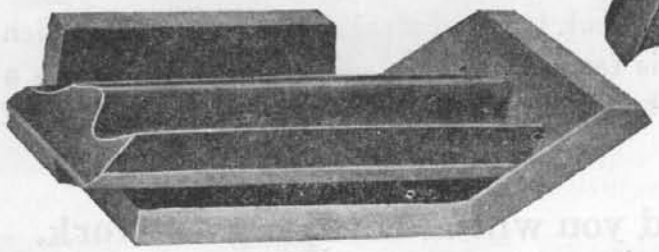


Fig. 500



GAUGE

This tool is designed especially for cutting Rosettes out of the solid block and works equally well on sunken or raised designs.

The Bits, three in number, are carefully moulded on their backs to suit the exact shape of mould. They are filed straight across the edge in sharpening, or can be ground on emery wheel to fit the gauge which accompanies each Head, when uniform work is invariably maintained.

The Head will receive Bits for any desired shape of mould.

The Head is designed somewhat conical in shape with straight seat tooled in such manner as to bring the knives to a common cutting line each having the inner edge meeting at the centre and radiating there from.

The bolt and clamping device holds the knives very effectually to the base or seat prepared for them.

It is a well made tool and guaranteed to do good and satisfactory work in any DRY LUMBER.

Price, Head complete with one set of Bits $48

Price, Bits per set of 3 13

Net Price List of SURFACE MOULDING CUTTERS

With Straight Shank

Cutters having taper shank or stem, add 10 per cent to the list.

NO.	Price.	No.	Price.
1	11.48	40	$ 9.34
2	10.00	41	9.66
3	10.54	42	9.34
4	9.50	43	9.66
5	12.76	44	9.66
6	15.34	45	9.66
7	12.26	46	12.00
8	16.06	47	10.98
9	25.38	48	12.76
10	9.86	49	13.50
11	9.48	50	15.32
12	18.14	51	16.68
13	9.50	52	18.14
14	28.20	53	20.32
15	12.00	54	9.74
16	9.48	55	22.96
17	18.14	56	33.46
18	9.50	57	25.56
19	28.10	58	28.24
20	12.00	59	25.78
21	9.48	60	25.78
22	9.50	61	11.06
23	11.06	62	12.94
24	11.46	63	14.94
25	11.80	64	15.86
26	10.40	65	22.96
27	9.50	66	33.46
28	9.50	67	38.52
29	9.60	68	22.96
30	10.26	69	21.94
31	10.66	70	35.86
32	11.48	71	22.96
33	12.76	72	30.82
34	12.76	73	26.80
35	11.50	74	23.34
36	10.46	75	20.32
37	10.46	76	25.68
38	9.50	77	28.24
39	9.34	78	22.00

GUIDE COLLARS.

33 Collars, complete set for ⅝ spindle, $105.00
9 Collars, complete set for ⅜ spindle, 27.00
Single Collars, 3.50 each.

ROSETTE, SUNKEN PANEL, ROUTING AND DOVE TAIL

CUTTERS

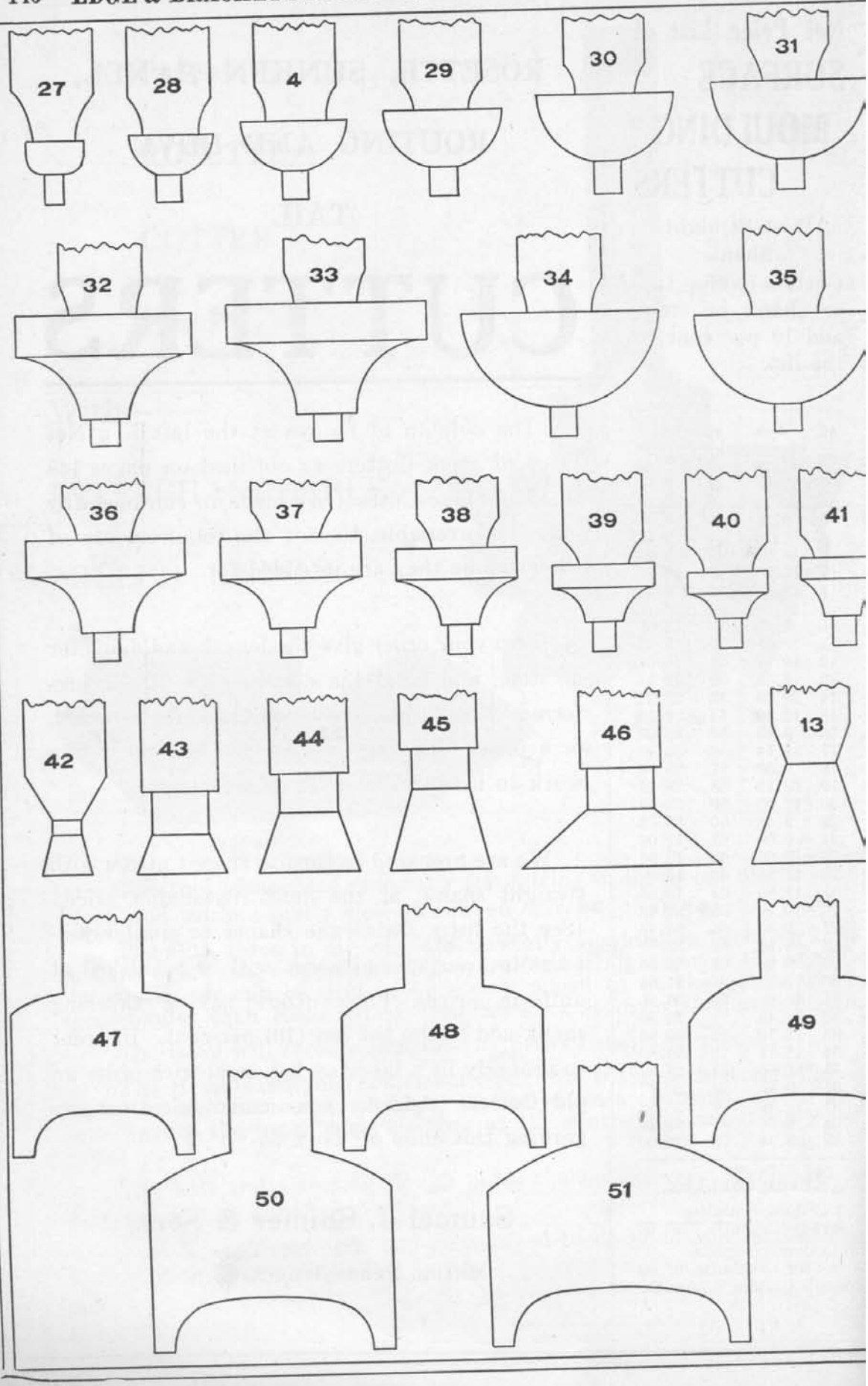
The column of figures at the left is a Net Price of Stem Cutters as outlined on pages 148 to 152. These Cutters are made to run one way only, or reversible, to suit the requirements of the machine they are intended for.

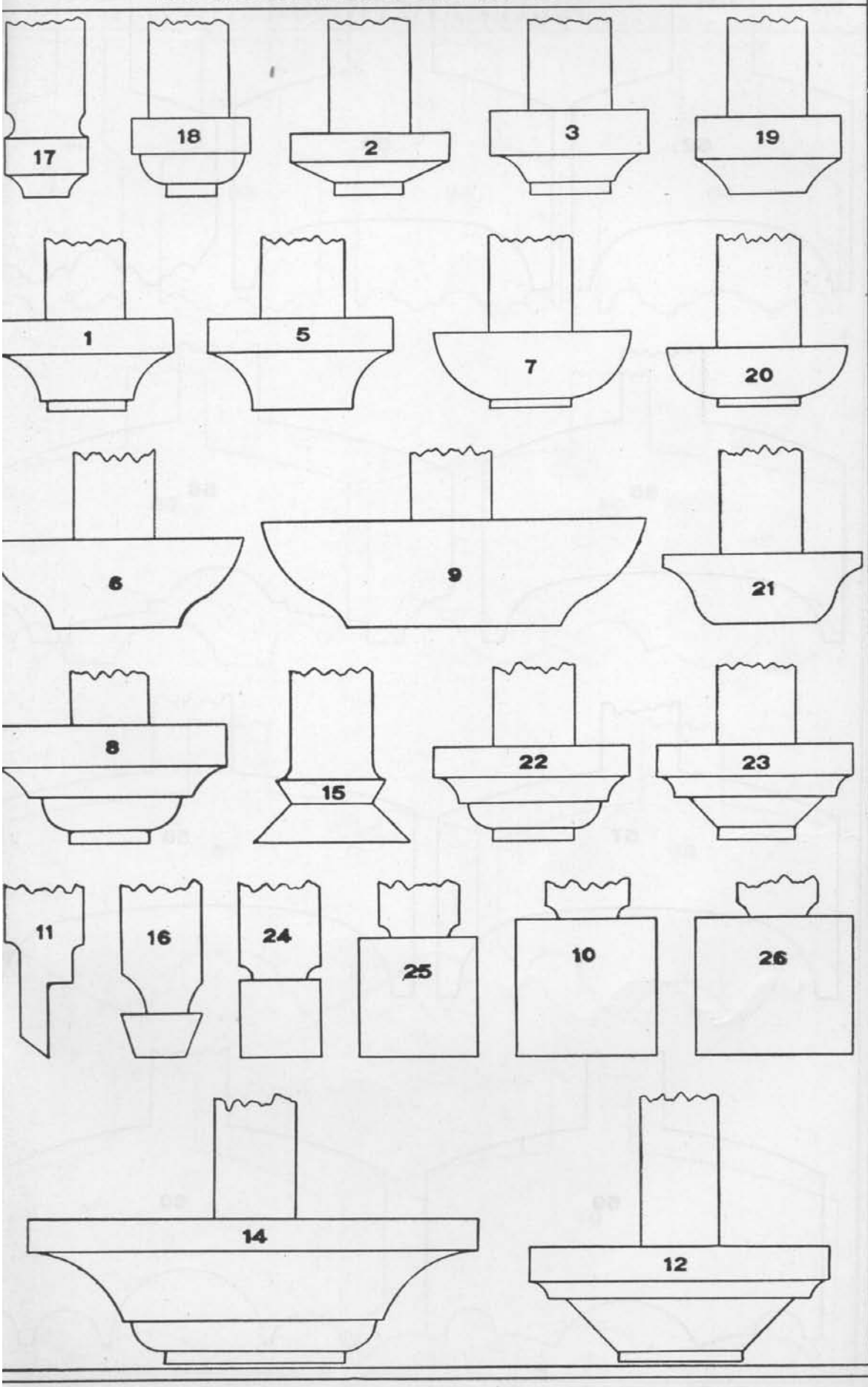
With your order give the length and diameter of stem, and state the diameter of Cutter preferred. Send a piece of wood carefully moulded, or a pencil drawing to show the outline of the work to be done.

We are prepared to furnish these Cutters with straight shank, at the most reasonable prices. (See the list.) Catalogue shapes or similar patterns to your special needs will be furnished at uniform prices. For Cutters having tapering shank add to the list ten (10) per cent. In order to properly fit a taper socket, send with order an old Cutter. Address your communications regarding this class of work to

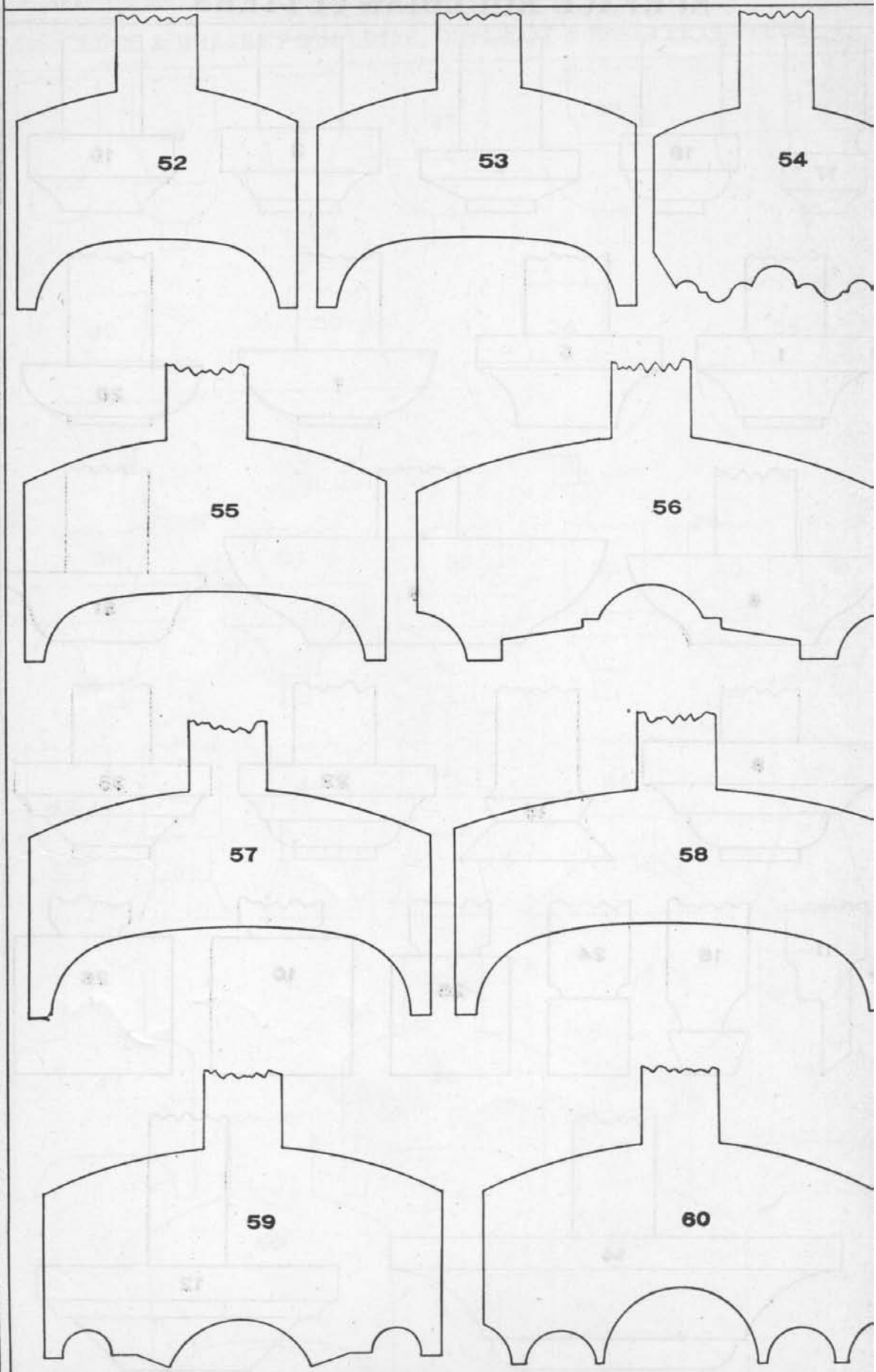
Samuel J. Shimer & Sons,

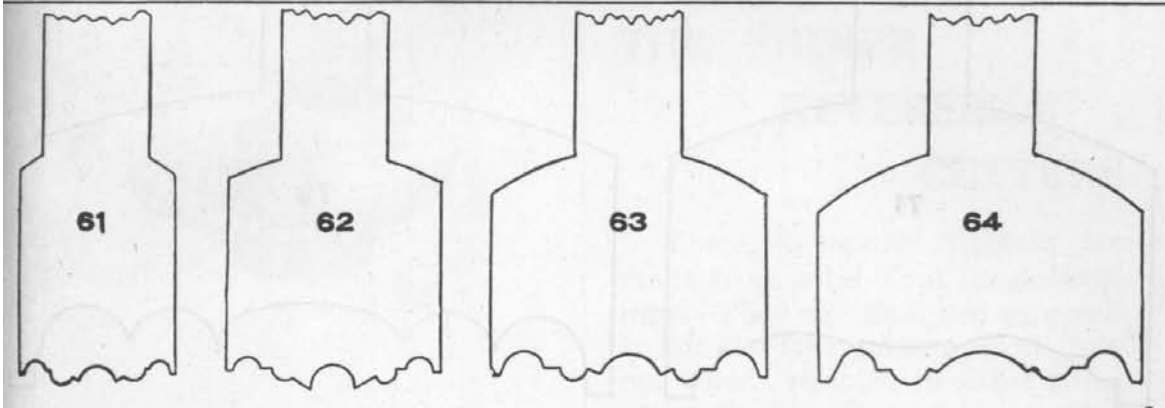
Milton, Pennsylvania. U. S. A.

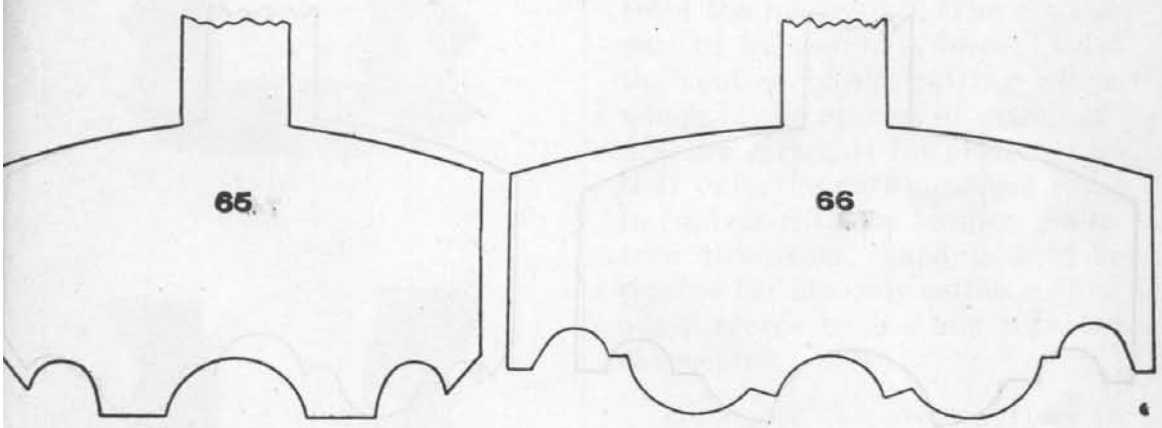

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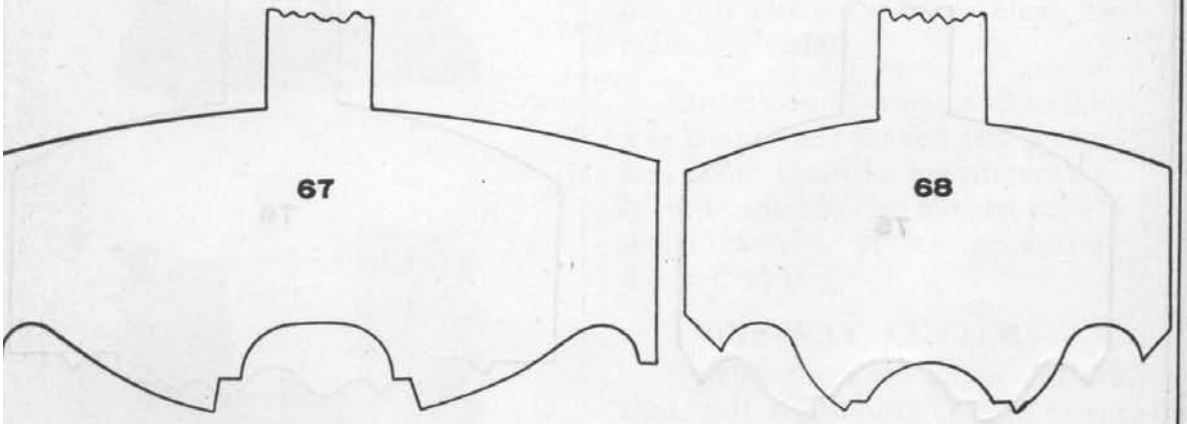

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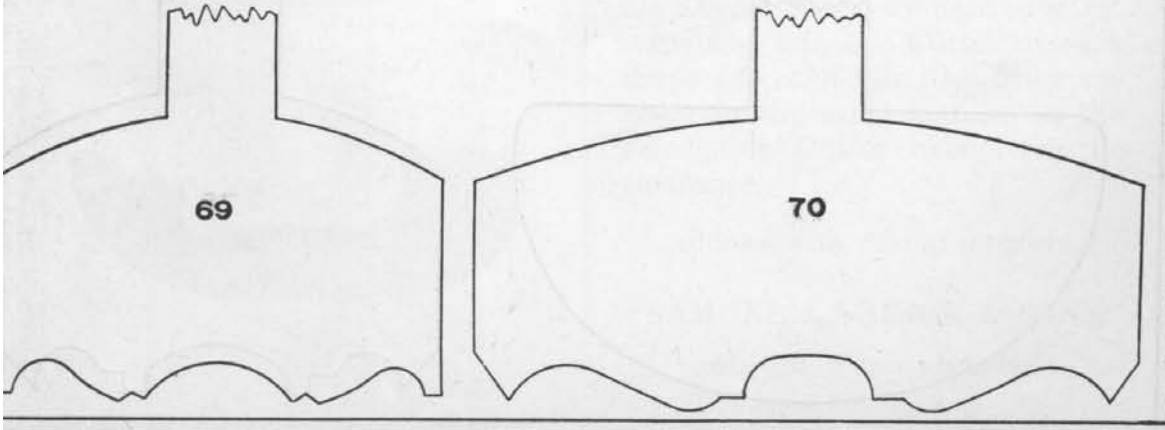
ROSETTE CUTTERS

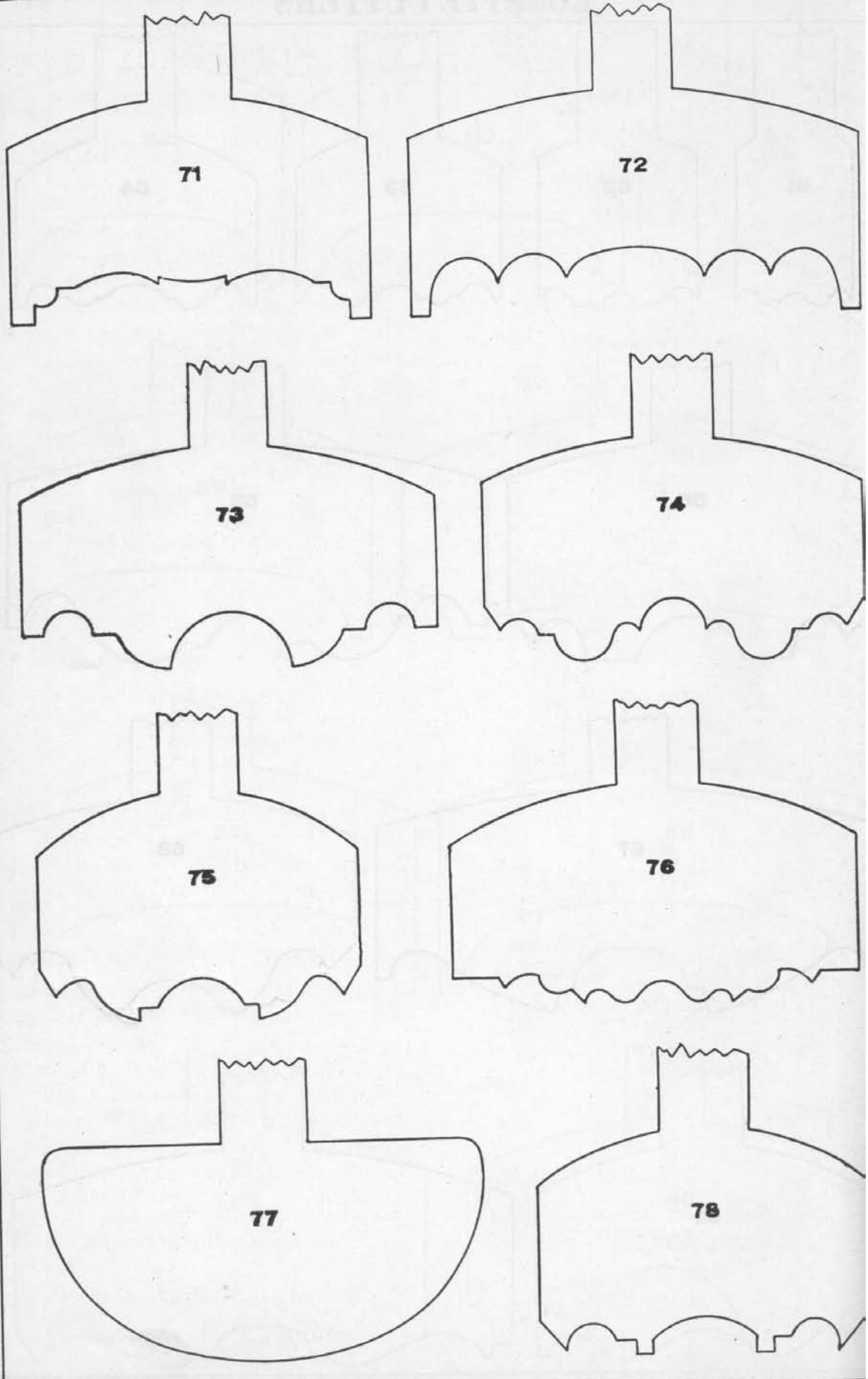


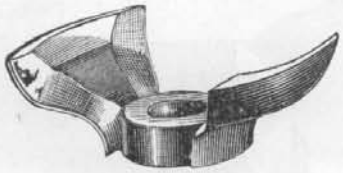

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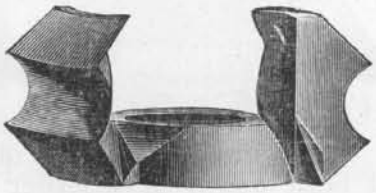

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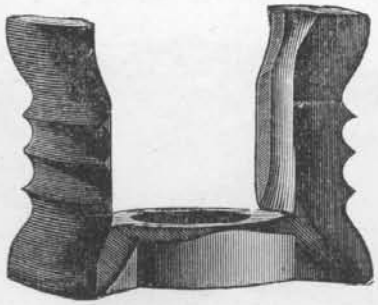

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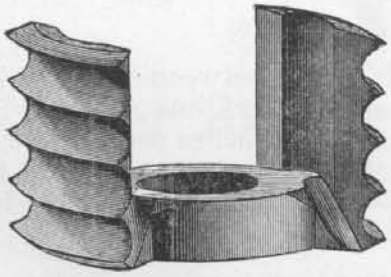

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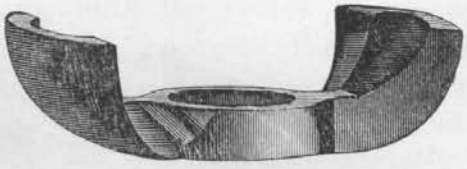

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THE SHIMER REVERSIBLE CUTTERS

These Reversible Cutters are made from solid Tool Steel Forgings. They are designed especially for the free cutting of all fibrous woods, running in either direction. The cutting edges are filed from the inside only. The counter part of the mould is formed upon the contour of the cutting wings, which in the process of manufacture, are arranged for clearance so that only the cutting edges come in contact with the lumber. Therefore the exact shape is held in reserve for use only as the cutting edges recede by use and repeated sharpening.

Owing to the great variety in sizes, shapes, spindle diameters, etc., all cutters of this class are made per order.

Cutters for special and catalogue shapes are turned out promptly, as our facilities are unexcelled. In ordering special shapes send a wood sample, or an accurately made drawing.

ONE-WAY CUTTERS

By this term we mean Cutters that will work only in one direction as made for the Double Spindle Shaper. They are used in pairs, right and left, one Cutter of each shape for each spindle. They are made in the same manner as the Reversible Cutter except in the clearance.

Address the manufacturers,

SAMUEL J. SHIMER & SONS,
Milton, Pennsylvania.

REVERSIBLE CUTTERS

These illustrations represent Reversible and One-way Cutters to which we give a permanent clearance ground into their contour in such a way as to agree with the pattern you send us or the pattern that you may select from the numbered list, illustrated on pages 155 to 181.

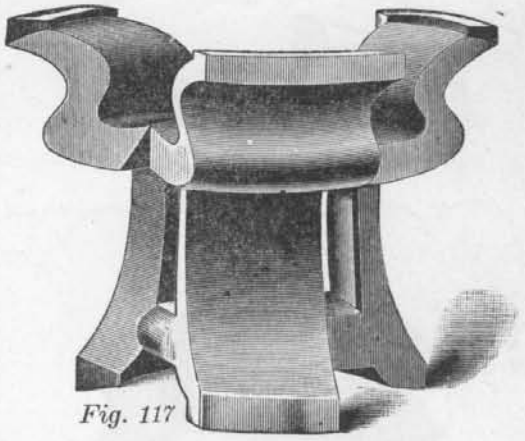


Fig. 117

The cutters illustrated on this and the next page show design only, and have no possible meaning as to size and proportions, therefore when you order make selection from patterns by number and send us the diameter of your shaper spindle and shaper collar with which the Cutter must work. Also advise whether or not Cutters are to be made Reversible, (to cut both ways) or whether they are to work in pairs and be made to cut one way only. You sharpen these Cutters from the inside and bring them to a sharp cutting edge, thus holding the shape of the pattern until they are worn out.

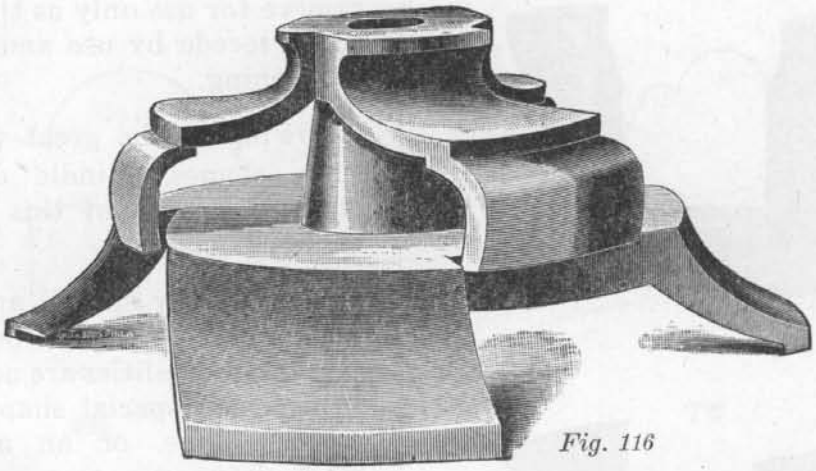


Fig. 116

Fig. 116 represents two Cutters with collar between them to build up for heavy mould. These are usually made to work one way only, cutting 4 and 5 inches of moulded surface from 3 to 5 inches deep. They are bored out on the inside so that a sharp cutting edge can be given them without disturbing the permanent shape—the edge line of cut being sharpened from the inside of the cutter.

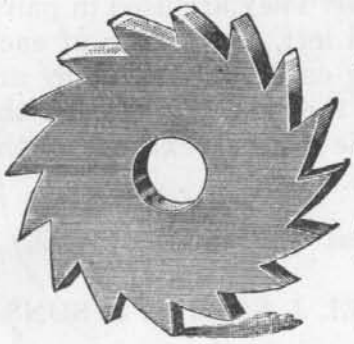


Fig. 119

Fig. 117 represents another two Cutters that work together to make a heavy mould.

Fig. 118 represents a Reversible Grooving Cutter clearance ground.

Fig. 119 represents a One-way Grooving Cutter that must be sharpened or set for clearance same as a saw.

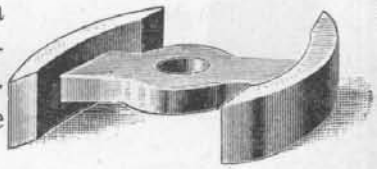


Fig. 118

The Shimer Ideal Shaper Head

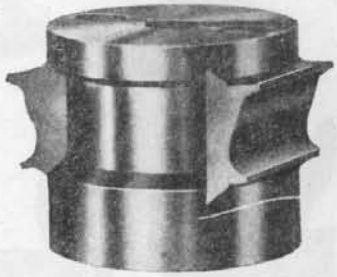


Fig. 679

This Little Shaper Head is constructed along the safety lines, having nothing protruding but the cutter edges. In this head one can use milled bits or shaper steel bits which can be very quickly changed from one pattern to another.

One particular feature is the holding of the knives which is not dependent on the spindle nut. Each bit is separately tightened in place by its holding bolt. The bottom of the head also serves as the guide in running mouldings.

Let us quote you on this Ideal Shaper Head. They are priced conservatively according to the sizes required.

THE SHIMER MILLED BIT SHAPER HEAD

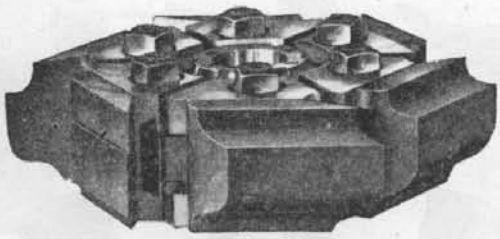


Fig. 684

This 6-Bit Shaper Head, Fig. 684 illustrated, is used for the longer runs of shaper work when an absolutely uniform pattern is demanded. The Bits are ground and moved ahead into position and as they are milled to pattern, always cut the same shape. The Bits are held securely by the vise grip flange when each bolt is tightened. A variety of milled to pattern Bits may be used interchangeably in this Head, if desired. Write for our price of these Heads and Bits. They are made also with 4 Bits to the Head.

Cutter for Reversible Glue Joint

This one way glue joint cutter is designed to give clearance to the cutting edges and thus produces more material between grinds. The pattern of joint will always remain the same until the cutter is consumed. Write for prices on this and other similarly styled shaper cutters. Send only a sample or drawing of the work to be done giving the size and style shaper.

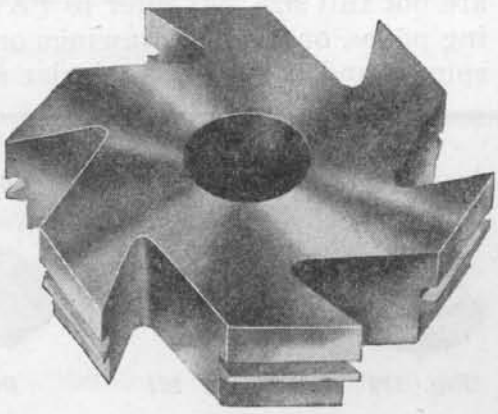
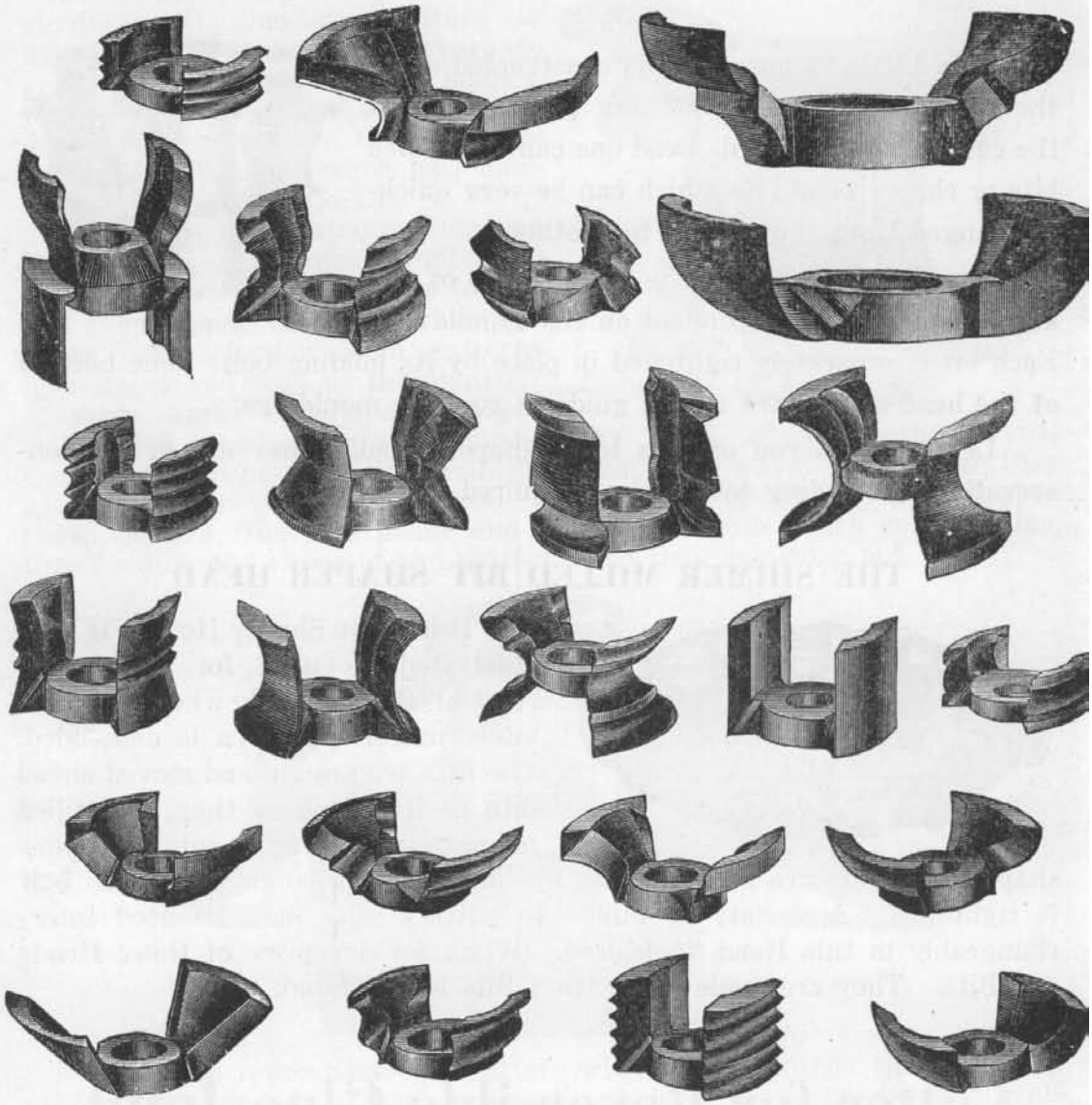


Fig. 678

REVERSIBLE CUTTERS

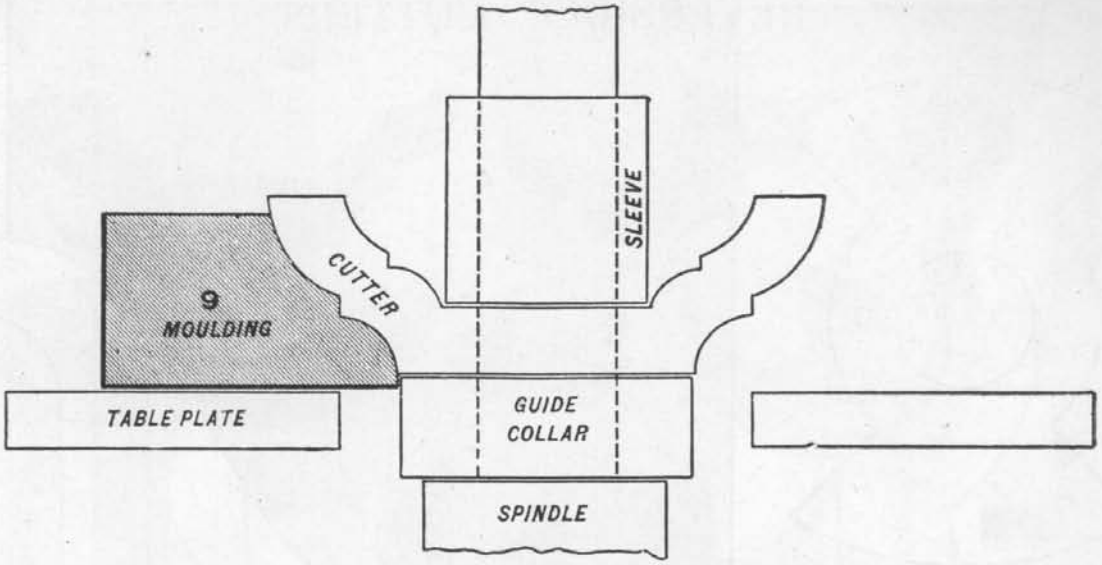


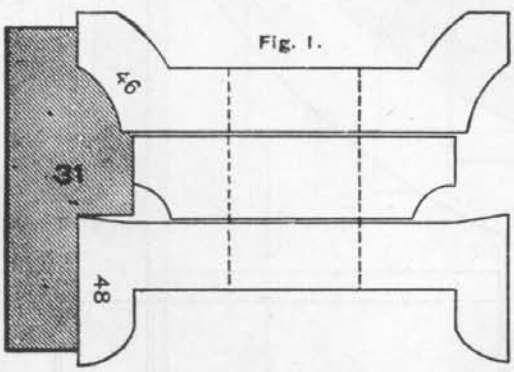
☛ When you order don't refer to the Cutters shown here, for they are not full size, but refer to PATTERNS of Mouldings shown on following pages, or send us drawings or sample blocks to work to, with sizes of spindle and collar, if particular size of collars are used.

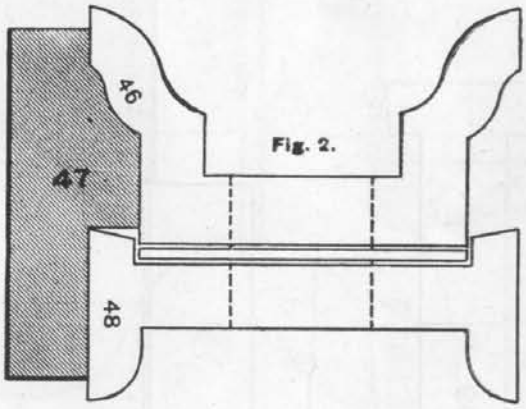
Carving Tools are made to order as per design sent us

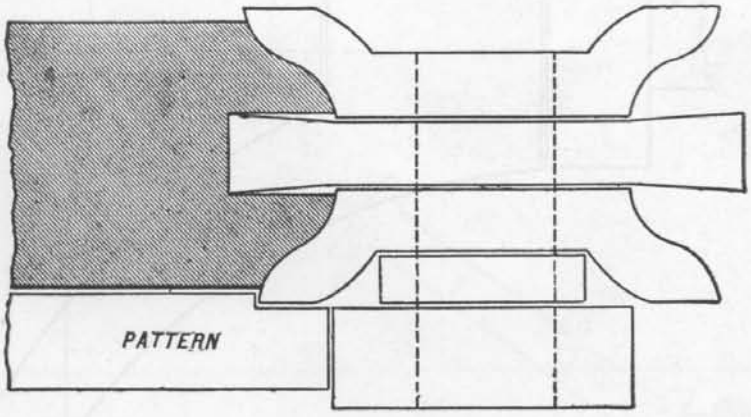


Fig. 120 *Fig. 121* *Fig. 122* *Fig. 123* *Fig. 124*





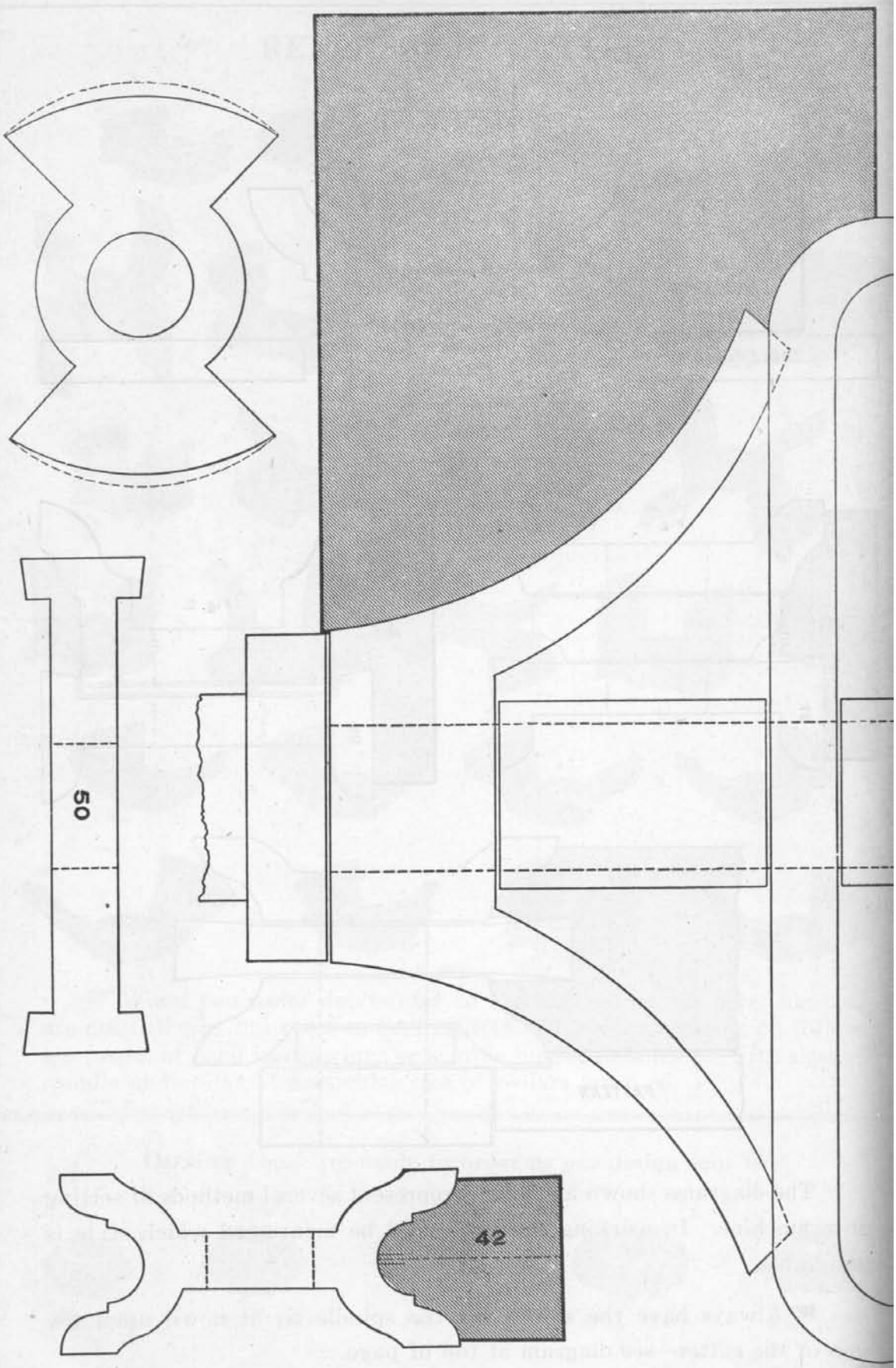


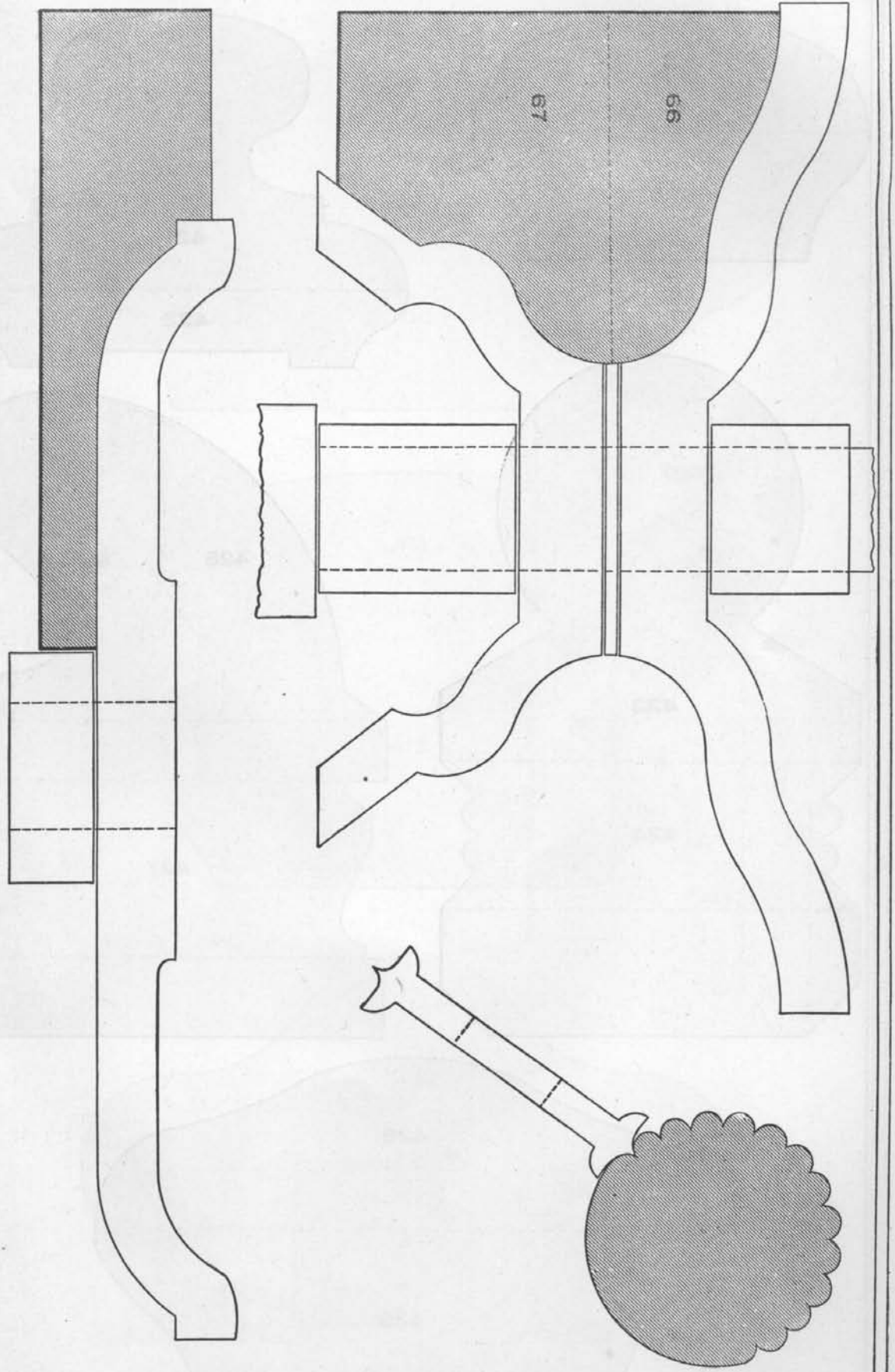


The diagrams shown above will represent several methods of setting up a machine. In working sash it should be mentioned which style is preferable.

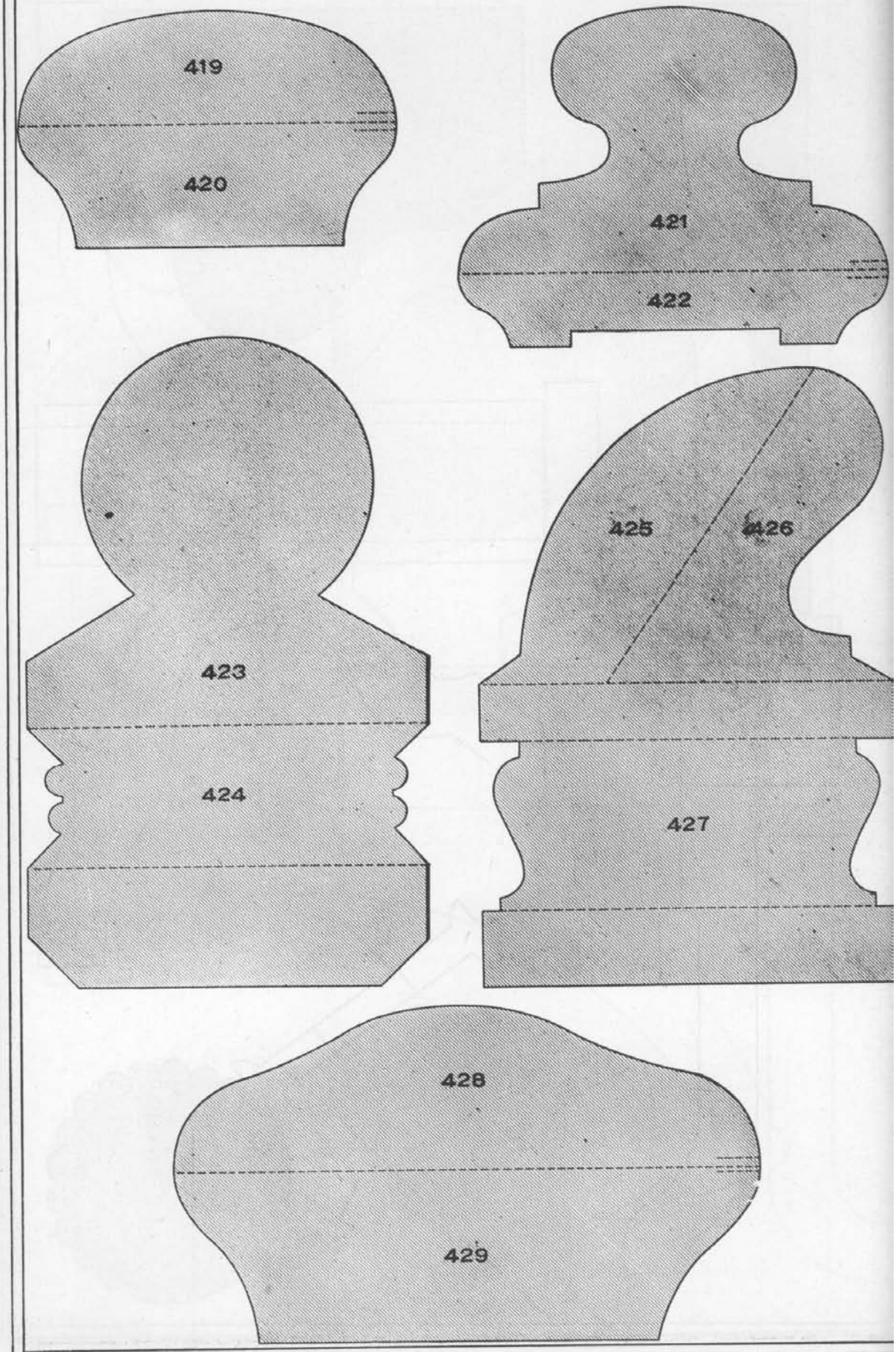
☛ Always have the sleeve for the spindle to fit down upon the web of the cutter—see diagram at top of page.

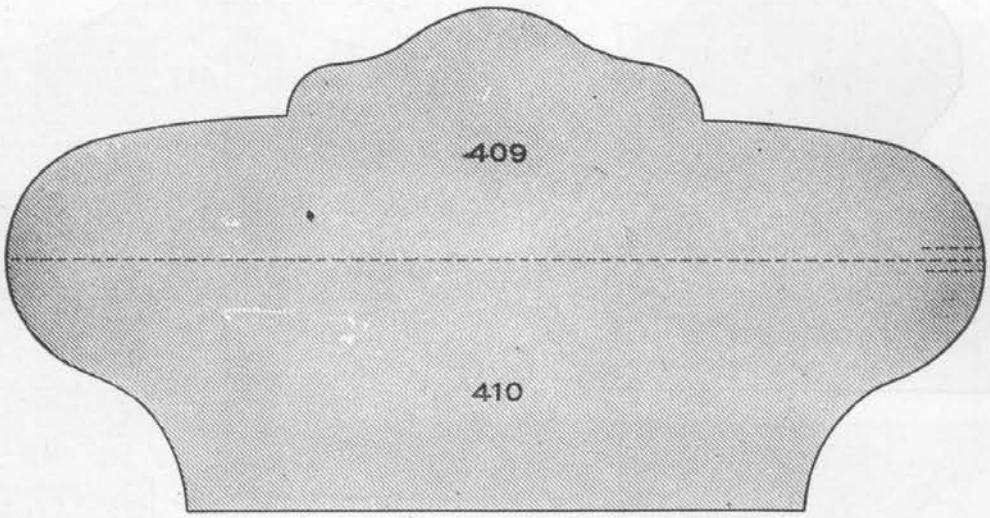
EDGE MOULDING CUTTERS

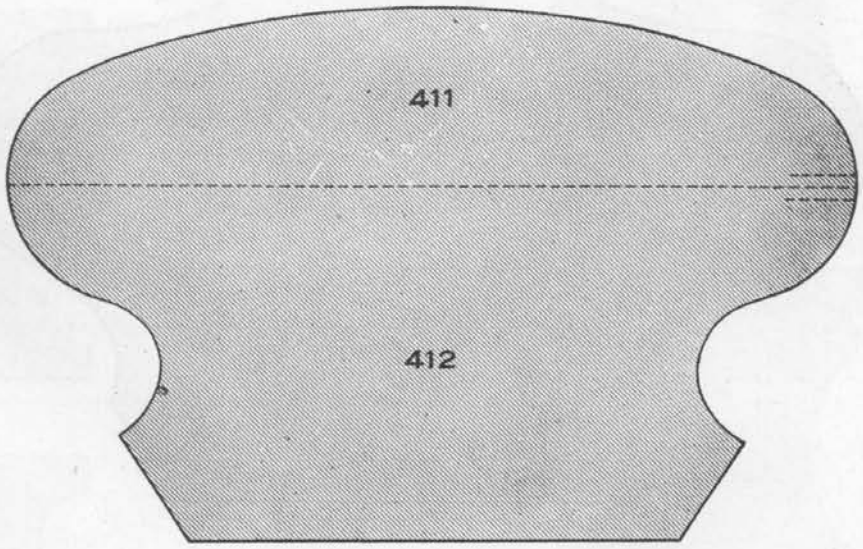


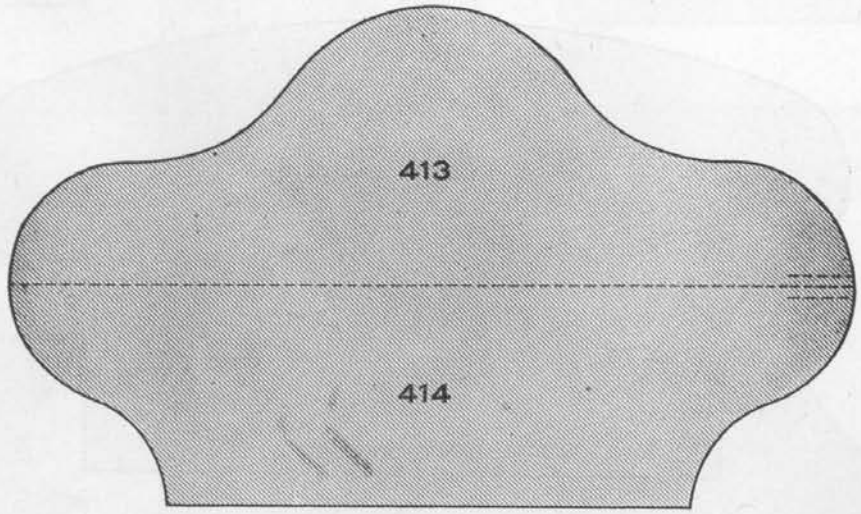

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PATTERNS OF STAIR RAIL

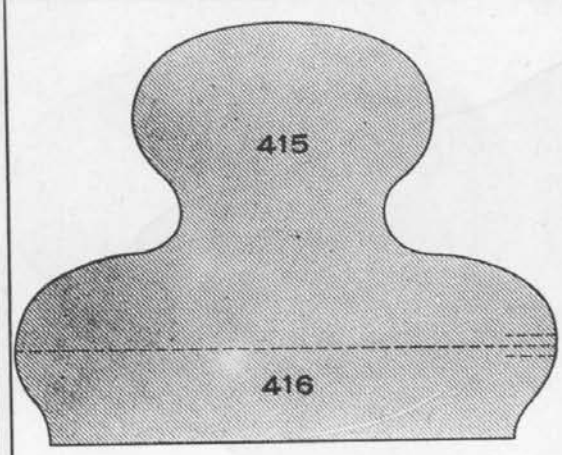


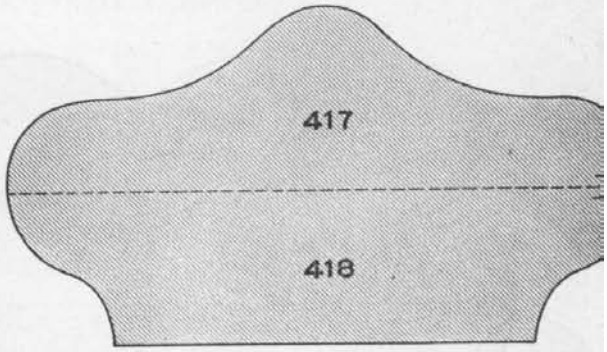

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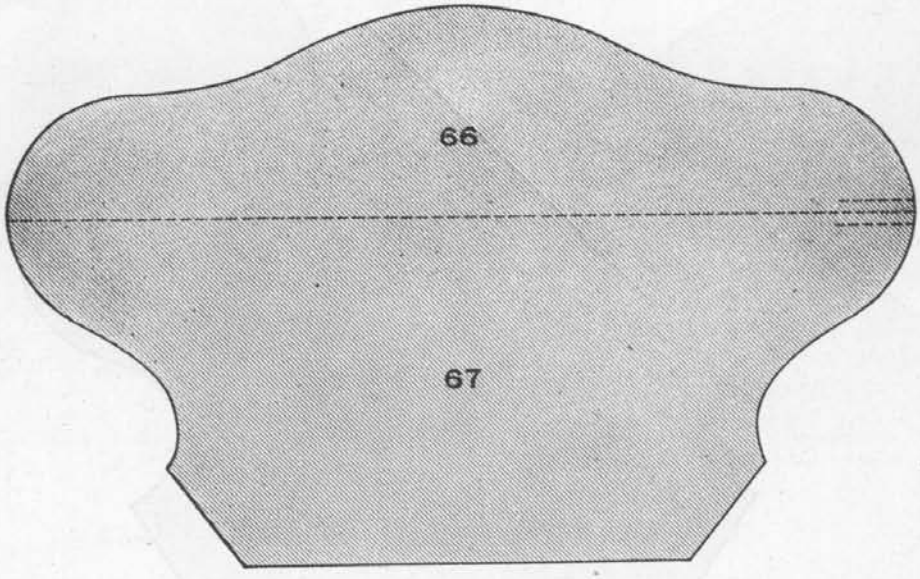

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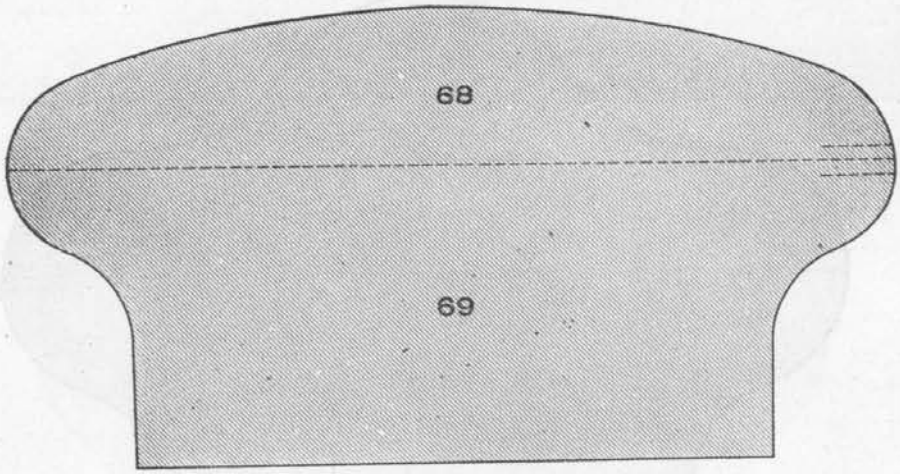

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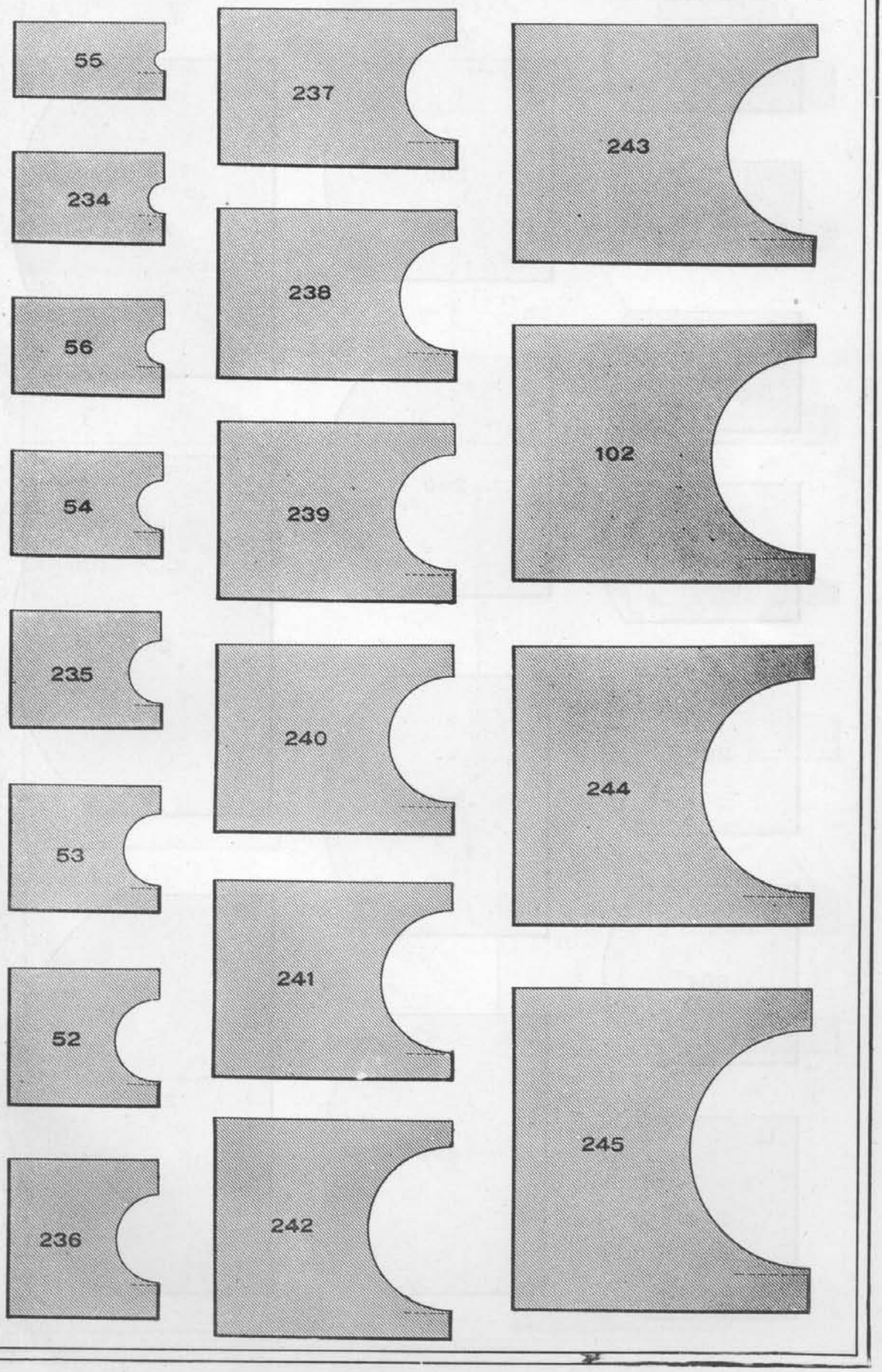
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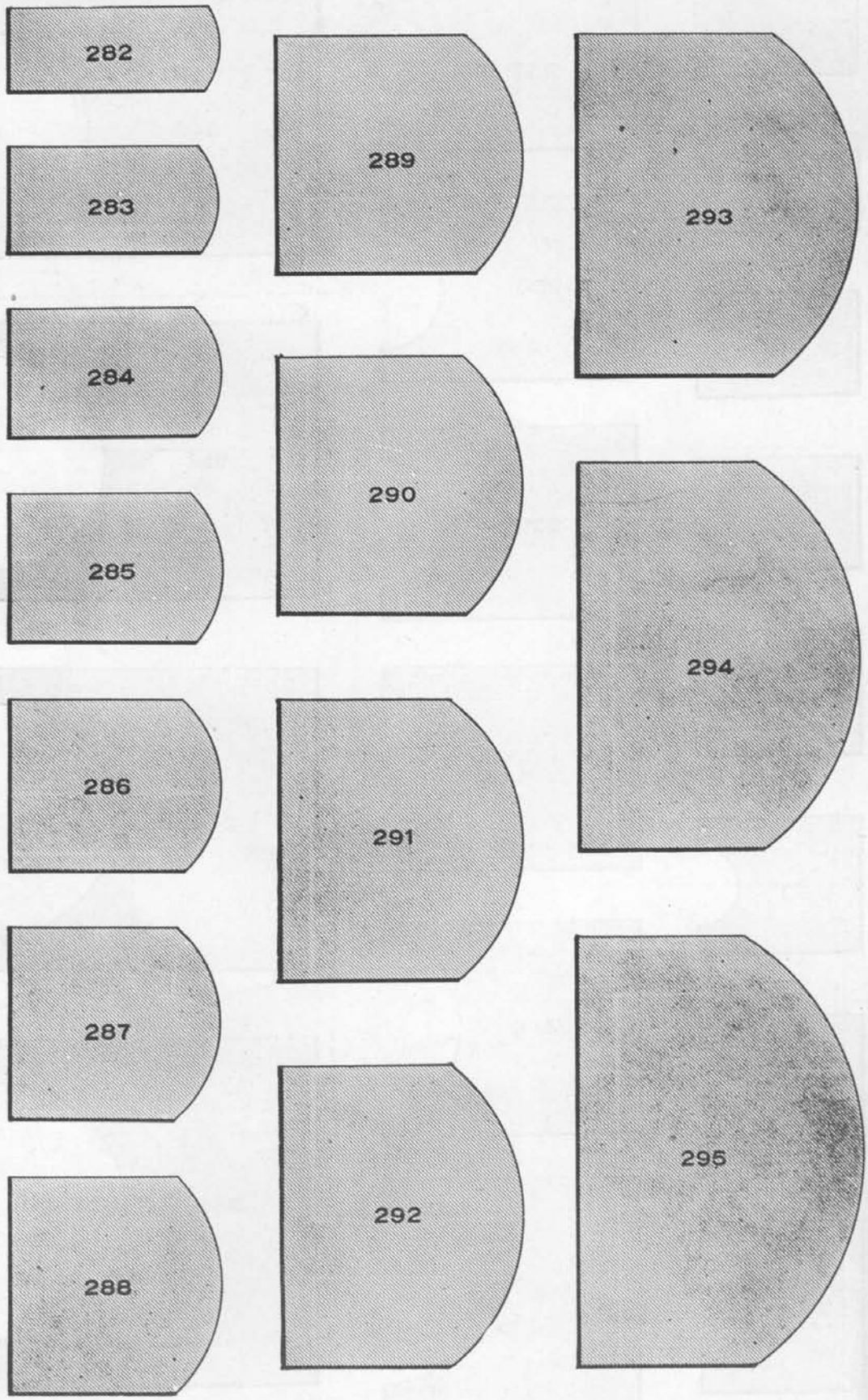




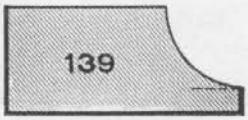


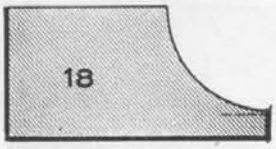


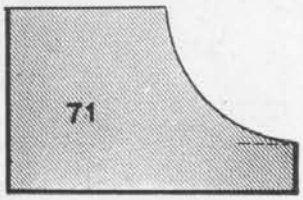

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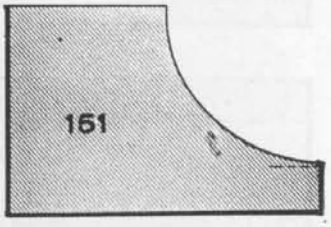

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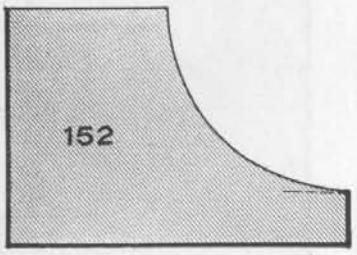

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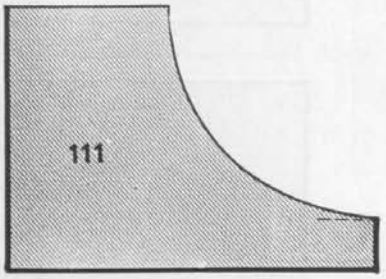

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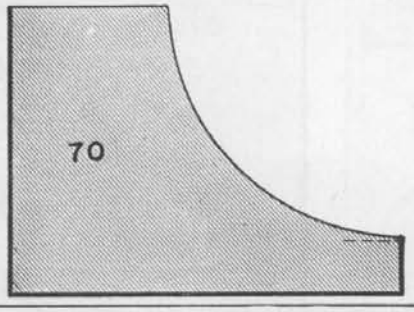

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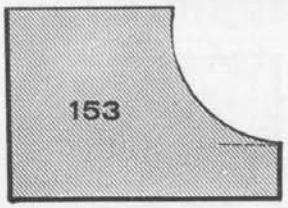

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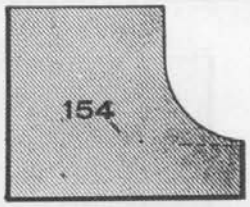

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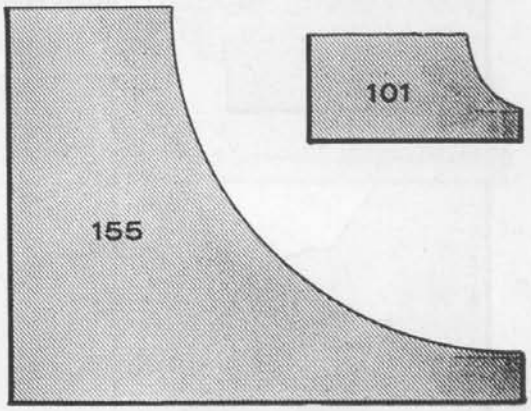

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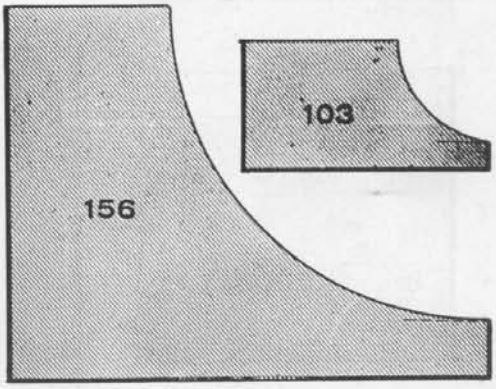

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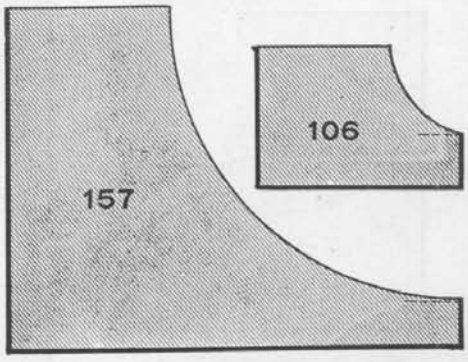

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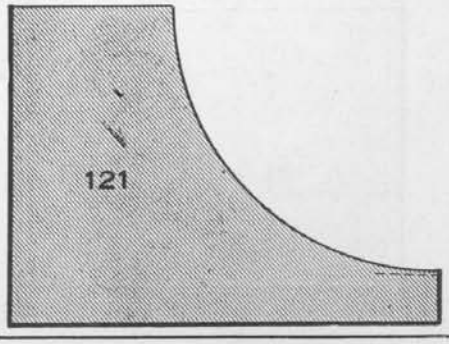
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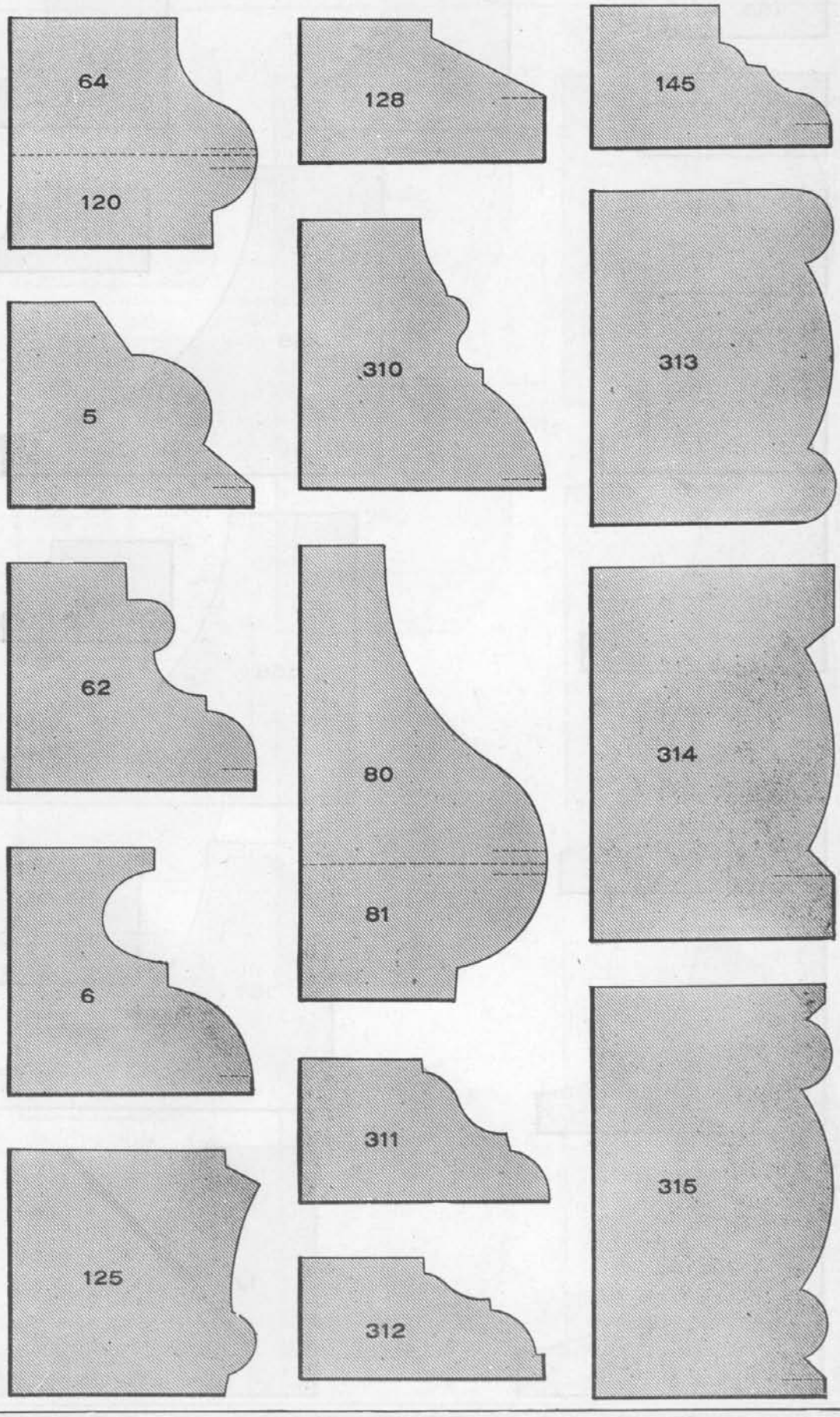

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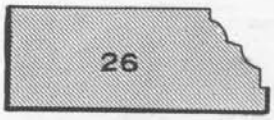

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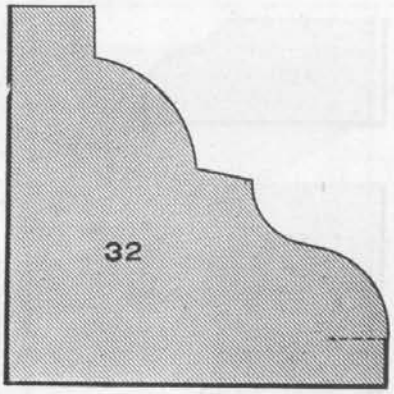
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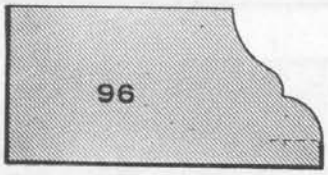

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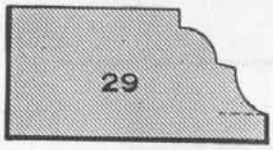

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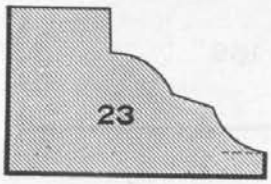

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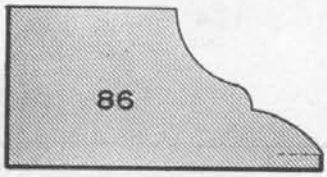

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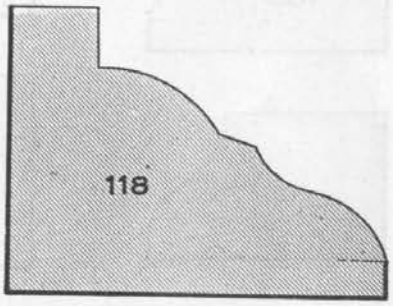

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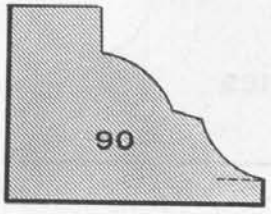

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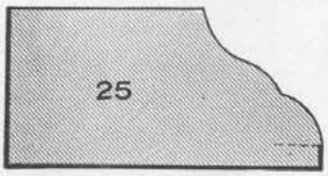

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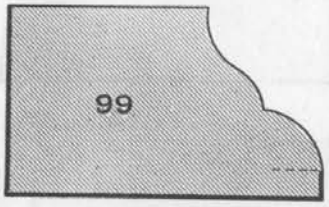

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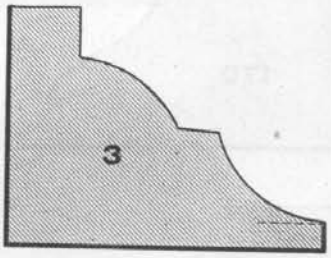

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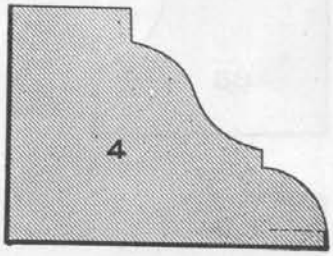

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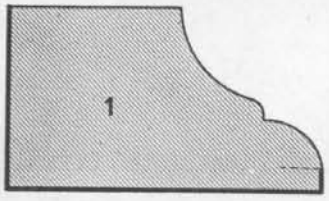

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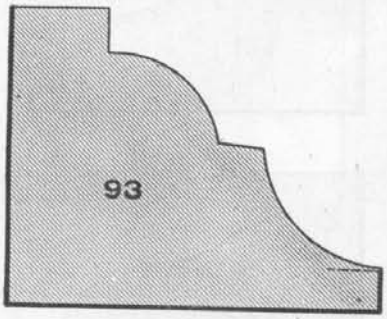

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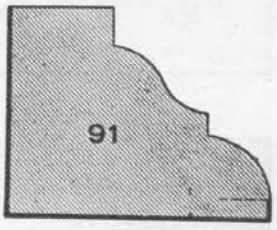

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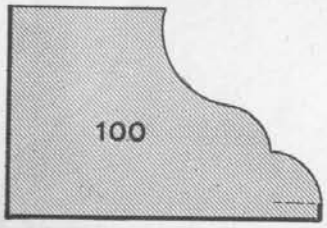

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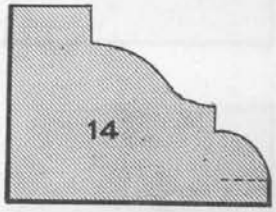

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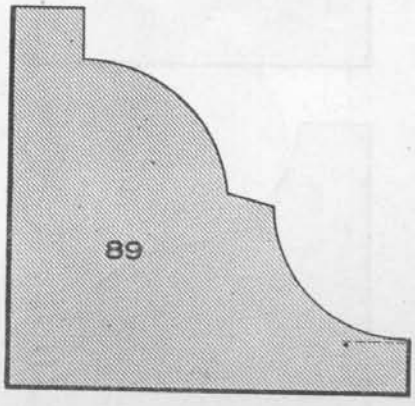

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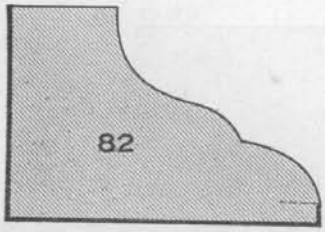

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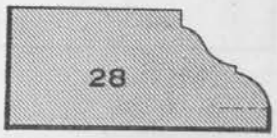

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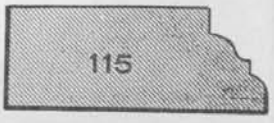

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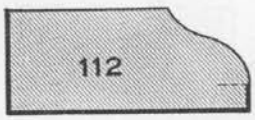

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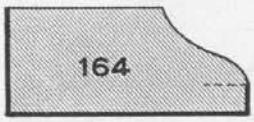

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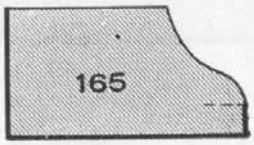

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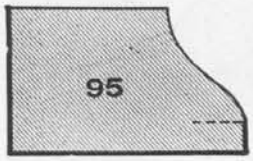

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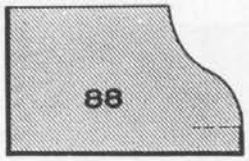

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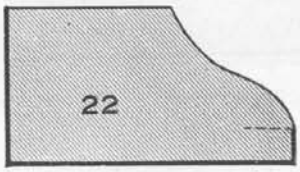

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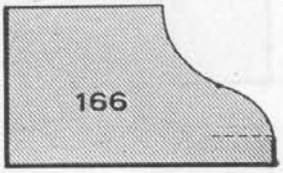

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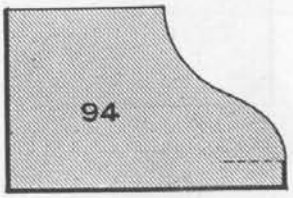

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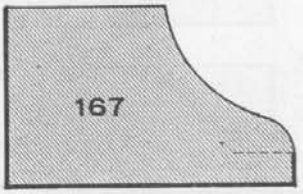

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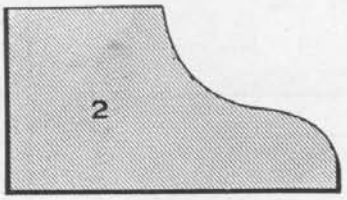

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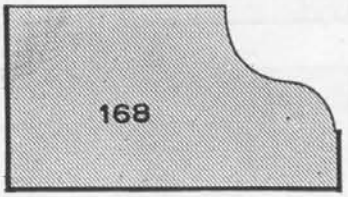

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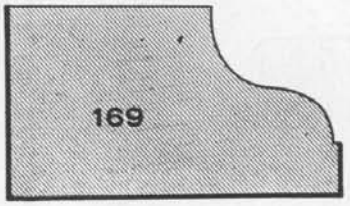

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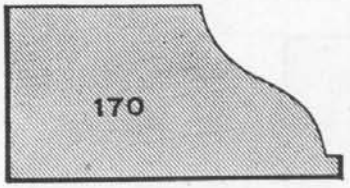

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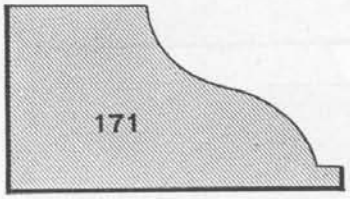

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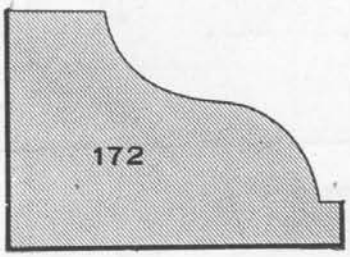

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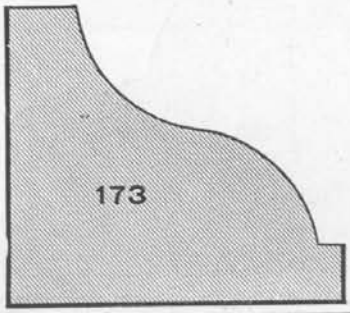

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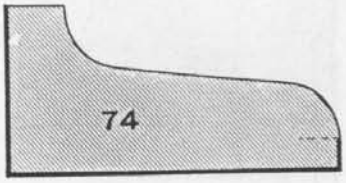

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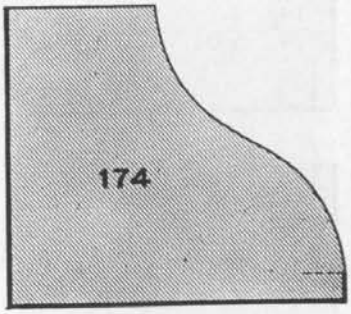

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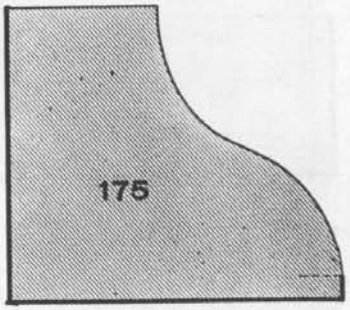

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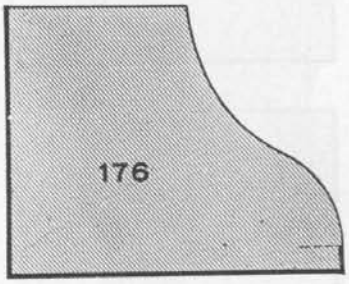

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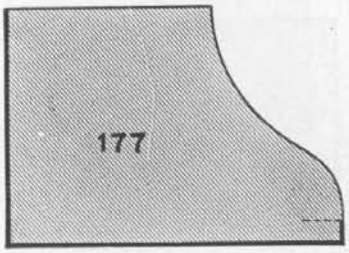

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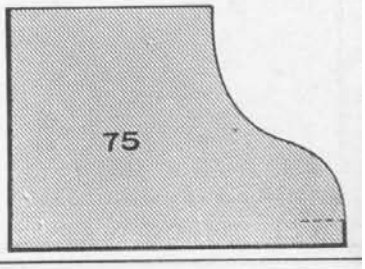

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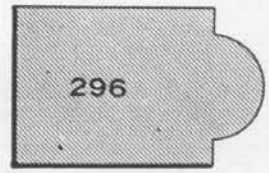

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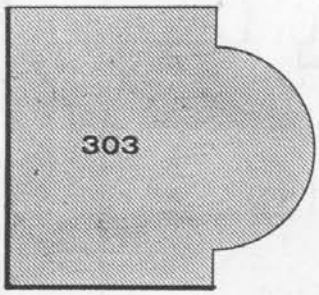

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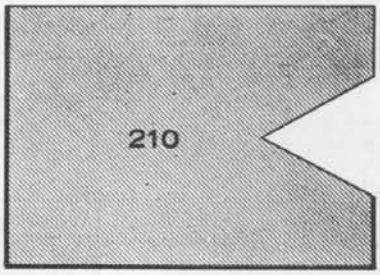

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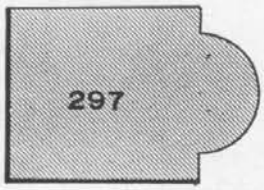

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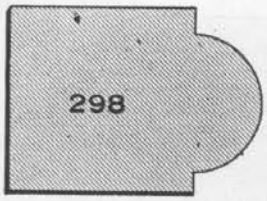

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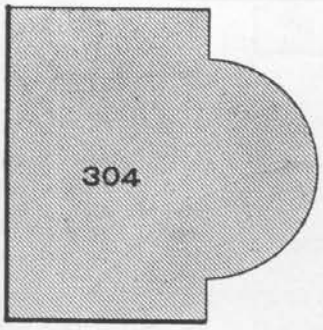

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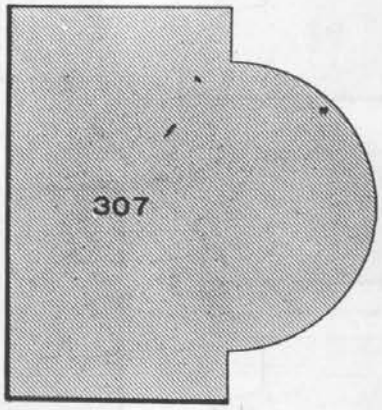

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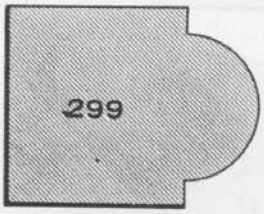

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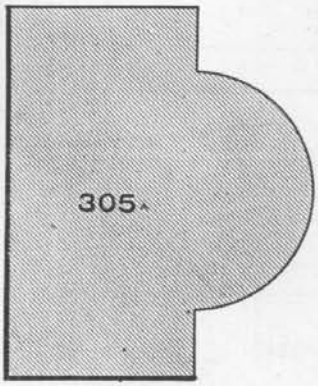

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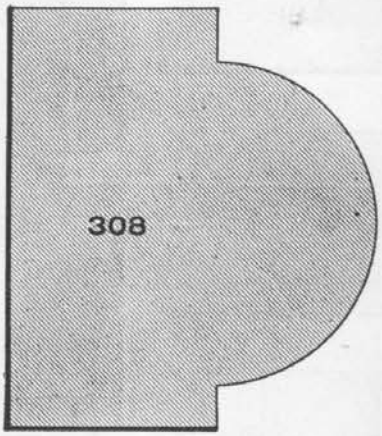

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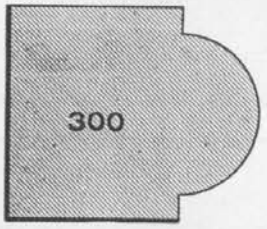

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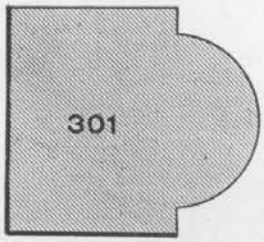

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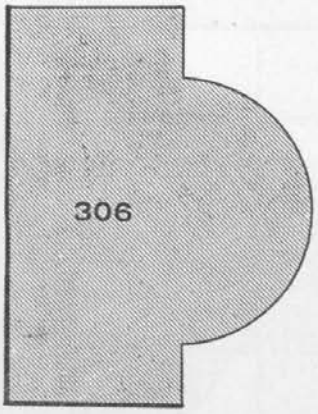

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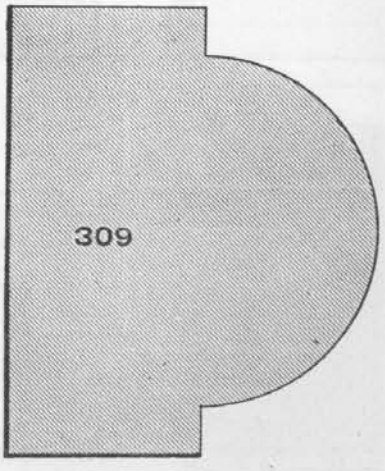

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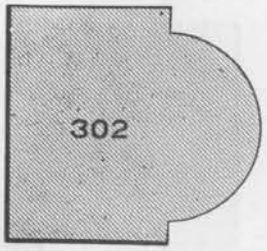

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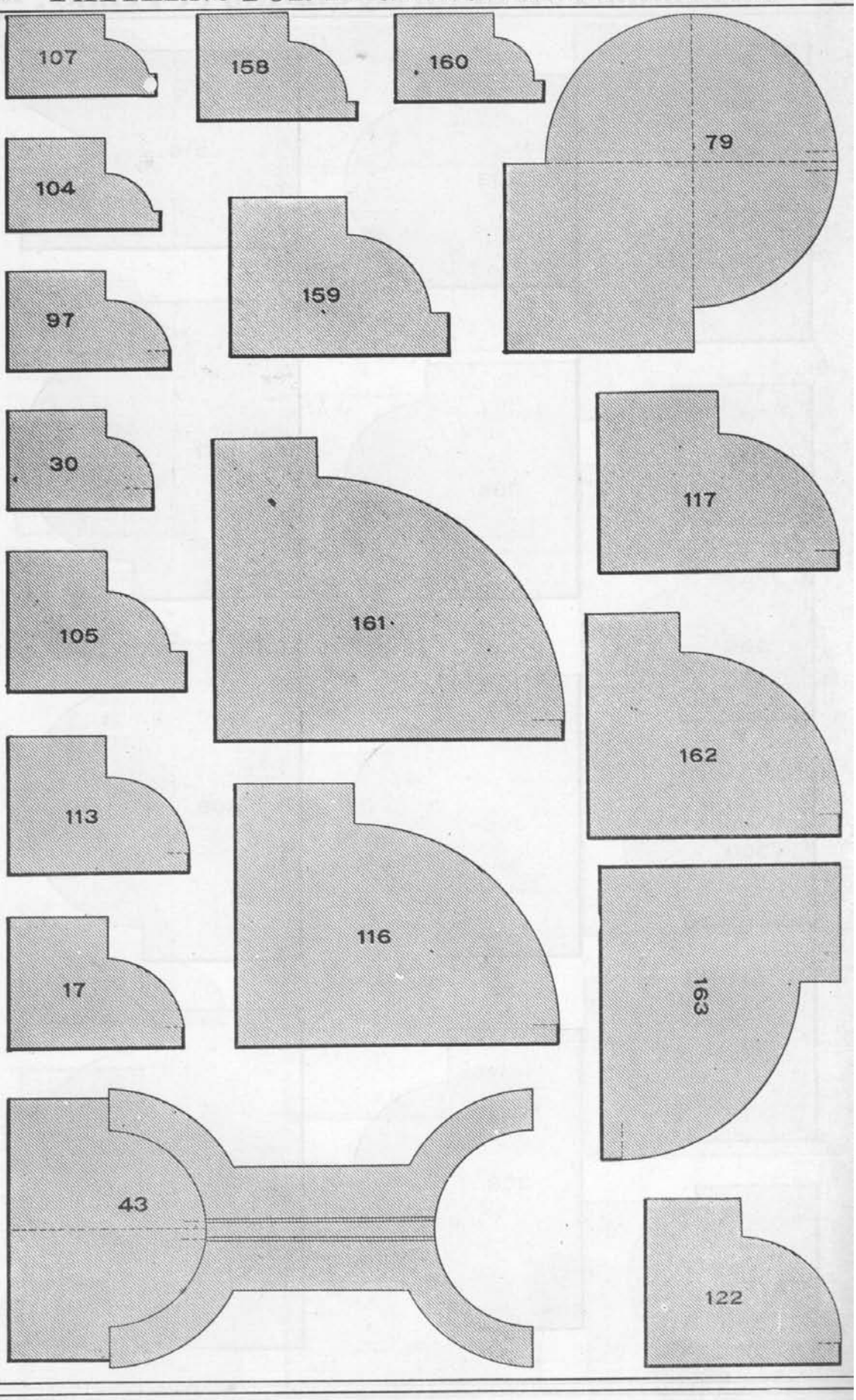

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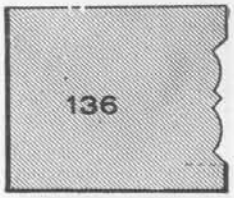
PATTERNS FOR EDGE MOULDING CUTTERS




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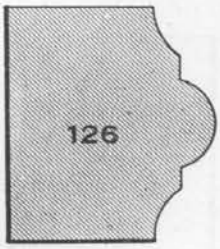

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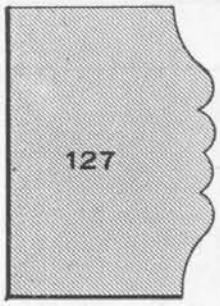

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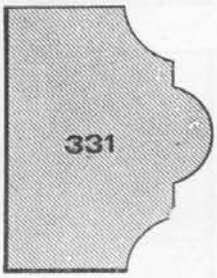

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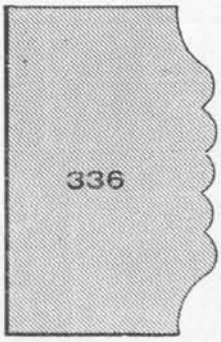

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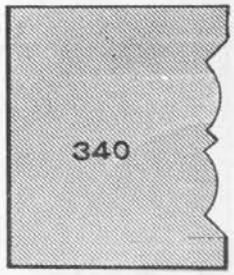

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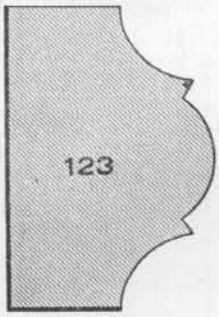

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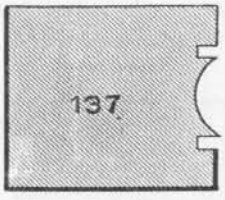

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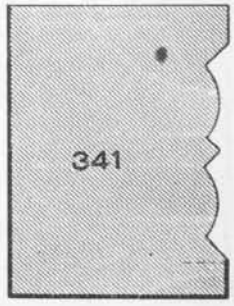

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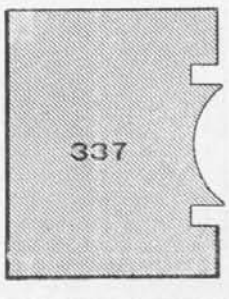

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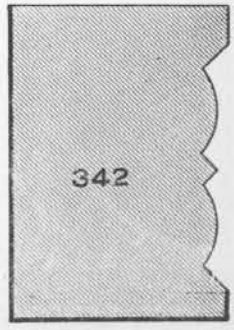

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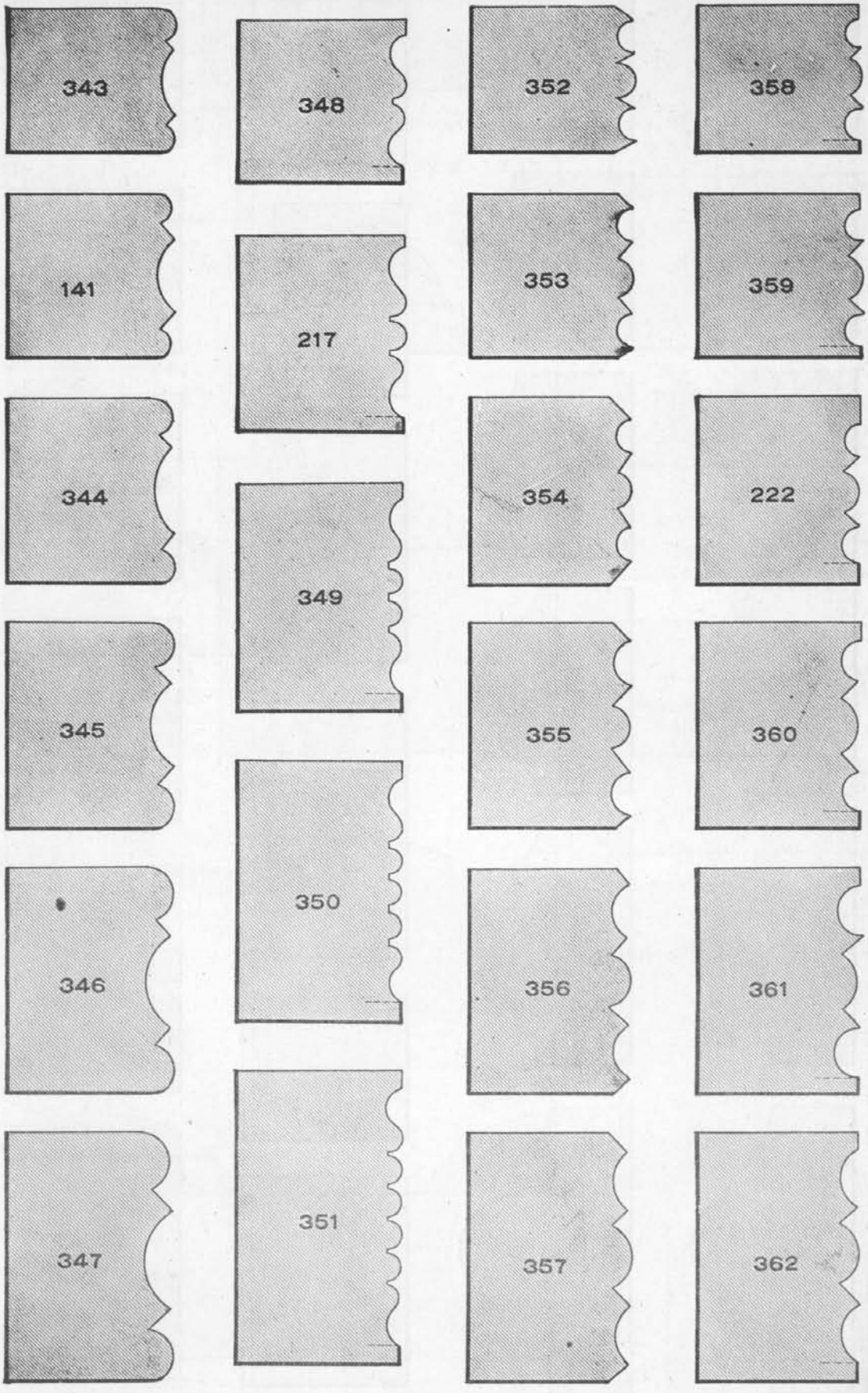

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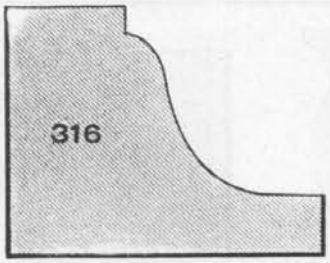

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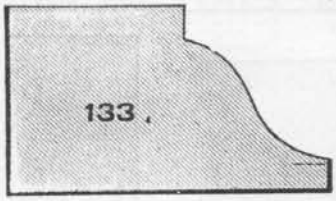

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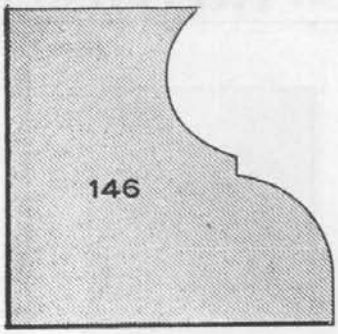

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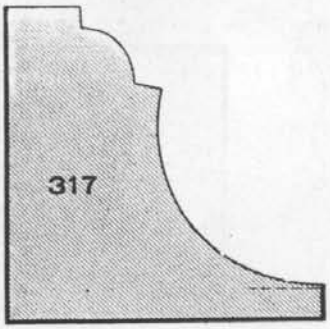
PATTERNS FOR EDGE MOULDING CUTTERS

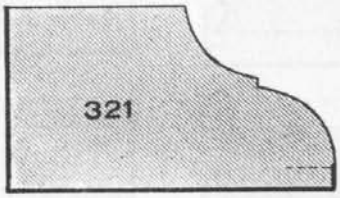


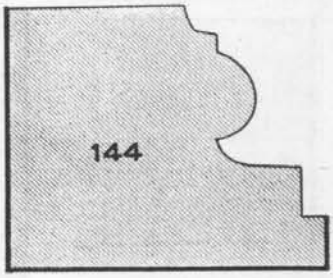

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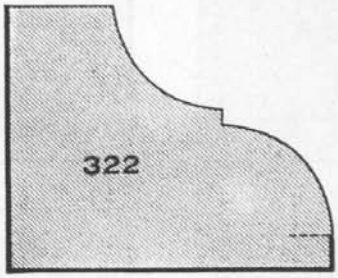

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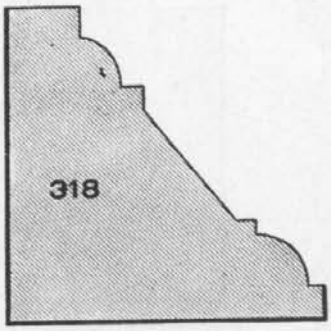

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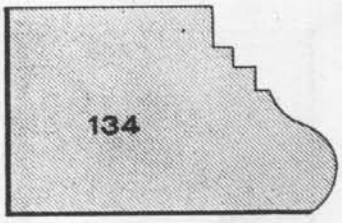

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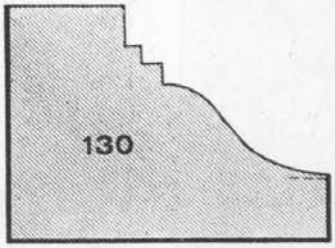

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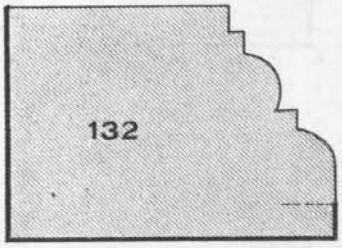

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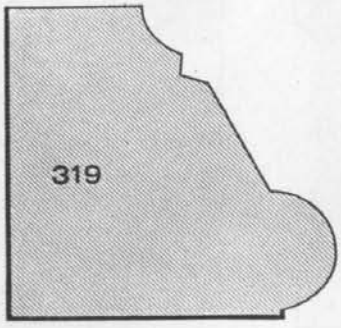

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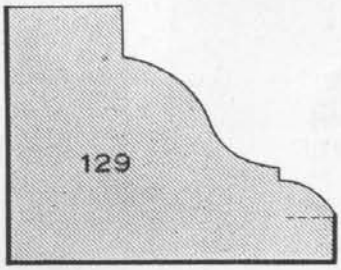

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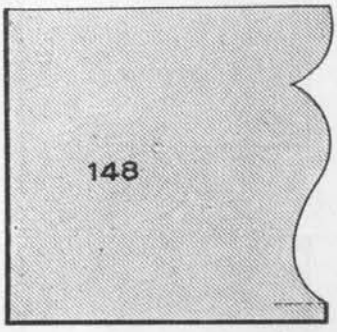

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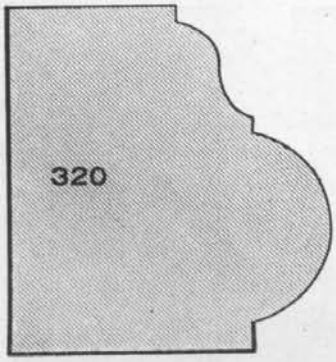

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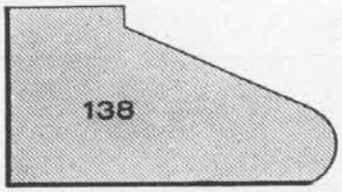

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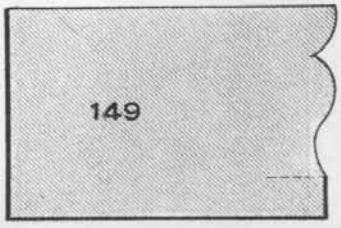

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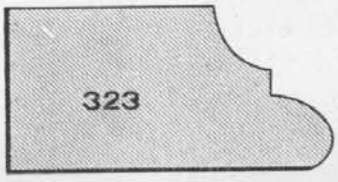

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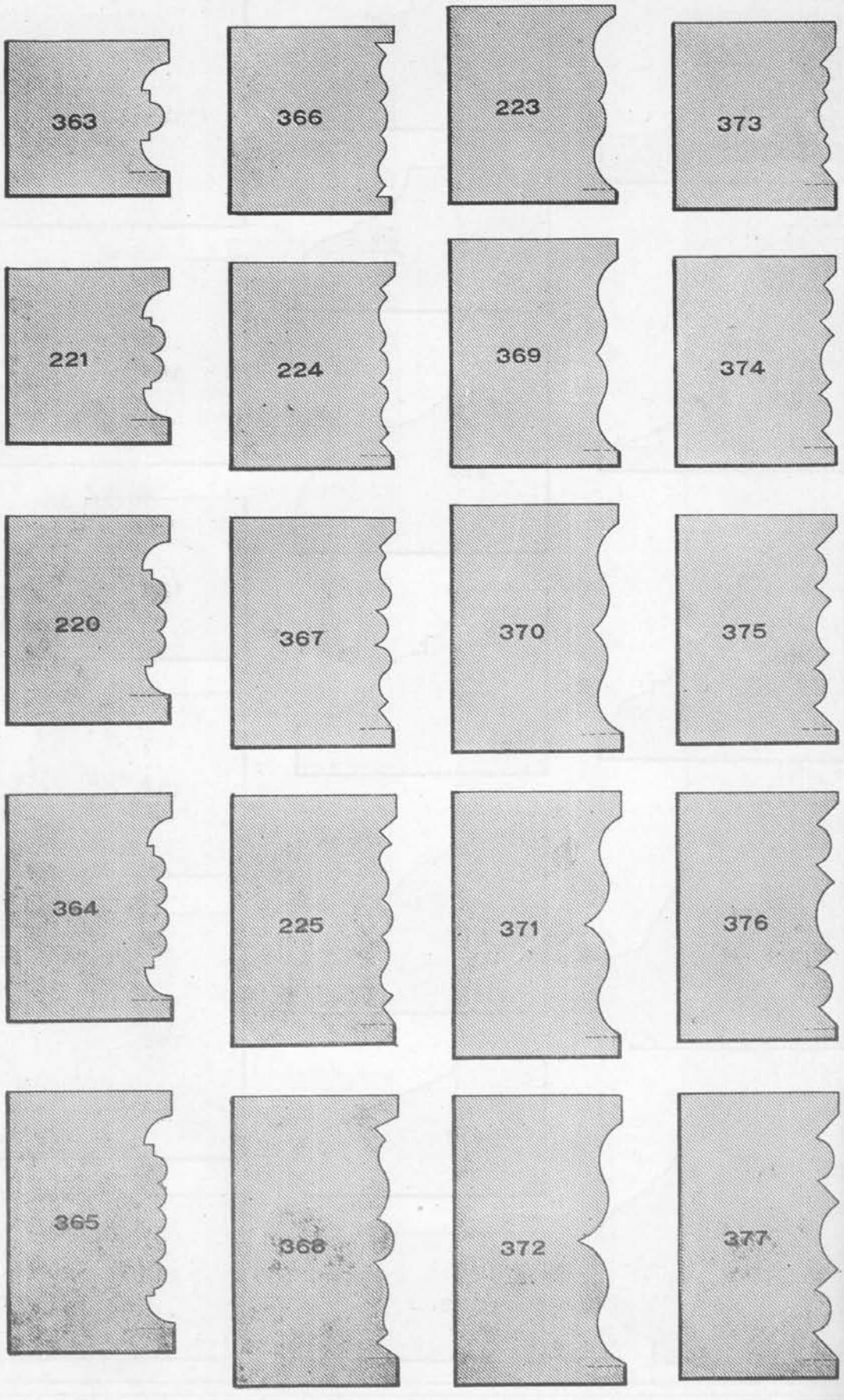

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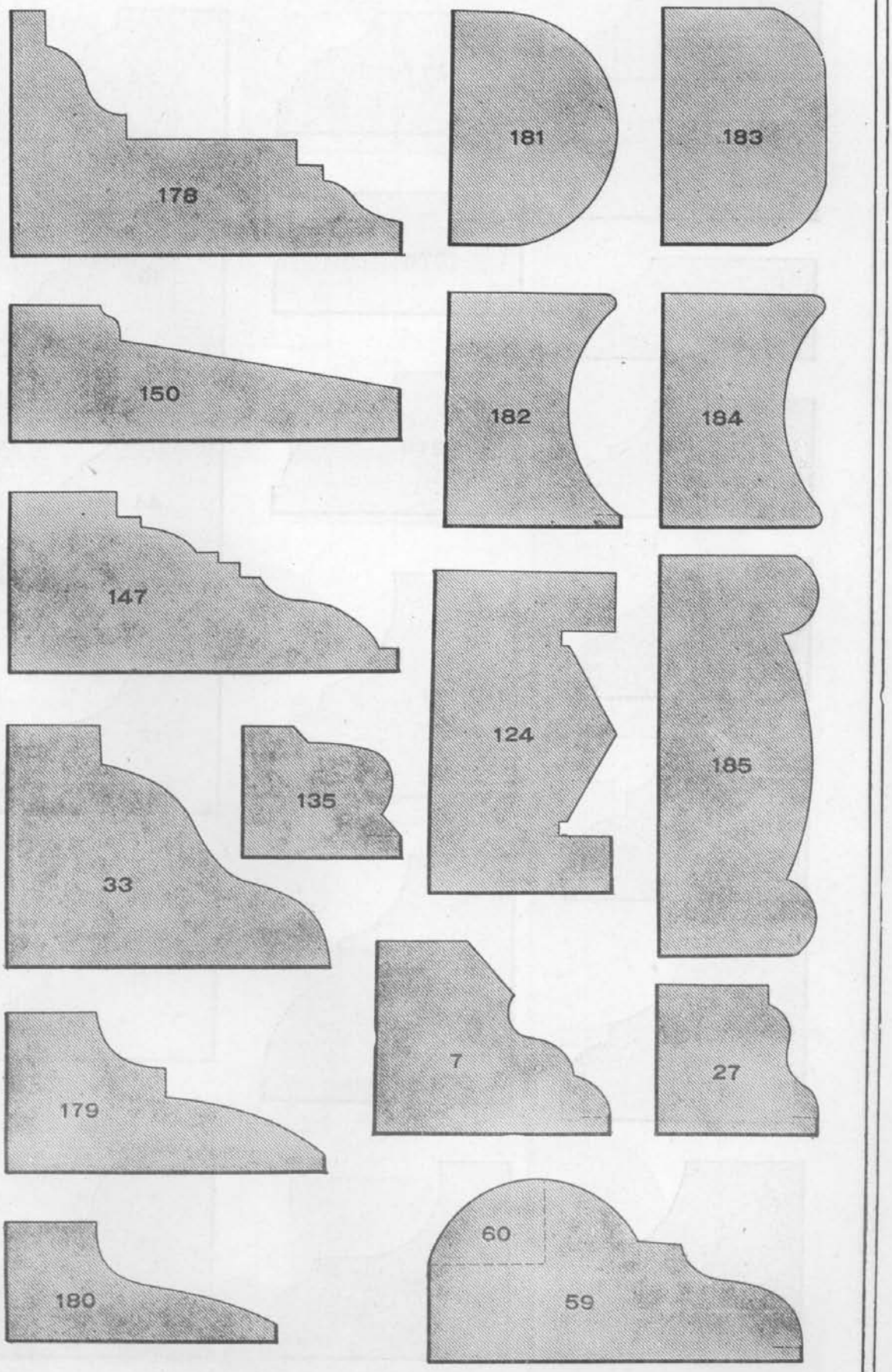

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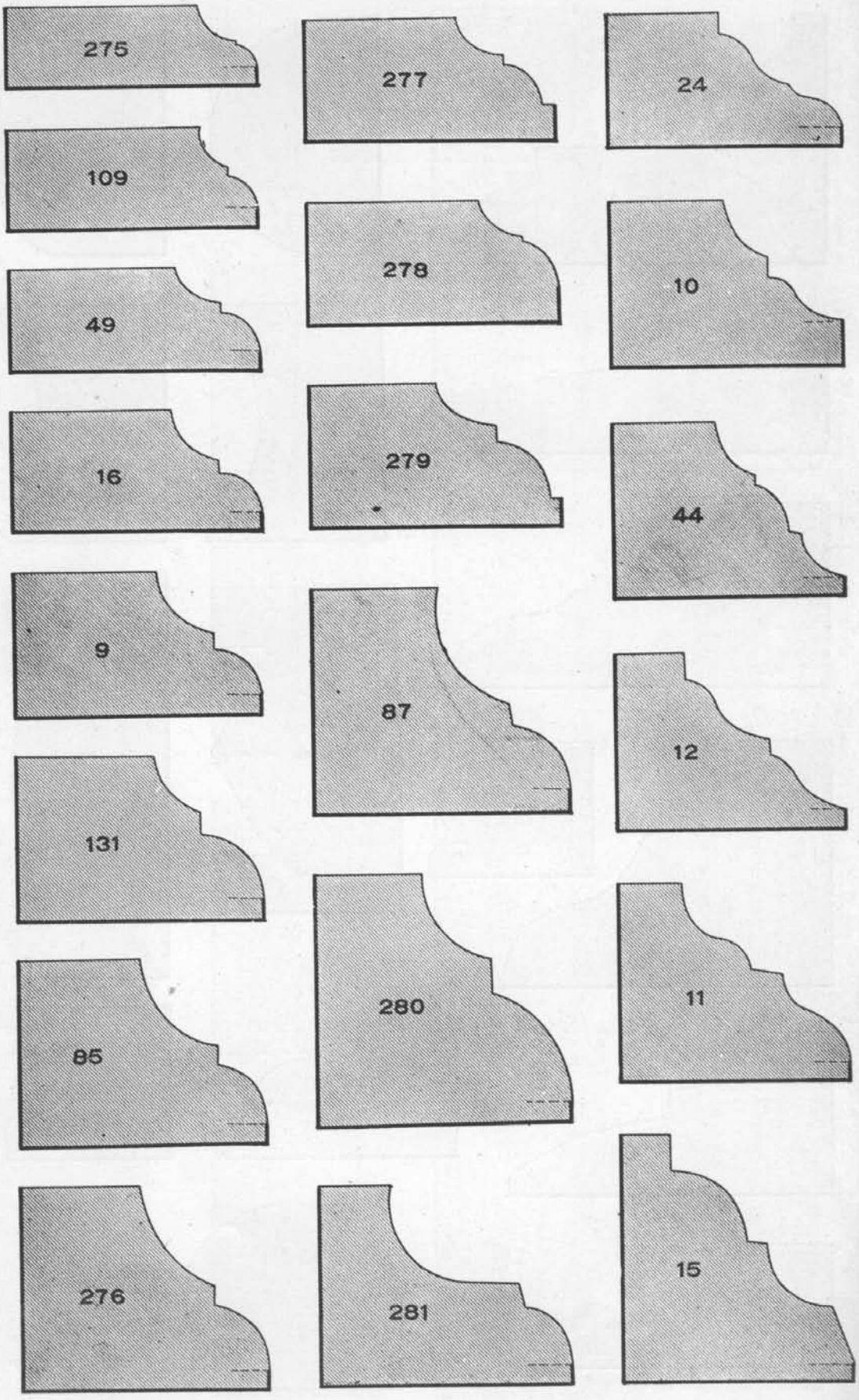

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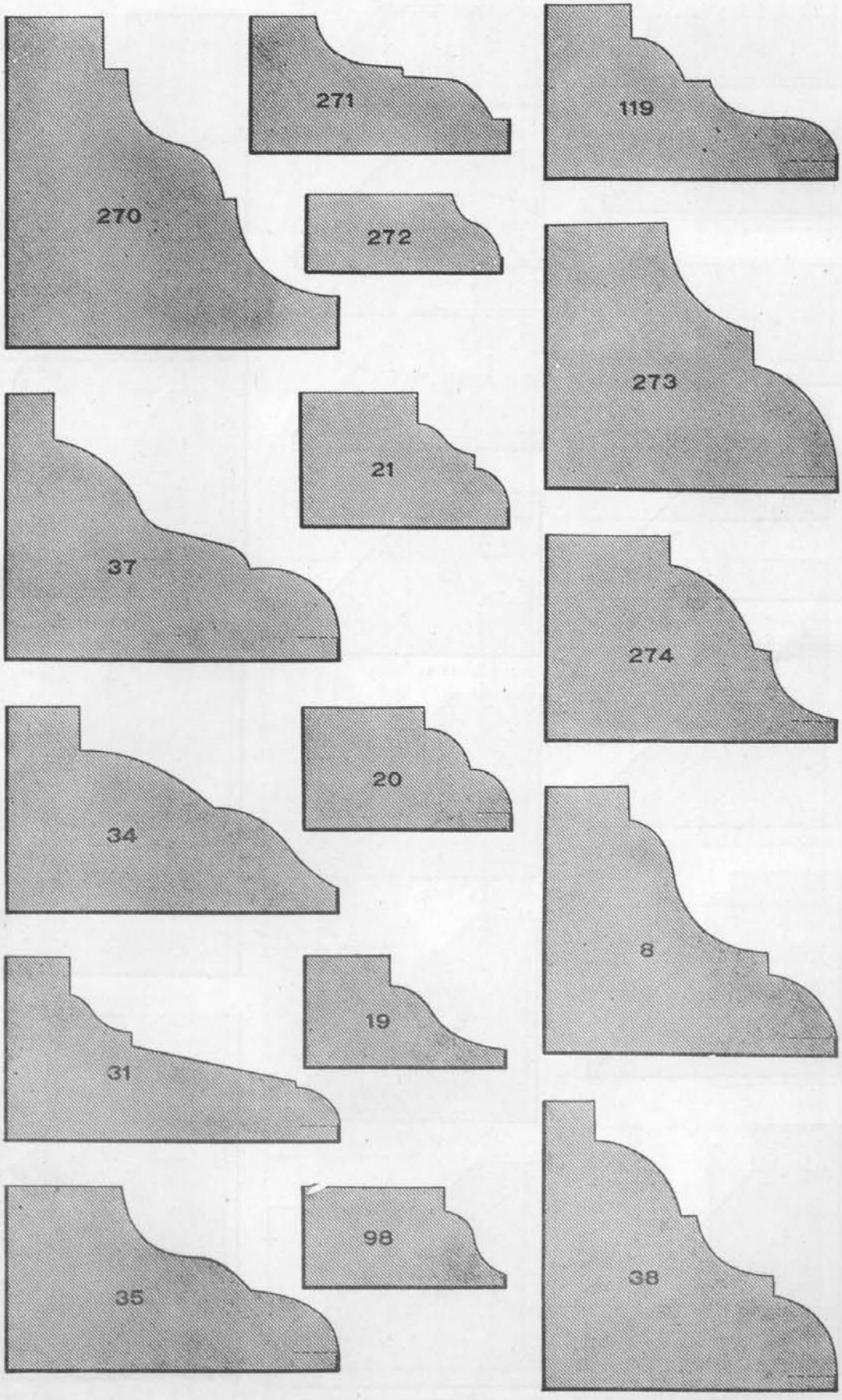

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PATTERNS FOR EDGE MOULDING CUTTERS

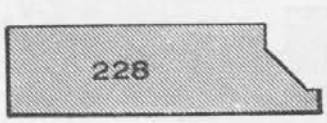


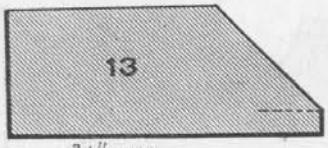

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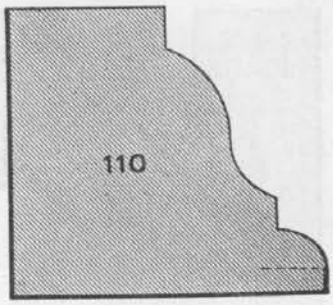

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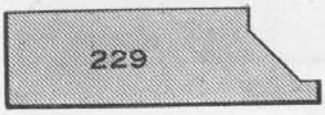
PATTERNS FOR EDGE MOULDING CUTTERS

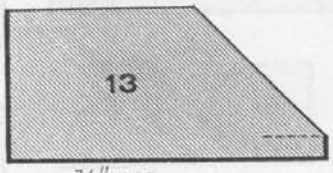




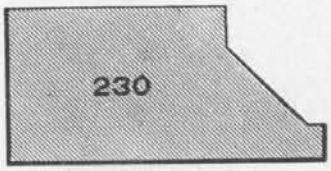
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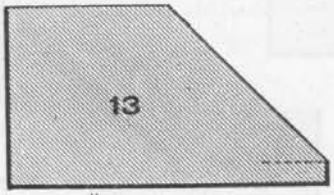




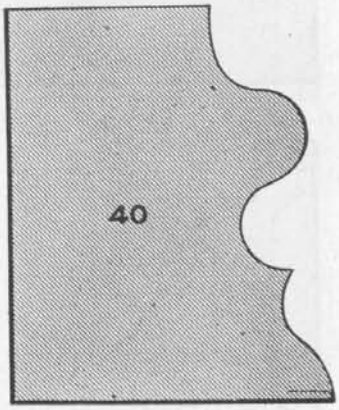


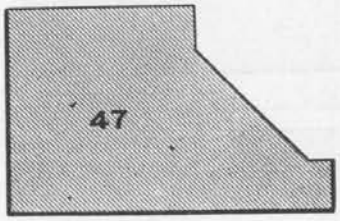
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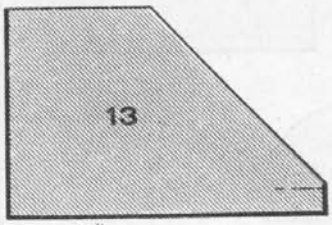




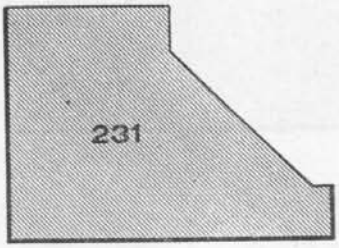
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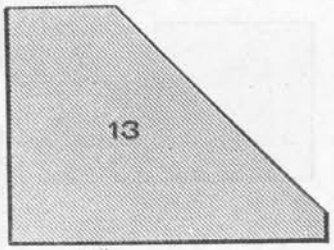




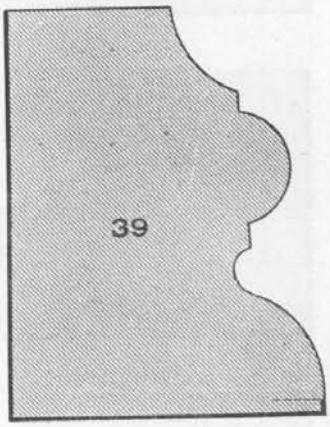


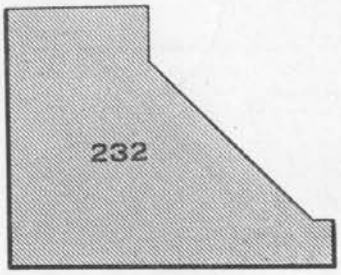
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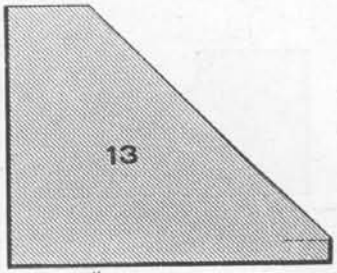




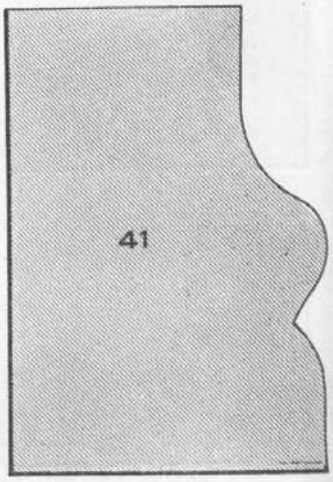
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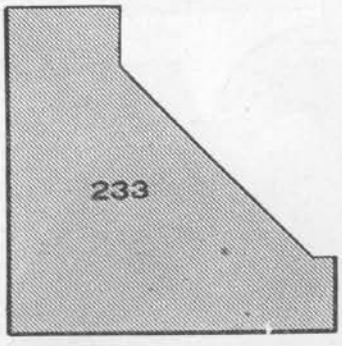


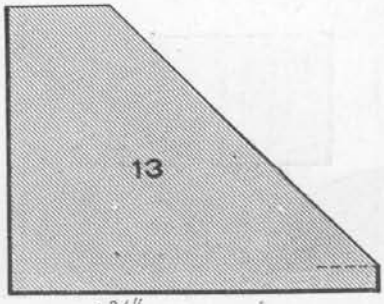




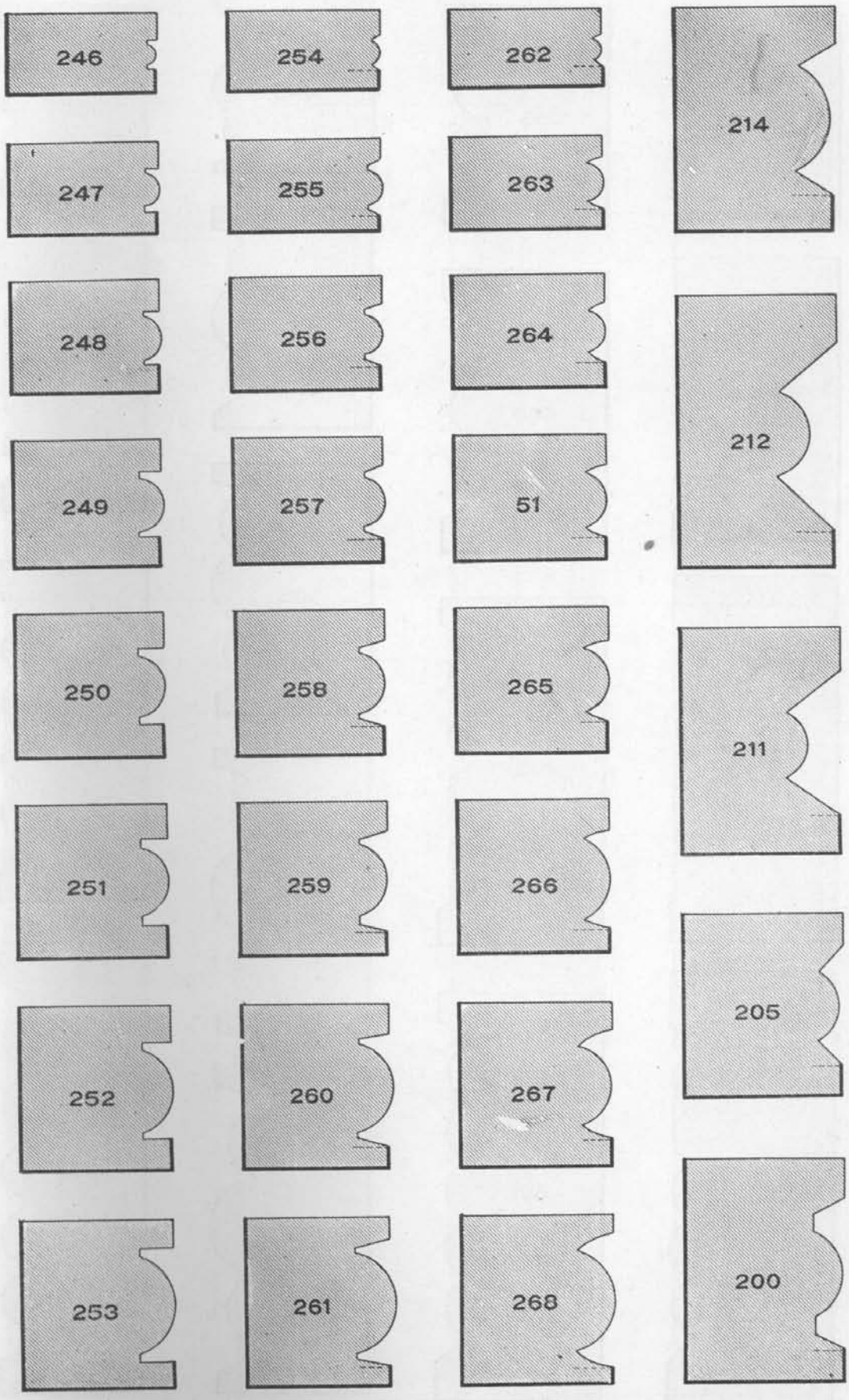
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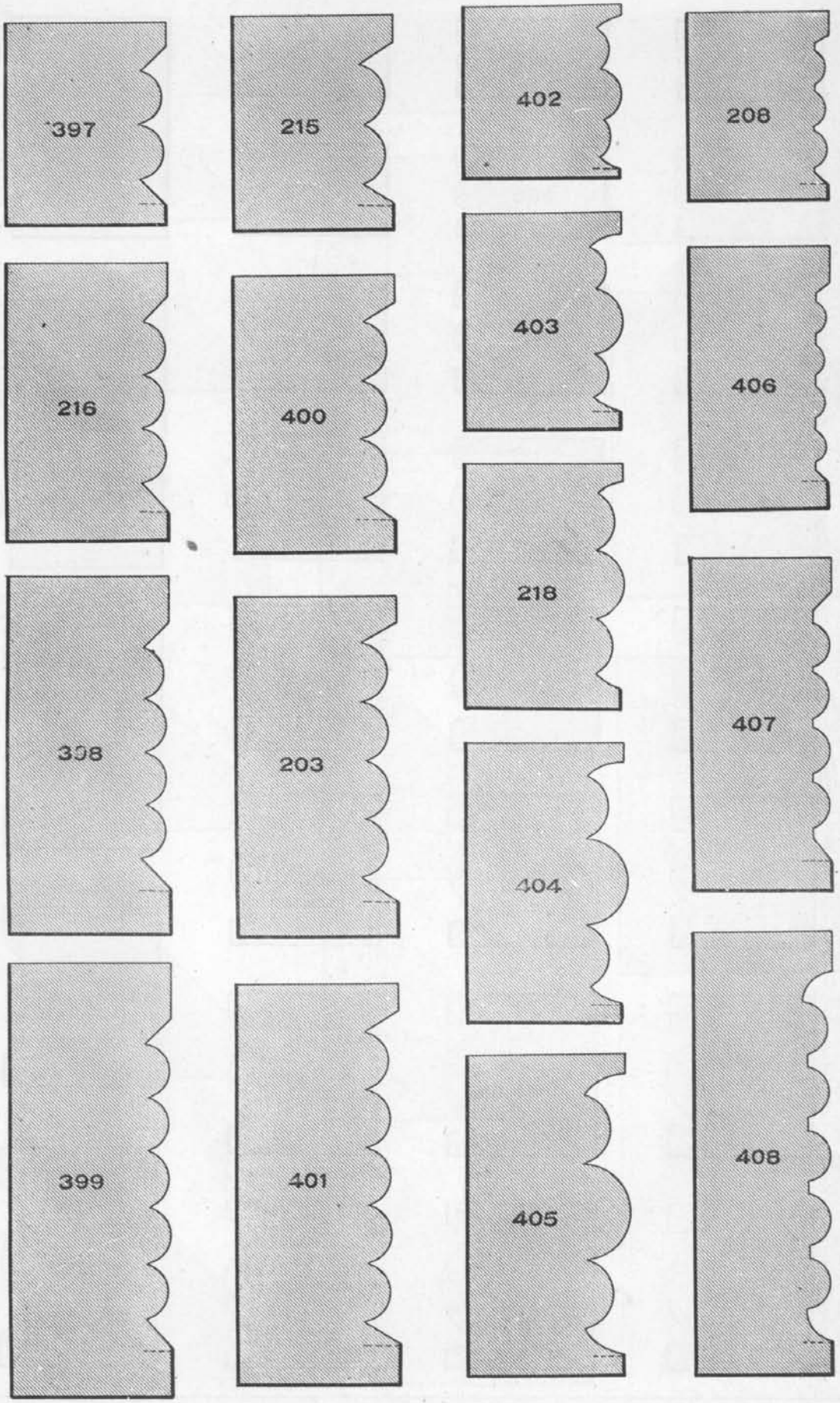


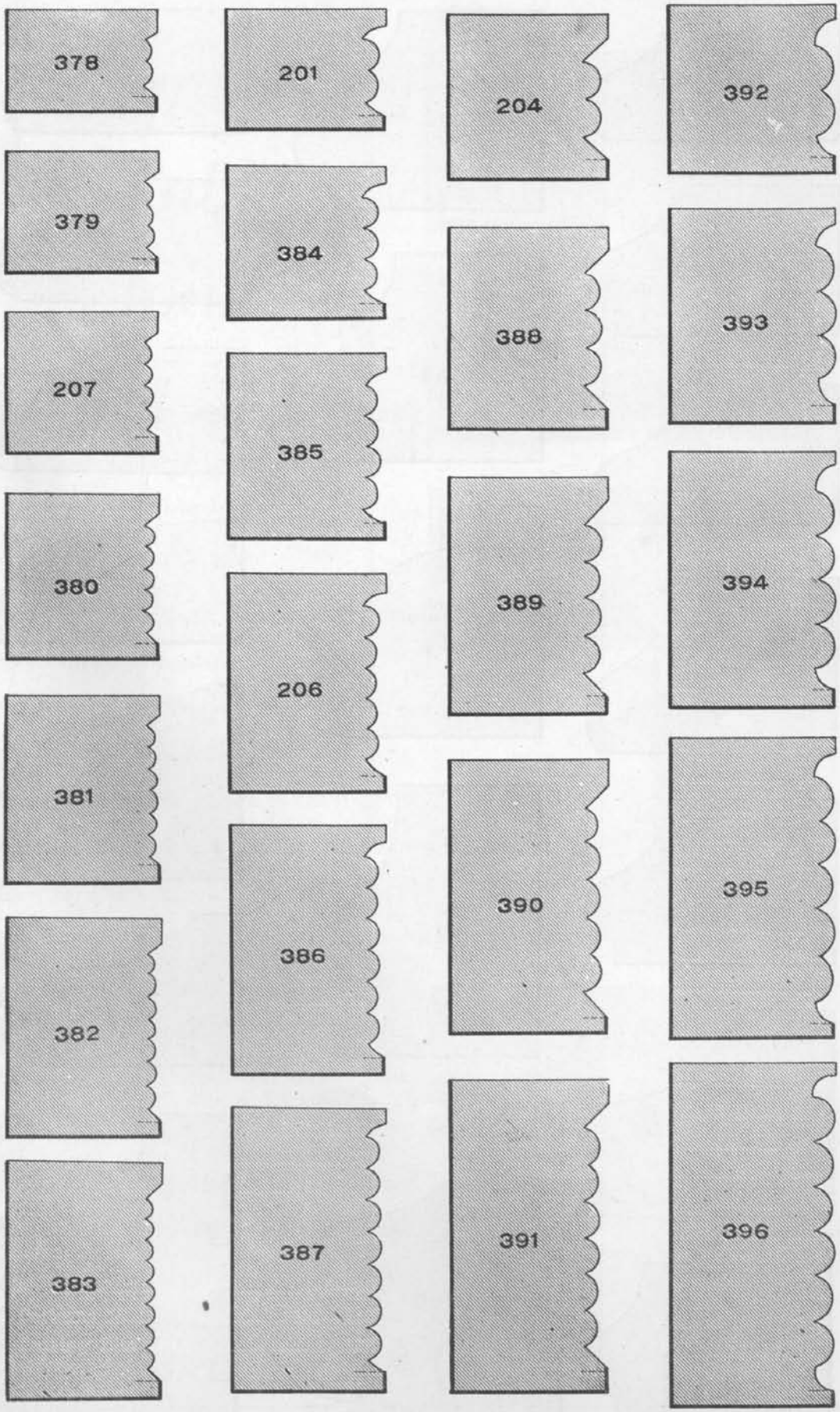


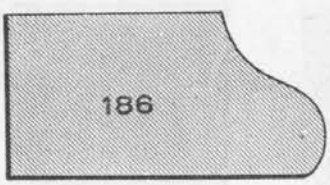
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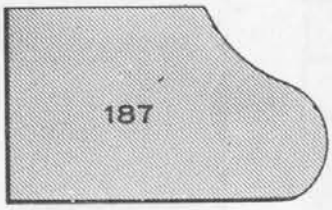

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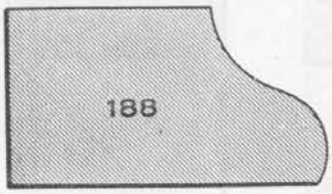
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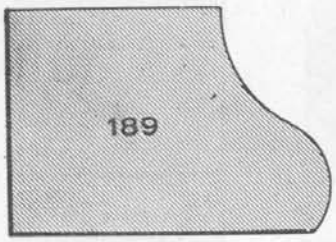


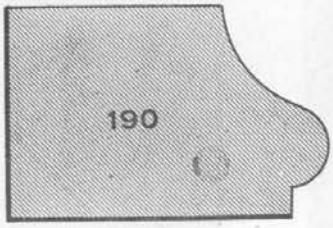

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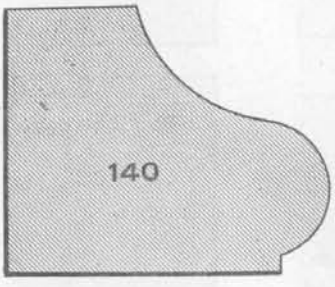

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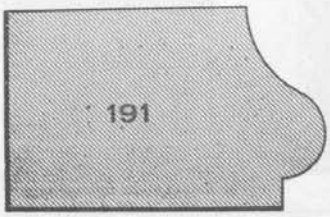

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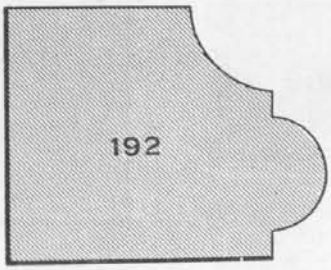

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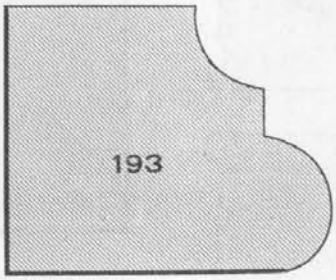

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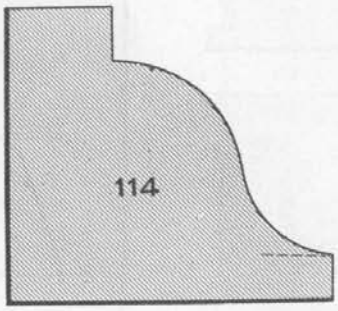

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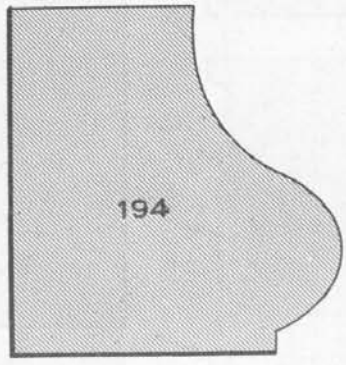

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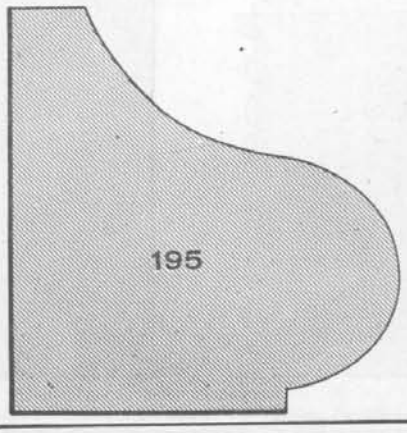

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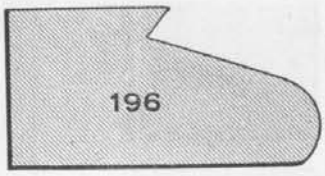

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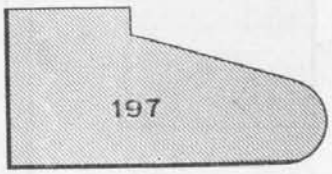

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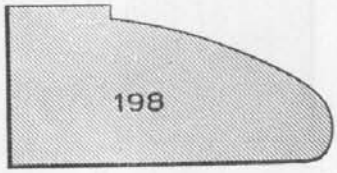

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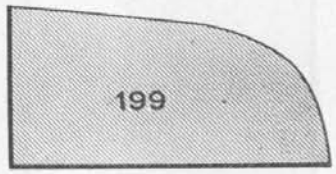

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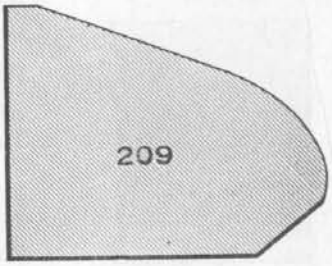

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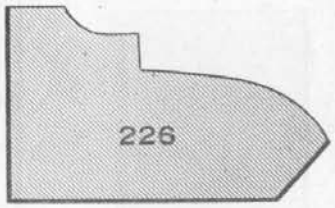

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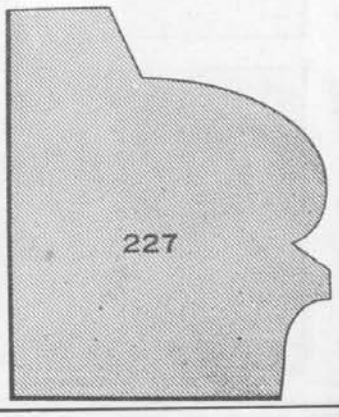

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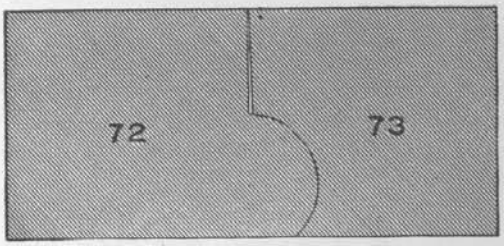

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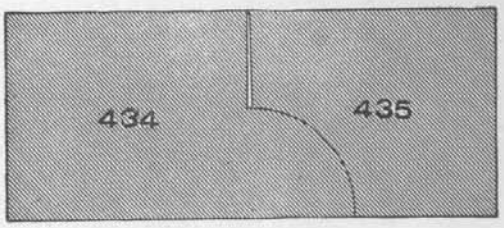

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226

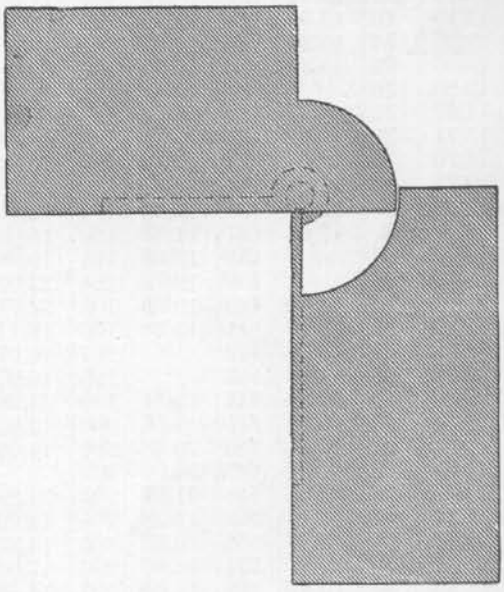

227

Drop Leaf Table Joints

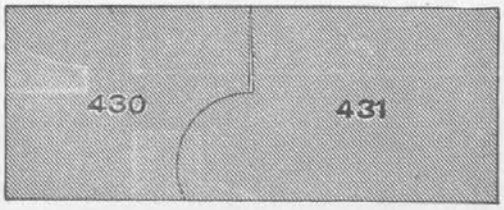


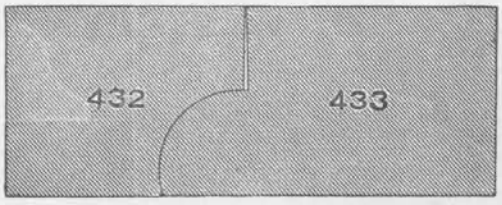


There are some peculiarities in making Cutters for working Table Joints



Every practical table maker will have ideas of his own; first, with reference to the shape; next, with reference to the manner of hanging them. We show above several good patterns we know to be correct having spent much time in perfecting them. We also represent how the hinge is applied to one of the patterns to work smoothly and in harmony with the circles of the joint.





We make Reversible and One-way Cutters to suit any Special Pattern, and to please the fancy of the most particular workman.

182 Price List of Reversible or One-Way Cutters

Two Wings for Use with 1⅜" Guide Collars or Less

☛ *FOR PRICES OF CUTTERS WITH*

1¾" Collar, ⅞" Spindle add 15% to list. 2¼" Collar, 1⅛ " Spindle add 25% to list.
2" Collar, 1" Spindle add 20% to list. 2½" Collar, 1¼" Spindle add 25% to list.

No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.
1	$14.64	56	$10.09	111	$21.35	166	$11.57	221	$12.13	276	$17.82	331	$18.20	386	$14.65
2	15.53	57		112	10.74	167	12.71	222	13.45	277	12.71	332	22.00	387	17.08
3	21.35	58		113	11.57	168	11.57	223	13.72	278	11.33	333	24.86	388	12.40
4	18.60	59	26.65	114	18.31	169	12.71	224	15.29	279	14.40	334	15.07	389	13.38
5	18.70	60	13.11	115	10.74	170	12.71	225	15.79	280	21.37	335	15.60	390	13.50
6	20.85	61		116	24.86	171	15.03	226	23.13	281	20.25	336	18.90	391	15.10
7	17.82	62	20.77	117	16.10	172	21.35	227	28.65	282	10.78	337	14.87	392	12.29
8	26.65	63		118	25.76	173	24.86	228	9.80	283	11.43	338	12.43	393	13.30
9	14.67	64	11.87	119	23.17	174	22.44	229	10.09	284	11.90	339	12.95	394	14.60
10	14.40	65		120	10.37	175	21.55	230	11.03	285	12.72	340	13.30	395	16.36
11	19.69	66	33.60	121	24.86	176	20.31	231	16.96	286	13.25	341	14.30	396	18.10
12	16.96	67	32.71	122	14.68	177	16.36	232	17.82	287	14.32	342	15.08	397	11.88
13	*	68	31.86	123	17.33	178	37.12	233	19.60	288	15.64	343	13.26	398	18.93
14	15.43	69	17.82	124	15.68	179	23.98	234	11.57	289	16.36	344	15.08	399	21.50
15	17.38	70	22.23	125	15.53	180	17.82	235	11.57	290	18.86	345	15.56	400	16.36
16	11.15	71	13.72	126	12.46	181	17.82	236	12.15	291	19.78	346	16.30	401	21.50
17	12.13	72	15.52	127	13.83	182	17.39	237	12.15	292	20.54	347	17.10	402	13.40
18	11.15	73	15.52	128	11.87	183	18.82	238	13.18	293	21.40	348	12.44	403	14.25
19	11.87	74	19.39	129	19.22	184	17.40	239	14.19	294	26.84	349	15.15	404	18.85
20	13.16	75	15.35	130	19.78	185	28.09	240	14.23	295	29.52	350	16.27	405	20.00
21	12.83	76		131	17.47	186	14.08	241	15.68	296	10.44	351	18.92	406	14.25
22	11.87	77		132	15.68	187	16.12	242	16.36	297	11.31	352	13.30	407	18.86
23	12.71	78		133	15.07	188	14.67	243	18.93	298	12.14	353	14.05	408	23.50
24	13.70	79	16.97	134	16.36	189	16.69	244	19.78	299	12.99	354	15.10	409	39.77
25	12.71	80	24.01	135	12.71	190	15.22	245	23.27	300	14.67	355	15.58	410	19.85
26	10.54	81	12.15	136	11.43	191	12.99	246	9.81	301	15.66	356	16.25	411	32.71
27	12.27	82	17.96	137	11.31	192	18.08	247	9.81	302	15.66	357	17.16	412	27.05
28	10.54	83		138	19.08	193	19.36	248	10.76	303	17.44	358	13.30	413	36.37
29	10.54	84		139	10.73	194	23.92	249	10.76	304	18.05	359	14.35	414	18.93
30	11.57	85	17.09	140	19.62	195	32.71	250	11.62	305	20.69	360	15.30	415	26.65
31	29.10	86	15.53	141	13.24	196	16.11	251	11.83	306	22.46	361	15.60	416	10.00
32	31.86	87	18.67	142		197	16.97	252	12.23	307	23.26	362	16.30	417	26.70
33	29.72	88	11.43	143		198	16.97	253	12.72	308	25.08	363	13.40	418	12.99
34	29.30	89	30.81	144	19.51	199	24.86	254	9.93	309	27.72	364	14.05	419	20.55
35	18.39	90	15.43	145	15.50	200	13.93	255	9.93	310	25.57	365	15.57	420	13.58
36		91	15.43	146	20.58	201	14.60	256	10.76	311	15.46	366	12.56	421	34.00
37	30.92	92		147	30.96	202		257	10.76	312	14.71	367	14.05	422	10.20
38	33.22	93	23.77	148	21.67	203	24.86	258	11.62	313	17.16	368	15.95	423	34.10
39	24.52	94	13.43	149	15.23	204	14.29	259	12.27	314	18.90	369	14.05	424	14.55
40	24.52	95	11.43	150	16.50	205	13.33	260	12.72	315	24.66	370	15.08	425	42.42
41	23.32	96	12.67	151	16.50	206	17.04	261	13.49	316	17.86	371	15.55	426	28.10
42	15.93	97	10.47	152	18.04	207	14.54	262	9.93	317	23.27	372	17.12	427	17.05
43	29.01	98	11.43	153	12.72	208	14.54	263	9.93	318	24.15	373	11.80	428	30.96
44	17.24	99	13.83	154	11.43	209	23.22	264	10.78	319	21.35	374	13.33	429	15.75
45		100	15.44	155	32.71	210	15.80	265	11.62	320	22.03	375	16.05	430	15.00
46		101	10.34	156	30.04	211	14.68	266	12.27	321	15.52	376	15.08	431	15.00
47	11.90	102	18.93	157	27.53	212	16.60	267	12.72	322	20.45	377	17.12	432	15.00
48		103	11.36	158	10.97	213		268	13.50	323	14.05	378	12.25	433	15.00
49	10.76	104	10.37	159	13.16	214	14.20	269	10.78	324	14.90	379	12.83	434	16.63
50	*	105	10.97	160	10.37	215	15.13	270	32.71	325	17.01	380	15.35	435	16.63
51	10.19	106	10.72	161	31.83	216	16.54	271	18.70	326	18.15	381	15.58		
52	10.97	107	10.72	162	21.35	217	15.18	272	9.95	327	19.16	382	16.75		
53	10.97	108	9.81	163	24.01	218	16.60	273	25.06	328	24.86	383	17.62		
54	10.29	109	11.57	164	10.37	219		274	20.48	329	14.85	384	12.45		
55	9.81	110	19.11	165	11.57	220	14.53	275	10.78	330	17.25	385	13.30		

*No. 13—2 Wing.

1	inch	face,	$11 45
1¼	"	"	12 87
1½	"	"	15 15
1¾	"	"	16 52
2	"	"	18 12

*No. 50—2 Wing.

¼	inch	face,	$ 9 50
½	"	"	10 29
¾	"	"	10 82
1	"	"	11 40
1¼	"	"	12 79
1½	inch	face,	$15 13
1¾	"	"	16 62
2	"	"	18 03
2¼	"	"	19 72
2½	"	"	21 16
3	"	"	22 57

Sash Cutters, page 155—1⅜" Sash..$24.36
Sash Cutters, page 155—1¾" Sash.. 25.77

Door Cutters, page 155—1⅛" Door..$25.87
Door Cutters, page 155—1⅜" Door.. 27.91
Door Cutters, page 155—1¾" Door.. 30.13

Three Wing Reversible or One-Way Cutters

For Use with 1⅜" Guide Collars or Less

☛ *FOR PRICES OF CUTTERS WITH*

1¾" Collar, ⅞" Spindle add 15% to list. 2¼" Collar, 1⅛ " Spindle add 25% to list.
2" Collar, 1" Spindle add 20% to list. 2½" Collar, 1¼" Spindle add 25% to list.

No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.	No.	Price.
1	$17.95	56	$11.98	111	$26.93	166	$14.30	221	$15.14	276	$22.00	331	$22.09	386	$18.44
2	19.26	57		112	13.40	167	15.90	222	16.98	277	15.84	332	25.90	387	21.37
3	26.24	58		113	14.35	168	14.30	223	17.13	278	14.08	333	32.44	388	16.56
4	23.35	59	32.04	114	23.11	169	15.90	224	19.26	279	15.11	334	17.69	389	16.95
5	23.38	60	16.11	115	13.29	170	15.96	225	19.74	280	26.68	335	19.30	390	17.08
6	23.64	61		116	31.06	171	18.83	226	28.93	281	25.34	336	23.50	391	18.99
7	22.02	62	23.81	117	20.02	172	26.93	227	35.94	282	13.56	337	18.80	392	15.46
8	33.29	63		118	32.20	173	31.01	228	12.21	283	14.38	338	15.52	393	16.37
9	18.32	64	14.70	119	20.65	174	28.03	229	12.36	284	14.94	339	16.16	394	16.56
10	17.77	65		120	13.01	175	24.25	230	13.61	285	15.96	340	16.56	395	18.43
11	24.58	66	42.00	121	31.06	176	23.47	231	21.25	286	16.31	341	17.85	396	20.34
12	21.24	67	40.88	122	18.00	177	20.41	232	22.25	287	17.85	342	18.94	397	22.58
13	*	68	39.80	123	21.57	178	46.42	233	24.49	288	19.39	343	17.66	398	14.91
14	19.28	69	22.18	124	19.60	179	29.56	234	12.22	289	20.54	344	18.94	399	23.55
15	29.16	70	27.80	125	41.50	180	22.00	235	14.72	290	23.51	345	19.31	400	26.19
16	13.88	71	17.17	126	15.56	181	22.00	236	15.03	291	24.76	346	20.32	401	20.17
17	15.15	72	19.40	127	17.22	182	21.65	237	15.03	292	25.76	347	21.37	402	26.19
18	13.88	73	19.40	128	14.70	183	23.50	238	16.20	293	29.83	348	15.53	403	16.95
19	14.87	74	24.30	129	26.25	184	20.68	239	17.68	294	33.27	349	17.08	404	17.68
20	16.18	75	19.22	130	24.67	185	35.00	240	17.68	295	36.97	350	20.14	405	24.83
21	16.04	76		131	21.70	186	17.50	241	19.37	296	12.99	351	23.55	406	17.95
22	14.78	77		132	19.65	187	20.02	242	20.41	297	14.09	352	16.56	407	23.61
23	15.89	78		133	18.38	188	18.43	243	23.58	298	15.18	353	17.55	408	30.61
24	17.06	79	21.25	134	18.95	189	20.72	244	24.51	299	16.20	354	18.94	409	49.70
25	15.89	80	29.96	135	14.55	190	18.30	245	28.26	300	18.44	355	19.31	410	24.65
26	13.88	81	15.15	136	14.36	191	15.98	246	12.20	301	19.26	356	20.17	411	41.17
27	15.12	82	27.45	137	14.20	192	23.23	247	12.20	302	19.26	357	21.37	412	33.79
28	13.09	83		138	23.34	193	24.40	248	13.37	303	21.74	358	16.56	413	45.30
29	13.09	84		139	13.34	194	29.92	249	13.37	304	22.53	359	17.91	414	23.55
30	14.45	85	21.36	140	24.59	195	40.91	250	15.03	305	25.81	360	13.66	415	33.24
31	35.75	86	19.40	141	14.80	196	28.50	251	14.75	306	28.07	361	19.42	416	12.43
32	40.01	87	37.17	142		197	21.25	252	15.13	307	29.15	362	20.17	417	33.24
33	37.13	88	14.32	143		198	21.25	253	15.95	308	31.23	363	15.04	418	16.28
34	36.77	89	38.37	144	26.18	199	31.01	254	12.44	309	34.55	364	17.53	419	25.83
35	31.49	90	19.28	145	14.34	200	17.47	255	12.44	310	29.78	365	19.31	420	14.16
36		91	19.28	146	25.69	201	18.32	256	13.56	311	19.24	366	15.55	421	42.50
37	38.25	92		147	38.67	202		257	13.56	312	18.49	367	17.54	422	12.72
38	41.67	93	32.20	148	25.78	203	31.01	258	14.57	313	28.75	368	20.11	423	42.50
39	30.45	94	16.65	149	19.78	204	17.47	259	15.41	314	23.50	369	17.53	424	15.55
40	30.45	95	14.33	150	34.37	205	16.58	260	15.85	315	30.00	370	17.00	425	53.03
41	28.21	96	16.59	151	20.52	206	21.27	261	16.94	316	22.10	371	19.31	426	35.12
42	20.78	97	13.07	152	22.44	207	18.27	262	12.44	317	28.88	372	21.38	427	21.31
43	34.35	98	14.31	153	15.78	208	13.75	263	12.44	318	28.88	373	15.79	428	38.67
44	27.39	99	17.30	154	14.40	209	28.17	264	13.56	319	26.68	374	16.56	429	19.80
45		100	19.28	155	40.89	210	19.60	265	14.57	320	27.52	375	17.53	430	18.66
46		101	12.80	156	37.47	211	18.35	266	15.41	321	19.26	376	18.94	431	18.66
47	14.64	102	24.52	157	34.37	212	20.46	267	15.85	322	23.64	377	21.38	432	18.87
48		103	14.32	158	13.72	213		268	16.94	323	17.56	378	15.23	433	18.87
49	13.37	104	12.88	159	16.12	214	17.68	269	13.56	324	18.82	379	16.25	434	20.16
50	*	105	13.75	160	12.93	215	18.98	270	40.89	325	21.42	380	19.10	435	20.16
51	12.72	106	13.55	161	39.80	216	20.64	271	23.38	326	21.95	381	19.42		
52	13.56	107	13.55	162	26.74	217	19.22	272	12.44	327	23.92	382	21.00		
53	13.56	108	12.16	163	29.98	218	20.65	273	30.24	328	31.01	383	21.86		
54	12.80	109	14.35	164	12.93	219		274	25.58	329	18.70	384	15.55		
55	12.06	110	24.32	165	14.35	220	19.90	275	13.56	330	21.55	385	16.56		

*No. 13—3 Wing.

1	inch	face,	$14 22
1¼	"	"	16 10
1½	"	"	18 97
1¾	"	"	21 00
2	"	"	22 86

*No. 50—3 Wing.

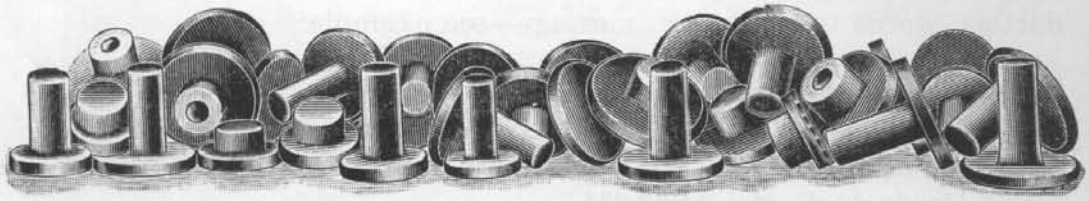
¼	inch	face,	$11 90
½	"	"	12 72
¾	"	"	13 66
1	"	"	14 20
1¼	"	"	16 05
1½	inch	face,	$18 14
1¾	"	"	20 72
2	"	"	22 73
2¼	"	"	24 80
2½	"	"	26 36
3	"	"	28 28

Sash Cutters, page 155—1⅜" Sash..$28.40
Sash Cutters, page 155—1¾" Sash.. 30.08

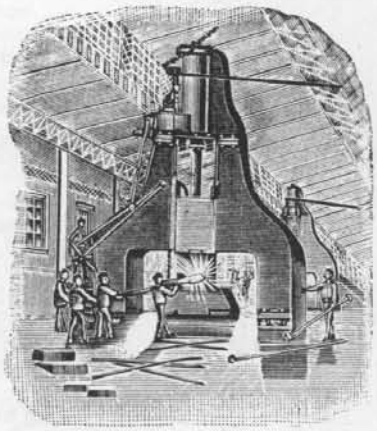
Door Cutters, page 155—1⅛" Door..$30.18
Door Cutters, page 155—1⅜" Door.. 32.32
Door Cutters, page 155—1¾" Door.. 35.18

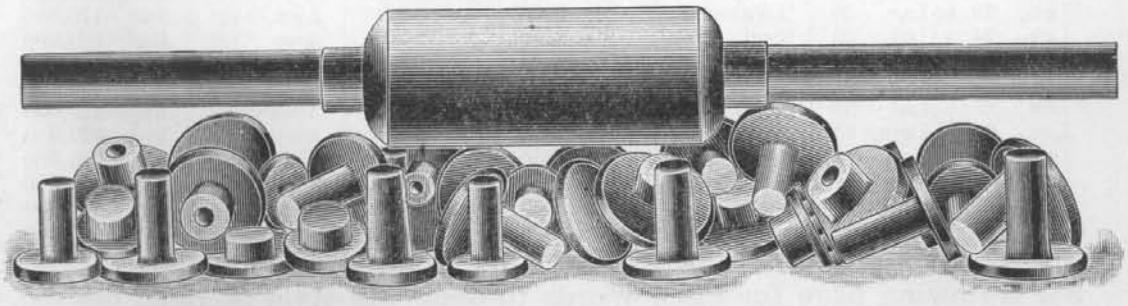
STEEL FORGINGS

For the Shimer Cutter Heads.



THE BEST METAL in addition to the best workmanship must come to the front in such a tool as The Shimer Cutter Head, and for this reason we adopted the Solid Steel Forging of 60,000 pounds tensile strength. It represents one of the points upon which we base our guarantee for strength and the maintenance of bit seat alignments. Revolving cutter heads must bear a two-fold strain—that of cutting hard and knotty lumber plus the stress exerted by centrifugal force. The Forged Steel is compressed, solidified and united in its entire structure. It differs in fracture greatly from the porus and open grain of that which is cast into moulds. If you could examine the broken fracture of the two metals and compare—that which is cast with that which is hammered and forged—we would need no argument in words to convince you of the superiority of forged steel over that of the cast for revolving cutter heads, and the cost is no greater.





TELEGRAPHIC CODE OF HEAD NUMBERS

By special arrangement with Mr. B. F. Ulmer we are pleased to formulate the following Telegraphic Code which will assist those who wish to communicate by telegraph in few words. Use one of the introductory words to start each message—see example:

Samuel J. Shimer & Sons,
Milton, Penn'a.,
Como Bab Aco Luf," or send me by express as soon as possible one set of Heads duplicates of 10,974."—

Nineteen words communicated by means of four Code Words. Use Code only when duplicate parts are needed, as Heads or Bits. All other orders must be accompanied with measurements and particulars not transmissible by wire.

COMO—Send me (or us) by express as soon as possible one set of Heads duplicates of—

ACQUA—Send me (or us) by express as quick as possible Bits for Heads numbered—

The following used to designate Head numbers. Copyrighted 1902, by B. F. Ulmer.

Lac, 1	Let, 33	Los, 65	Lyp, 97	Aja, 3000	Api, 6200	Axu, 9400
Lad, 2	Lew, 34	Lot, 66	Lyr, 98	Aje, 3100	Apo, 6300	Axy, 9500
Lae, 3	Lex, 35	Low, 67	Lyt, 99	Aji, 3200	Apu, 6400	Aya, 9600
Laf, 4	Ley, 36	Lox, 68	Aba, 100	Ajo, 3300	Apy, 6500	Aye, 9700
Lag, 5	Lic, 37	Loy, 69	Abe, 200	Aju, 3400	Ara, 6600	Ayo, 9800
Lah, 6	Lid, 38	Lub, 70	Abi, 300	Ajy, 3500	Are, 6700	Ayu, 9900
Lak, 7	Lie, 39	Luc, 71	Abo, 400	Aka, 3600	Ari, 6800	Bab, 10,000
Lal, 8	Lif, 40	Lud, 72	Aby, 500	Ake, 3700	Aro, 6900	Bac, 20,000
Lam, 9	Lig, 41	Lue, 73	Aca, 600	Aki, 3800	Aru, 7000	Bad, 30,000
Lan, 10	Lik, 42	Luf, 74	Ace, 700	Ako, 3900	Ary, 7100	Baf, 40,000
Lao, 11	Lil, 43	Lug, 75	Aci, 800	Aku, 4000	Asa, 7200	Bag, 50,000
Lap, 12	Lim, 44	Lui, 76	Aco, 900	Aky, 4100	Ase, 7300	Bib, 60,000
Lar, 13	Lin, 45	Luk, 77	Acu, 1000	Ala, 4200	Asi, 7400	Bic, 70,000
Las, 14	Lio, 46	Lul, 78	Acy, 1100	Ale, 4300	Aso, 7500	Bid, 80,000
Lat, 15	Lip, 47	Lum, 79	Ada, 1200	Ali, 4400	Asu, 7600	Big, 90,000
Lau, 16	Lir, 48	Lun, 80	Ade, 1300	Alo, 4500	Asy, 7700	Bil, 100,000
Lax, 17	Lis, 49	Luo, 81	Adi, 1400	Alu, 4600	Ata, 7800	Bim, 110,000
Lay, 18	Lit, 50	Lup, 82	Ado, 1500	Aly, 4700	Ate, 7900	Bip, 120,000
Lec, 19	Lix, 51	Lur, 83	Adu, 1600	Ama, 4800	Ati, 8000	Bis, 130,000
Led, 20	Lob, 52	Lus, 84	Ady, 1700	Ame, 4900	Ato, 8100	Bit, 140,000
Lef, 21	Loc, 53	Lut, 85	Aga, 1800	Ami, 5000	Atu, 8200	Biv, 150,000
Leg, 22	Lod, 54	Luv, 86	Age, 1900	Amo, 5100	Aty, 8300	Bub, 160,000
Leh, 23	Lae, 55	Lux, 87	Agi, 2000	Amu, 5200	Awa, 8400	Buc, 170,000
Lek, 24	Lof, 56	Lyd, 88	Ago, 2100	Amy, 5300	Awe, 8500	Bud, 180,000
Lel, 25	Log, 57	Lye, 89	Agu, 2200	Ana, 5400	Awi, 8600	Buf, 190,000
Lem, 26	Lok, 58	Lyf, 90	Agy, 2300	Ane, 5500	Awo, 8700	Bug, 200,000
Len, 27	Lol, 59	Lyg, 91	Aha, 2400	Ani, 5600	Awu, 8800	Buj, 210,000
Lee, 28	Lom, 60	Lyk, 92	Ahe, 2500	Ano, 5700	Awy, 8900	Buk, 220,000
Leo, 29	Lon, 61	Lyl, 93	Ahi, 2600	Anu, 5800	Axa, 9000	Bul, 230,000
Lep, 30	Loo, 62	Lym, 94	Aho, 2700	Any, 5900	Axe, 9100	Bum, 240,000
Ler, 31	Lop, 63	Lyn, 95	Ahu, 2800	Apa, 6000	Axi, 9200	Bun, 250,000
Les, 32	Lor, 64	Lyo, 96	Ahy, 2900	Ape, 6100	Axo, 9300	Bup, 260,000

See following page for Code Words to designate style of Head desired.

Telegraphic Code of Fig. Numbers.

The following words should be used to designate style of Head.

Fig. 1, 4 bit, Sab.
" 1, 6 " Sac.
" 1, 8 " Sell.
" 2, 4 " Shut.
" 2, 6 " Shunt.
" 2, 8 " Shutter
" 1, ex. 4 bit Saby
" 1, ex. 6 "Saber
" 1, ex. 8 " Sack
" 2, ex. 4 " Sort.
" 2, ex. 6 "Sortie
" 2, ex. 8 " Sot.
" 3, Sabo.
" 4, Sacar.
" 6, Sacred.
" 7, Sad.
" 8, Serum.
" 9, Servant.
" 10, Serve.
" 11, Service.
" 12, 4 bit, Safety.
" 12, 6 " Sapt.
" 12, 8 " Shrub.
" 13, 4 " Soul.
" 13, 6 " Sound.
" 13, 8 " Souse.
" 14, Sag.
" 15, Saga.
" 16, Sage.
" 19, Sail.
" 20, Saint.
" 21, Sal.
" 22, 4 bit, Salad.
" 22, 6 " Scat.
" 22, 8 " Side.
" 23, 4 " Salam
" 23, 6 " Split.
" 23. 8 " Splice.
" 31, Salmon.
" 31A, Sara.
" 35, Serving.
" 36, Set.
" 37, Seton.
" 38, Salty.
" 39, Sa'ute.
" 40, Salvage.
" 41, Salve.
" 42, Salvo.
" 43, Sam.
" 45, Sambo.
" 46, Sample.
" 47, Sampan.
" 48, Samson.
" 49, San.
" 52, Sanded.
" 53, Sandix.
" 54, Sandy.
" 55, Sane.
" 56, Sang.
" 57, Sank.
" 58, Saus.
" 59, Sap.
" 60, Sapid.
" 62, Sapped.
" 63, Sappy.
" 65, Sar.

Fig. 66, Sarn.
" 66A, Setler.
" 67, Sarse.
" 68, Setting.
" 70, Satan.
" 72, Sated.
" 73, Satin.
" 75, Settle.
" 76, Satrap.
" 77, Saturn.
" 78, Satyr.
" 80, Sauce.
" 81, Saucy.
" 82, Saunter.
" 83, Save.
" 84, Saving.
" 86, Savoy.
" 87, Saw.
" 88, Sawing.
" 89, Sax.
" 91, Say.
" 92, Saying.
" 93, Scab.
" 95, Scald.
" 98, Scrub.
" 99, Scud.
" 103, Scurf.
" 104, Scurvy.
" 107, Setwall.
" 108, Sever.
" 109, Sew.
" 110, Sewer.
" 111, Sewing.
" 112, Sex.
" 113, Sextant
" 115, Sexton.
" 116, Sexual.
" 117, Shack
" 118, Shackles.
" 119, Shade.
" 120, Shading.
" 121, Shadow.
" 122, Shaft.
" 123, Shake.
" 124, Shaking.
" 137, Scrip.
" 142, Scythe.
" 143, Sea.
" 144, Seam.
" 145, Search.
" 146, Season.
" 147, Secede.
" 148, Secess.
" 149, Seclude.
" 150, Second.
" 151, Shall.
" 153, Sham.
" 160, Sedan.
" 160A, Shamble.
" 161, Shame.
" 162, Seeding.
" 165, Seeker.
" 202, 4 bit, Scrap.
" 202, 6 " Sharp.
" 202, 8 " Shape.
" 203, 4 " South.

Fig. 203, 6 " Sow.
" 203, 8 " Sowing.
" 206, Seen.
" 212, 4 bit, Seine.
" 212, 6 " Seized
" 212, 8 " Sick
" 213, 4 " Span.
" 213, 6 " Spalt.
" 213, 8 " Spake
" 214. Shanty.
" 215, Sharply.
" 216, Shapless.
" 217, Shaping.
" 218, Shard.
" 218½, Share.
" 219, Sharing.
" 219½ Shark.
" 220, Selling.
" 221, Senate.
" 222, Send.
" 225, Seemed.
" 226, Scraw.
" 227, Screak.
" 228, Scream.
" 229, Screw.
" 230, Scribe.
" 232, Scroll.
" 233, Scrog.
" 235, Scruple.
" 236, Scuffle.
" 237, Sauge.
" 238, Scuhe.
" 243, Sculk.
" 244, Sculkying.
" 400, Scale.
" 401, Scallop.
" 402, Scalp.
" 403, Scamp.
" 404, Scan.
" 405, Scant.
" 460, Scoff.
" 461, Scold.
" 462, Scollop.
" 463, Sconce.
" 464, Scorch.
" 435, Scope.
" 466, Score.
" 467, Scorn.
" 468, Scorse
" 469, Scott.
" 470, Scotch.
" 47 , Scotist.
" 500, Seldom.
" 501, Select.
" 502, Segar.
" 506A, Sept.
" 506, Septon.
" 507, Spartan.
" 510, Septum.
" 511, Sequel.
" 512, Sequent.
" 513, Seraph.
" 514 Serce.
" 515, Serene.
" 517, Serf.
" 518, Serge.

Fig. 525, Series.
" 526, Serial.
" 535, Shower.
" 536, Shout.
" 537, Shod.
" 538, Shock.
" 539, Shoal.
" 540, Shoe.
" 541, Shoot.
" 542, Shop.
" 543, Should.
" 544, Shotted.
" 545, Shrewd.
" 546, Shred.
" 547, Shriek.
" 548, Shrill.
" 549, Shrimp.
" 550, Shrine.
" 551, Shrink.
" 552, Ship.
" 553, Shire.
" 554, Shirk.
" 556, Shirt.
" 557, Shive.
" 600, Sermon.
" 615, Sheaf.
" 624, Sheath.
" 625, Shed.
" 626, Sheen.
" 627, Sheep.
" 628, Sheet.
" 631, Shekel.
" 632, Shelf.
" 633, Shell.
" 634A, Shelter.
" 634B, Shear.
" 635, Sparrow.
" 636, Spawl.
" 637, Spasm.
" 638, Stable.
" 639, Staff.
" 640, Stage.
" 642, Stain.
" 643, Stake.
" 644, Stand.
" 650, Start.
" 651 Stay
" 652 Stow
" 653 Straw
" 654 Stroke
" 655 Struck
" 656 Sub
" 657 Sud
" 660 Suffer
" 666 Sum
" 670 Sun
" 671 Supper
" 675 Surf
" 676 Suspect
" 677 Sustain
" 678 Swat
" 679 Sweet
" 680 Swish
" 681 Swallow
" 682 Swollen
" 683 Tan

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‡—Patterns of Stair Rail

*—Drop Leaf Table Joints

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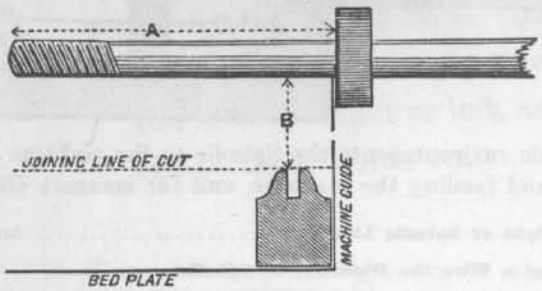
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‡—Patterns of Stair Rail

*—Drop Leaf Table Joints

How to Order Door or Sash Heads

☞ *Be particular to state whether you want the Standard or Expansion Head.*



Diameter of Spindle [*file a wire*] . . . . . .

Length of Spindle, line A . . . . . .

Length of Head . . . . . .

Length of line B, to joining line of cut . . . . . .

Is Head fastened with Nut or Set Screw? . . . . . .

Diameter of Head across bottom . . . . . .

Makers' name of machine . . . . . .

Shape of Mould, see [*sample*] [*drawing*]

Style of Head { *Standard* . . . . . / *Expansion* . . . . . }

How to Order Cope Heads.

If the Heads are shrunk on the Spindles, remove them by heating to a low red heat in a blacksmith's fire, then file a wire for size of Spindles. *Give*

Thickness of Heads . . . . . .

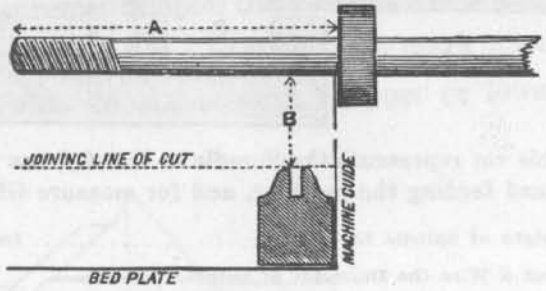
Solid diameter of Heads . . . . . .

Maker's name of Tenoner . . . . . .

Largest circle Bits may cut to and not strike . . . .

How to Order Door or Sash Heads

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Diameter of Spindle [*file a wire*] . . . . . .

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Shape of Mould, see [*sample*] [*drawing*]

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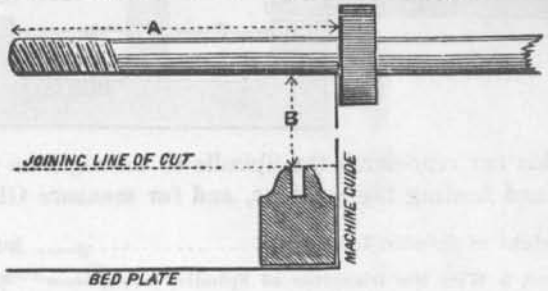
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Shape of Mould, see [*sample*] [*drawing*]

Style of Head { *Standard* . . . . . / *Expansion* . . . . . }

How to Order Cope Heads.

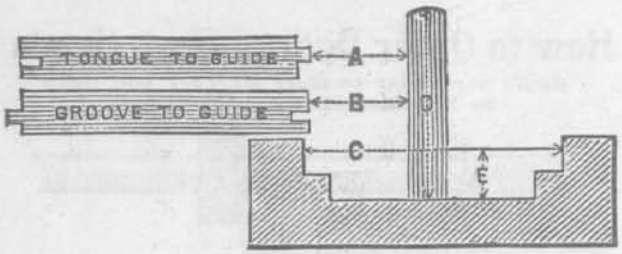
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Thickness of Heads . . . . . .

Solid diameter of Heads . . . . . .

Maker's name of Tenoner . . . . . .

Largest circle Bits may cut to and not strike . . . .



This cut represents the Spindle to the right as you stand feeding the machine, and for measure GIVE

Height of Spindle Line D ..... inches

Send a Wire the Diameter of Spindle ———

Depth of Recess below level of Bed, Line E.....inches

Free scope Head has to turn in, Line C.....inches

Diameter of Head in use, (solid) across Bottom....inches

Can you move the Fence or Guide?

Give length of Line from Spindle to jointed edge of Board, A or B.....inches

Tongue or Groove to Guide (see diagram) and cross one of them out

Groove 1/4 wide by 3/8 deep, or.....

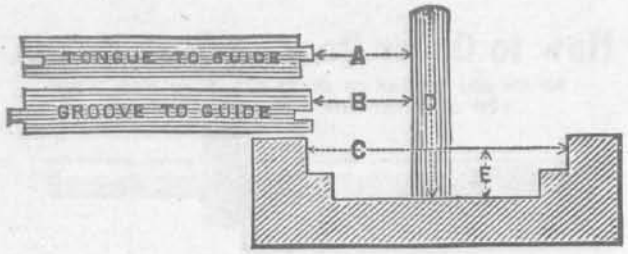
Give Maker's Name of Planer.....

Is the Board Matched Surface Side up or down?.....

We give correct measure for.....Heads which you may send on trial for.....days; if they work to our profit we will pay for them; if not we will return them. Send Heads to

.....

.....



This cut represents the Spindle to the right as you stand feeding the machine, and for measure GIVE

Height of Spindle Line D ..... inches

Send a Wire the Diameter of Spindle ———

Depth of Recess below level of Bed, Line E.....inches

Free scope Head has to turn in, Line C.....inches

Diameter of Head in use, (solid) across Bottom....inches

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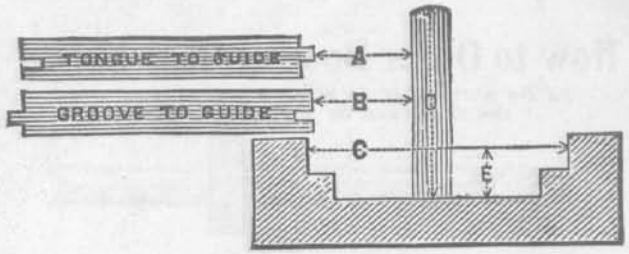
Give Maker's Name of Planer.....

Is the Board Matched Surface Side up or down?.....

We give correct measure for.....Heads which you may send on trial for.....days; if they work to our profit we will pay for them; if not we will return them. Send Heads to

.....

.....



This cut represents the Spindle to the right as you stand feeding the machine, and for measure GIVE

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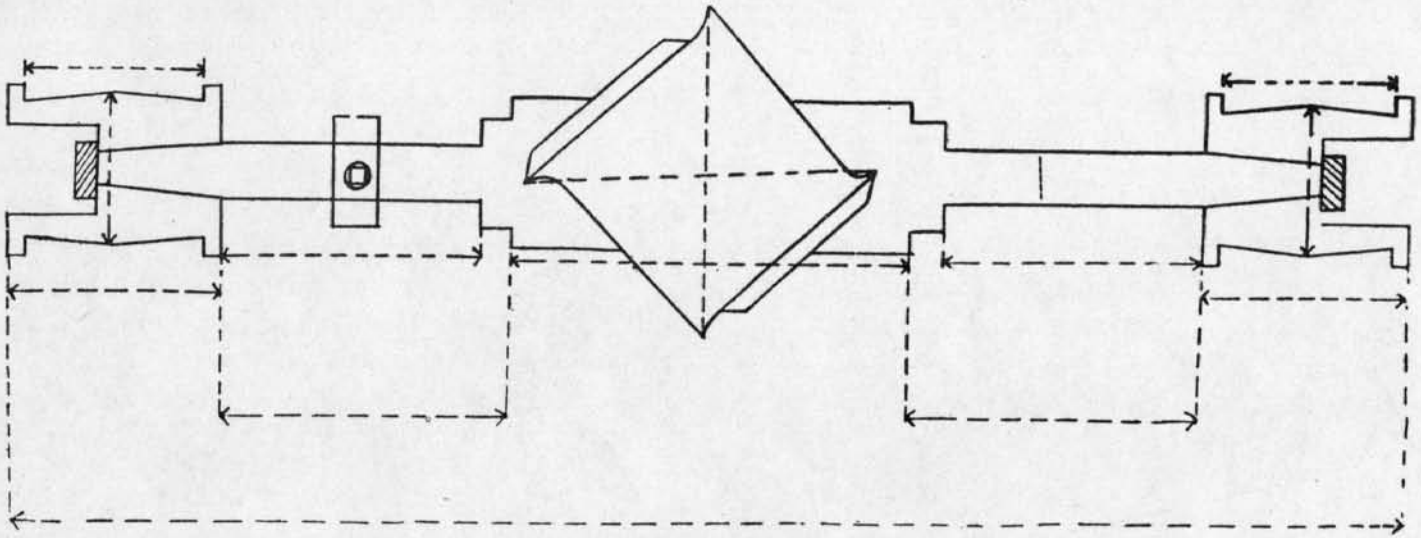
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.....

HOW TO ORDER

Tear out this page, and fill in with measurements.

To guarantee perfect fitting of the Cylinder in your machine give measurements as called for by the dotted lines. Insert the measurements upon their respective lines in the diagram below As you stand at the feeding-in end of the machine be particular to mark upon the diagram which end is to the right or left, as agreeing with the measurements. Upper or lower Cylinder? (Cross one of these words out.)



Messrs. Samuel J. Shimer & Sons, Milton, Pennsylvania

Gentlemen:—You may enter our order for one upper / lower Shimer Blades Cylinder according to the measurements given upon the diagram above, which forward via ..... as soon as possible.

Yours truly,

.....

Address ..... Date .....

WORKS OF
SAMUEL J. SHIMER & SONS