

**FORGES, BLOWERS,
DRILLS, PUNCHES,
SHEARS, SHRINKERS.**

**PRICE
LIST**

**NUMBER
ELEVEN**

CANEDY-OTTO MFG. CO.
CHICAGO HEIGHTS, ILL.

I N D E X

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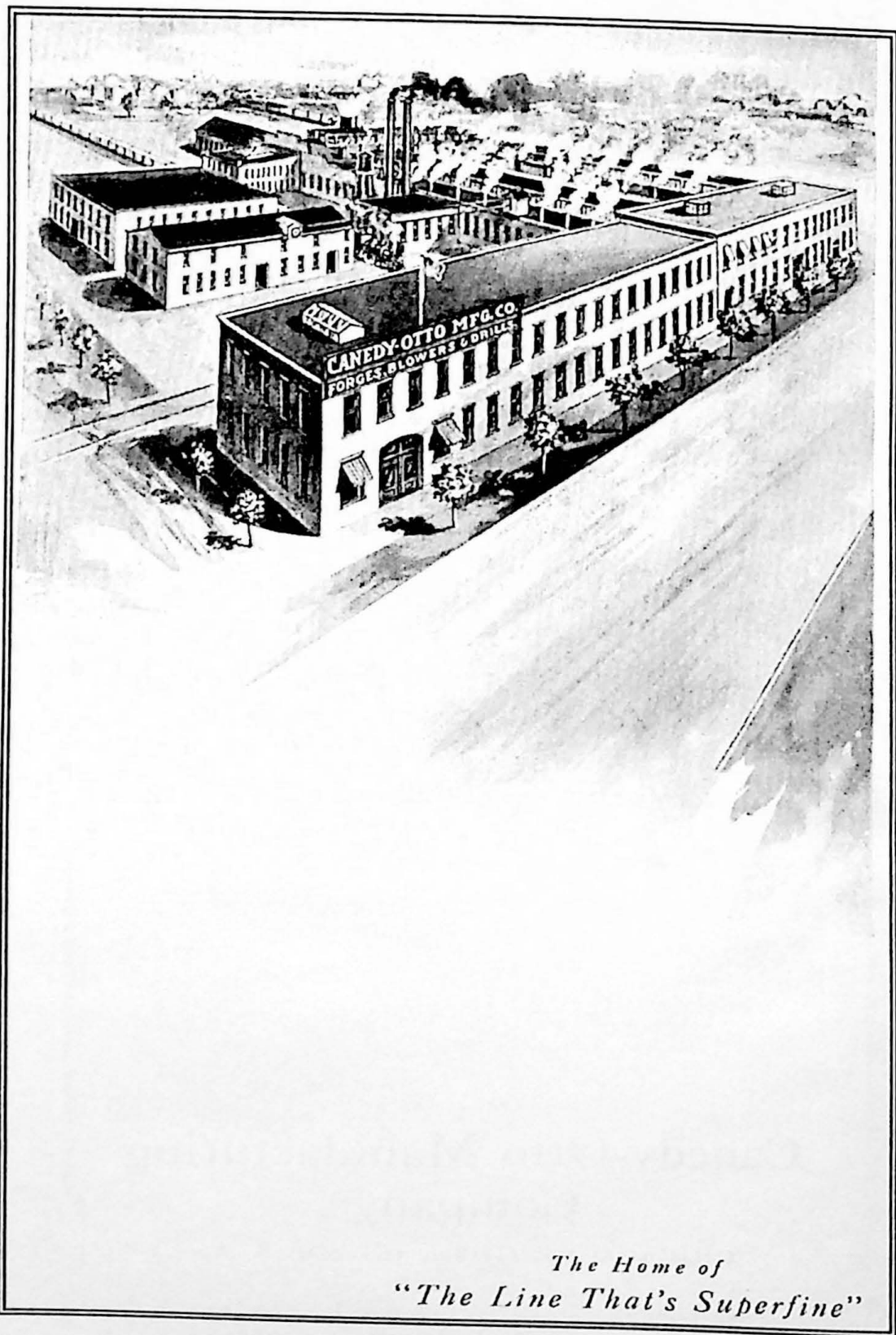
Illustrating and Describing
"The Line That's Superfine"

Forges·Blowers·Drills Punches·Shears & Tire Shrinkers Etc·Etc



MANUFACTURED BY
**Canedy-Otto Manufacturing
Company**

CHICAGO HEIGHTS, ILL., U. S. A.



*The Home of
"The Line That's Superfine"*



Foreword

IN THIS CATALOG we present for your consideration "*The Line That's Superfine*" and do so with that feeling of pride which naturally comes with the knowledge of having excelled. Whereas not so many years ago "CANEDY-OTTO" as a trade term meant but little, it has now become a volume of meaning wherever maximum productiveness and maximum efficiency are valued. Ever eager to improve we have built up a business second to none in our line and our success in itself best expresses the regard in which our product is held. Believing that actions speak louder than words we leave it to the pages that follow to convince you that we are worthy of your preference.

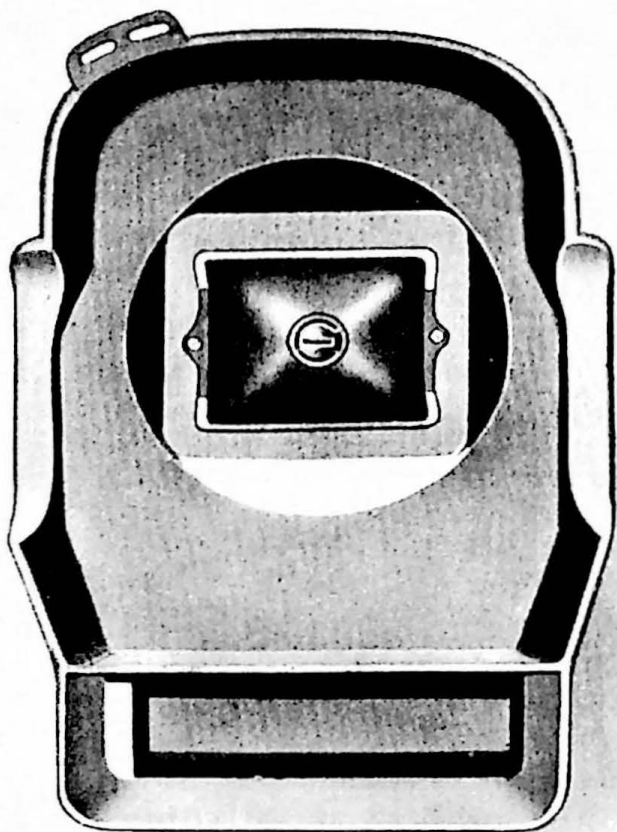
We thank our many friends for their liberal patronage in the past and freely offer to those not yet acquainted with the merits of "*The Line That's Superfine*" the benefit of our experience at all times as well as the benefit of our highly developed experimental and manufacturing facilities.

Canedy-Otto Manufacturing Co.

CHICAGO HEIGHTS, ILL., U. S. A.

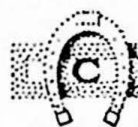
A Superior Feature

No Other Forge is Built with a Hearth Like This

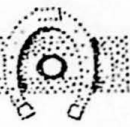


Showing Solid Heavy Fire-pot, Side and Center Blast Tuyere Ball. All separate from Hearth. No Clay necessary.

Furnished on Royal and Western Chief Forges,
1-99-100-200-AA and Electric.



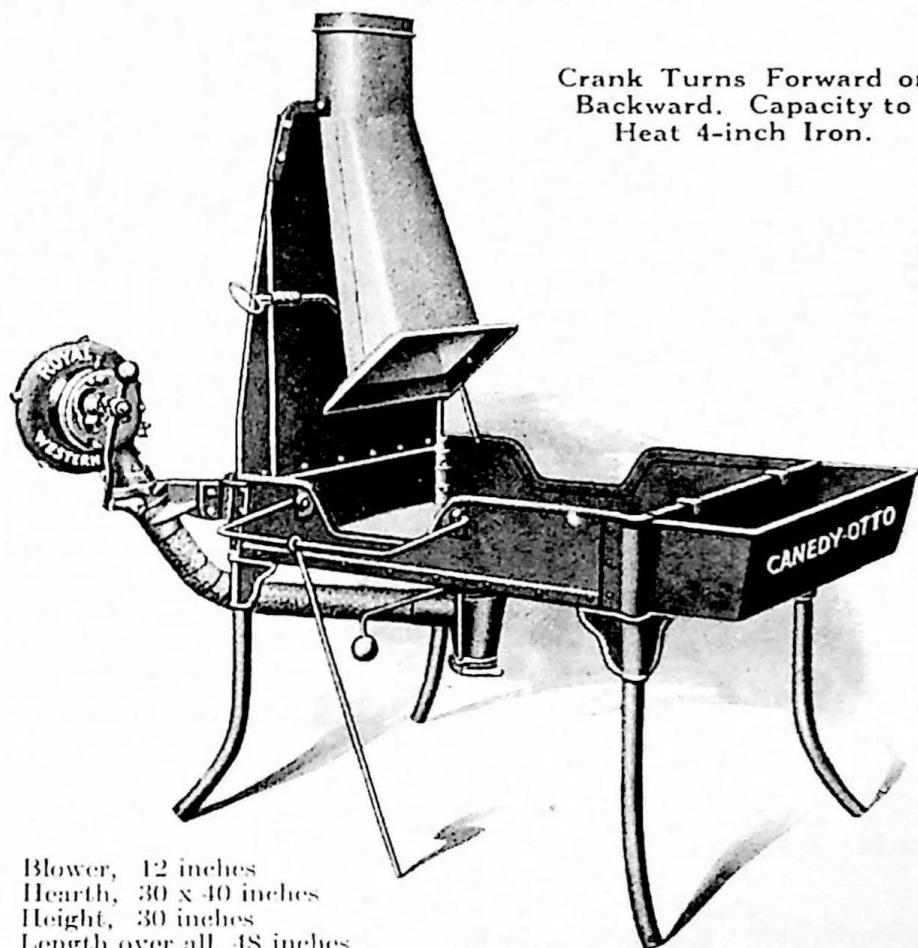
CANEDY-OTTO MFG. CO.



Royal Steel Forge No. 10

Best Suited for Large Blacksmith, Wagon, Plow and Railroad
Shops Heavy and Light Work

Crank Turns Forward or
Backward. Capacity to
Heat 4-inch Iron.



Blower, 12 inches
Hearth, 30 x 40 inches
Height, 30 inches
Length over all, 48 inches

This Forge combines our "Royal" style of Blower, with Steel Hearth, having Solid Fire-pot with Tuyere Ball furnishing side and center blast. For transportation it can be easily and quickly taken apart and all parts packed in its own Hearth which forms a strong shipping case.

Price, Without Tank, weight 225 lbs. \$70.00

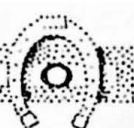
Price, With Tank (as illustrated), weight 255 lbs. . . . 75.00

Always shipped WITHOUT TANK, unless so ordered

For List of Repairs, See Page 140

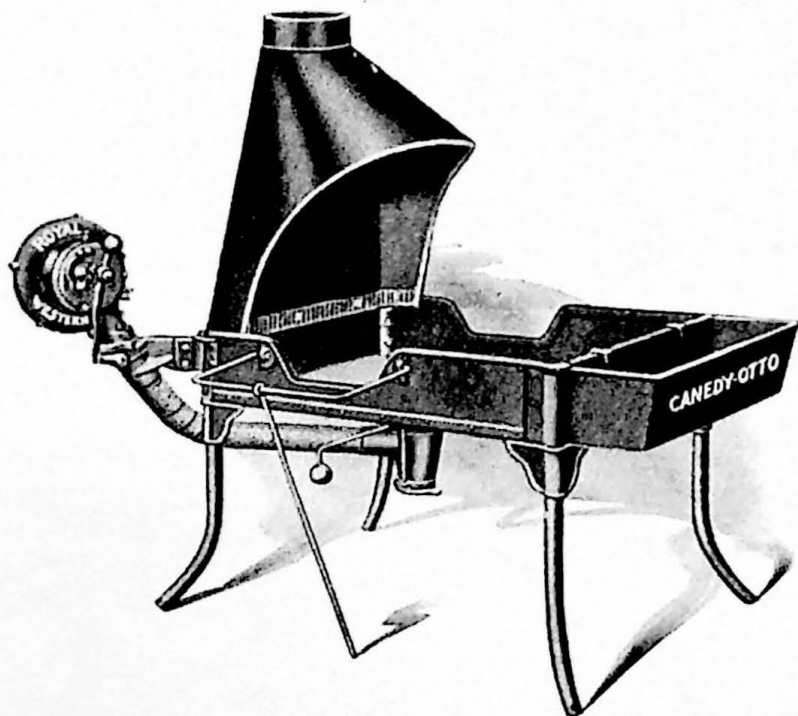


CANEDY-OTTO MFG. CO.



Royal Steel Forge No. 15

For Ordinary Blacksmith, Wagon and Plow Shops, Garages, Etc.
Heavy and Light Work



Blower, 12 inches
Hearth, 30 x 40 inches

Height, 30 inches
Length over all, 48 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower, with Steel Hearth, having Solid Fire-pot with Tuyere Ball furnishing side and center blast.

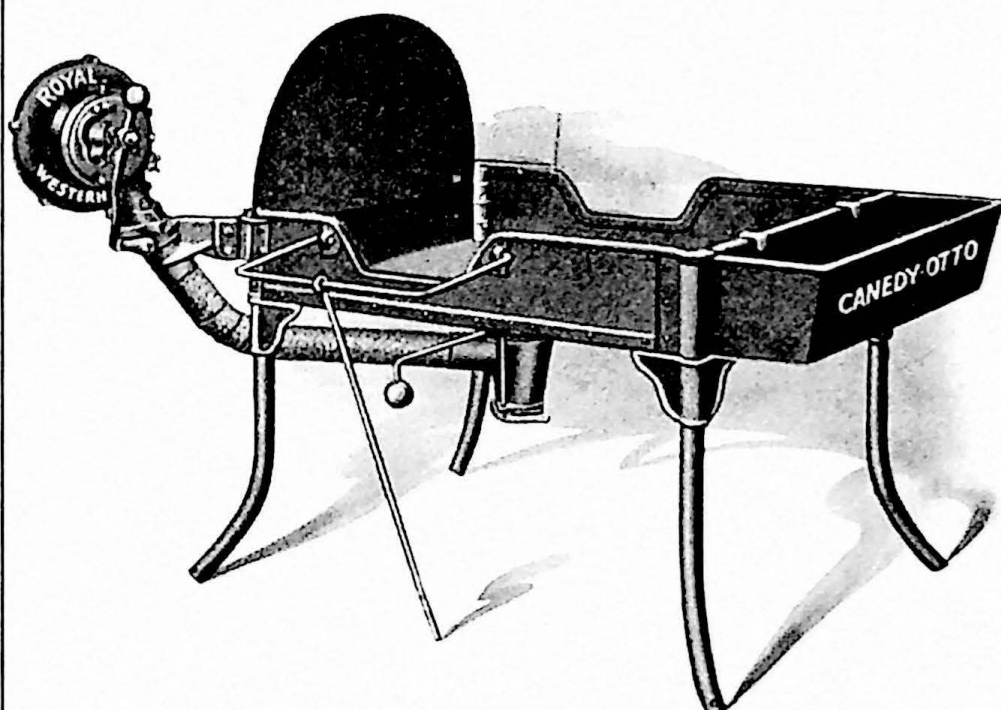
Price, Without Tank, weight 215 lbs. \$65.00
Price, With Tank (as illustrated), weight 245 lbs. . . . 70.00

Always shipped WITHOUT TANK, unless so ordered

For List of Repairs, See Page 140

Royal Steel Forge No. 20

For Outdoor Construction and Contract Work
Light or Heavy



Blower, 12 inches
Hearth, 30 x 36 inches

Height, 30 inches
Length over all, 44 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower, with Steel Hearth, having Solid Fire-pot with Tuyere Ball furnishing side and center blast. For transportation it can be easily and quickly taken apart and all parts packed in its own Hearth which forms a strong shipping case.

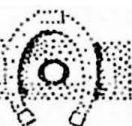
Price, Without Tank, weight 190 lbs.	\$58.00
Price, With Tank (as illustrated), weight 220 lbs. . . .	63.00

Always shipped WITHOUT TANK, unless so ordered

For List of Repairs, See Page 140

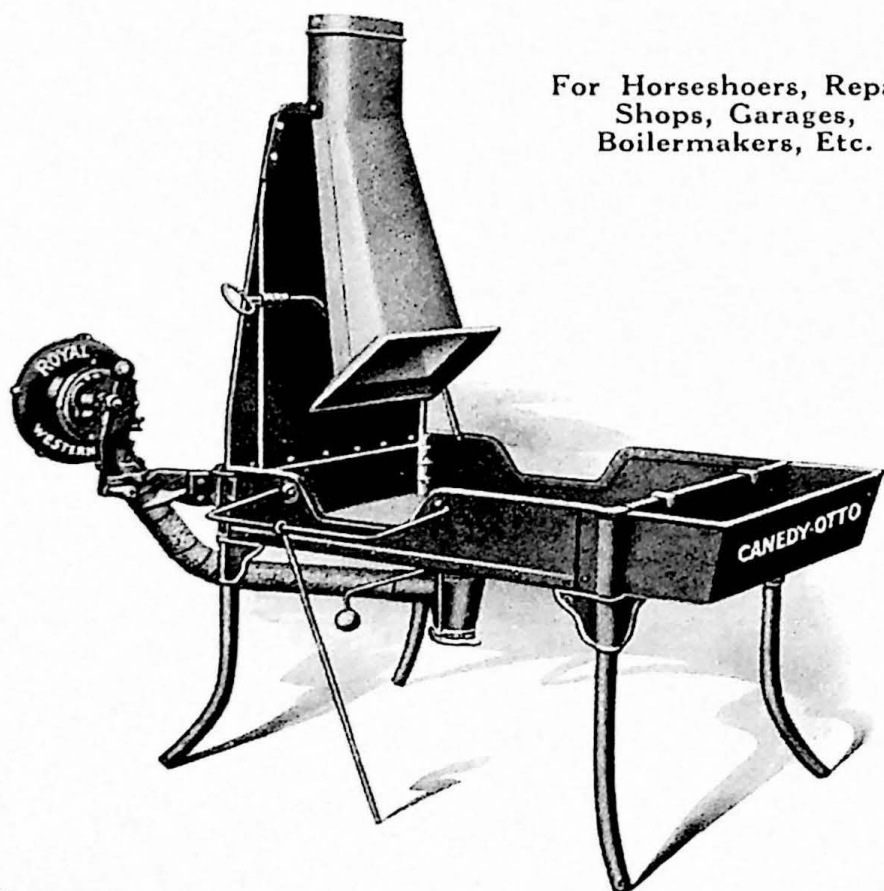


CANEDY-OTTO MFG. CO.



Royal Steel Forge No. 30

For Horseshoers, Repair
Shops, Garages,
Boilermakers, Etc.



Blower, 12 inches
Hearth, 30 x 36 inches

Height, 30 inches
Length over all, 44 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower, with Steel Hearth, having Solid Fire-pot with Tuyere Ball furnishing side and center blast. For transportation it can be easily and quickly taken apart, and all parts packed in its own Hearth, which forms a strong shipping case.

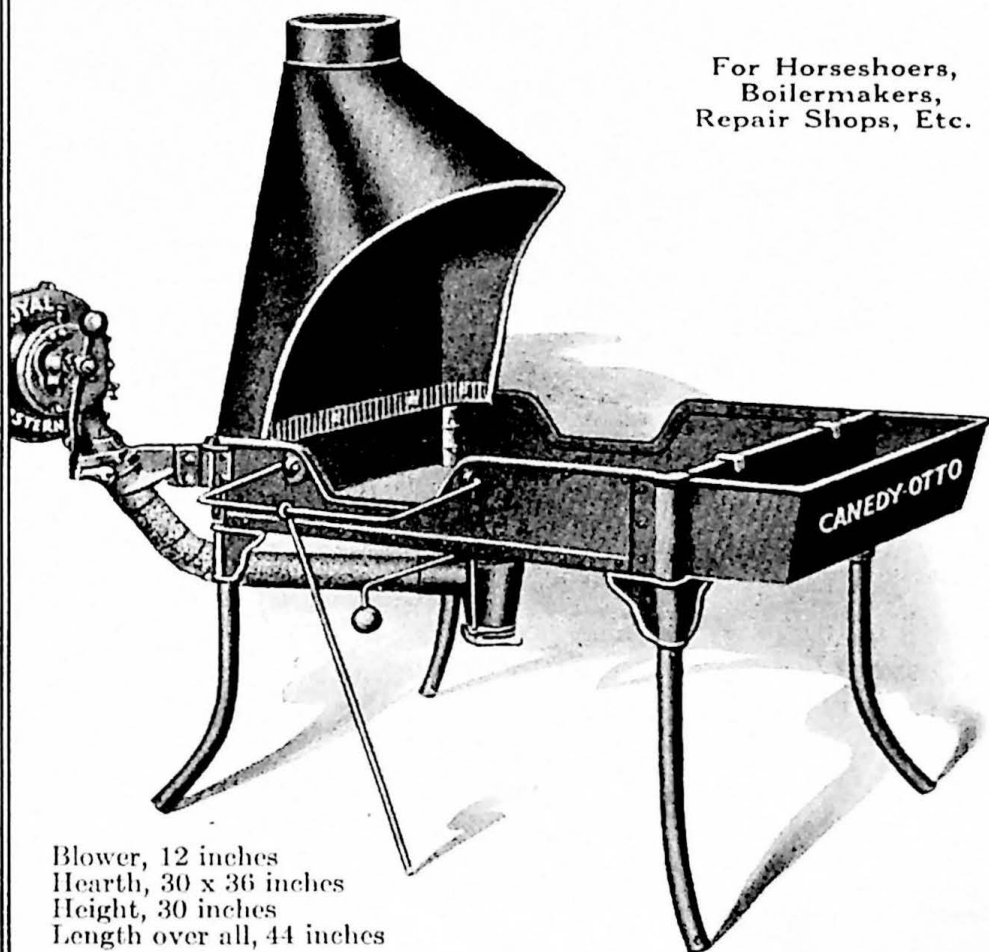
Price, Without Tank, weight 200 lbs. \$65.00
Price, With Tank (as illustrated), weight 230 lbs. . . . 70.00

Always shipped WITHOUT TANK, unless so ordered

For List of Repairs, See Page 140

Royal Steel Forge No. 35

For Horseshoers,
Boilermakers,
Repair Shops, Etc.



Blower, 12 inches
Hearth, 30 x 36 inches
Height, 30 inches
Length over all, 44 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower, with Steel Hearth, having Solid Fire-pot with Tuyere Ball furnishing side and center blast.

Price, Without Tank, weight 195 lbs. **\$60.00**

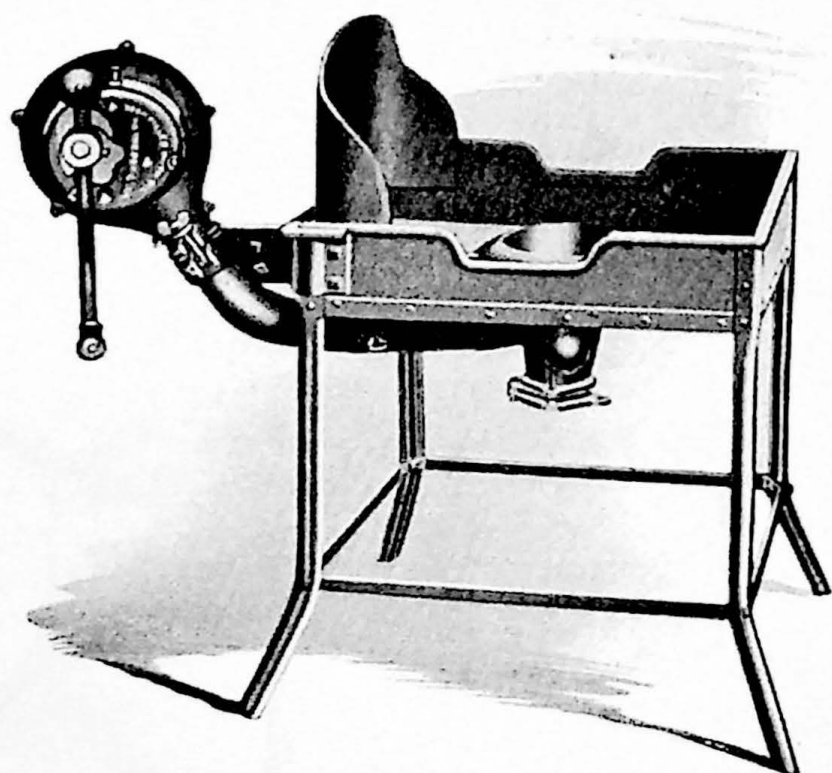
Price, With Tank (as illustrated), weight 225 lbs. . . . **65.00**

Always shipped **WITHOUT TANK**, unless so ordered

For List of Repairs, See Page 140

Royal Steel Forge No. 36

For Boilermakers, Outdoor Construction Work, Etc.



Blower, 10 inches
Hearth, 24 x 24 inches

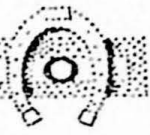
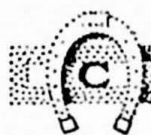
Height, 30 inches
Weight, 135 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

This Forge has a Duck Nest Fire-pot with side and center blast Tuyere Ball. The legs are of Steel, U-shaped, riveted to the hearth and strongly braced at the bottom. The Blower can be instantly removed for transportation.

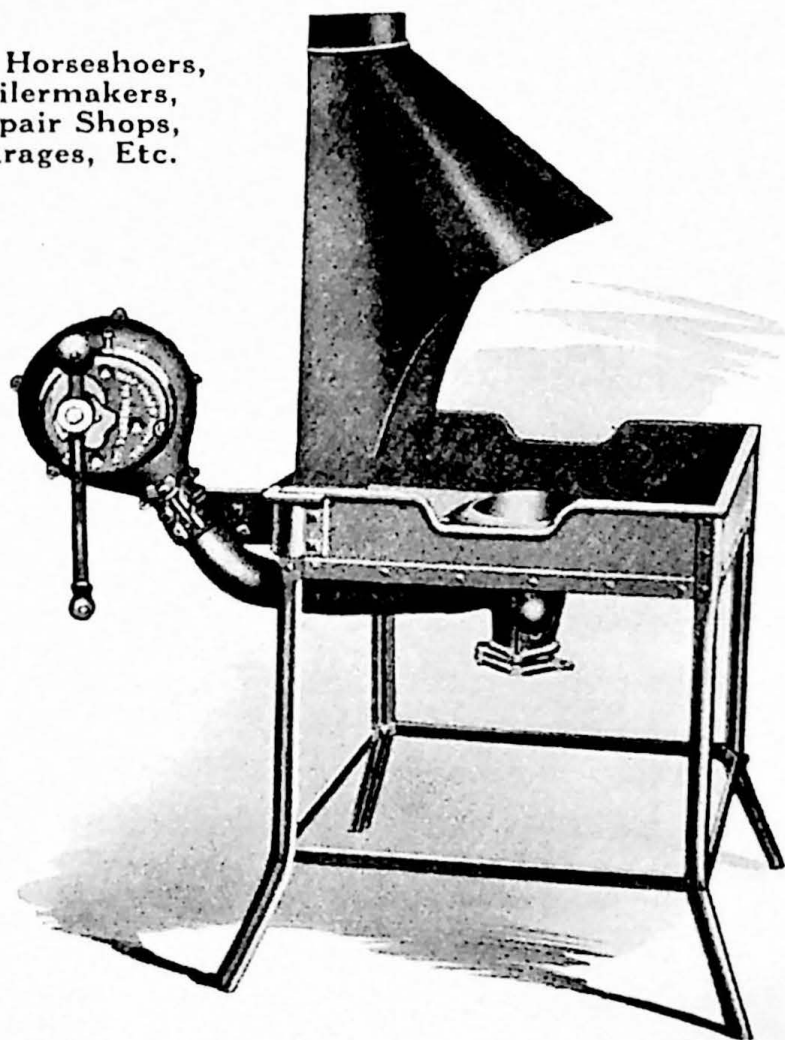
Price.....\$40.00

For List of Repairs, See Page 140



Royal Steel Forge No. 37

For Horseshoers,
Boilermakers,
Repair Shops,
Garages, Etc.



Blower, 10 inches
Hearth, 24 x 24 inches

Height, 30 inches
Weight, 140 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

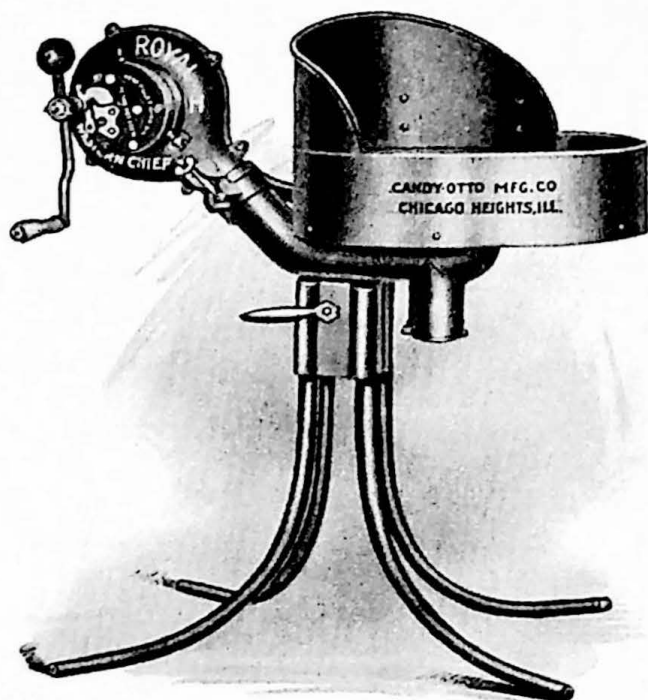
This Forge has a Duck Nest Fire-pot with side and center blast Tuyere Ball. The legs are of Steel, U-shaped, riveted to the hearth and strongly braced at the bottom. The Blower can be instantly removed for transportation.

Price.....\$44.00

For List of Repairs. See Page 140

Royal Steel Forges Nos. 40 and 60

For Boilermakers, Rivet Work, Mines, Quarries,
Armies, Navies, Etc.



No. 40
Blower, 10 inches
Hearth, 22 inches
Height, 30 inches
Weight, 95 pounds

No. 60
Blower, 10 inches
Hearth, 18 inches
Height, 30 inches
Weight, 90 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

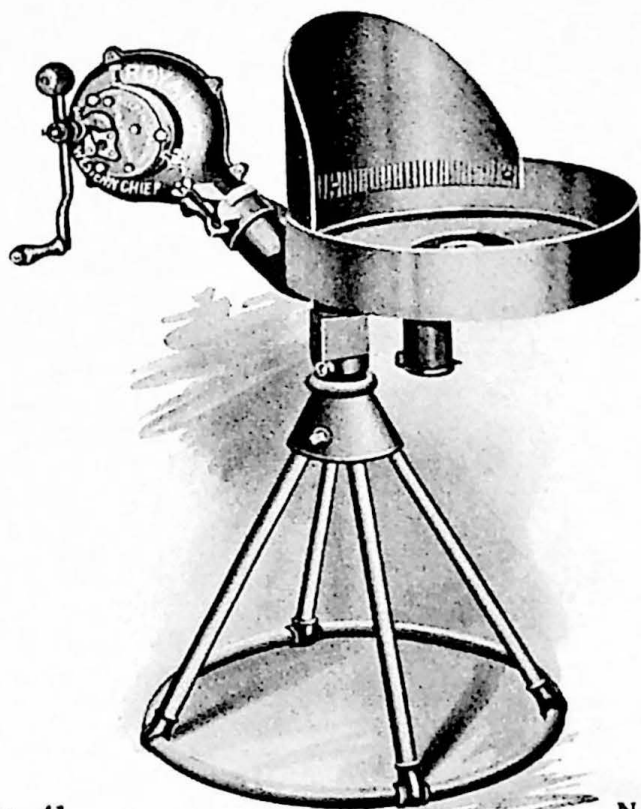
These Forges can be quickly knocked down and packed in a box
22 x 24 x 9 inches. The best Army and Navy Forge made.

Price, No. 40.....	\$40.00
Price, No. 60.....	35.00

For List of Repairs, See Page 140

Royal Steel Forges Nos. 41 and 61

For Elevated Railway, Buildings, High-up Construction
and Trestle Work, Etc.



No. 41

Blower, 10 inches
Hearth, 22 inches
Height, 30 inches
Weight, 100 pounds

No. 61

Blower, 10 inches
Hearth, 18 inches
Height, 30 inches
Weight, 95 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

The Ring Base on these Forges permits their use on bridges and high-up places where it is difficult to place a Forge that has legs only. They are easily and quickly taken apart for shipping or transportation.

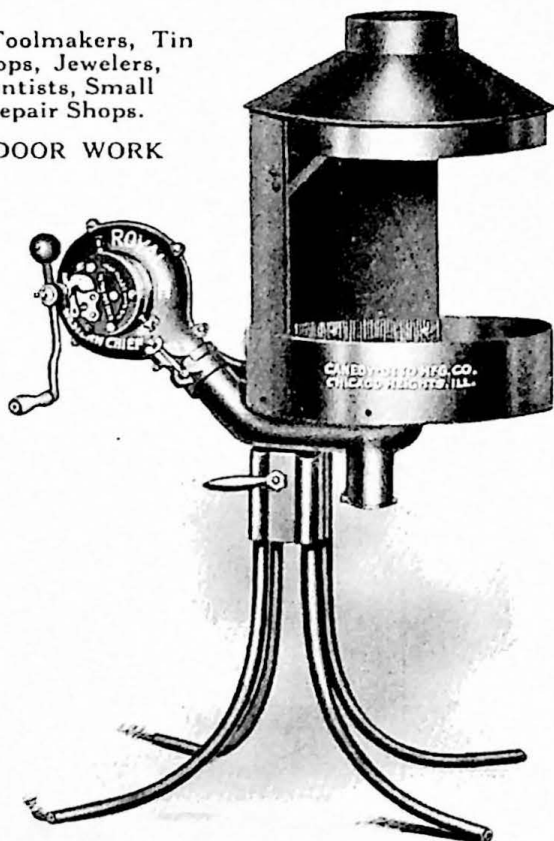
Price, No. 41.....	\$43.00
Price, No. 61.....	38.00

For List of Repairs. See Page 140

Royal Steel Forges Nos. 50 and 70

For Toolmakers, Tin
Shops, Jewelers,
Dentists, Small
Repair Shops.

INDOOR WORK



No. 50

Blower, 10 inches
Hearth, 22 inches
Height, 30 inches
Weight, 100 pounds

No. 70

Blower, 10 inches
Hearth, 18 inches
Height, 30 inches
Weight, 95 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

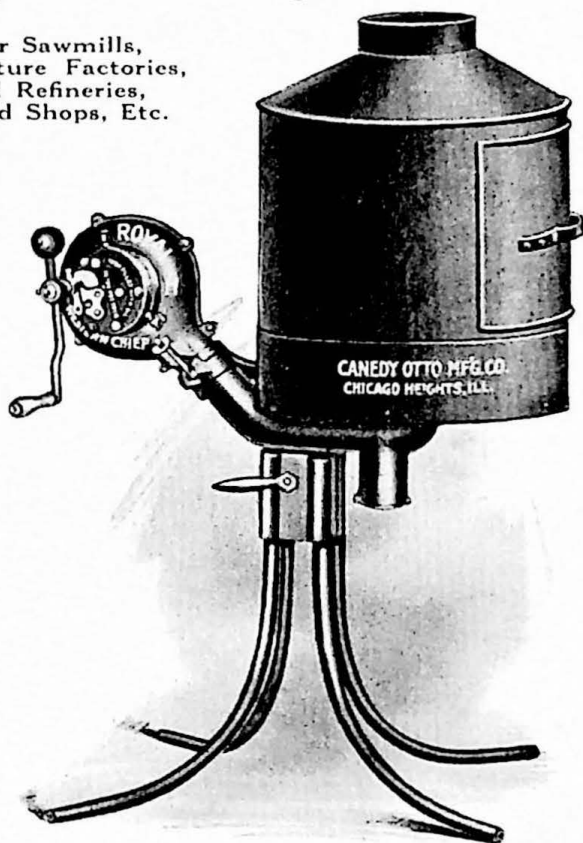
Can be quickly taken apart for shipping or transportation.

Price, No. 50.....	\$43.00
Price, No. 70.....	38.00

For List of Retailers, See Page 140

Royal Steel Forges Nos. 55 and 75

For Sawmills,
Furniture Factories,
Oil Refineries,
Wood Shops, Etc.



No. 55

Blower, 10 inches
Hearth, 22 inches
Height, 30 inches
Weight, 110 pounds

No. 75

Blower, 10 inches
Hearth, 18 inches
Height, 30 inches
Weight, 100 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

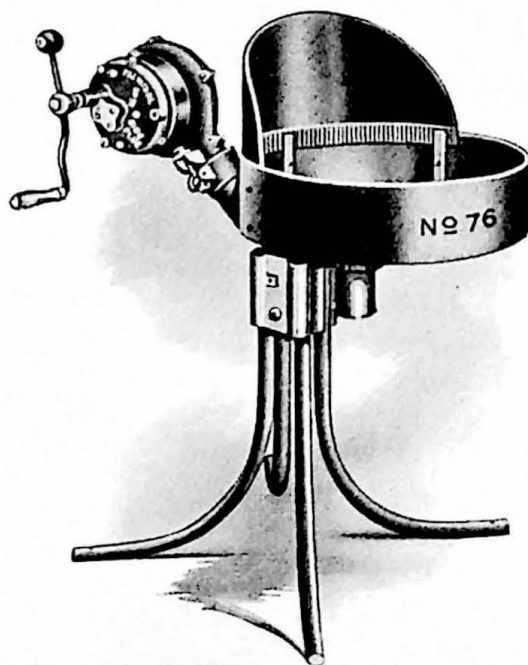
This Forge is arranged for places where it is objectionable or dangerous to have smoke, gas or sparks escape.

Price, No. 55.....	\$45.00
Price, No. 75.....	40.00

For List of Repairs, See Page 140

Royal Steel Forge No. 76

For Riveters, Boilermakers, Mines,
Quarries, Etc.



Blower, 9 inches
Hearth, 18 inches

Height, 30 inches
Weight, 85 pounds

**Crank Turns Forward or Backward
Capacity to Heat $3\frac{1}{2}$ -inch Iron**

Forge No. 76 is similar in appearance but cheaper in construction than
our regular Royal Forges of like type.

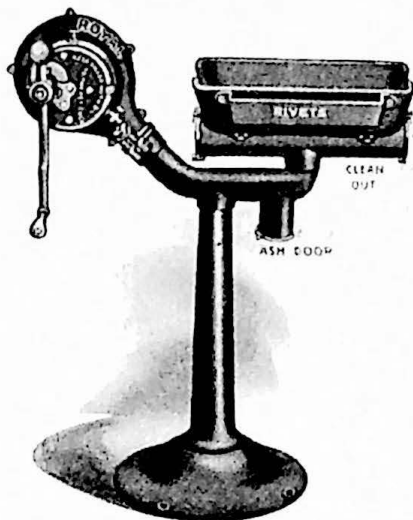
Price.....\$30.00

For List of Repairs, See Page 140



Royal Forge No. 83

Hearth Can Be Set at Any Angle Desired



For Riveters, Boilermakers, Bridgebuilders, Etc. Also for Heating Wagon Tires and Plowshares.

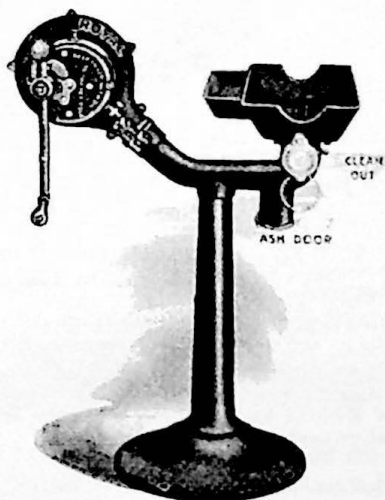
This view shows the proper position. A fire 16 inches long, or it can be reduced any length down to 2 inches by dropping plugs or rivets in the holes of tuyere tube to shut off the blast.

For Toolmakers

This position is proper. An ideal forge for hardening and tempering long reamers, stay-bolt taps and special tools.

Blower, 10 inches
Height, 30 inches
Hearth, 17 x 10 $\frac{1}{4}$ x 4 inches
inside
Weight, 125 pounds

Price.....\$35.00



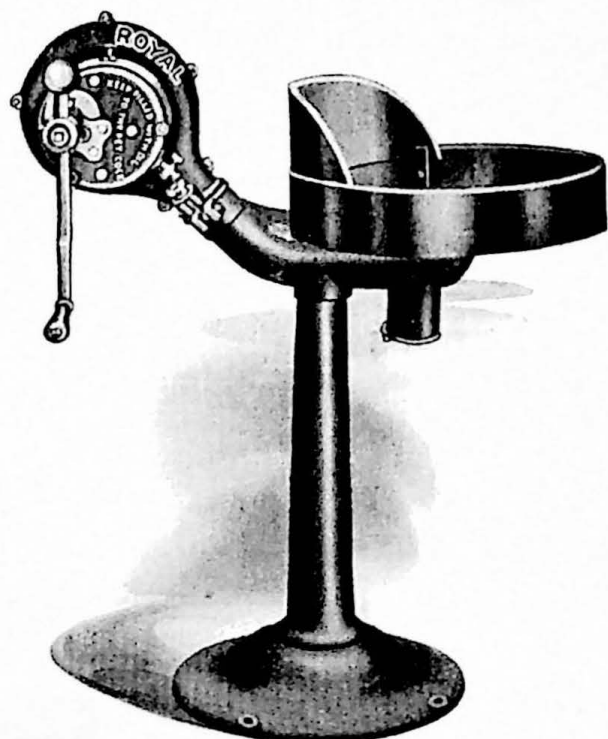


CANEDY-OTTO MFG. CO.



Royal Steel Forge No. 80

For Bridgebuilders, Contractors, Rivet Work, Etc.



With Hollow Cast-iron
Column and Base
Steel Hearth

Blower, 10 inches
Hearth, 18 inches
Height, 30 inches
Weight, 95 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

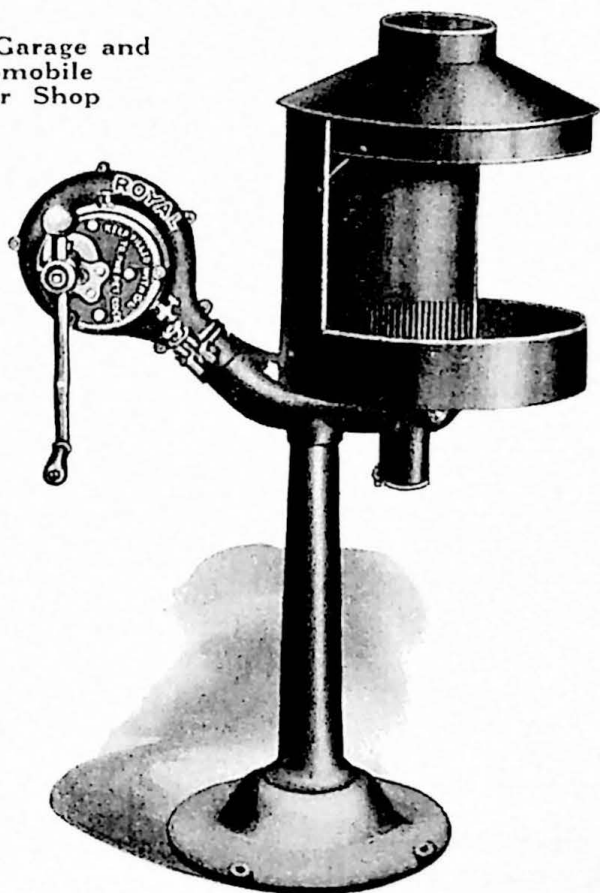
This Forge is designed for those who prefer Stand to Legs. It can be quickly taken apart for transportation. It is especially adapted to Miners, Bridgebuilders, Contractors, Railroad and Trestle Work, the Round Base giving it a solid foundation in high-up places. Hearth and Blower part can be detached from Stand and operated inside of Boilers and low-down places.

Price **\$35.00**

For List of Repairs, See Page 110

Royal Steel Forge No. 81

For the Garage and
Automobile
Repair Shop



With Hollow Cast-iron
Column and Base; Steel
Hearth

Blower, 10 inches
Hearth, 18 inches
Height, 30 inches
Weight, 100 pounds

Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron

This Forge, while suitable for all indoor use, is designed especially for the Garage and Automobile repair shop. The neatest and best forge for this purpose upon the market.

Price.....\$38.00

Can be furnished with a full enclosed hood, if desired; then known as
No. 82, Price, \$40.00.

For List of Repairs, See Page 140

Please Note

IN MAKING ORDERS, we recommend that great care be used in specifying what is required. Orders are frequently received in which it is left to us to guess at details, etc., and in such cases our friends as well as ourselves are often caused unnecessary inconvenience and delays to say nothing of errors that should not occur.

If a **Forge** is wanted and we list it **with** and **without** Hoods, Tanks, etc., be sure to specify just which way it is wanted. If a **Blower** is wanted **names** and **sizes** and other **essential details** should be specified clearly.

In the case of **Drills**, **with** or **without Pulleys** represents an important distinction. State which is wanted. Also whether chuck shall be with $\frac{1}{2}$ inch, $\frac{4}{8}$ inch or taper hole. Much trouble and annoyance can easily be avoided with the use of a little care in these matters and we thank you in advance for your acceptance of the suggestion.

Royal (Western Chief) Forges

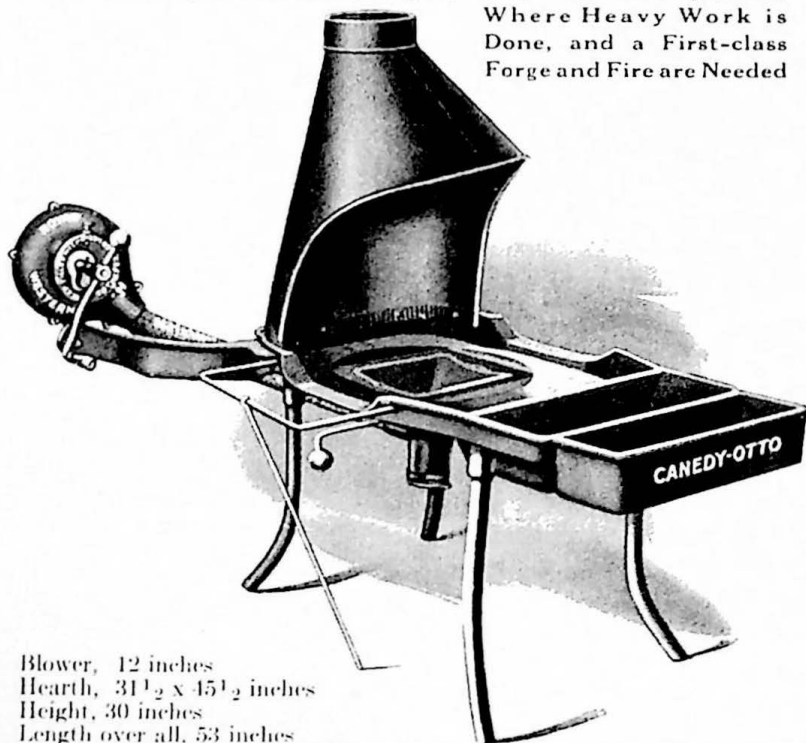
(Equipped with Cast Iron Hearths)

Are illustrated on the following pages, 24 to 40.

THIS NAME when found on a forge offers protection against unworthy and unsatisfactory results. It represents the highest skill in manufacture, the best quality in material, and the result of the experience gained from many years of persistent effort. It is not possible to make a better investment if you are looking for maximum satisfaction.

Royal Western Chief Forge No. 100

For Use of Large Blacksmith, Wagon, Plow, Railroad Shops, Etc.,
Where Heavy Work is
Done, and a First-class
Forge and Fire are Needed



Blower, 12 inches
Hearth, 31½ x 45½ inches
Height, 30 inches
Length over all, 53 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower with Western Chief Standard Hearth having Solid Fire-pot with Tuyere Ball furnishing side and center blast. We guarantee it fully.
For detailed description of Hearth, see page 6.

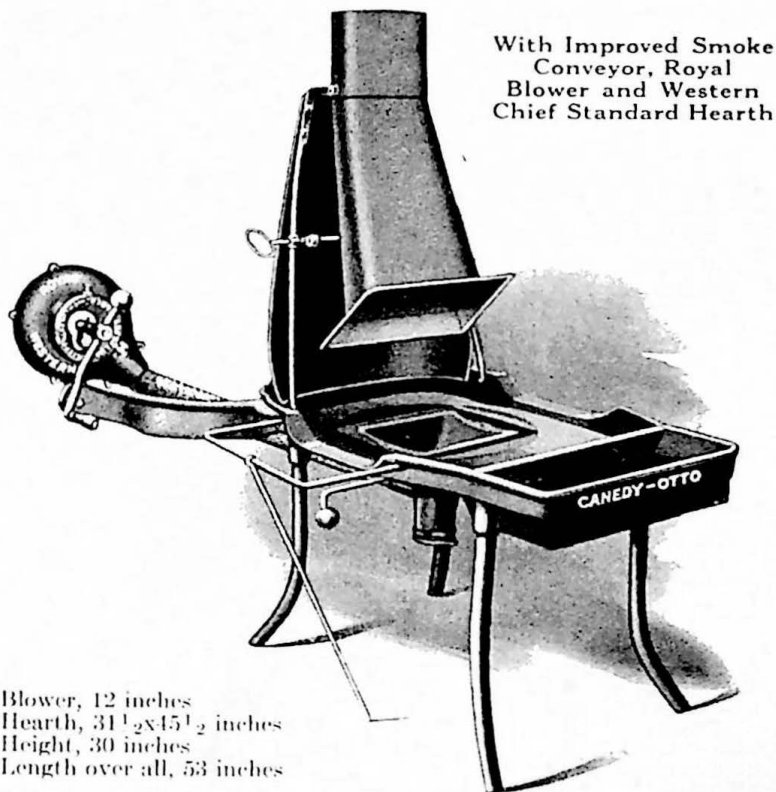
Price, With One Tank, weight 295 lbs. \$50.00

Price, With Extra Tank (as illustrated), wt. 325 lbs. 55.00

Always shipped WITHOUT EXTRA TANK, unless so ordered

For List of Repairs, See Page 140

Royal Western Chief Forge No. 200



With Improved Smoke
Conveyor, Royal
Blower and Western
Chief Standard Hearth

Blower, 12 inches
Hearth, $31\frac{1}{2} \times 45\frac{1}{2}$ inches
Height, 30 inches
Length over all, 53 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower with Western Chief Standard Hearth, having Solid Fire-pot with Tuyere Ball furnishing side and center blast. We guarantee it fully.
For detailed description of Hearth, see page 6.

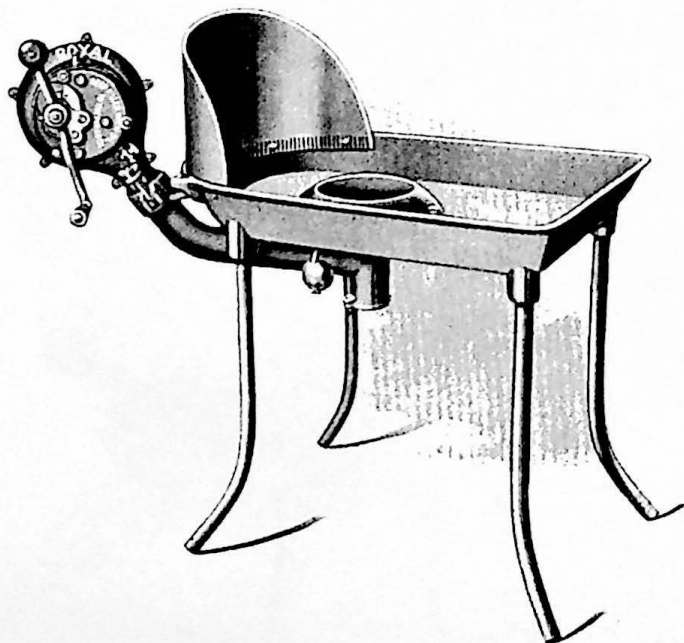
Price, With One Tank (as illustrated), wt. 300 lbs. **\$55.00**
Price, With Extra Tank, weight 330 lbs. **60.00**

Always shipped WITHOUT EXTRA TANK, unless so ordered

For List of Dealers, See Page 110

Royal Western Chief Forge No. 102

For Well-drillers, Railroads, Boilermakers, Quarries,
Contractors, Outdoor Work, Etc.



Blower, 10 inches
Hearth, 23 x 34 inches

Height, 30 inches
Weight, 180 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

Equipped with "Royal" type of Blower and Duck Nest Fire-pot.

Price.....\$38.00

For List of Repairs, See Page 140

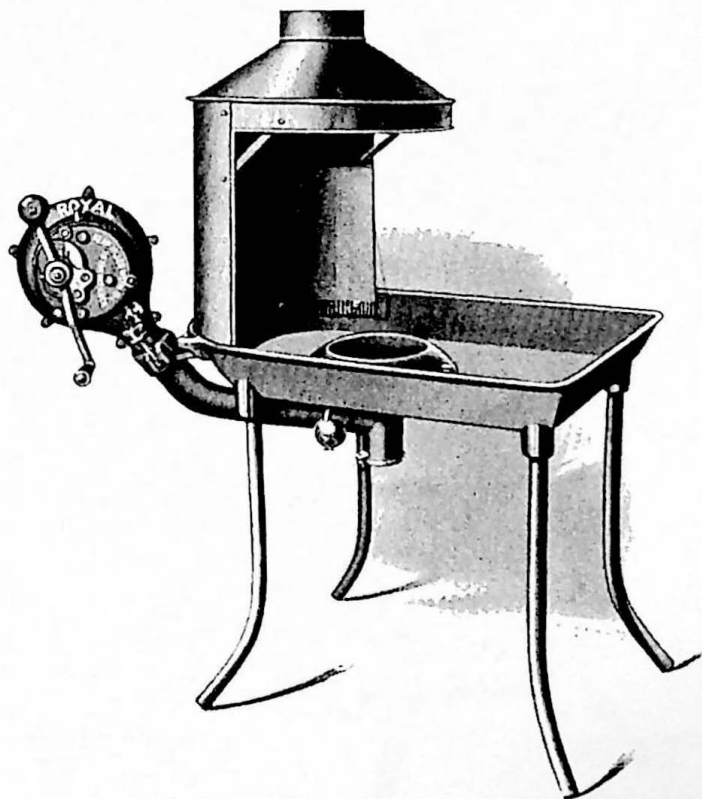


CANEDY-OTTO MFG. CO.



Royal Western Chief Forge No. 103

For Horseshoers, Small Blacksmith Shops, Garages,
Boilermakers, Etc.



Blower, 10 inches
Hearth, 23 x 34 inches

Height, 30 inches
Weight, 185 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

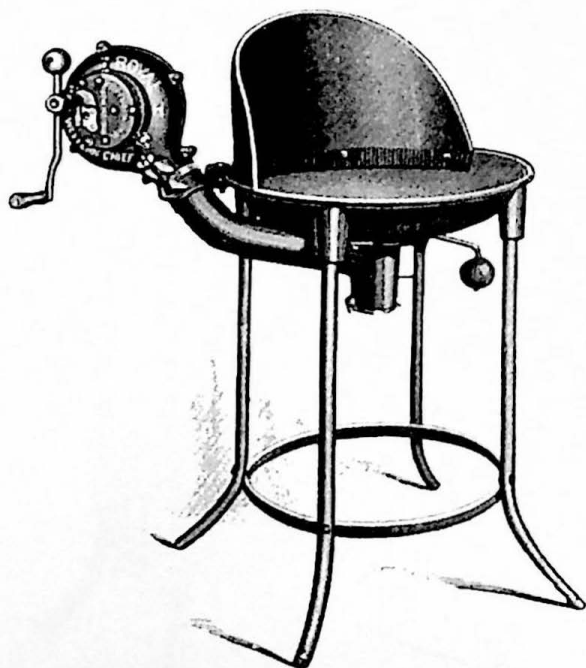
Equipped with "Royal" type of Blower and Duck Nest Fire-pot.

Price.....\$42.00

For List of Equips. See Page 140

Royal Western Chief Forge No. 104

Excellent for Mines, Quarries, Bridgebuilders, Railroad and
Outdoor Repair or Construction Work



Blower, 10 inches
Hearth, 22 inches

Height, 33 inches
Weight, 120 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

The "Royal" type of Blower with Cast-iron Hearth—will outwear Steel Hearth. The most serviceable forge constructed for outdoor use.

Price..... **\$33.00**

For List of Repairs, See Page 140

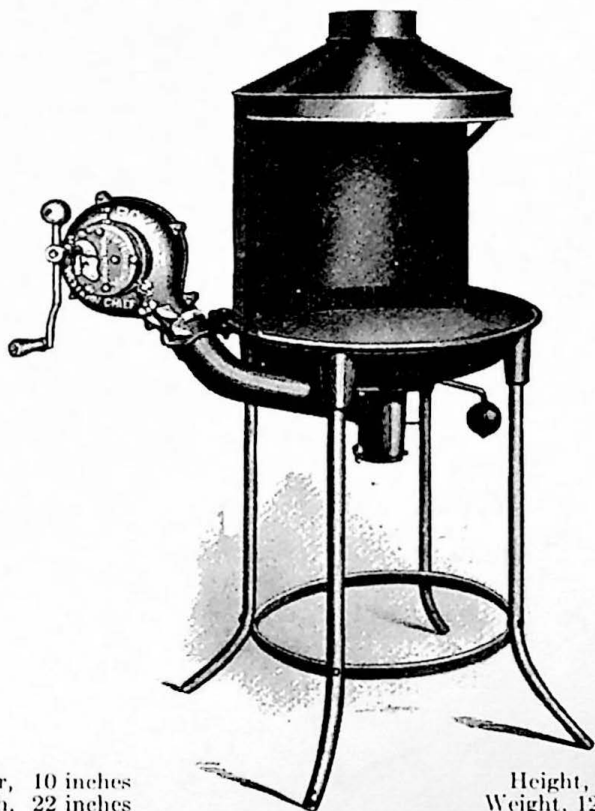


CANEDY-OTTO MFG. CO.



Royal Western Chief Forge No. 105

For Toolmakers, Jewelers, Dentists, Tin Shops,
Repair Shops, Garages, Etc.



Blower, 10 inches
Hearth, 22 inches

Height, 33 inches
Weight, 125 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3½-inch Iron**

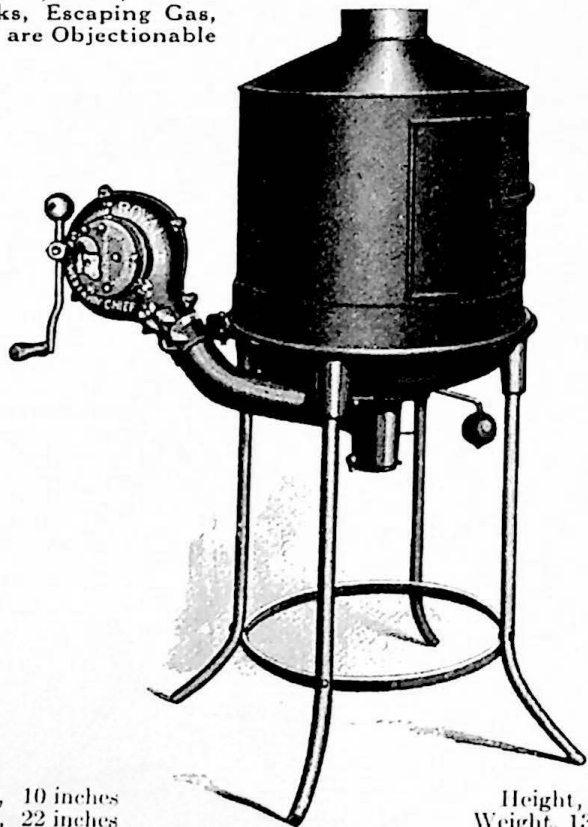
The "Royal" type of Blower with Cast-iron Hearth—will outwear
Steel Hearth.

Price.....\$36.00

For List of Repairs, See Page 110

Royal Western Chief Forge No. 105 $\frac{1}{2}$

For Furniture Factories, Sawmills, Wood Shops, Oil Refineries,
Dentists, Etc., where
Sparks, Escaping Gas,
Etc., are Objectionable



Blower, 10 inches
Hearth, 22 inches

Height, 33 inches
Weight, 130 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3 $\frac{1}{2}$ -inch Iron**

The "Royal" type of Blower with Cast-iron Hearth—will outwear
Steel Hearth.

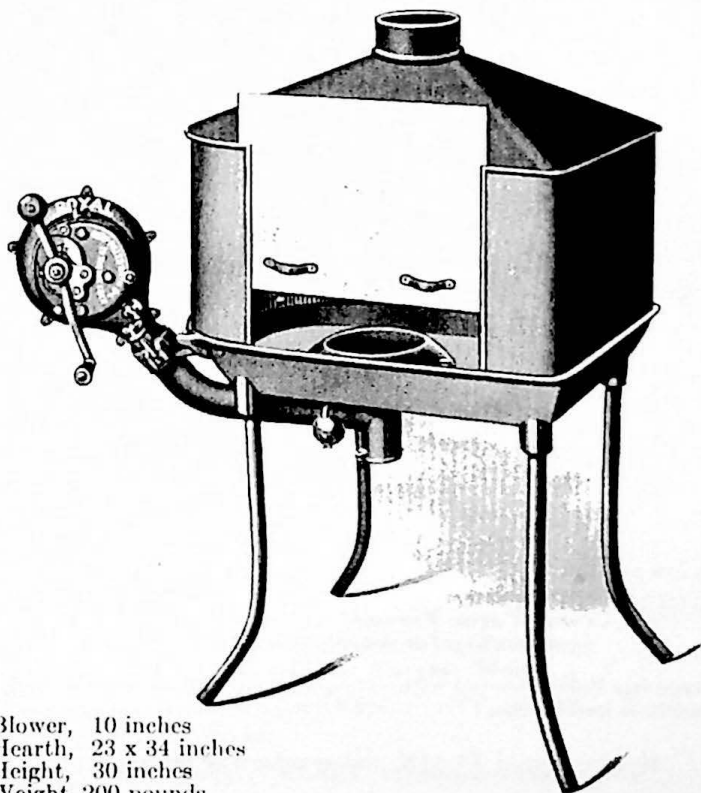
Price.....\$38.50

For List of Repairs, See Page 140



Royal Western Chief Forge No. 103 $\frac{1}{4}$

Made Especially for Furniture Factories, Sawmills, Wood Shops,
Oil Refineries, Etc., where Sparks, Escaping Gas,
Etc., are Objectionable



Blower, 10 inches
Hearth, 23 x 34 inches
Height, 30 inches
Weight, 200 pounds

**Crank Turns Forward or Backward
Capacity to Heat 3 $\frac{1}{2}$ -inch Iron**

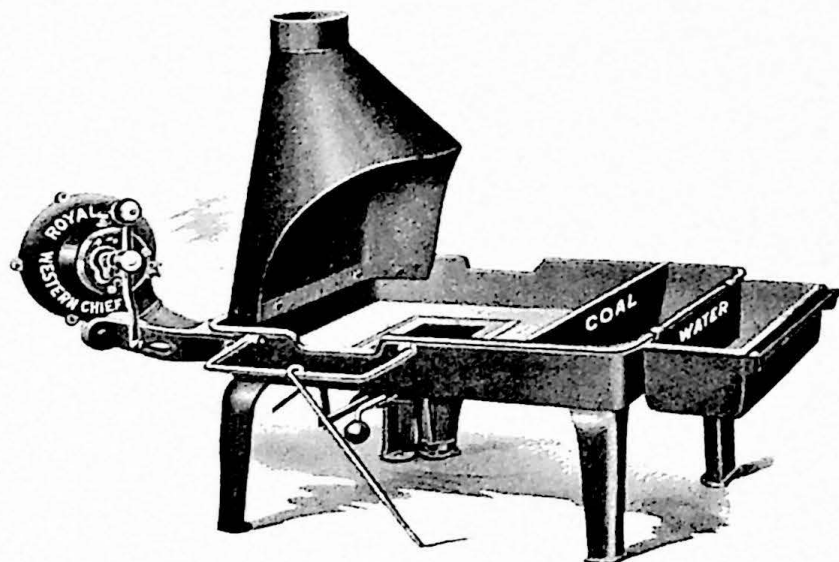
The "Royal" type of Blower and Duck Nest Fire-pot, also Hood having doors, front and back.

Price.....\$45.00

For List of Repairs, See Page 140

Royal Western Chief Forge No. 8

For Large, Heavy Blacksmith, Plow and Agricultural Shops



Blower, 12 inches
Height, 26 inches

Hearth, $37\frac{1}{2}$ x 41 inches
Over all, $37\frac{1}{2}$ x 51 inches

**Crank Turns Forward or Backward
Capacity for Largest Work**

This Forge has Solid Fire-pot with Side and Center Blast Tuyere Ball, also Tool Rest and Racks.

Always shipped PLAIN, unless otherwise ordered

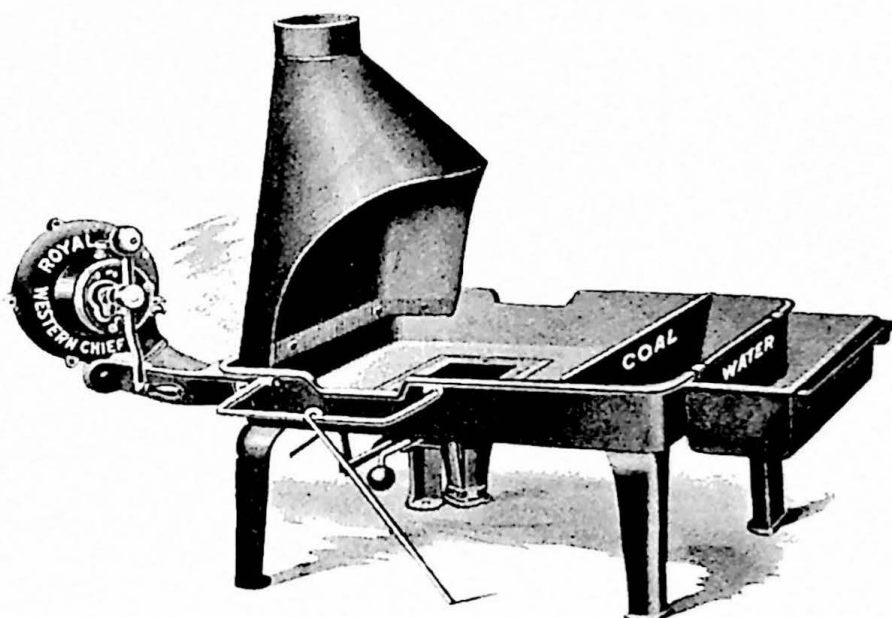
Price, Plain, no Tank, no Hood, weight 435 lbs	\$65.00
Price, With Tank, no Hood, weight 500 lbs	70.00
Price, With Hood, no Tank, weight 450 lbs	70.00
Price, With Tank and Hood (as illustrated), weight 515 lbs	75.00

When specially requested, will furnish Round Canopy Hood at same price as Half-hood.

For List of Repairs, See Page 140

Royal Western Chief Forge No. 9

For Large, Heavy Blacksmith, Plow and Agricultural Shops



Blower, 12 inches
Height, 26 inches

Hearth, 38 x 50 inches
Over all, 38 x 60 inches

**Crank Turns Forward or Backward
Capacity for Largest Work**

This Forge has Solid Fire-pot with Side and Center Blast Tuyere Ball, also Tool Rest and Racks.

Always shipped PLAIN, unless otherwise ordered

Price, Plain, no Tank, no Hood, weight 500 lbs.	\$70.00
Price, With Tank, no Hood, weight 565 lbs.	75.00
Price, With Hood, no Tank, weight 515 lbs.	75.00
Price, With Tank and Hood (as illustrated), weight 580 lbs.	80.00

When specially requested, will furnish Round Canopy Hood at same price as Half-hood.

For List of Repairs, See Page 119

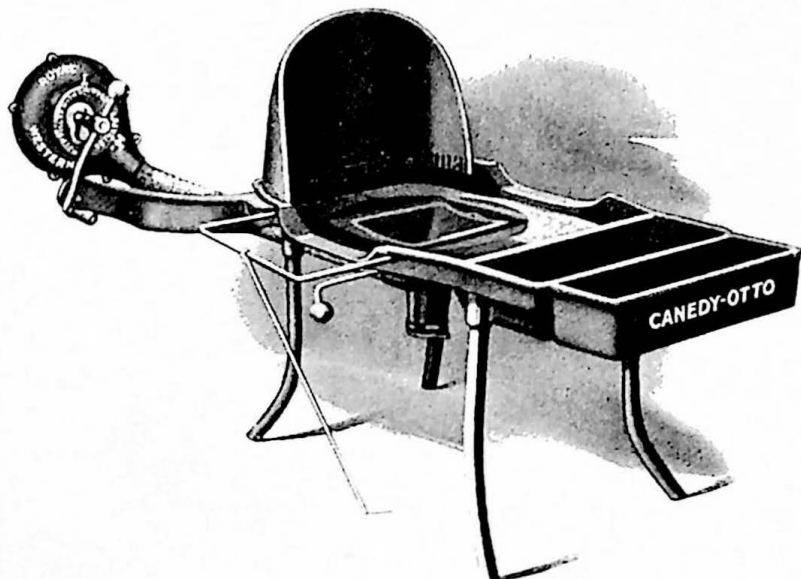


CANEDY-OTTO MFG. CO.



Royal Western Chief Forge No. 99

For Large, Heavy Construction and Contractors' Work
Outdoor Use



Blower, 12 inches
Hearth, $31\frac{1}{2} \times 45\frac{1}{2}$ inches

Height, 30 inches
Length over all, 53 inches

**Crank Turns Forward or Backward
Capacity to Heat 4-inch Iron**

This Forge combines our "Royal" style of Blower with the Western Chief Standard Hearth having Solid Fire-pot with Tuyere Ball furnishing side and center blast. We guarantee it fully.
For detailed description of Hearth, see page 6.

Price, With One Tank, weight 290 lbs. **\$46.00**

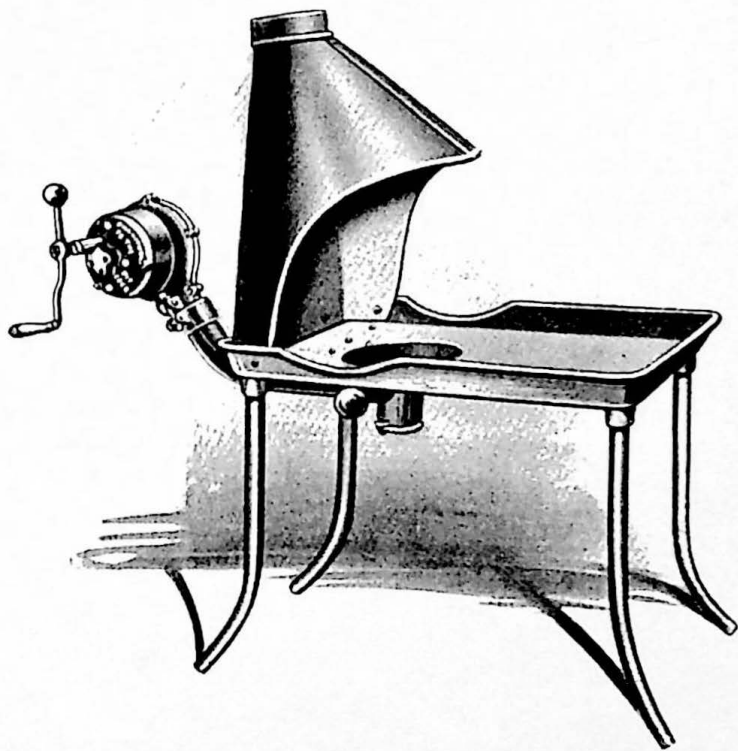
Price, With Extra Tank (as illustrated), wt. 320 lbs. . . **51.00**

Always shipped WITHOUT EXTRA TANK, unless so ordered

For List of Repairs, See Page 140



Tiger Forge No. 153



Blower, 9 inches
Hearth, 25 x 36 inches

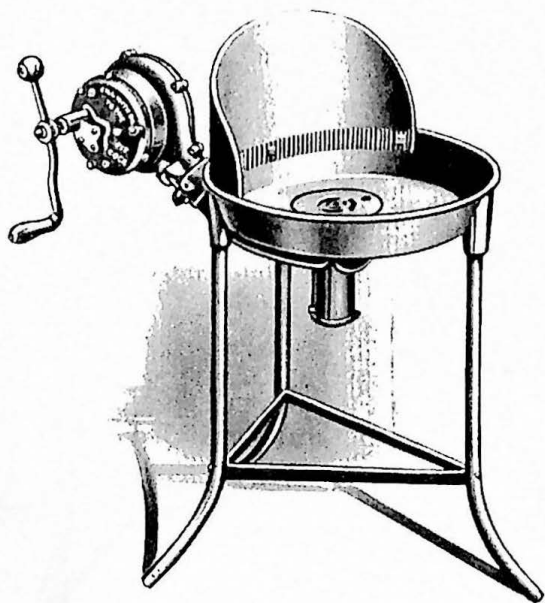
Height, 30 inches
Weight, 180 pounds

This Forge is similar in appearance, but cheaper in construction, than our "Royal" Forges. It is specially built to meet the increasing demand for this style of Forge. This Forge has a large, roomy Fire-pot, conveniently shaped Hearth, and splendid blast. It is a very serviceable forge at a low cost.

Price.....\$31.00



Tiger Forge No. 154



Blower, 9 inches
Hearth, 22 inches

Height, 30 inches
Weight, 80 pounds

The No. 154 Tiger Forge is similar in appearance, but cheaper in construction than our regular Royal Forge of like type.

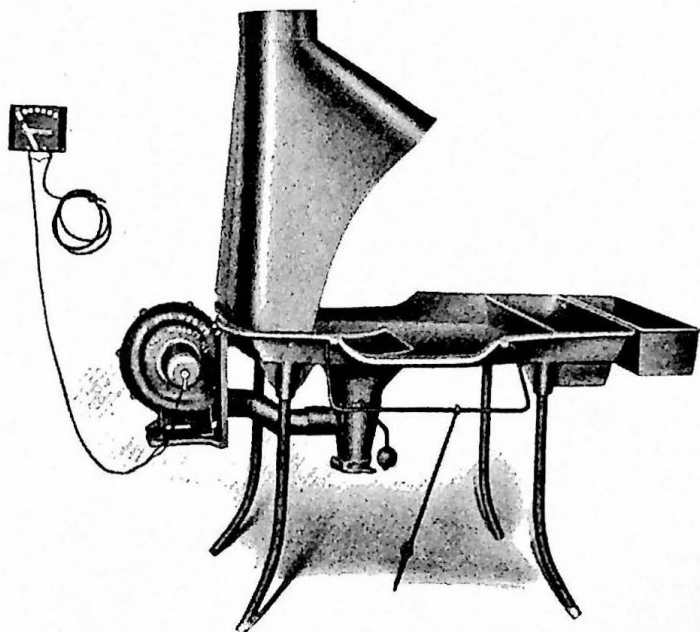
The demand is getting larger each year for crank gear forges, and in our No. 154 Tiger Forge we have endeavored to construct one so that the difference in price between the old lever type of forge and the crank gear will be small enough to allow anyone to possess an up-to-date forge.

Price.....\$24.55



Royal Electric Forge No. 301

For Use of Large Blacksmith, Wagon, Plow, Railroad Shops,
Etc., where Heavy Work is Done and a First-class
Forge and Fire are Needed



Blower, 12 inches
Hearth, $31\frac{1}{2} \times 45\frac{1}{2}$ inches

Height, 30 inches
Length over all, 53 inches

Motor Runs on Either Current
Capacity to Heat 4-inch Iron

In this Forge we combine our 110 or 220 volt Dustproof Type of Motor, as shown and described on page 95, with Western Chief Standard Hearth having Solid Fire-pot with Tuyere Ball furnishing side and center blast. We guarantee it fully. For detailed description of Hearth, see page 6.
When ordering Electric-driven Forges or Blowers furnish us with the following information:

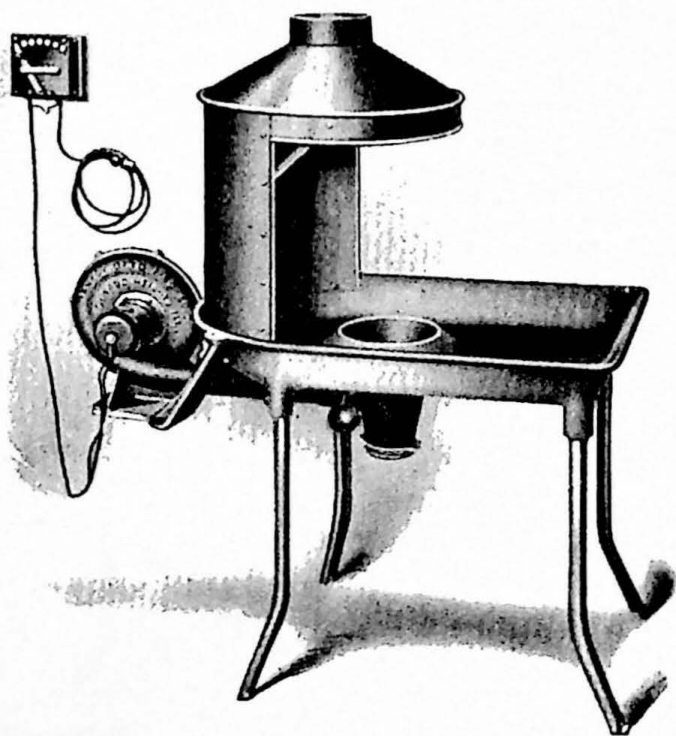
1. Whether current is 110 or 220 volts.

Price, With One Tank, weight 267 lbs.	\$78.50
Price, With Extra Tank, weight 297 lbs., (as illustrated)	83.50

Always shipped WITHOUT EXTRA TANK, unless so ordered.

Royal Electric Forge No. 303

For Horseshoers, Small Blacksmith Shops, Boilermakers, Etc.



Blower, 12 inches
Hearth, 23 x 24 inches

Height, 30 inches
Weight, 164 pounds

**Motor Runs on Either Current
Capacity to Heat 3½-inch Iron.**

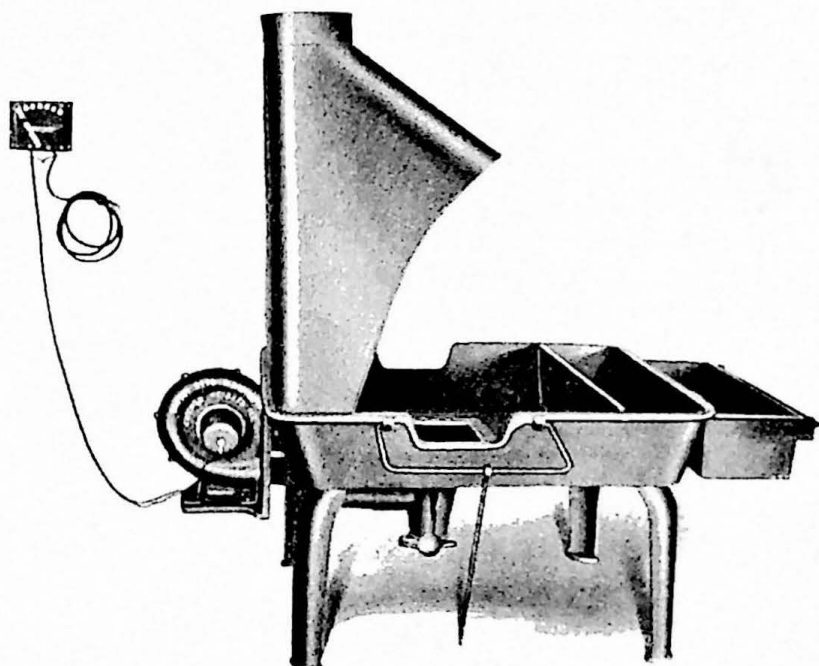
Equipped with 110 or 220 volt Dustproof Motor, as shown and described on page 95. Has Duck Nest Fire-pot.

When ordering Electric-driven Forges or Blowers, furnish us with the following information:

1. Whether current is 110 or 220 volts.

Price **\$73.00**

Royal Electric Forge No. 308



Blower, 12 inches
Height, 26 inches

Hearth, $37\frac{1}{2} \times 41$ inches
Over all, $37\frac{1}{2} \times 51$ inches

**Motor Runs on Either Current
Capacity for Largest Work**

This Forge has Solid Fire-pot with Side and Center Blast Tuyere Ball, also Tool Rest and Racks. Equipped with either 110 or 220 volt dust proof motor as shown and described on page 95.

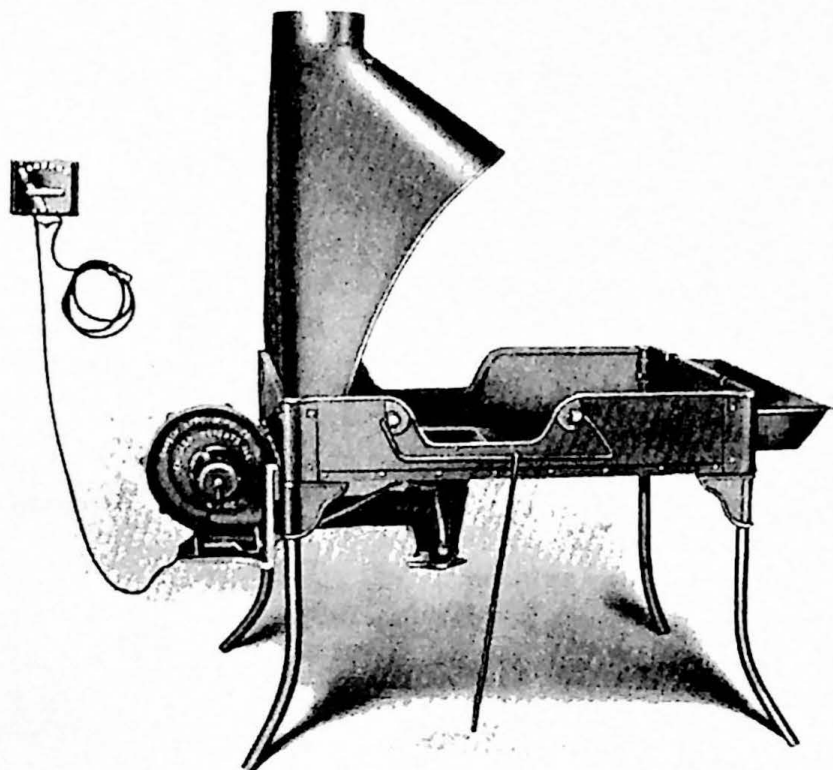
Always shipped PLAIN, unless otherwise ordered

Price, Plain, no Tank, no Hood, weight 435 lbs.....	\$82.00
Price, with Tank, no Hood, weight 500 lbs.....	87.00
Price, with Hood, no Tank, weight 450 lbs.....	87.00
Price, with Tank and Hood (as illustrated), weight 515 lbs.....	92.00

When specially requested, will furnish Round Canopy Hood
at same price as Half-hood



Royal Electric Forge No. 315



Blower, 12 inches
Hearth, 30x40 inches

Height, 30 inches
Length, 48 inches

**Motor Runs on Either Current
Capacity to Heat 4-inch Iron**

This Forge is equipped with Royal Electric Blower; as shown and described on page 95. Steel Hearth having Solid Fire-pot with Tuyere Ball furnishing side and center blast.

Price, Without Tank, weight 215 lbs.	\$82.00
Price, With Tank (as illustrated), weight 245 lbs.	87.00

Always shipped WITHOUT TANK, unless so ordered

Western Chief Challenge, Chicago Hero and Leader

Forges

*Forges under above names
are with Cast-iron Hearths,
and (excepting Stationary
and Leader Forges) are op-
erated by lever movement
or pulley power or both.*

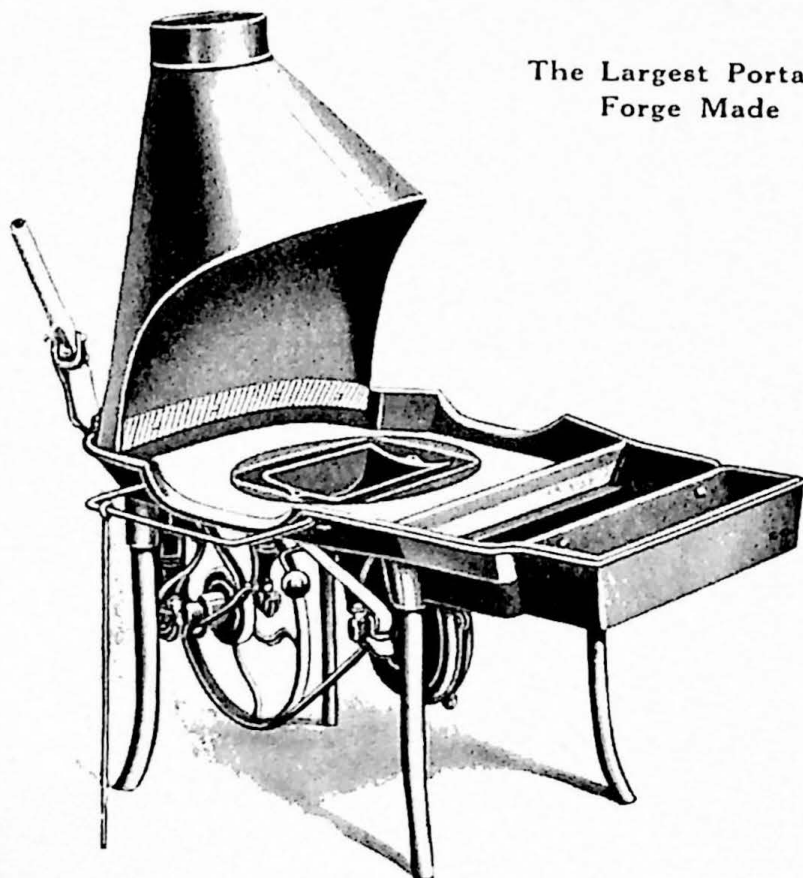
Pages 42 to 77

Repair List in Back of Book



Western Chief Forge No. 1

The Largest Portable
Forge Made



Blower, 14½ inches
Hearth, 31½x45½ inches

Height, 30 inches
Length over all, 53 inches

Capacity to Heat 4½-inch Iron

This Forge is adapted for the largest, heaviest work. It has a Solid Fire-pot with Tuyere Ball furnishing side and center blast. Is equipped with Brass Boxes and Oil Cups throughout, also Noiseless Adjustable Friction Clutch. Can be furnished reversed, to operate with the right arm, for left-handed smiths, when desired. For detailed description of Hearth, see page 6.

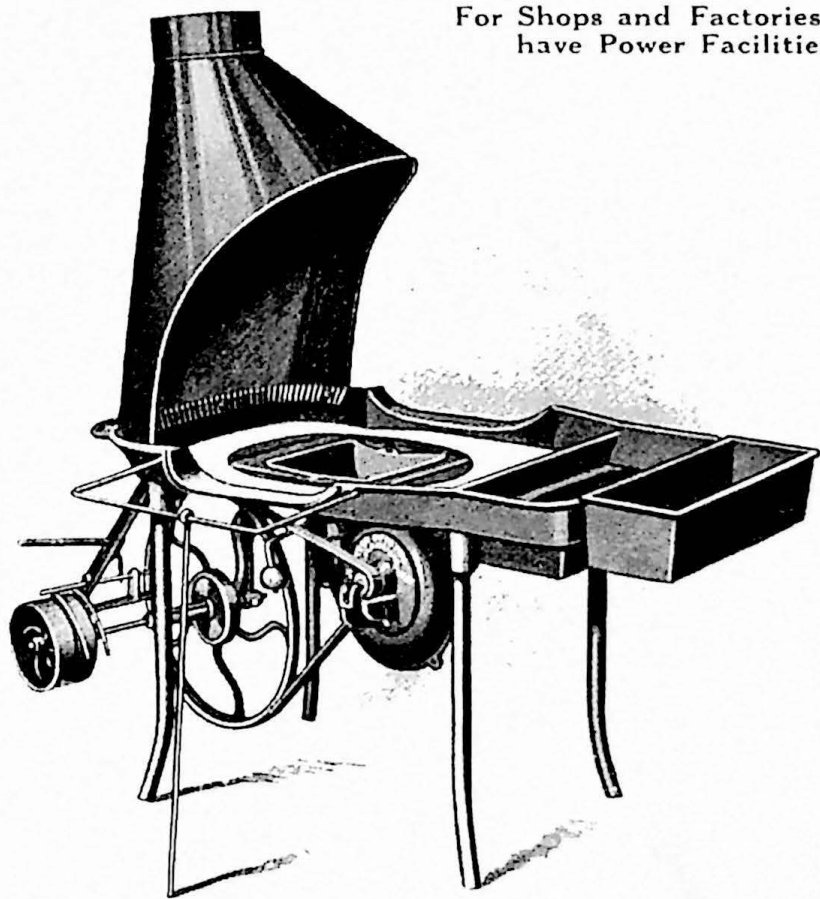
Price, With One Tank, weight 315 lbs. \$50.00
Price, With Extra Tank (as illustrated), wt. 345 lbs. 55.00

Always shipped WITHOUT EXTRA TANK, unless so ordered

For List of Repairs, See Page 142

Western Chief Forge No. 1 $\frac{1}{2}$

For Shops and Factories that
have Power Facilities



Blower, 14 $\frac{1}{2}$ inches
Hearth, 31 $\frac{1}{2}$ x45 $\frac{1}{2}$ inches

Height, 30 inches
Length over all, 53 inches

Capacity to Heat 4 $\frac{1}{2}$ -inch Iron

Size of Pulleys, 7 $\frac{1}{2}$ x1 $\frac{3}{4}$ -inches, should run 125 revolutions per minute

This Forge is arranged for power and adapted for heavy work. It is equipped with Solid Fire-pot with Tuyere Ball furnishing side and center blast. Brass Boxes and Oil Cups throughout. When desired, can be furnished with Hand Power Attachment, a convenience when power is not running. It has Blast Gate to regulate Blast when driven by power. For detailed description of Hearth, see page 6.

Price, with one Tank, weight 315 lbs.	\$53.00
Price, with extra Tank (as illustrated), weight 345 lbs.	58.00
Price, with one Tank and Hand Power, weight 330 lbs.	57.00
Price, with extra Tank, also Hand Power, weight 360 lbs.	62.00

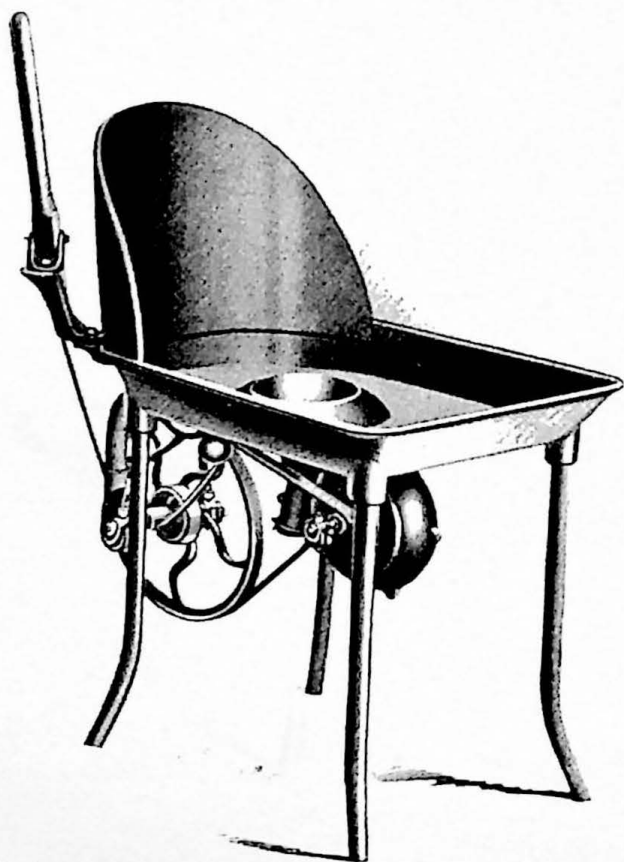
Never shipped WITH EXTRA TANK, nor HAND POWER, unless asked for.

For List of Repairs. See Page 142



Western Chief Forge No. 2

Suitable for Bridgebuilders, Railroads, Quarries, Welldrivers,
Boilermakers, Etc.



Blower, 12 inches
Hearth, 23x34 inches

Height, 30 inches
Weight, 195 pounds

Capacity to Heat 3-inch Iron

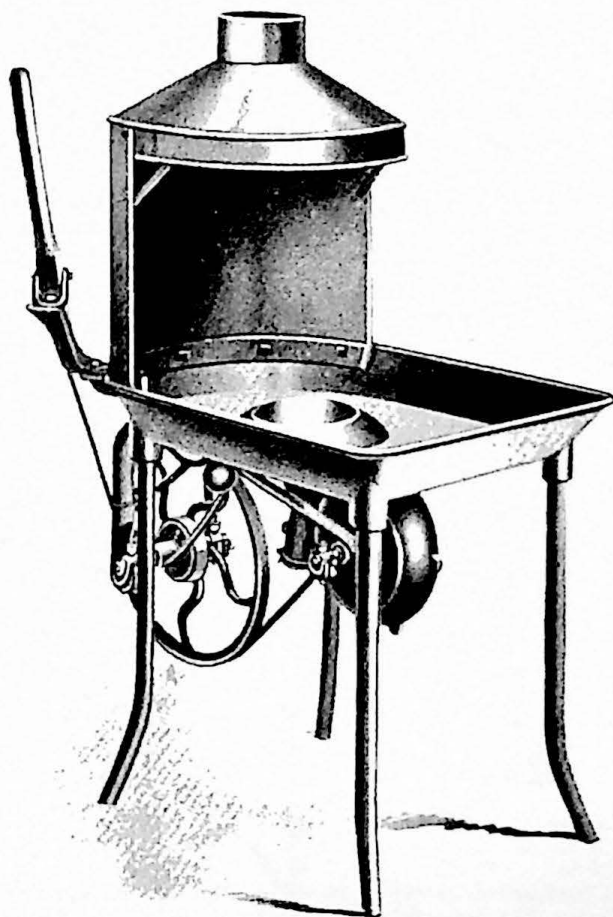
This Forge is equipped with Brass Boxes and Oil Cups throughout,
also Noiseless Adjustable Friction Clutch, and has a Duck Nest Fire-pot.

Price.....\$36.00

For List of Repairs, See Page 144

Western Chief Forge No. 3

Suitable for Boilermakers, Horseshoers, Small Blacksmith Shops, Etc.



Blower, 12 inches
Hearth, 23x34 inches

Height, 30 inches
Weight, 200 pounds

Capacity to Heat 3-inch Iron

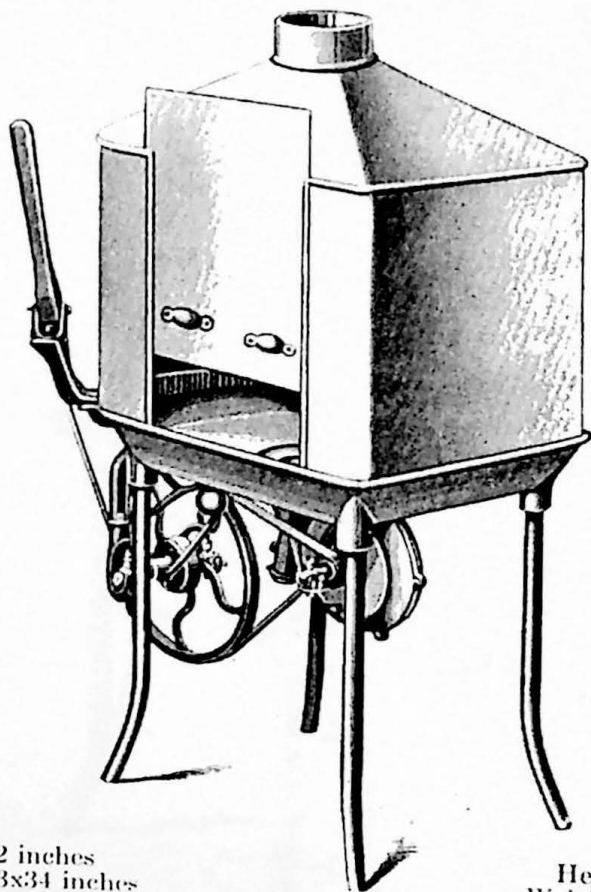
This Forge is equipped with Brass Boxes and Oil Cups throughout, also Noiseless Adjustable Friction Clutch, and has a Duck Nest Fire-pot.

Price.....\$40.00

For List of Repairs, See Page 111

Western Chief Forge No. 3 $\frac{1}{4}$

For Furniture Factories, Sawmills, Wood Shops,
Oil Refineries, Etc.



Blower, 12 inches
Hearth, 23x34 inches

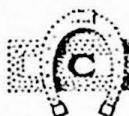
Height, 30 inches
Weight, 215 pounds

Capacity to Heat 3-inch Iron

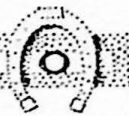
This Forge, having full enclosed Hood, with Doors both front and back, is desirable where it is dangerous or objectionable to have Smoke, Gas or Sparks escape. Is equipped throughout with Brass Boxes and Oil Cups, also Noiseless, Adjustable Friction Clutch, and has a Duck Nest Fire-pot.

Price, with Hand Lever (as illustrated).....	\$42.00
Price, with Power Attachment only.....	47.00
Price, with both Hand and Power.....	50.00

For List of Repairs, See Page 144

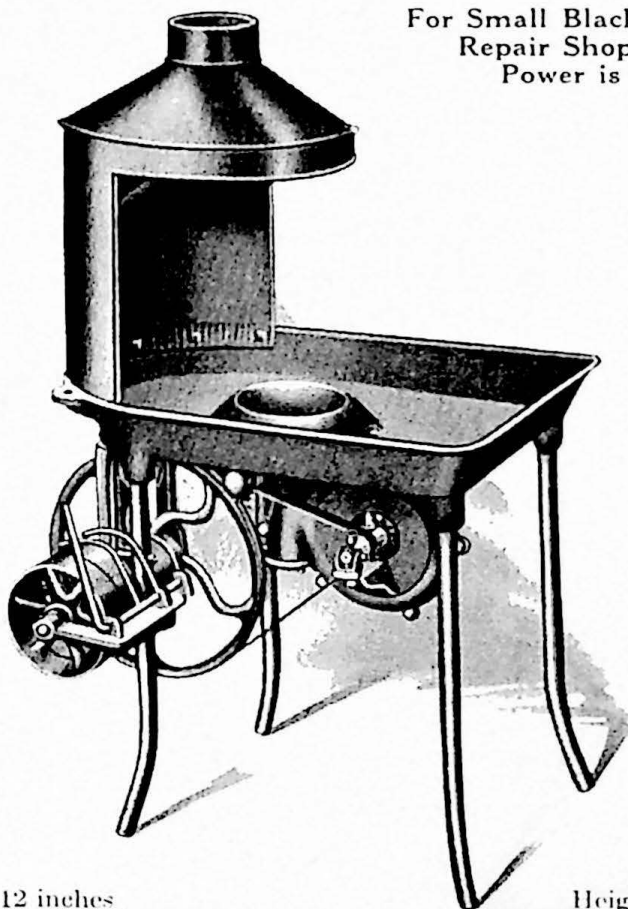


CANEDY-OTTO MFG. CO.



Western Chief Forge No. 3 $\frac{1}{2}$

For Small Blacksmith and
Repair Shops where
Power is Used



Blower, 12 inches
Hearth, 23x34 inches

Height, 30 inches
Weight, 205 pounds

Capacity to Heat 3-inch Iron

Size of Pulleys, 7 $\frac{1}{2}$ x13 $\frac{3}{4}$ inches, should run 125 revolutions per minute

Is equipped with Brass Boxes and Oil Cups throughout, and has a Duck Nest Fire-pot.

When desired, it can be furnished with Hand-power Attachment, a convenience when power is not running.

Price, Power Attachment only (as illustrated)..... **\$45.00**

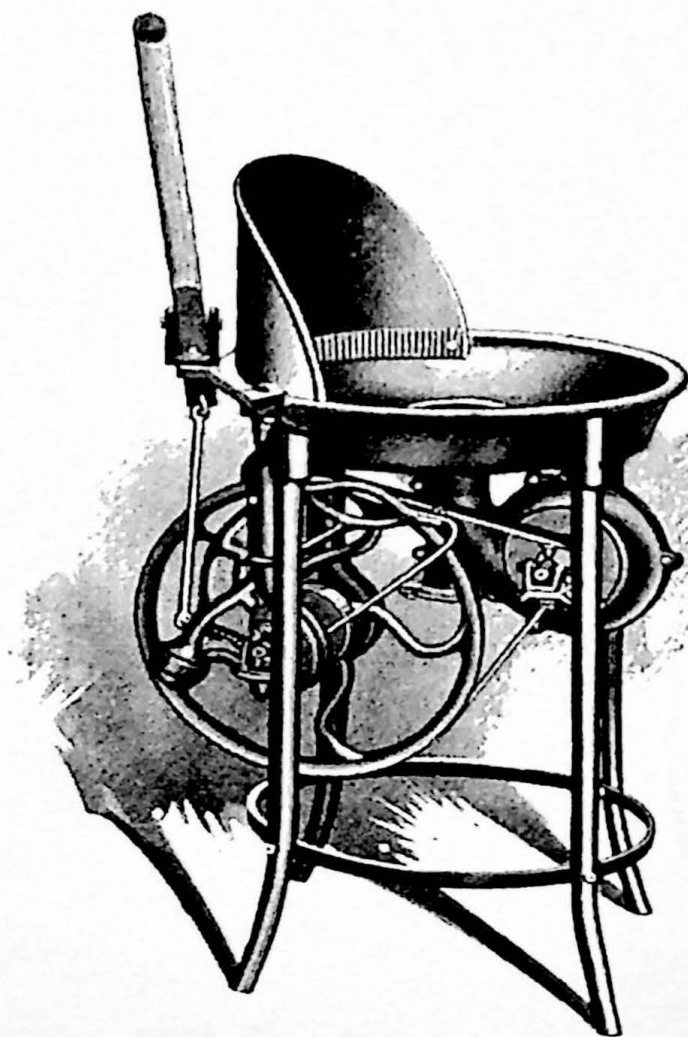
Price, Power Attachment, also Hand Power..... **48.00**

Always shipped for POWER ONLY, unless otherwise ordered

For List of Repairs, See Page 111

Western Chief Forge No. 4

A splendid Forge for Mines, Quarries, Bridgebuilders, Railroad
and Outdoor Repair Work



Blower, 9 inches
Hearth, 22 inches

Height, 33 inches
Weight, 120 pounds

Capacity to Heat 2½-inch Iron

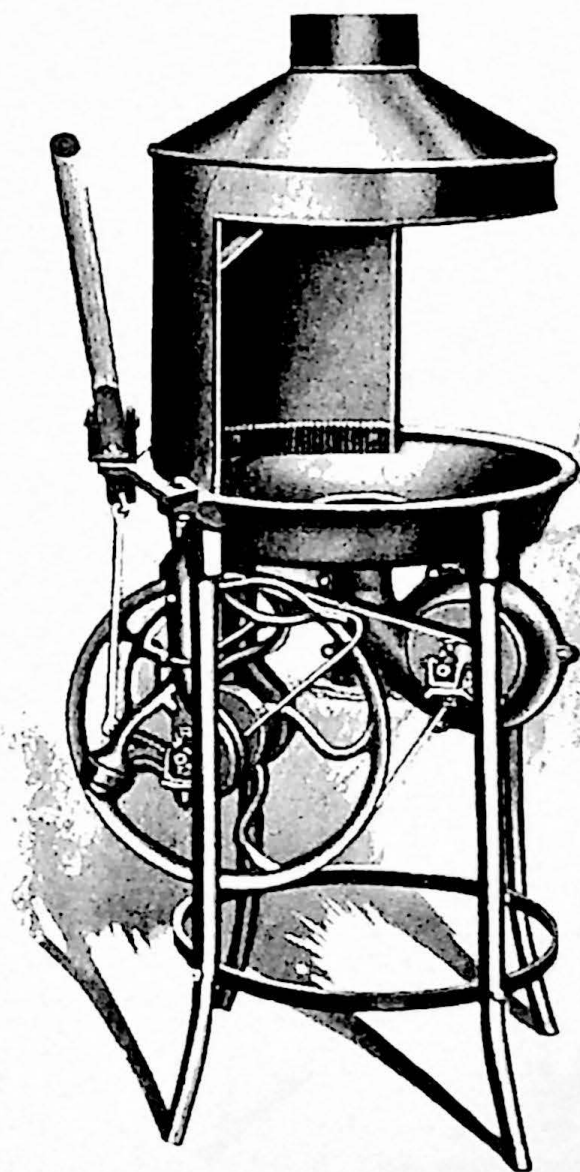
It is equipped throughout with Brass Boxes and Oil Cups, also Noiseless Adjustable Friction Clutch.

Price.....\$24.00

For List of Repairs, See Page 146

Western Chief Forge No. 5

For Toolmakers, Bicycle Repair Shops, Jewelers, Dentists, Tin Shops, Farmers, Etc.



Blower, 9 inches
Hearth, 22 inches

Height, 33 inches
Weight, 125 pounds

Capacity to Heat 2½-inch Iron

It is equipped throughout with Brass Boxes and Oil Cups, also Noiseless, Adjustable Friction Clutch.

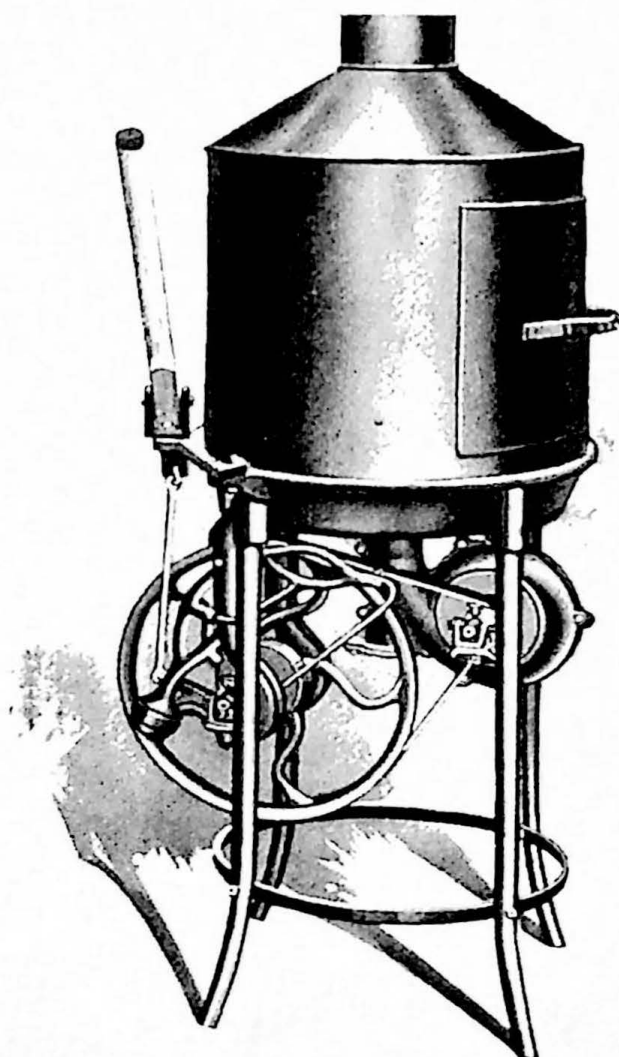
Price.....\$27.00

For List of Repairs, See Page 116



Western Chief Forge No. 5 $\frac{1}{2}$

For Jewelers, Dentists, Furniture Factories, Sawmills,
Wood Shops, Oil Refineries, Etc.



Blower, 9 inches
Hearth, 22 inches

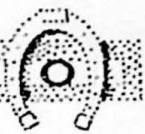
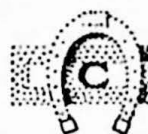
Height, 33 inches
Weight, 130 pounds

Capacity to Heat 2 $\frac{1}{2}$ -inch Iron

It is equipped throughout with Brass Boxes and Oil Cups, also Noiseless, Adjustable Friction Clutch.

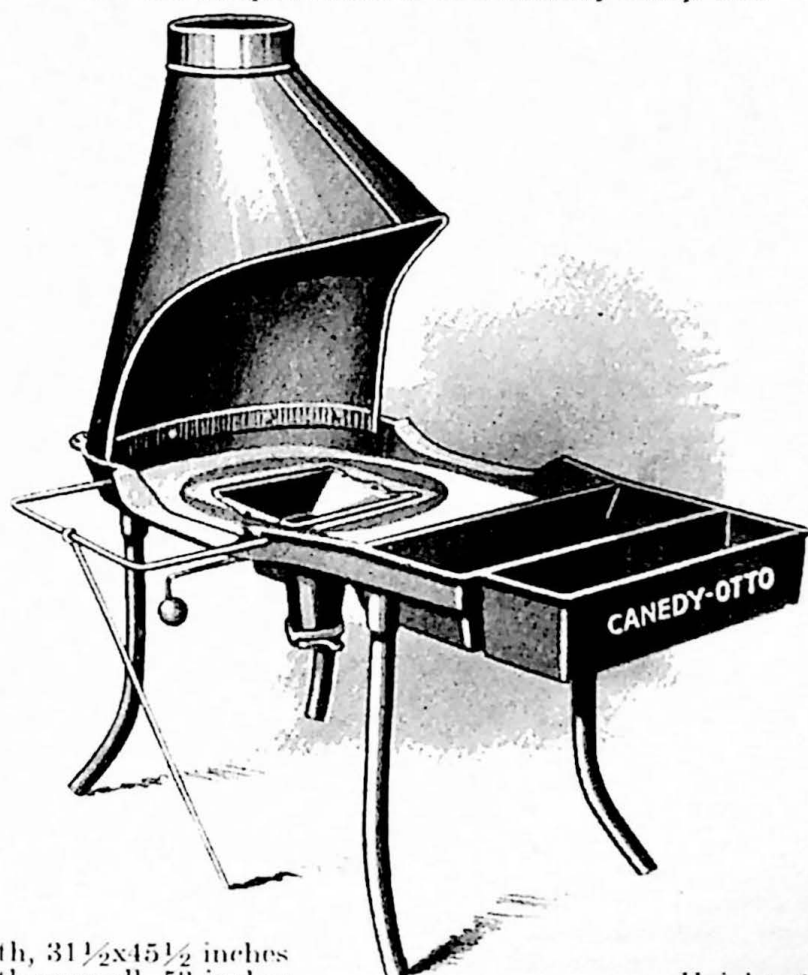
Price.....\$29.50

For List of Repairs, See Page 146



Western Chief Forge, Size AA

A Stationary Blast Forge, of Size and Construction Suitable for
all the Requirements of Ordinary Shop Use



Hearth, $31\frac{1}{2} \times 45\frac{1}{2}$ inches
Length over all, 53 inches

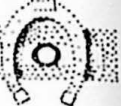
Height, 30 inches

This Forge has no blast machinery; it is for use in shops where power blast is furnished, or can be used with ordinary bellows or blower. It has Solid Fire-pot, also side and center blast Tuyere Ball, Tool Rest, etc. It is adapted for heavy work and is much superior to a brick forge. For detailed description of Hearth, see page 6.

Always shipped PLAIN, unless otherwise ordered

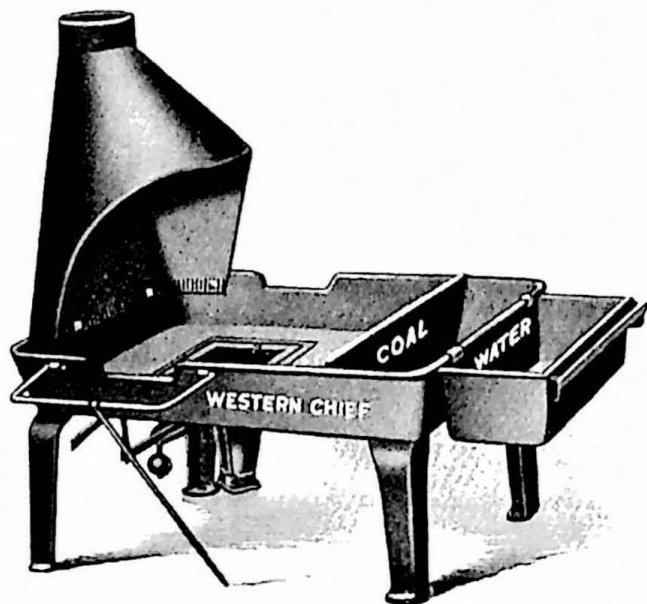
Price, Plain, one Tank only, no Hood, weight 220 lbs.....	\$25.00
Price, with EXTRA Tank, no Hood, weight 250 lbs.....	30.00
Price, with one Tank and Half-hood, weight 235 lbs.....	30.00
Price, with EXTRA Tank and Half-hood (as illustrated), weight 265 lbs.....	35.00

For List of Repairs, See Page 118



Western Chief Forge, Size BB

A Stationary Blast Forge, very Large, Heavy and Strong. Is Cheaper and much Handsomer than a Brick or Stone Forge



Height, 26 inches
Hearth, 37 $\frac{1}{2}$ x44 inches

Over all,
37 $\frac{1}{2}$ x51 inches

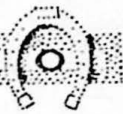
This Forge is intended for shops supplied with power blast, or can be used with ordinary bellows or blower, if desired. Is equipped with Solid Fire-pot, with side and center blast Tuyere Ball. Has Tool Rest and Racks, and Lever Attachment to Blast Gate, by which the smith easily regulates the blast. The most complete Forge of its kind on the market.

Always shipped PLAIN, unless otherwise ordered

Price, Plain, no Tank, no Hood, weight 375 lbs.	\$35.00
Price, with Tank, no Hood, weight 440 lbs.	40.00
Price, with Hood, no Tank, weight 390 lbs.	40.00
Price, with Tank and Hood (as illustrated), weight 455 lbs.	45.00

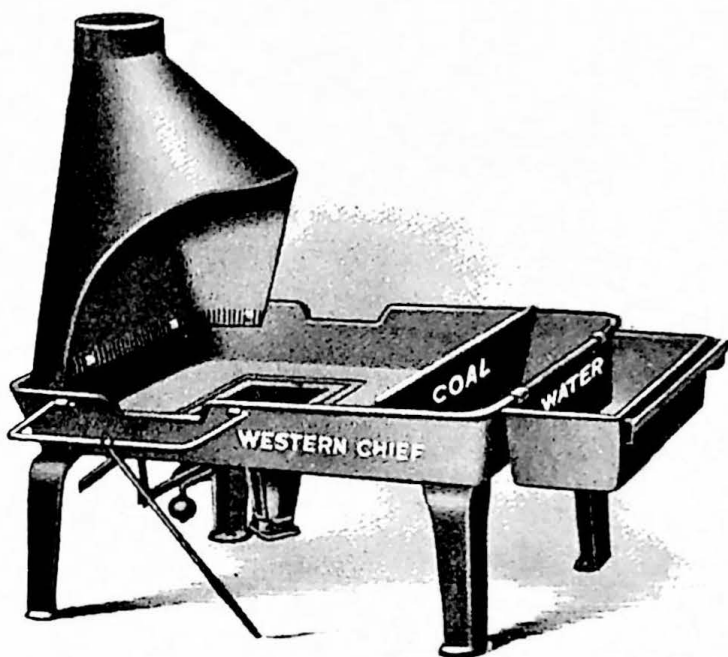
When specially requested, will furnish Round Canopy Hood at same price as Half-hood

For List of Repairs, See Page 148



Western Chief Forge, Size XBB

A Stationary Blast Forge, very Large, Heavy and Strong. Is
Cheaper and much Handsomer than a
Brick or Stone Forge



Height, 26 inches
Hearth, 38x50 inches

Over all,
38x60 inches

This Forge is intended for shops supplied with power blast, or can be used with ordinary bellows or blower, if desired. Is equipped with Solid Fire-pot, with side and center blast Tuyere Ball. Has Tool Rest and Racks, and Lever Attachment to Blast Gate, by which the smith easily regulates the blast. The most complete Forge of its kind on the market.

Always shipped PLAIN, unless otherwise ordered

Price, Plain, no Tank, no Hood, weight 440 lbs.	\$40.00
Price, with Tank, no Hood, weight 505 lbs.	45.00
Price, with Hood, no Tank, weight 455 lbs.	45.00
Price, with Tank and Hood (as illustrated), weight 520 lbs.	50.00

When specially requested, will furnish Round Canopy Hood
at same price as Half-hood

For List of Repairs, See Page 148



Western Chief Forge, Size CC

A Small Stationary Blast Forge, Suitable for the Requirements
of Ordinary Medium-sized Work



Hearth, 23x34 inches

Weight, 145 pounds

Height, 30 inches

This Forge has no blast machinery, and is intended for use in shops where power blast is furnished, or can be used with ordinary blower or bellows. It has a blast gate in its pipe connections, also has Duck Nest Fire-pot, and is well adapted to all ordinary, medium-sized work.

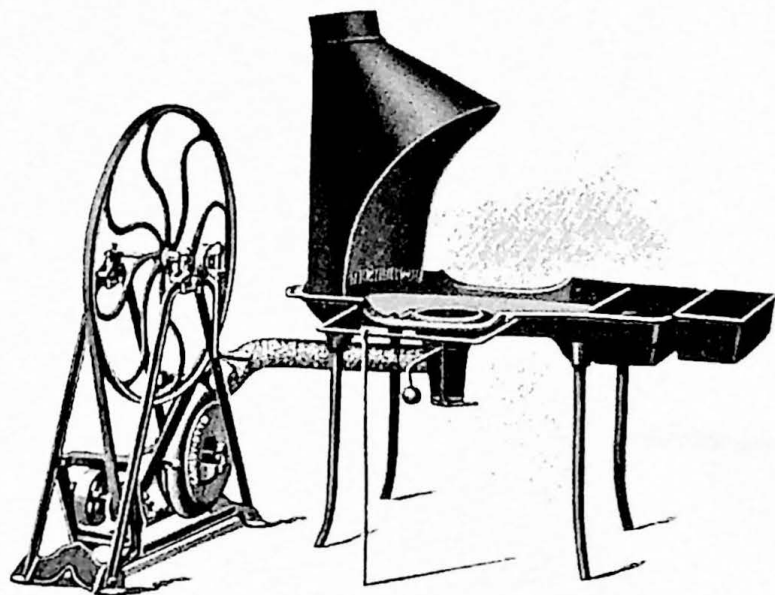
Always shipped PLAIN, unless otherwise ordered

Price, Plain (as illustrated), no Hood.....	\$20.00
Price, With Half-hood.....	24.00

For List of Repairs. See Page 148

Western Chief Combined Forge and Blower, Size AG

An Excellent Substitute for the Old-fashioned Brick Forge and
Bellows



Forge:

Over all, 31½x53 inches
Height, 30 inches
Weight, 265 pounds

DIMENSIONS

Blower:

Fly-wheel, 36 inches
Blower, 16½ inches
Weight, 150 pounds

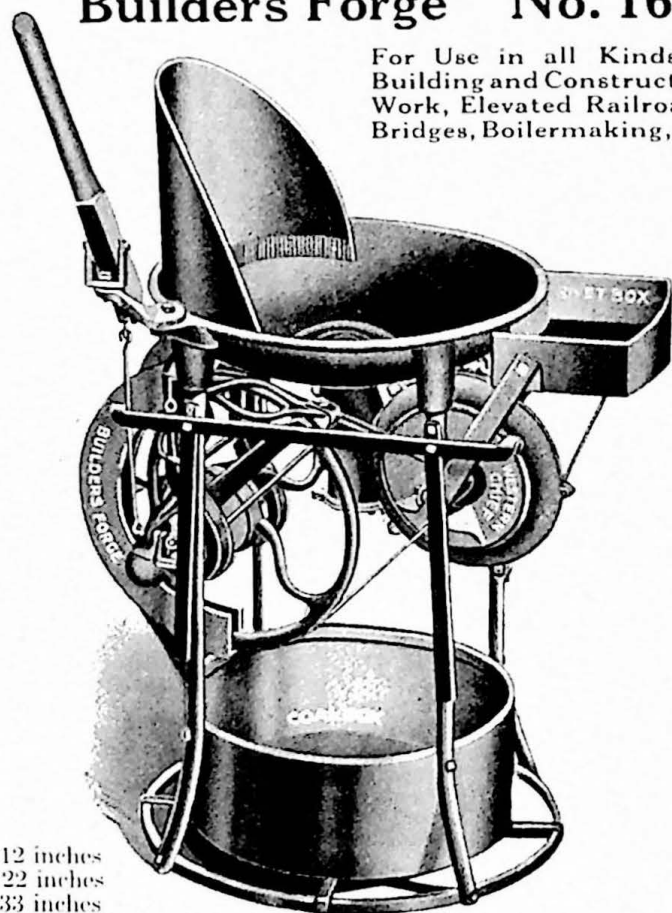
This combination of Forge and Blower is complete in every detail, and much more desirable than a brick forge and bellows. The Blower runs very easily and furnishes a tremendous blast; and, as it sets up close behind the Forge, but very little space is taken. The Forge is equipped with side and center blast Tuiere Ball, and also Solid Fire-pot. Ashes and cinders are easily removed. Everything within easy reach and arranged for the convenience of the smith. For details of Forge Hearth, see page 6.

Price, Complete (as illustrated).....	\$70.00
Price, Without Hood or Without Extra Tank.....	65.00
Price, Without Both Hood or Extra Tank.....	60.00

For List of Repairs, See Pages 142 and 166

Western Chief "Contractors and Builders Forge" No. 16

For Use in all Kinds of Building and Construction Work, Elevated Railroads, Bridges, Boilermaking, etc.



Blower, 12 inches
Hearth, 22 inches
Height, 33 inches
Weight, 170 pounds

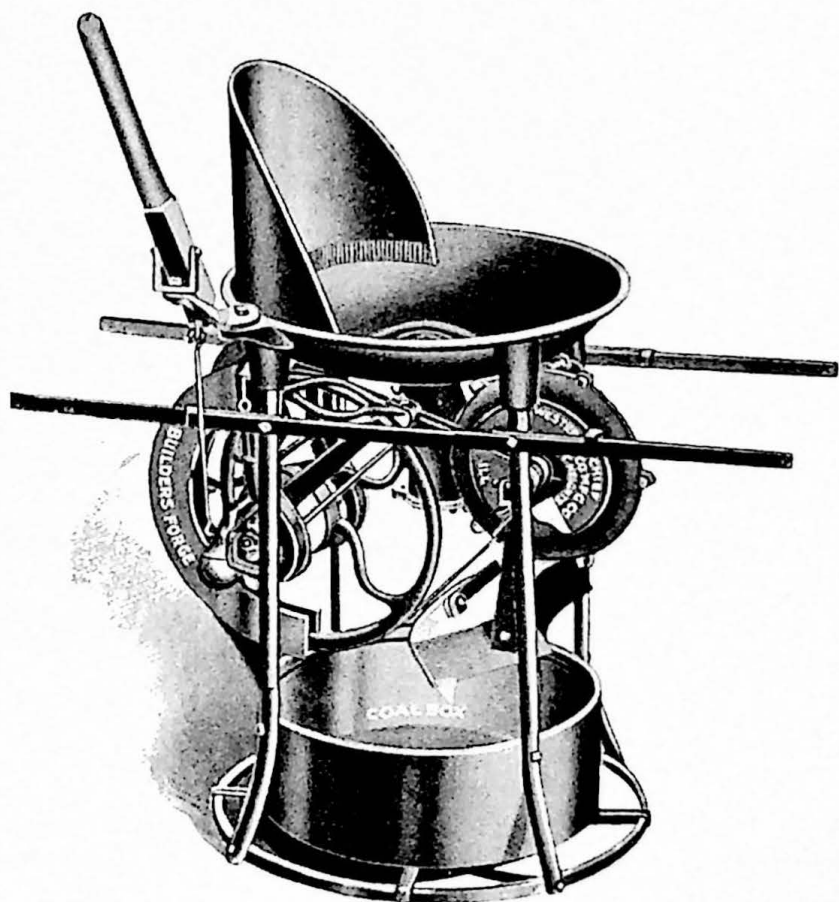
It is equipped with Adjustable Box for holding rivets to be heated, and also Coal Box conveniently located, though out of the way. The Belts are protected against damage from weather by shields which cover them. It has adjustable handles for carrying or moving the Forge from one place to another, which, when Forge is in use, are dropped down and not in the way. Its operation is extremely easy, as it is equipped with Brass Boxes and Oil Cups, and Noiseless, Adjustable Friction Clutch.

Price.....\$40.00

For List of Repairs, See Page 146

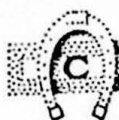
Western Chief "Contractors and Builders Forge" No. 16

For Description, See Page 56



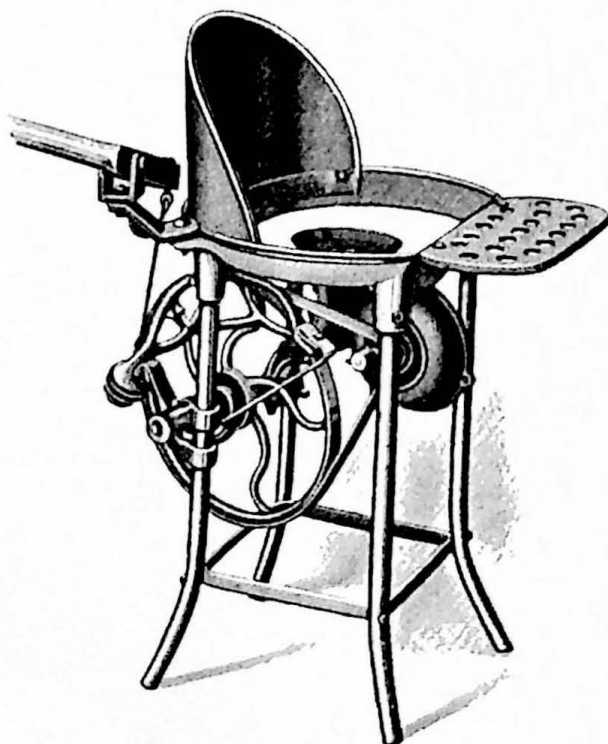
The above cut shows the manner in which our Western Chief "Contractors and Builders Forge" is arranged for moving from one place to another. The Rivet Box is made to swing down underneath the Hearth, if desired, and the handle to raise so that it can be very easily carried. The frequent necessity for moving the position of a forge in building and construction work makes these features most valuable.

For List of Repairs, See Page 116



Hero Forge No. 6

Suitable for Mines, Quarries, Prospectors, Bridges
and Outdoor Work



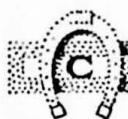
Blower, $7\frac{1}{2}$ inches
Hearth, 18 inches

Height, 30 inches
Weight, 90 pounds

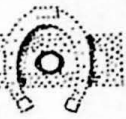
This Forge has capacity to heat $1\frac{1}{2}$ -inch iron, also has Shelf as shown
and is equipped with Noiseless, Adjustable Friction Clutch.

Price \$20.00

For List of Repairs. See Page 150

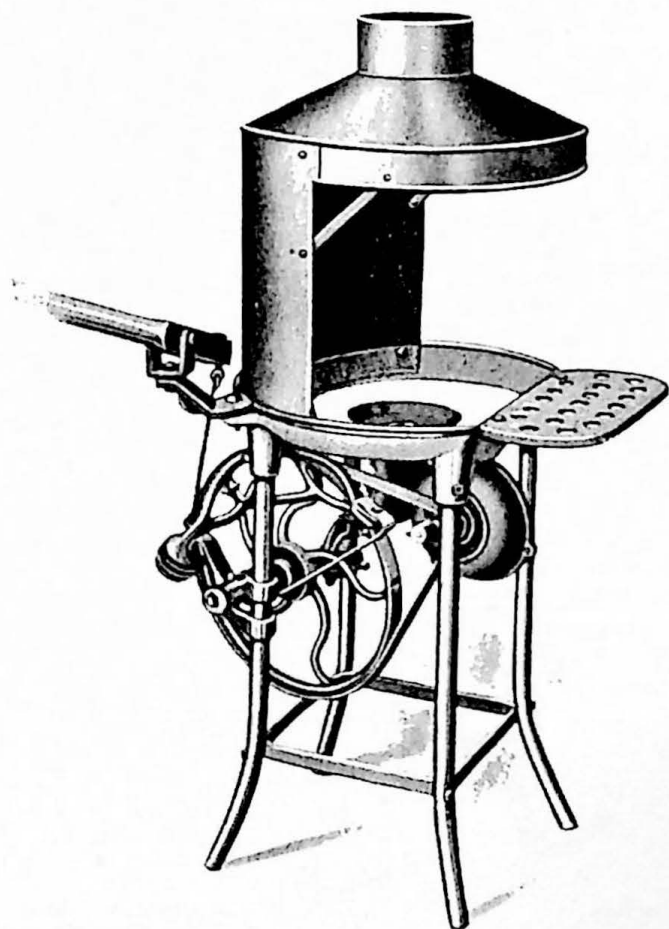


CANEDY - OTTO MFG. CO.



Hero Forge No. 7

Very Popular with Toolmakers, Tin Shops, Farmers, Jewelers,
Small Repair Shops, Etc.



Blower, 7 $\frac{1}{2}$ inches
Hearth, 18 inches

Height, 30 inches
Weight, 95 pounds

This Forge has capacity to heat 1 $\frac{1}{2}$ -inch iron, also has Shelf and Hood as shown, and is equipped with Noiseless, Adjustable Friction Clutch.

Price.....\$23.00

For List of Repairs, See Page 159

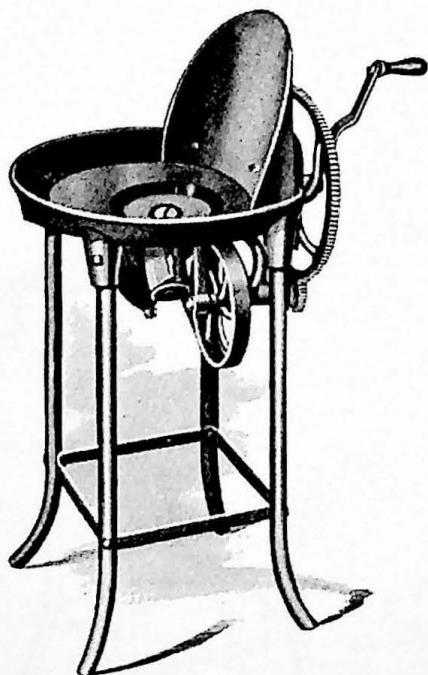


CANEDY-OTTO MFG. CO.



Leader Forge No. 11

Suitable for Light Outdoor Work



Blower, 7½ inches
Hearth, 18 inches

Height, 30 inches
Weight, 65 pounds

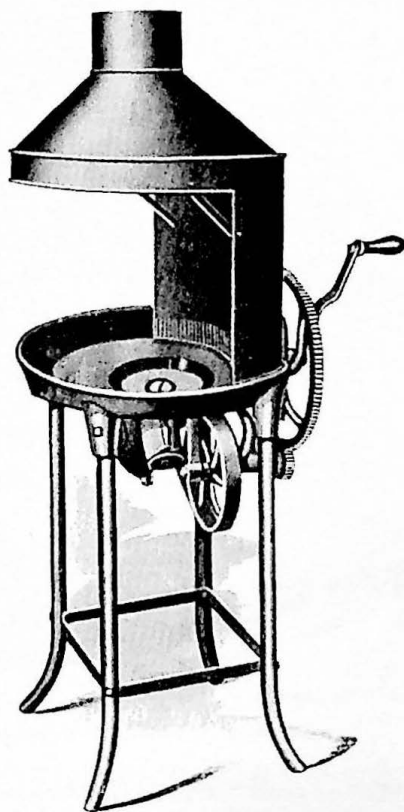
Capacity to Heat 1-inch Iron

Price.....\$14.00

For List of Repairs, See Page 150

Leader Forge No. 12

Suitable for Light Indoor Work, and Garages



Blower, 7½ inches
Hearth, 18 inches

Height, 30 inches
Weight, 70 pounds

Capacity to Heat 1-inch Iron

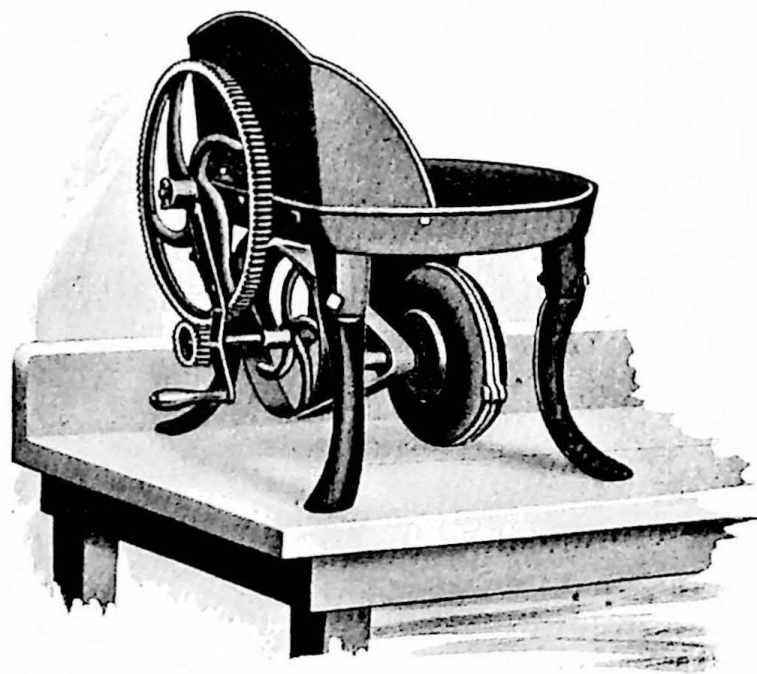
Price.....\$16.00

For List of Repairs, See Page 150



Leader Bench Forges Nos. 13 and 14

For Prospectors, Garages, etc.



Blower, 7½ inches

Height, 12½ inches

Hearth, 18 inches

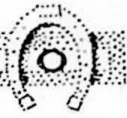
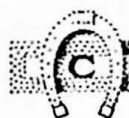
Capacity to Heat 1-inch Iron

Can be packed in box, 19x19x14 inches

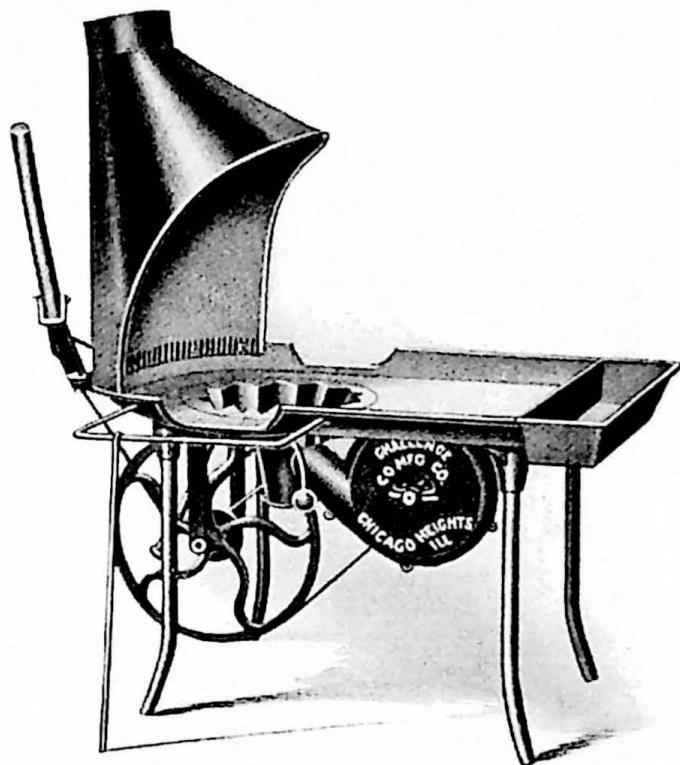
Price, No. 13, with Shield, weight 65 lbs. **\$14.00**

Price, No. 14, with Half-hood, weight 70 lbs. **16.00**

For List of Repairs, See Page 150



Challenge Forge No. 1c



Blower, 14½ inches
Hearth, 45x31 inches

Height, 30 inches
Length over all, 53 inches

Capacity to Heat 4-inch Iron

This Forge is constructed for the heaviest kind of work. It has an improved Fire-pot, separate from Hearth, which securely holds clay. The blast is direct from Fan and very powerful, by which, in connection with Side and Center Blast Tuyere Ball, a quick heat with little labor is secured.

Price, Without Tank, weight 275 lbs. \$50.00

Price, With Tank (as illustrated), weight 300 lbs. . . . 55.00

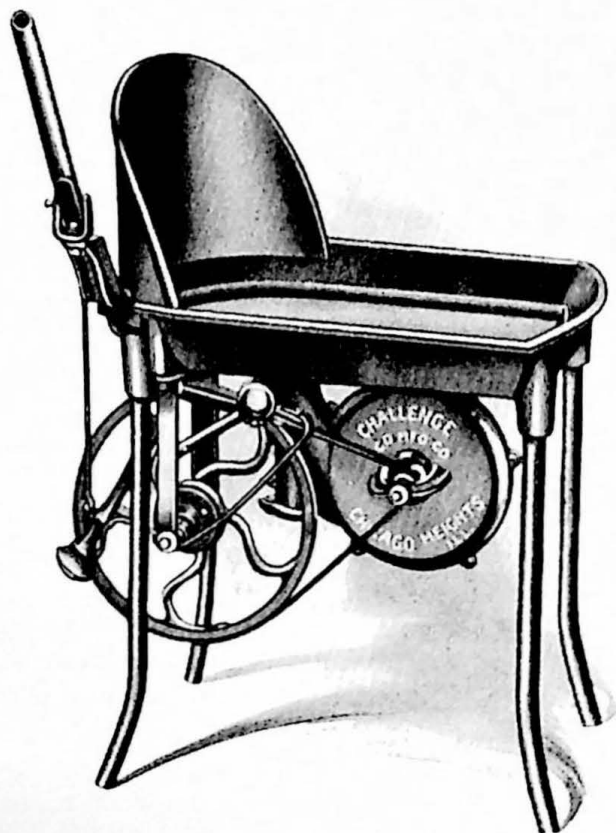
Power attachment, \$2.50 net, extra

Always shipped WITHOUT TANK, unless specially ordered

For List of Repairs, See Page 152

Challenge Forge No. 2c

Suitable for Boilermakers, Bridgebuilders, Railroads, Well-drivers, Outdoor Work



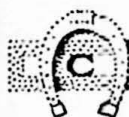
Blower, 12½ inches
Hearth, 35x23 inches

Height, 30 inches
Weight, 180 pounds

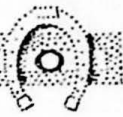
Capacity to Heat 3-inch Iron

Price.....\$36.00

For List of Repairs, See Page 154

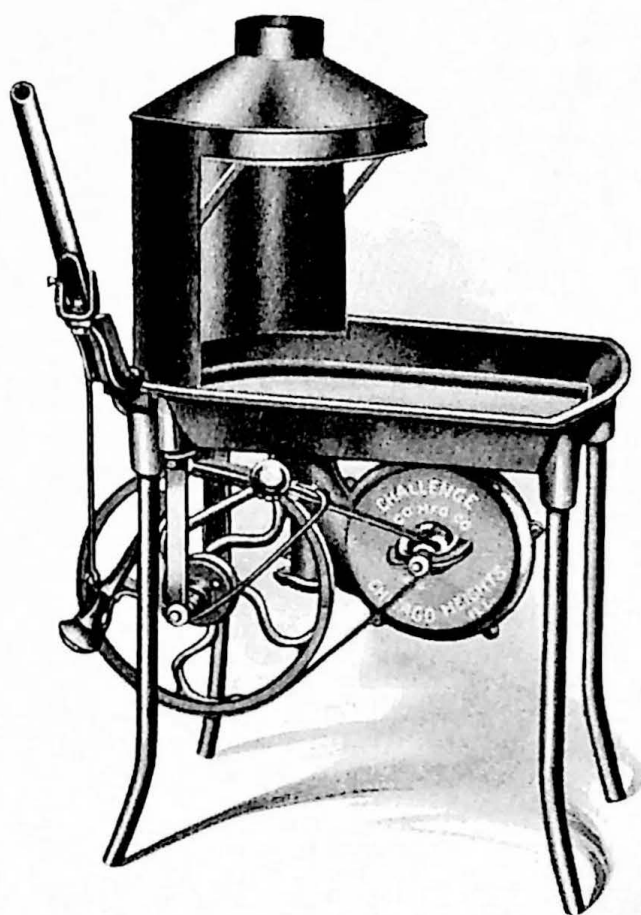


CANEDY-OTTO MFG. CO.



Challenge Forge No. 3c

Suitable for Machinists, Plumbers, Tin Shops, Locksmiths,
Horseshoers, Small Blacksmith Shops, Etc.



Blower, 12 $\frac{1}{2}$ inches
Hearth, 35x23 inches

Height, 30 inches
Weight, 185 pounds

Capacity to Heat 3-inch Iron

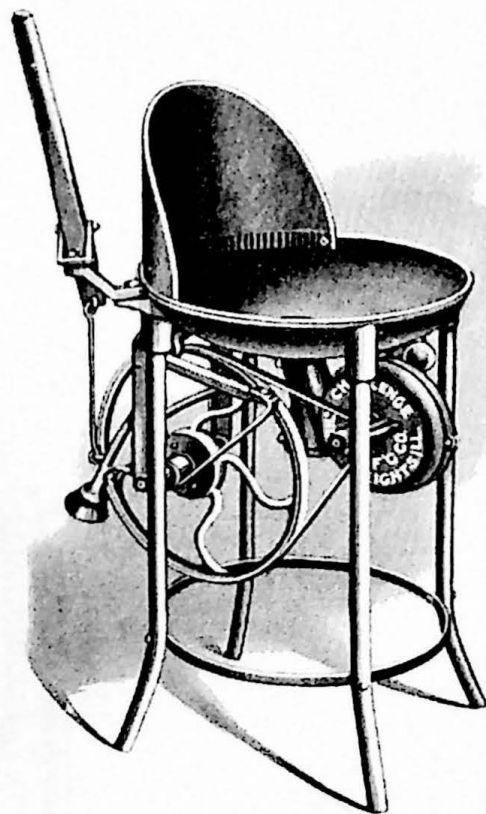
Price.....\$40.00

For List of Repairs, See Page 154



Challenge Forge No. 4c

For Quarries, Boilermakers, Mines, Bridgebuilders, Prospectors,
Outdoor Work, Etc.



Blower, 9½ inches
Hearth, 22 inches

Height, 33 inches
Weight, 120 pounds

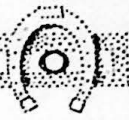
Capacity to Heat 2½-inch Iron

Price.....\$24.00

For List of Repairs, See Page 156

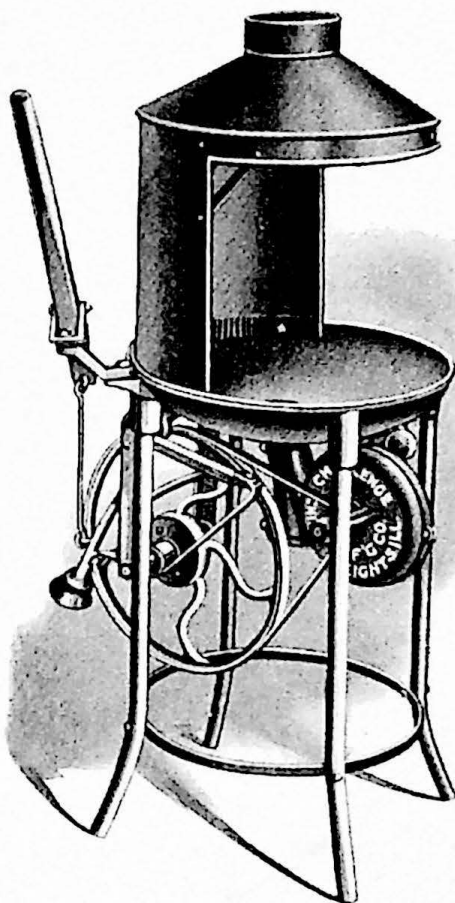


CANEDY - OTTO MFG. CO.



Challenge Forge No. 5c

For Bicycle Repair Shops, Toolmakers, Tin Shops, Plumbers,
Light Repair Shops of any Kind



Blower, 9½ inches
Hearth, 22 inches

Height, 33 inches
Weight, 125 pounds

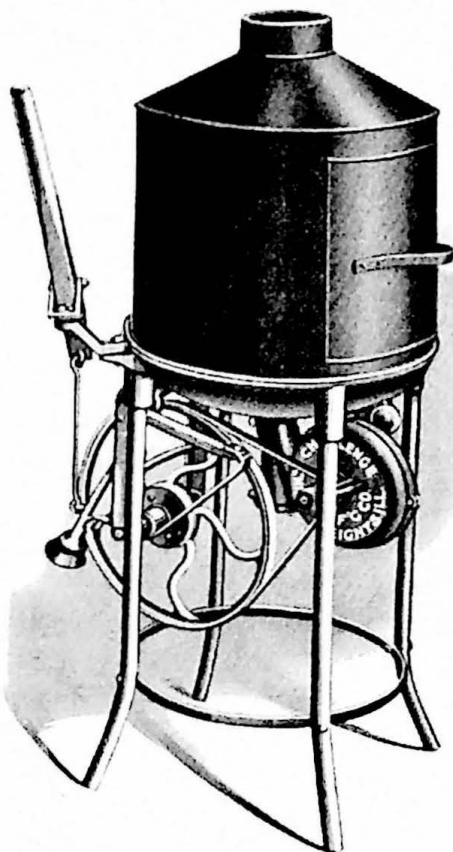
Capacity to Heat 2½-inch Iron

Price.....\$27.00

For List of Repairs, See Page 156

Challenge Forge No. 5¹/₂c

For Jewelers, Dentists, Furniture Factories, Sawmills,
Wood Shops, Oil Refineries, Etc.



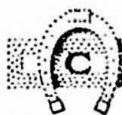
Blower, 9¹/₂ inches
Hearth, 22 inches

Height, 33 inches
Weight, 130 pounds

Capacity to Heat 2¹/₂-inch Iron

Price.....\$29.50

For List of Repairs, See Page 156



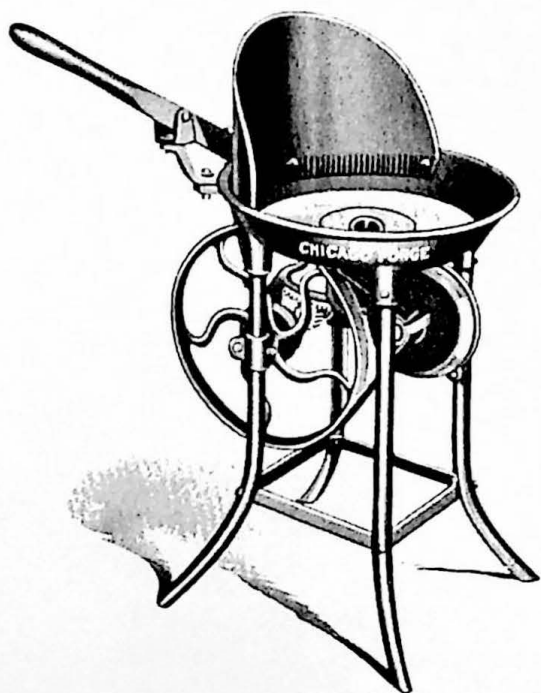
We are frequently asked

**Which Style of Forge
or Blower is the
Best?**

THIS question the user must himself answer. It depends simply on whether he prefers to "pump a lever" or "turn a crank." They are all the Best!

WE have a habit of furnishing
ONLY THE BEST!

Chicago Forge No. 150



Blower, 8 inches
Hearth, 18 inches

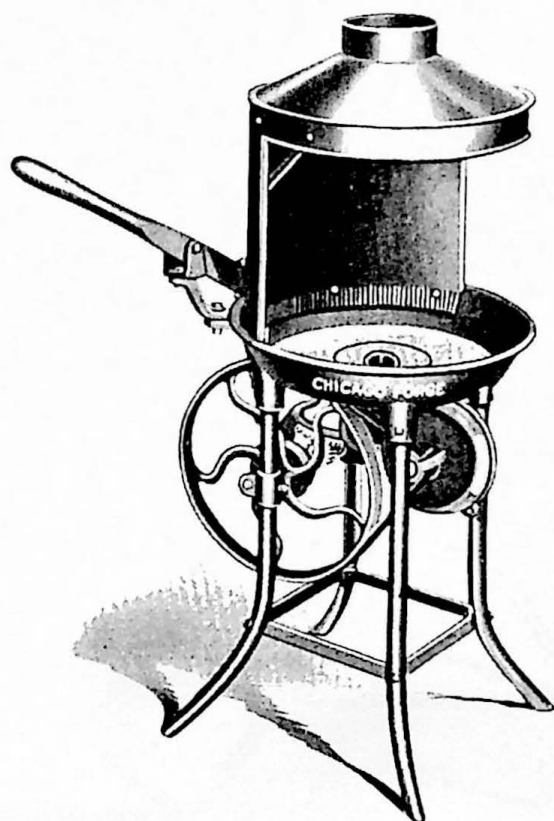
Height, 30 inches
Weight, 80 pounds

A light, move-about Forge; adapted to light work. Is suited to quarries, mines, etc., and popular as a low-priced article.

Price **\$13.00**

For List of Repairs, See Page 158

Chicago Forge No. 151



Blower, 8 inches
Hearth, 18 inches

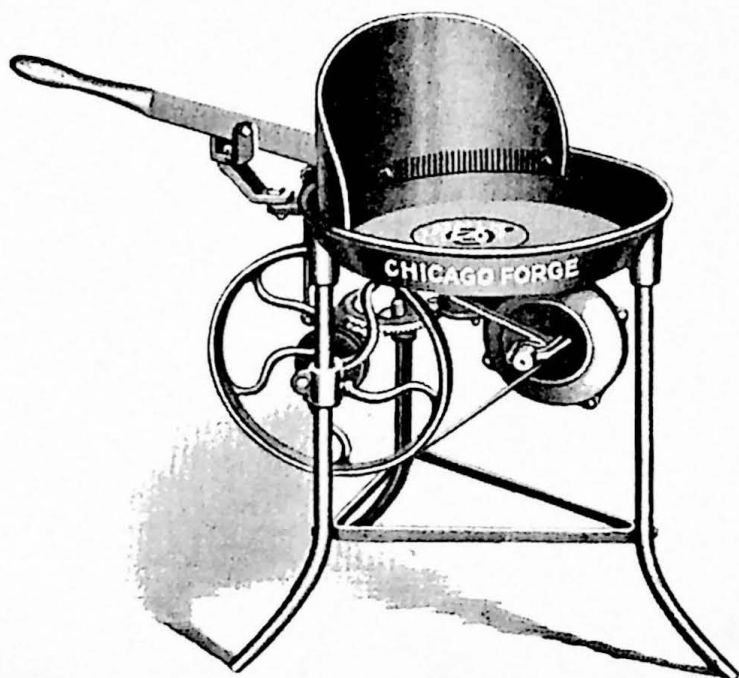
Height, 30 inches
Weight, 85 pounds

Suitable for farmers, small shops, toolmakers, etc. Has half-hood for indoor use. An inexpensive Forge and well made.

Price.....\$15.00

For List of Repairs, See Page 158

Chicago Forge No. 154



Blowers, 8 $\frac{3}{4}$ inches

Hearth, 22 inches

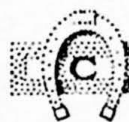
Height, 30 inches

Weight, 85 pounds

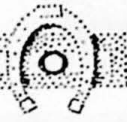
A very good outdoor Forge for use on ranches, farms, at mines, quarries, etc., where expensive equipment is not a necessity.

Price.....\$16.00

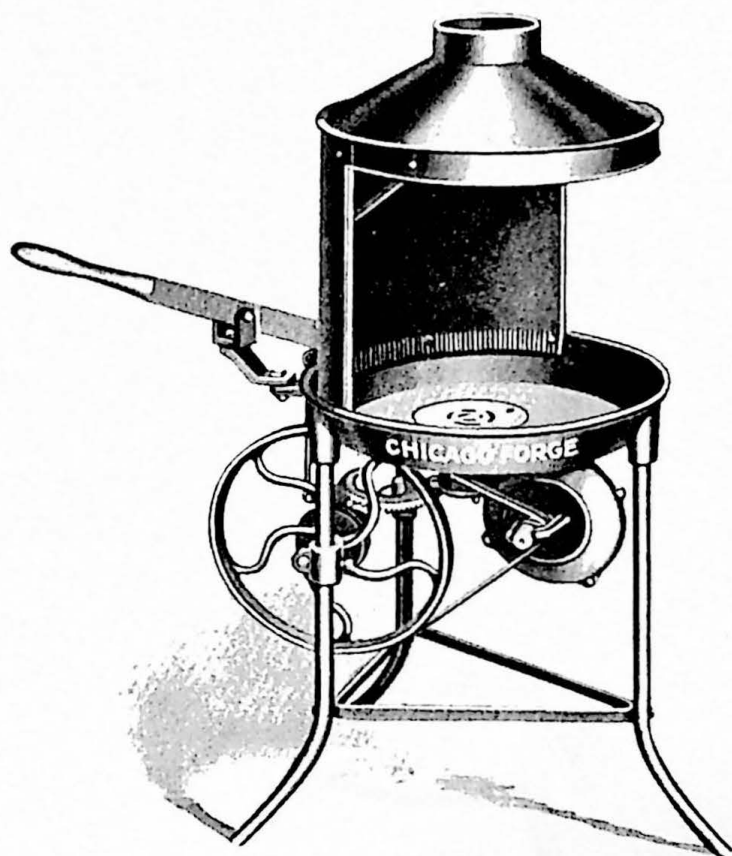
For List of Repairs, See Page 158



CANEDY-OTTO MFG. CO.



Chicago Forge No. 155



Blower, 8 $\frac{3}{4}$ inches

Hearth, 22 inches

Height, 30 inches

Weight, 90 pounds

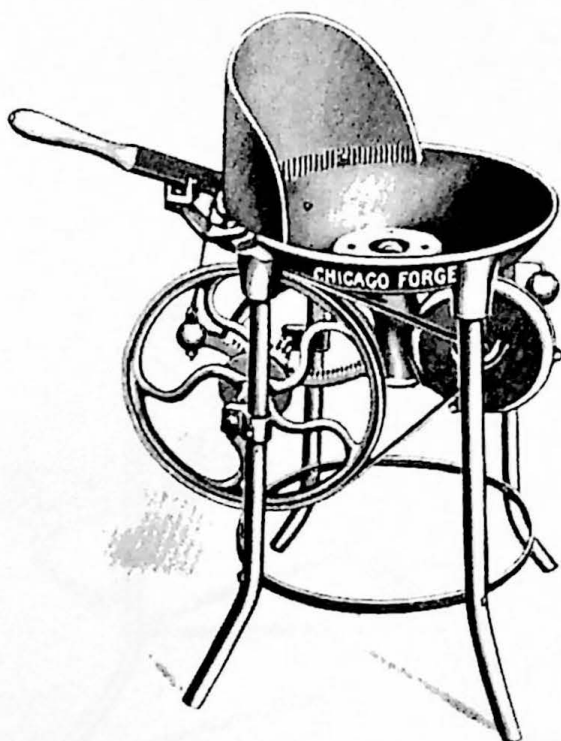
Has half-hood for indoor use, and well adapted for farmers, small shops, etc., where an inexpensive Forge is desired.

Price.....**\$19.00**

For List of Repairs, See Page 158

Chicago Forge No. 156

A Heavy, Strong, Inexpensive Forge, Suitable for Outdoor Work



Blower, 9½ inches

Hearth, 22 inches

Height, 30 inches

Weight, 120 pounds

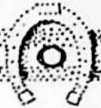
Capacity to Heat 2½-inch Iron

Price \$22.00

For List of Repairs, See Page 160

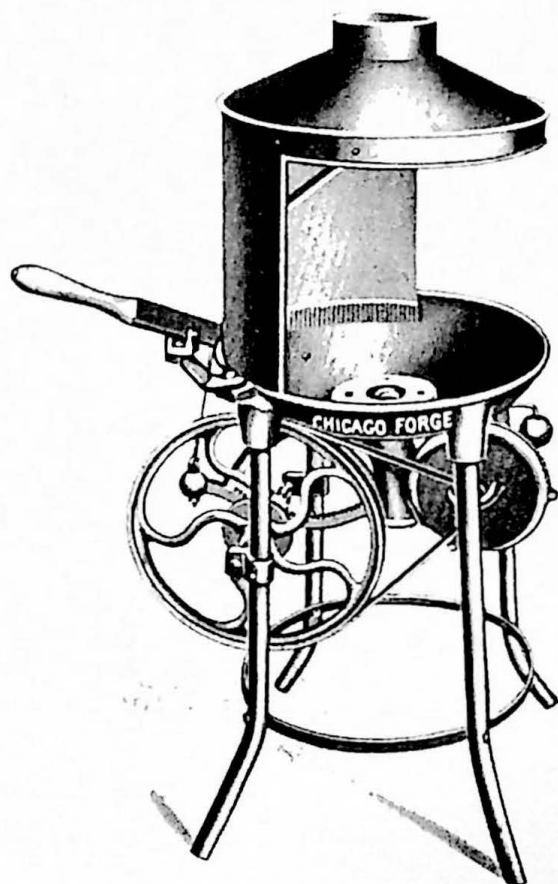


CANEDY - OTTO MFG. CO.



Chicago Forge No. 157

A Heavy, Strong, Inexpensive Forge for Indoor Work, Etc.



Blower, 9½ inches

Hearth, 22 inches

Height, 30 inches

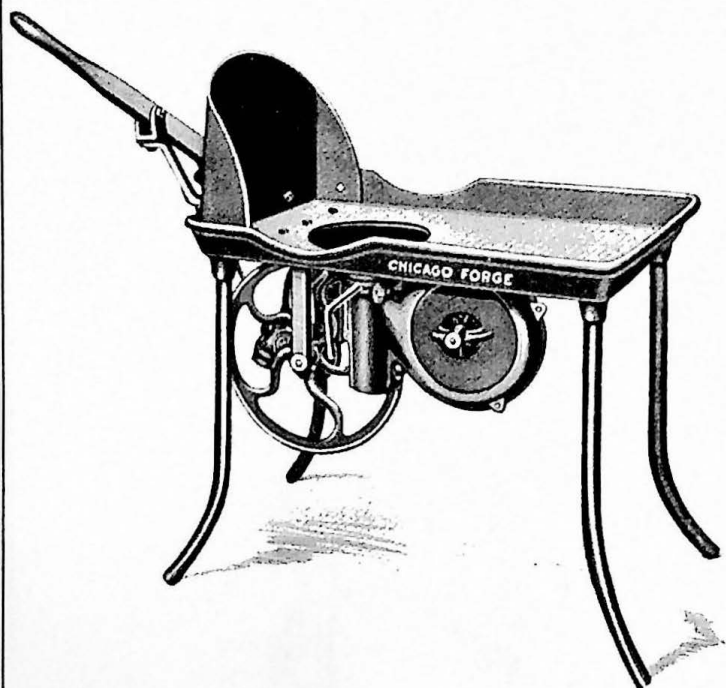
Weight, 125 pounds

Capacity to Heat 2½-inch Iron

Price.....\$25.00

For List of Repairs, See Page 160

Chicago Forge No. 152



Blower, 12½ inches

Hearth, 25x36 inches

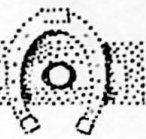
Height, 30 inches

Weight, 170 pounds

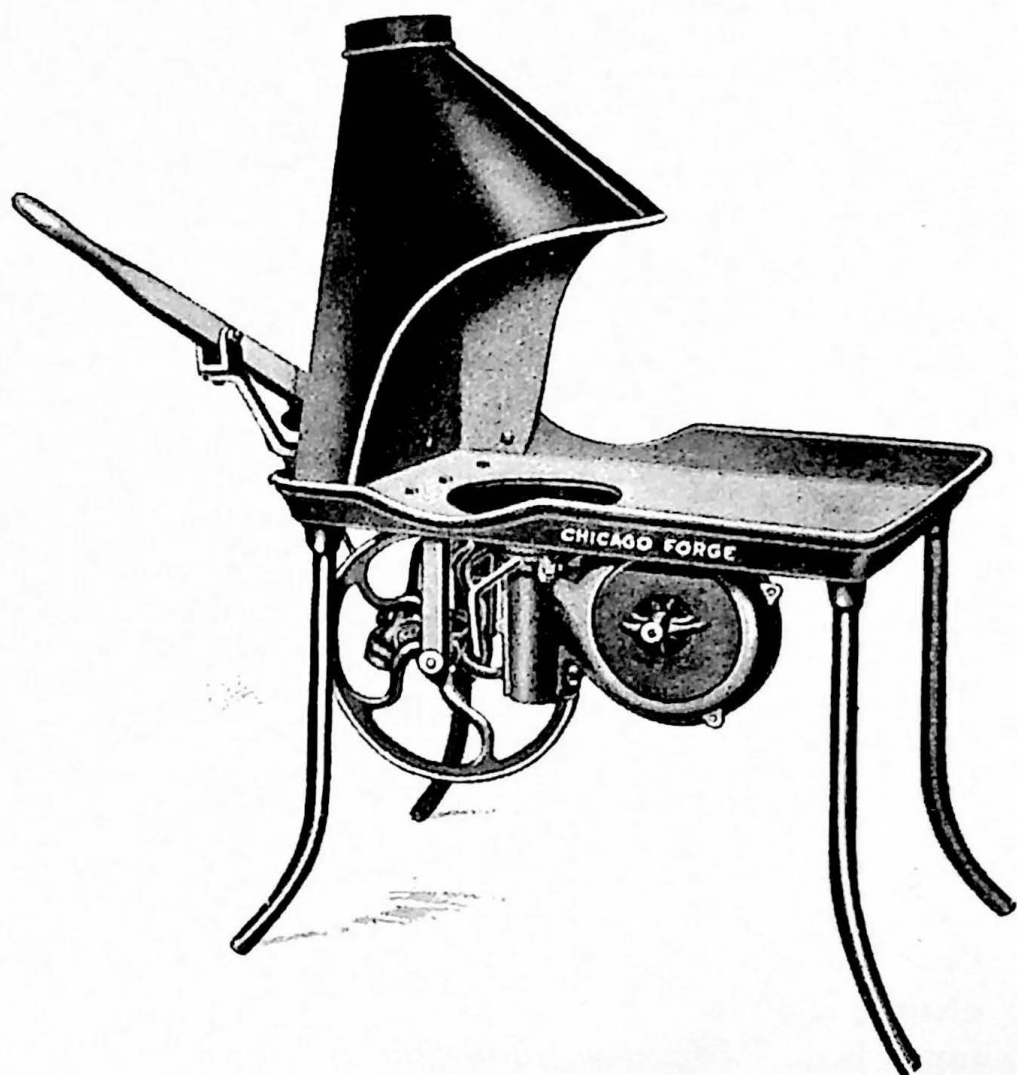
This Forge has a large, roomy Fire-pot, conveniently shaped Hearth and splendid blast; Ratchet Clutch. Is a serviceable Forge at a low cost.

Price.....\$34.00

For List of Repairs, See Page 158



Chicago Forge No. 153



Blower, 12½ inches
Hearth, 25x36 inches

Height, 30 inches
Weight, 175 pounds

This Forge has a large, roomy Fire-pot, conveniently shaped Hearth and splendid blast; Ratchet Clutch. Is a very serviceable Forge at a low cost.

Price.....\$38.00

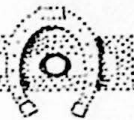
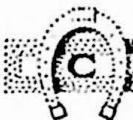
For List of Repairs, See Page 158

Please Note

IN MAKING ORDERS, we recommend that great care be used in specifying what is required. Orders are frequently received in which it is left to us to guess at details, etc., and in such cases our friends as well as ourselves are often caused unnecessary inconvenience and delays to say nothing of errors that should not occur.

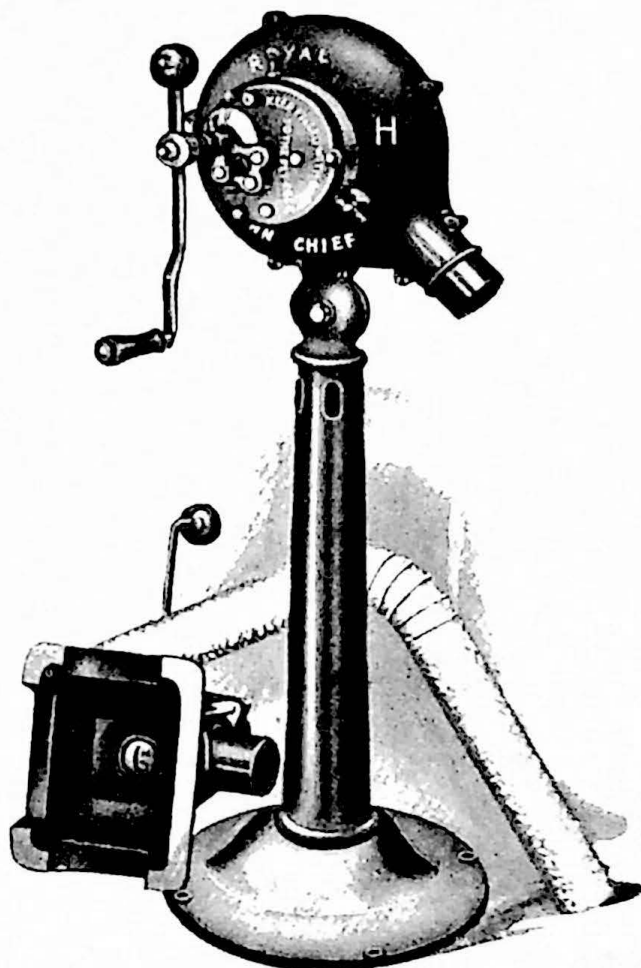
If a **Forge** is wanted and we list it **with** and **without** Hoods, Tanks, etc., be sure to specify just which way it is wanted. If a **Blower** is wanted **names** and **sizes** and other **essential details** should be specified clearly.

In the case of **Drills**, **with** or **without Pulleys** represents an important distinction. State which is wanted. Also whether chuck shall be with $\frac{1}{2}$ inch, $\frac{3}{4}$ inch or taper hole. Much trouble and annoyance can easily be avoided with the use of a little care in these matters and we thank you in advance for your acceptance of the suggestion.



Royal Blower

"The Successful Blower." Crank Turns Forward or Backward.
Noiseless and Easy to Operate.



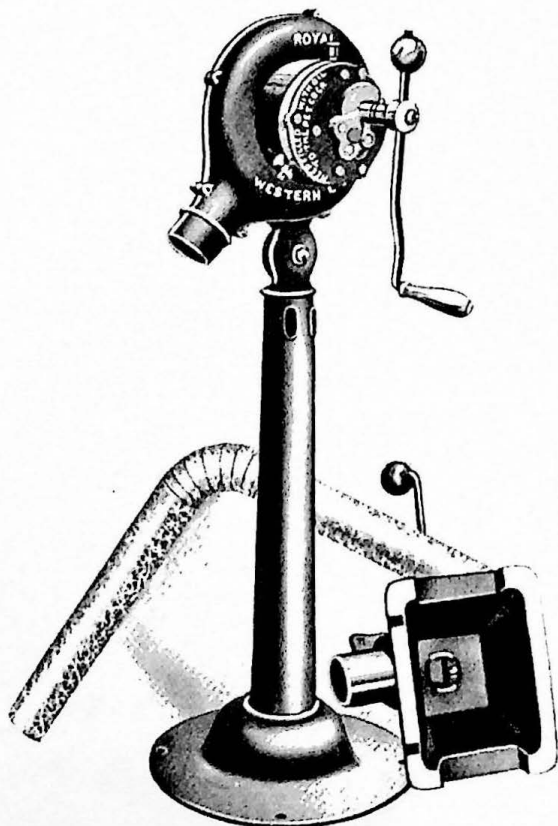
Gear case is oil-tight and dustproof. Gears run in a continuous bath of oil. Gears are flat and straight cut, made of special materials. No Spiral or Worm Gears. A powerful blast; lasting after blast. Fire-pot is 8x9½x4 inches, inside.

Blower, 12 inches	Weight, 135 pounds	Height, 47 inches
Price, Complete as shown.....		\$28.00
Price, Without Tuyere.....		24.50
Price, Without Stand, but with Tuyere.....		25.50

For List of Repairs, See Page 116

Royal Left-Hand Blower

"The Successful Blower." Crank Turns Forward or Backward.
Noiseless and Easy to Operate.



Gear case is oil-tight and dustproof. Gears run in a continuous bath of oil.

Gears are flat and straight cut, made of special materials. No Spiral or Worm Gears. A powerful blast; lasting after blast. Fire-pot is 8x9½x4 ins. inside.

Blower, 12 inches.

Weight, 135 pounds.

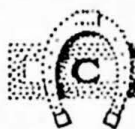
Height, 47 inches.

Price, Complete as shown **\$28.00**

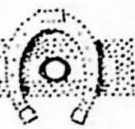
Price, Without Tuyere, **24.50**

Price, Without Stand, but with Tuyere **25.50**

For List of Repairs, See Page 110

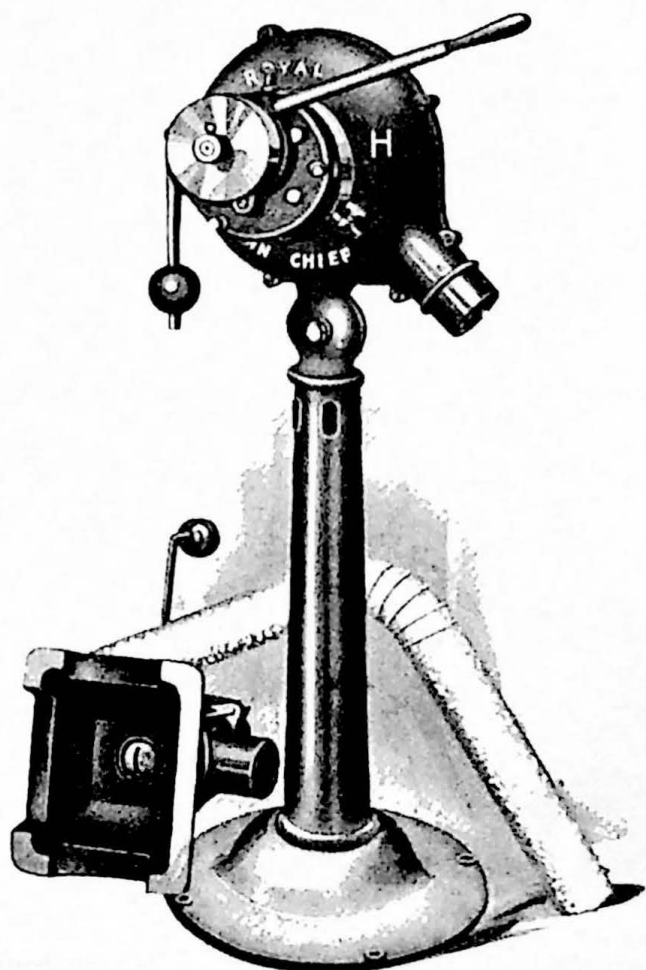


CANEDY-OTTO MFG. CO.



Royal Hand-Lever Blower

Lever Motion, Friction Clutch, No Springs or Ratchets
Noiseless and Easy to Operate



Gear case is oil-tight and dustproof. Gears run in a continuous bath of oil. Gears are flat and straight cut, made of special materials. No Spiral or Worm Gears. A powerful blast; lasting after blast. Fire-pot is 8x9½x4 inches inside.

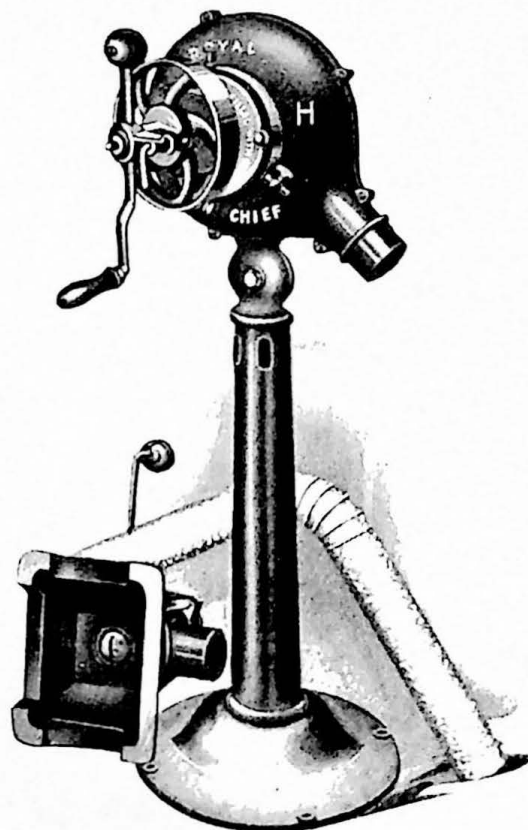
Blower, 12 inches Weight, 145 pounds Height, 47 inches
Can be furnished to operate with the right arm, for left-handed smiths, when desired.

Price, Complete as shown.....	\$28.00
Price, Without Tuyere.....	24.50
Price, Without Stand, but with Tuyere.....	25.50

For List of Repairs, See Page 140

Royal "Hand and Power" Blower

A Strong, Steady, Even Blast
Crank Turns Forward or Backward



In this machine we combine Hand and Pulley Power. One pulley only is used, but so constructed that it is both a tight and loose pulley. No shifting of belt.

Gear case is oil-tight and dust-proof. Gears run in a continuous bath of oil.

Gears are flat and straight cut, made of special materials. No Spiral or Worm Gears. Fire-pot is 8x9½x1 inches inside.

Pulley 7½x17½ in. Should run 35 rev. per minute.

Blower, 12 inches Weight, 145 pounds Height, 47 inches

The neatest Combined Hand and Power Blower on the market.

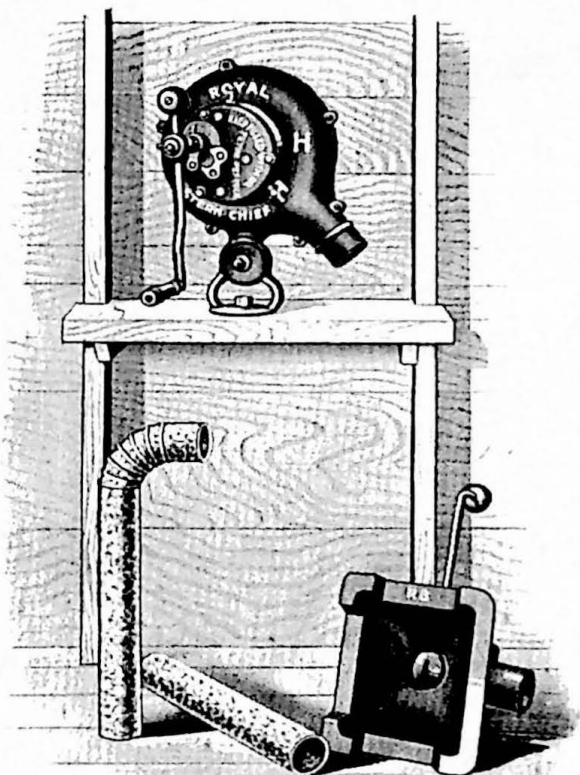
Price, Complete as shown. \$35.00

Price, Without Tuyere. 31.50

Price, Without Stand, but with Tuyere. 32.50

For List of Repairs, See Page 110

Royal "Bench" Blower



Blower, 12 inches
Crank Turns Forward
or Backward

Royal Fire-pot Tuyere Iron
Needs no Clay
Size, 8x9½x1 inches inside

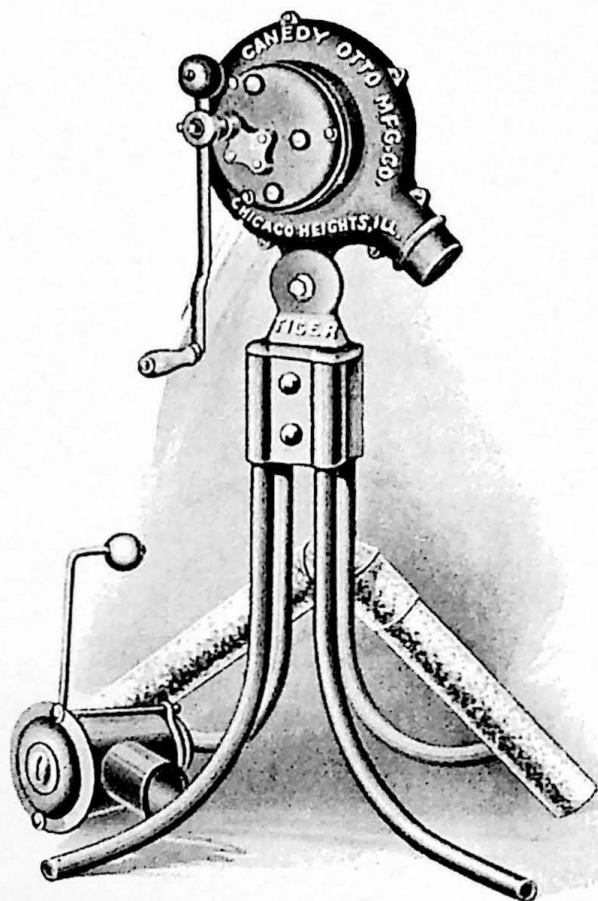
To accommodate those who do not have room for a Blower with stand, or those who prefer to place a Blower on a shelf or bench, we have arranged the Royal Blower with a bench stand.

Price, With Tuyere (as illustrated), wt. 100 lbs	\$25.00
Price, Without Tuyere, weight 50 lbs	21.00

For List of Repairs, See Page 119

Tiger Blower

Cut Gears, Oil-tight and Dustproof Gear Case. Crank Turns Forward or Backward. A Good, Serviceable Article



Blower, 11½ inches

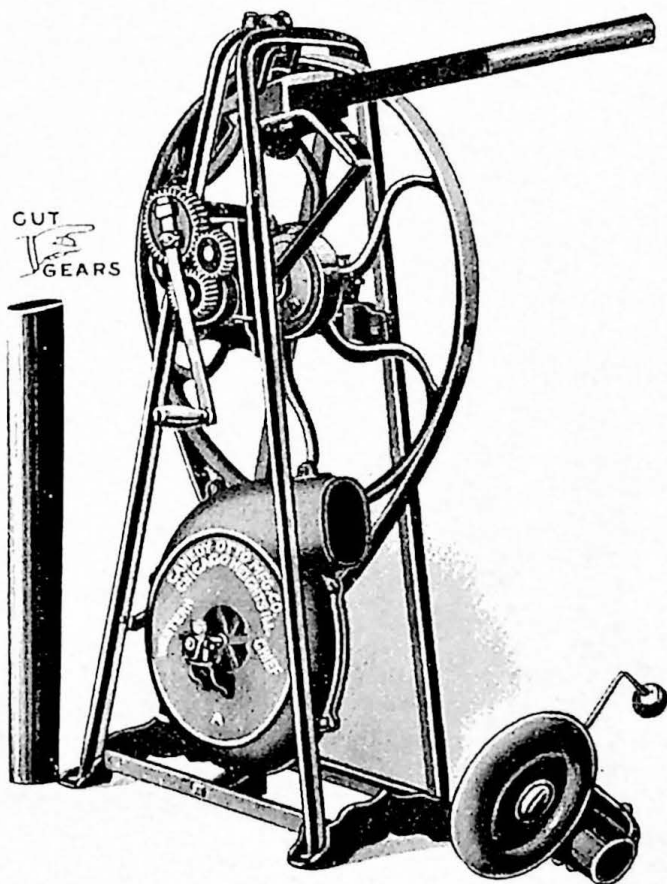
Weight, 95 pounds

The Tiger Blower is made to meet the demand for a blower of ordinary construction and less expensive than our higher and better grade of "Royal" Blowers. It gives a good blast, and is neatly finished.

Price.....\$20.00

Western Chief Blower, Size A

Both Crank and Lever Movement
No Bellows the Equal of This



Blower, 16½ inches Fly-wheel, 27 inches Weight, 190 pounds

It is equipped throughout with Brass Boxes and Oil Cups and has Noiseless Adjustable Steel Friction Clutch. Can be furnished to operate with right arm for left-handed smiths, when desired.

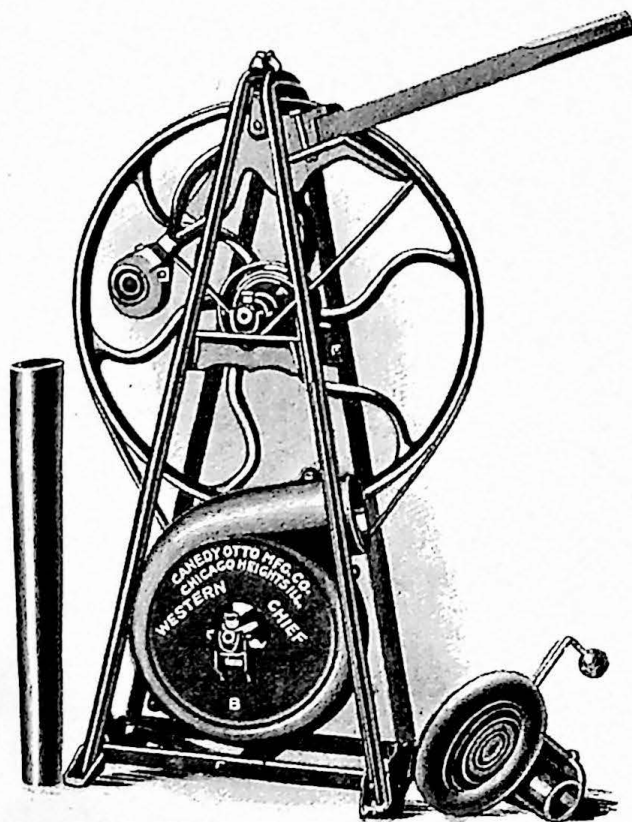
Power Attachment (Pulleys, 7½x1¾ inches), \$2.50 net extra

Price.....\$32.00

For List of Repairs, See Page 162

Western Chief Blower, Size B

Lever Movement Only
No Bellows the Equal of This



Blower, 16½ inches Fly-wheel, 27 inches Weight, 180 pounds

Is equipped throughout with Brass Boxes and Oil Cups; has Noiseless, Adjustable Steel Friction Clutch. Can be furnished to operate with right arm for left-handed smiths, when desired.

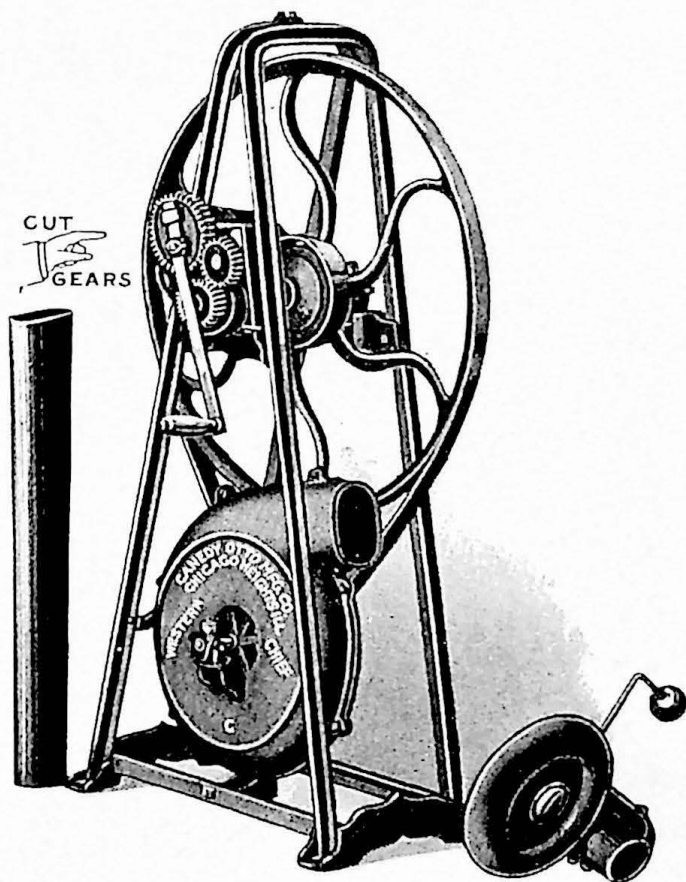
Price.....\$27.00

Power Attachment (Pulleys, 7½x1¾ inches), \$2.50 net extra

For List of Repairs, See Page 162

Western Chief Blower, Size C

Crank Movement Only
No Bellows the Equal of This



Blower, 16½ inches Fly-wheel, 27 inches Weight, 165 pounds

It is equipped throughout with Brass Boxes and Oil Cups. As soon as crank is released it drops to lower side and gear wheels stop. Can be furnished to operate with right arm for left-handed smiths, when desired.

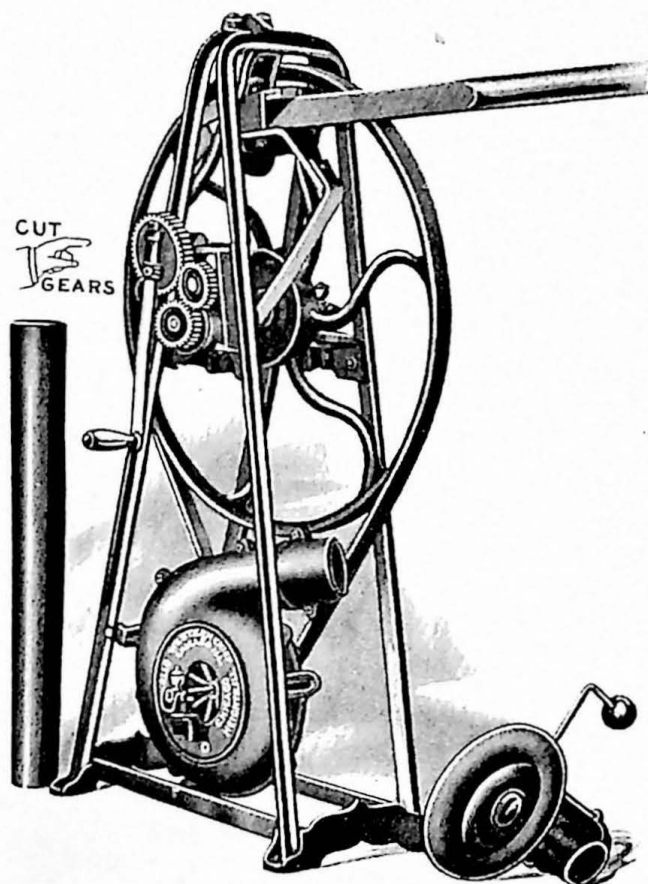
Price.....\$27.00

Power Attachment (Pulleys, 7½x1¾ inches), \$2.50 net extra

For List of Repairs, See Page 162

Western Chief Blower, Size D

Both Crank and Lever Movement
No Bellows the Equal of This



Blower, 14½ inches Fly-wheel, 27 inches Weight, 185 pounds

Is equipped throughout with Brass Boxes and Oil Cups and Noiseless, Adjustable Steel Friction Clutch. It has both crank and lever movement, which work independently of each other.

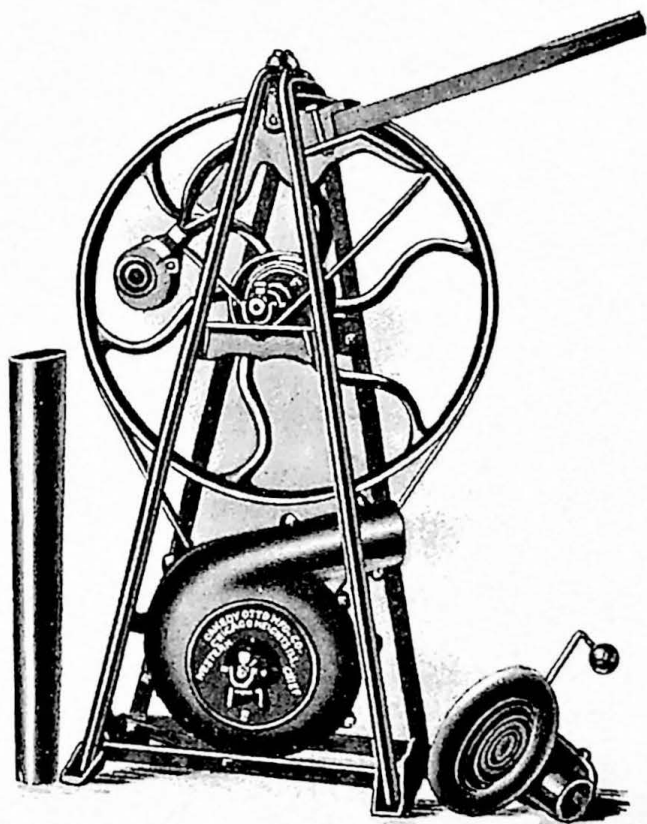
Price.....\$28.50

Power Attachment (Pulleys, 7½x1¾ inches), \$2.50 net extra

For List of Repairs, See Page 164

Western Chief Blower, Size E

Lever Movement Only
No Bellows the Equal of This



Blower, 14½ inches Fly-wheel, 27 inches Weight, 175 pounds

Is equipped throughout with Brass Boxes and Oil Cups and has Noiseless, Adjustable Steel Friction Clutch.

Price.....\$23.50

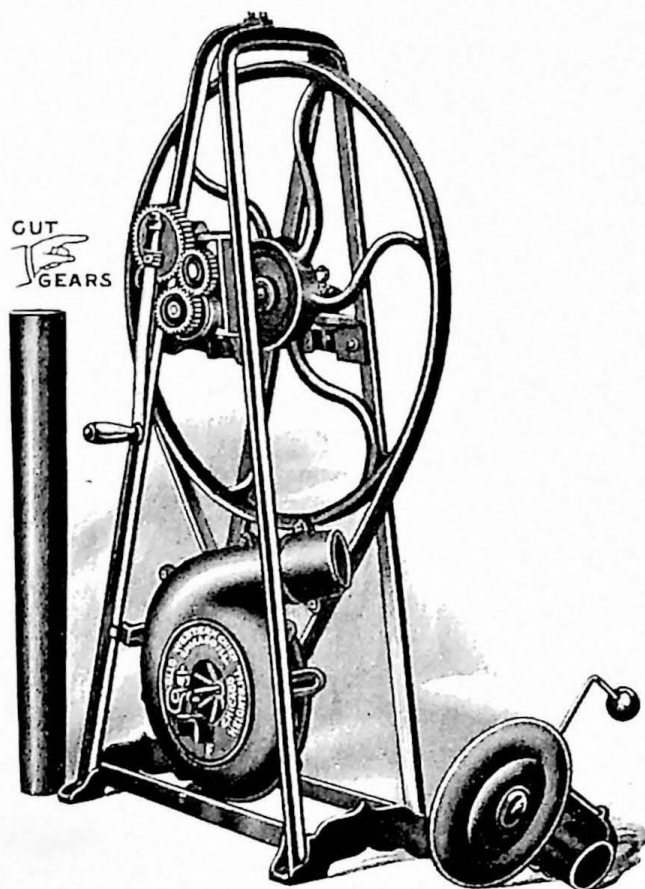
Power Attachment (Pulleys, 7½x1¾ inches), \$2.50 net extra

For List of Repairs, See Page 164



Western Chief Blower, Size F

Crank Movement Only
No Bellows the Equal of This



Blower, 14½ inches Fly-wheel, 27 inches Weight, 160 pounds

It is equipped throughout with Brass Boxes and Oil Cups. As soon as crank is released it drops to lower side and gear wheels stop.

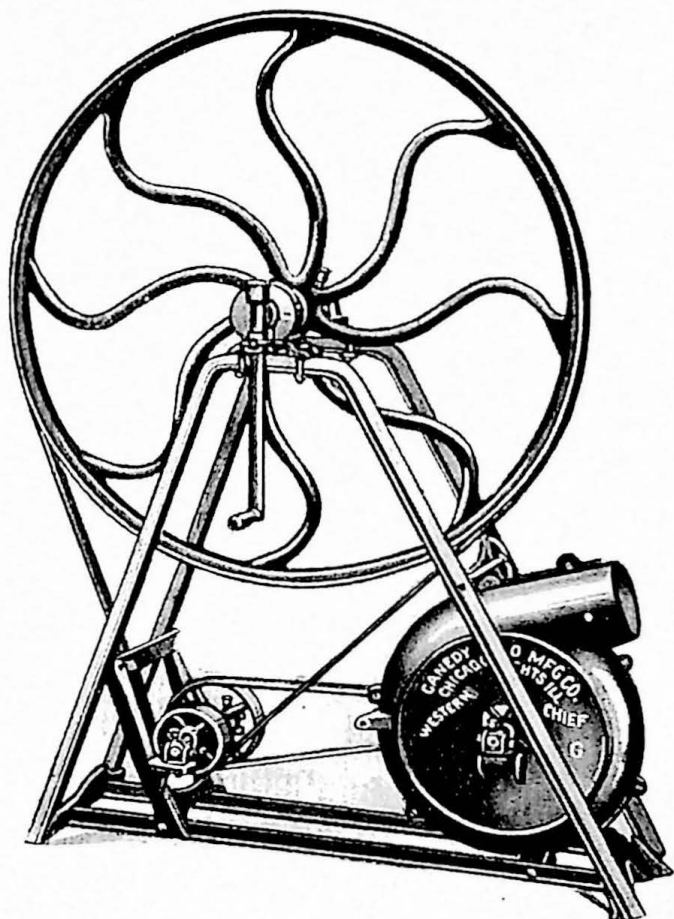
Price.....\$23.50

Power Attachment (Pulleys, 7½x1¾ inches), \$2.50 net extra

For List of Repairs, See Page 164

Western Chief Blower, Size G

Crank Movement Only
The Only Successful Big-Wheel Blower
Pipe and Tuyere Iron Furnished With Every Machine

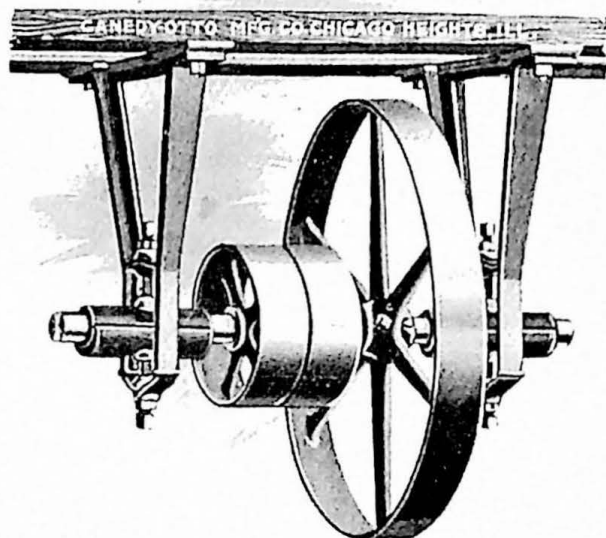


Blower, 16½ inches Fly-wheel, 36 inches Weight, 180 pounds
A very powerful blast. By the use of countershaft, this 36-inch Wheel runs the Fan at same speed as other 48-inch wheel blowers, and also admits of looser belts without slipping. It takes but little room and runs very easily. Is equipped throughout with Brass Boxes and Oil Cups. The crank is adjustable (long or short) to suit operator's arm. Can be furnished to operate with right arm for left-handed smiths, when desired.
Price.....\$35.00

For List of Repairs, See Page 166

Western Chief Countershafts

For Pressure Blowers, Etc.



Size	Driving Pulleys		Tight & Loose Pulleys		Diameter of Shaft	Weight	Price
	Diameter	Width	Diameter	Width			
P 1	10 $\frac{3}{4}$ in.	2 $\frac{1}{2}$ in.	4 in.	2 in.	$\frac{7}{8}$ in.	50 lbs.	\$ 8.00
P 3	14 in.	2 $\frac{3}{4}$ in.	6 in.	2 $\frac{1}{2}$ in.	1 $\frac{1}{8}$ in.	60 lbs.	12.00
P 5	18 in.	3 $\frac{1}{2}$ in.	7 in.	3 $\frac{3}{4}$ in.	1 $\frac{1}{8}$ in.	75 lbs.	16.00

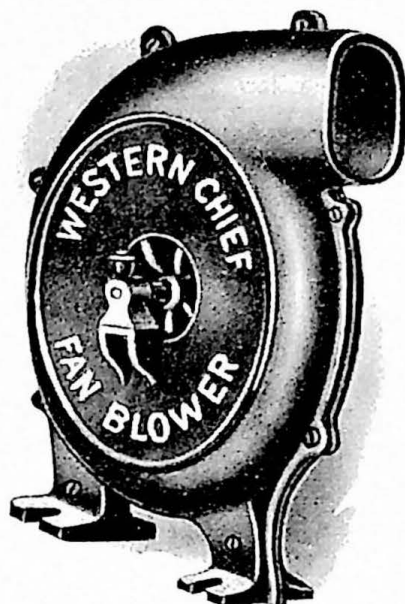


Western Chief Cast-Iron Blast Gates

Outside Diameter	Weight	Price
2 $\frac{1}{2}$ inches	3 pounds	\$1.25
3 inches	5 pounds	1.50
4 inches	6 pounds	1.75
4 $\frac{1}{2}$ inches	9 $\frac{1}{2}$ pounds	2.00
5 inches	11 pounds	2.25
6 inches	15 pounds	2.50
7 $\frac{1}{2}$ inches	18 $\frac{1}{2}$ pounds	3.25
8 inches	23 pounds	3.50

Western Chief Power Blower

Small Fan Blower For Forge Fires, etc.



Fan Blower No. F2

This is a light, neat, power Fan Blower, very desirable for ventilating purposes, and has capacity for two or three forge fires. Suitable for light belting and ordinary use. Has $1\frac{3}{4}$ -inch pulley for belt connections.

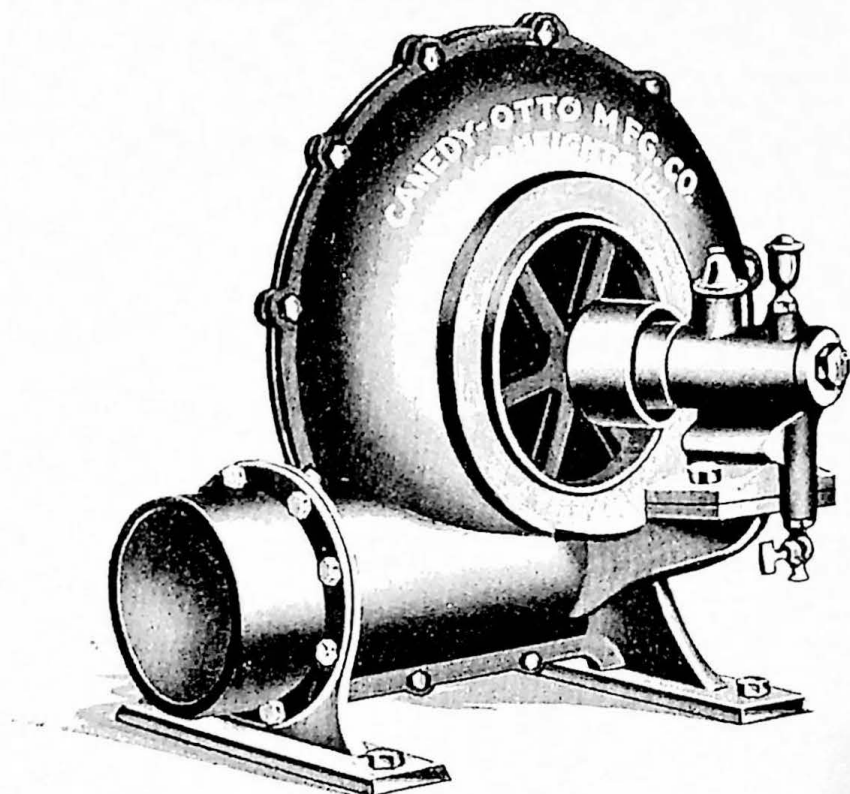
Size.....16½ inches Revolutions.....1,500 to 2,000

Weight.....55 lbs.

Price.....\$13.00

Western Chief Power Blowers

Pressure Blowers. For Forge Fires, Etc.

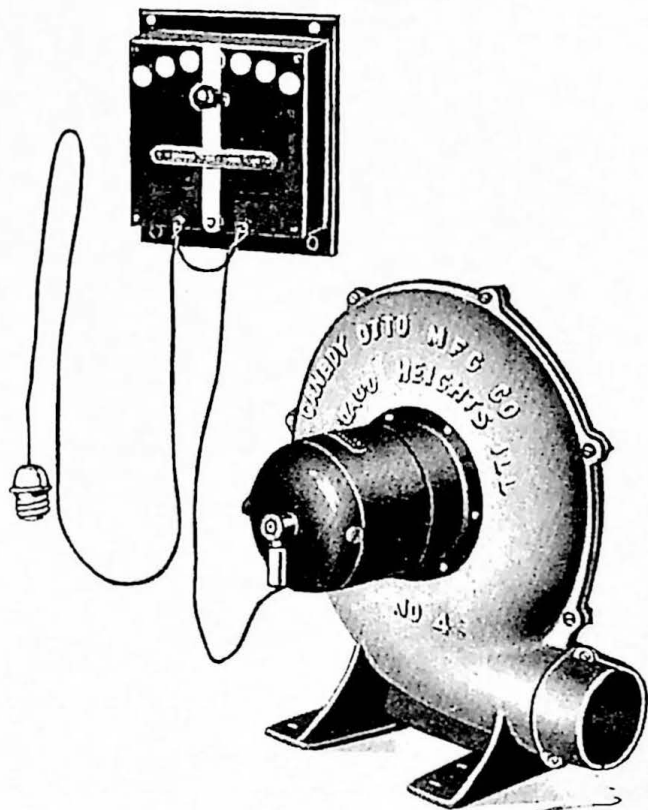


These Blowers are adapted to forge fires and small, light cupola work. They are very strong and durable, smooth running, and handsome in appearance. Sizes P3, P4, P5 and P6 have grease cup in addition to oil cup, so that should oil cup run dry the grease cup will continue to lubricate and prevent heating. Built for service.

No. of Blower	Height in Inches	Diameter of Inlet	Diameter of Outlet	Diameter of Pulley	Face of Pulley	Revolutions per Minute 2-oz. Blast for Boiler Fires	Revolutions per Minute 4-oz. Blast for Forge Fires	No. of Forge Fires	Sq. Ft. of Boiler Grate Surface Supplied by Blower	Weight, Pounds	H. P. Required, About	Price
P 1	10	3 1/4	2 3/4	1 1/8	1 1/4	3,675	4,640	1	2	15	1/4	\$12.00
P 2	15	4 1/2	4 1/4	3	2	3,000	4,000	2	5	35	1/3	18.00
P 3	18	5 1/4	4 3/4	3	2	2,600	3,600	4	6	50	1	20.00
P 4	20	6 1/2	5 3/4	3 1/2	2 1/2	2,300	3,200	5	8	70	1 1/4	28.00
P 5	24	7	7 1/2	4 3/8	3 1/4	1,928	2,680	7	10	105	1 3/4	33.00
P 6	34	10	7 1/2	5	3 1/2	1,410	2,275	17	18	200	2 1/2	64.00

Canedy-Otto No. 4 Universal Electric Blower

Will run on either 110 or 220 volt, alternating or direct current, 25, 40 or 60 cycles



The No. 4 Universal, one-fire, variable electric blacksmith blower has a motor of a special type, developed exclusively for this service. Because of the hard service that an electric blower is put to in a blacksmith shop (due to the dust and soot, which shortens the life of a motor) it has been necessary to provide more durability than is usually required. This motor is, therefore, completely enclosed in a dustproof case, and of such efficiency as to run with moderate temperature, without ventilation, and is equipped with automatic means of lubrication. This outfit is supplied with a seven-speed durable type of regulating switch, for starting and controlling the speed of the motor.

Cost of operation, 2 to 3 cents per day. Economy in use and strain on motor will be saved if run just fast enough to give satisfactory results. When brushes on motor become worn, they should be replaced at once with others of our manufacture, as they are of special carbon.

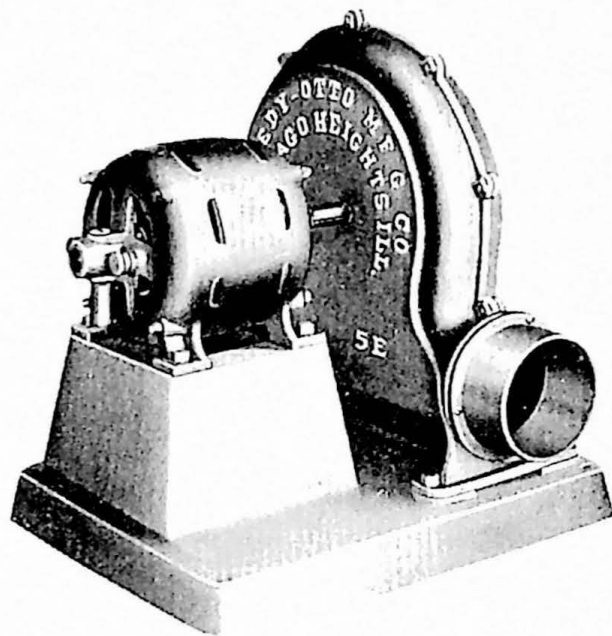
When ordering electric driven forges or blowers, furnish us with the following information:

Whether current is 110 or 220 volts.

Price.....\$38.00



Canedy-Otto No. 5E Electric Blower



Height, 18 inches
Weight, 120 pounds

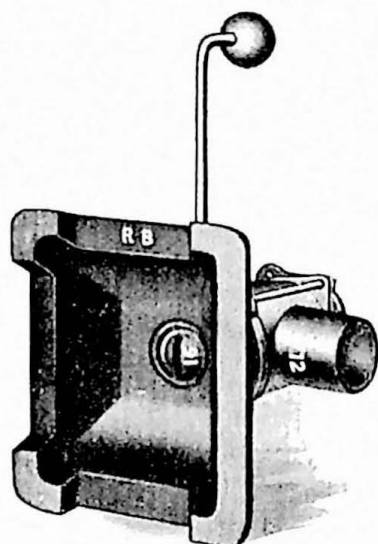
Diameter of inlet, $5\frac{1}{4}$ inches
Diameter of outlet, $4\frac{3}{4}$ inches
No. of forge fires, 5

The No. 5-E Electric Blower is equipped with a high grade, constant speed, induction type motor, capable of handling from one to five forge fires. It is mounted on a substantial pedestal and base; smooth running, handsome in appearance, and a high class machine in every particular. Fully guaranteed. Built for service.

When ordering Electric-driven Forges or Blowers, furnish us with the following information:

1. Whether current is ALTERNATING or DIRECT.
2. If alternating current, find out cycles or alternations, and state whether 110 or 220 volts.
3. Our standard motors are designed for 60 cycles, or 7,200 alternations.
4. If direct current, the voltage is all the information needed.

Price.....\$96.00



Royal Tuyere

Needs No Clay

A large, heavy, solid iron Fire-pot, with side and center blast Tuyere Ball.

Measures $8 \times 9 \frac{1}{2} \times 4$ Inches Inside.

Weights 50 pounds

Diameter of Inlet, 3 Inches

Price.....\$5.00

Furnished regularly with all "Royal" Blowers.

Mammoth Tuyere

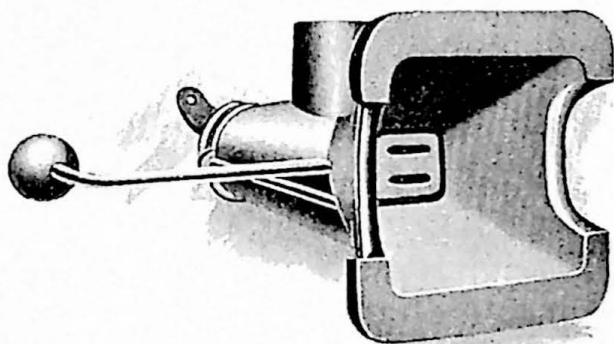
Extra Large Size, Inside, $9 \times 11 \frac{1}{2}$ Inches, 4 inches deep.

No Clay Required. Weights 55 Pounds.

Has square ball, furnishing side and center blast.

Diameter of Inlet, 3 Inches.

Price.....\$5.00



This Tuyere will be furnished with "Royal" Blowers, no extra charge, if requested.

Western Chief Tuyere

Has a loose ring top which rests on clay, to prevent falling or crumbling.

Weights 40 Pounds

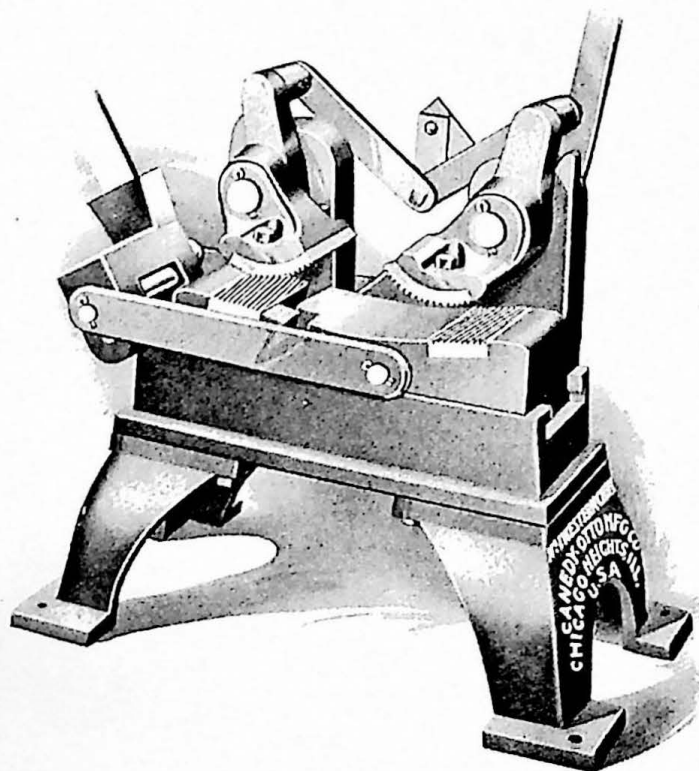
Diameter of Inlet, 3 Inches

Price.....\$2.50



Western Chief Tire and Axle Shrinker No. 1

Jaws Adjust Themselves to Uneven Thicknesses with One Motion of the Lever



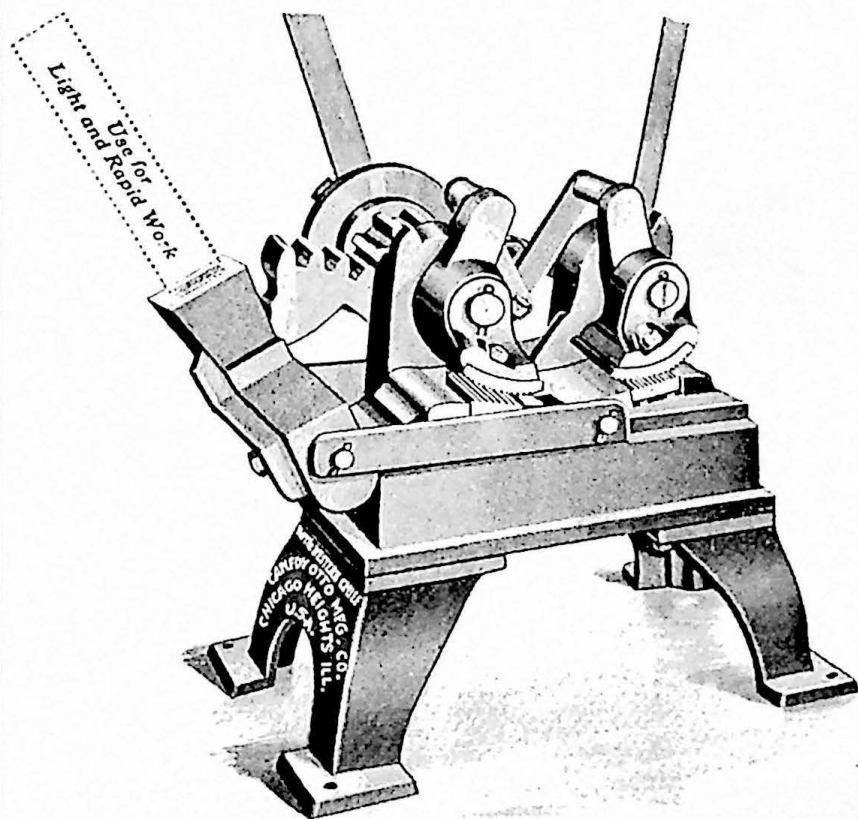
Will operate on tires as small as 26-inch diameter.

A strong machine, with capacity to shrink from smallest to 4 by 1-inch round-edge tires, and 1¼-inch square axles. The jaws are 4½ inches wide, and by means of a lever movement with universal joints they grip independently of each other, thereby adjusting themselves to uneven thicknesses, and with but one motion of the lever. The bed has open-and-shut or shrinking movement of 1½ inches. Ample space and strength is provided for pounding out bulges in tires. The jaw teeth are machine-cut Tool Steel properly hardened.

Weight, 360 Pounds

Price.....\$40.00

Western Chief Tire and Axle Shrinker No. 1 $\frac{1}{2}$



This Shrinker is far superior to any other hot-metal shrinker on the market, and is guaranteed to operate with one-half the labor of any shrinker of equal capacity.

The Shrinking Lever pulls toward the machine, not away, as is the case with other makes, and with a powerfully arranged gearing a light man can operate this Shrinker to its full capacity.

The Bed has an open-and-shut movement of 1 5-6 inches.

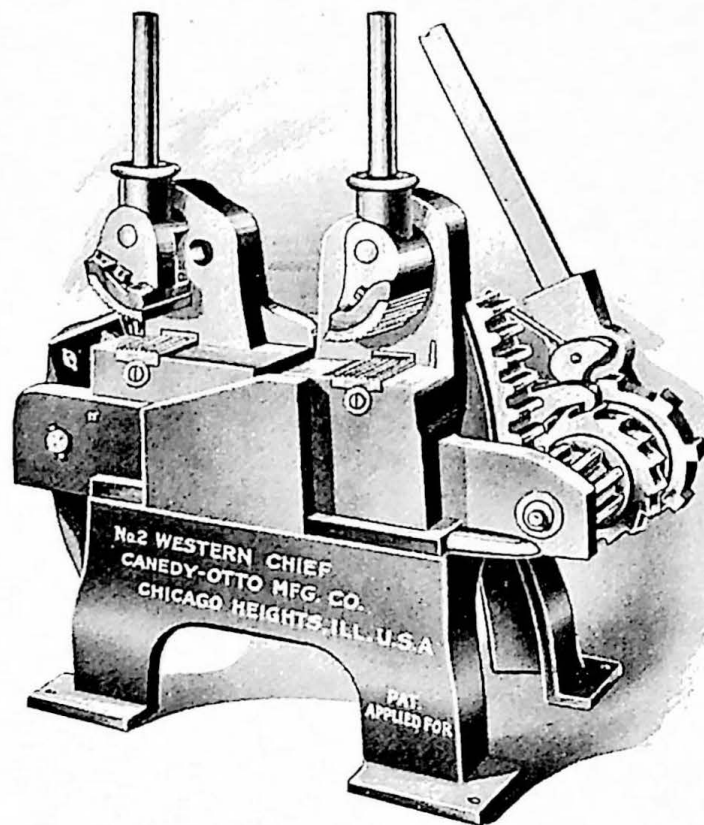
The Jaws are machine-cut, tool steel, properly hardened.

Size of Jaws, 4 $\frac{1}{2}$ inches wide, and will shrink from smallest to 4 x 1 inch round-edge tires, and 1 $\frac{1}{4}$ -inch square axles. Weight, 400 pounds.

Price.....\$40.00

Western Chief Welder No. 2

Combination Tire and Axle Upsetter and Welder



View Showing Axle Side.

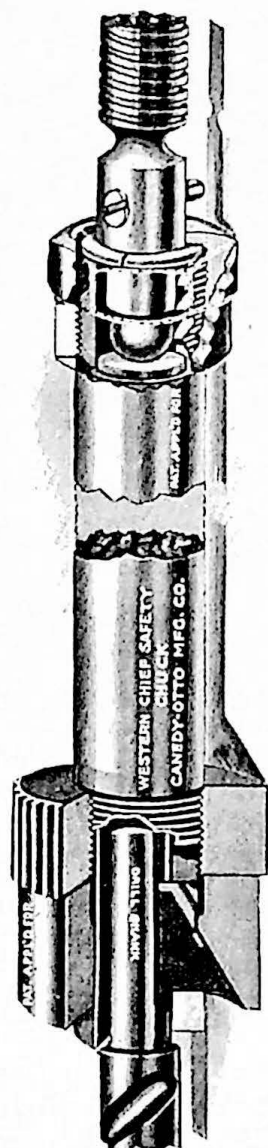
In presenting this machine to the trade we have some new and entirely original mechanical features not to be found in any other shrinker on the market. In this powerful machine we combine two separate machines in one by simply removing the top jaws to side of the machine for which the work to be done is adapted. This machine is built on the most modern mechanical principles. The leverage is applied in a manner to the sliding head so the line of force comes directly in line with the working strain, thereby reducing the friction on the slides until it is too little to mention, **making it easy for one man to operate.** The jaws are made of refined tool steel, machine-cut and properly tempered.

Size of Jaws, tire side, $4\frac{1}{2}$ inches wide, and will shrink from the smallest to $5 \times 1\frac{1}{4}$ inch round-edge tires and from smallest to $3\frac{1}{2}$ in. sq. axles. **Weight, 915 pounds.**

Price \$100.00

Sectional View of

Ball-Bearing and Safety Chuck



As Furnished on Western Chief Drills
Nos. 1, 2, 3, 7, 12, 14, 15, 16, 17, 18, 19 and 20.



Ball-Bearing

A single Steel Ball resting on a hardened Steel Disc. This contact of Ball and Disc forms a bearing in which the friction is too little to estimate.

These two features entirely overcome the old friction bearing, and set-screw for holding bits, that are so objectionable.



Safety Chuck

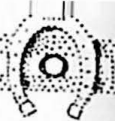
It is opened and closed with the hand.

No more set-screws to mar and bruise the shanks of bits.

No more wrenches to tighten and loosen set-screws.

No more twisting of bits in the chuck.

No more trouble in inserting and removing bits from chuck.



Western Chief DRILLS

*The most complete line of Drills
(quality, desirability and general
value considered) on the market.*



Pages 103 to 131

Western Chief Drill No. 0 $\frac{1}{2}$

A Single-Geared, Hand-Feed Drill

Our No. 0 $\frac{1}{2}$ Drill is a Neat, Durable Article, but is Hand-feed Only

Bores 0 to $\frac{3}{4}$ inch.

Drills to center of 12-inch Circle.

Up and Down run of Spindle, $2\frac{3}{4}$ inches.

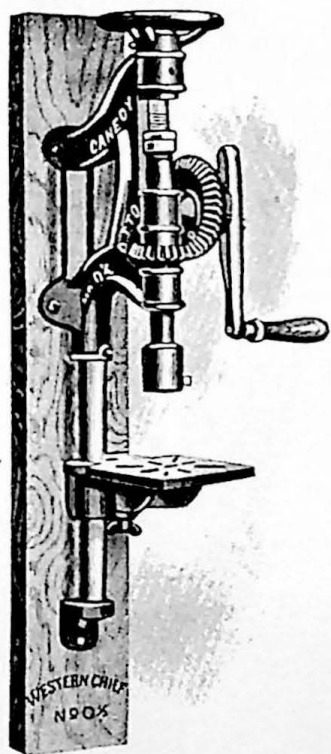
Up and Down run of Table, $9\frac{1}{2}$ inches.

Greatest distance from Table to Spindle, $9\frac{1}{2}$ inches.

Takes bits with $\frac{1}{2}$ -inch Shanks.

Weight, 50 pounds.

Light Wheel Rims can be drilled by removing table and using forked support as a wheelholder.



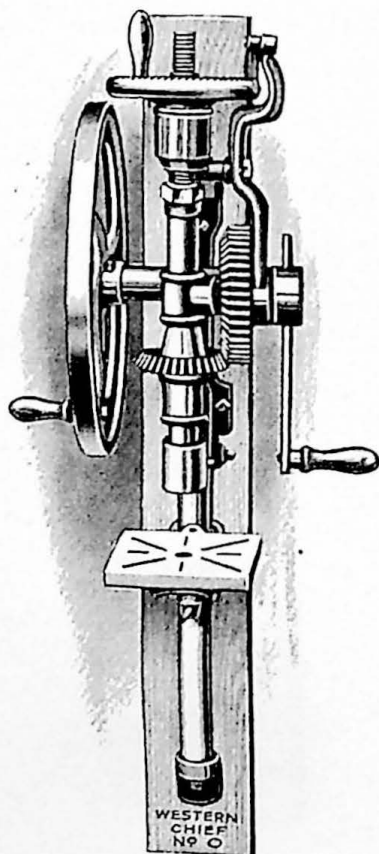
Best materials in its construction.

Price.....\$5.50

For List of Repairs. See Page 168

Western Chief Drill No. 0

Neat, Light and Durable



Our No. 0 Drill is Simple, yet Complete, and for Light Work is Very Satisfactory

Self-feed, Changeable Speed.

Fast and Slow Speed.

Bores 0 to $\frac{3}{4}$ -inch.

Drills to center of 12-inch Circle.

Up and Down run of Spindle, $2\frac{3}{4}$ inches.

Up and Down run of Table, $9\frac{1}{2}$ inches.

Greatest distance from Table to Spindle, $9\frac{1}{2}$ inches.

Takes bits with $\frac{1}{2}$ -inch shanks.

Weight, 75 pounds.

Light Wheel Rims can be drilled by removing table and using the forked support as a wheel-holder.

The Best Material is Used in Its Construction
Steel Mandrel, Shafts and Feed Screw

Price.....\$7.50

For List of Repairs, See Page 168

Western Chief Drill No. 00

A Reliable Drill at the Lowest Cost

Two speeds, Fast and Slow.

Self-feed, Changeable Speed.

Drills to center of 15-inch Circle.

Bores from 0 to 1 1/4 inches.

Up and Down run of Spindle 3 inches.

Up and Down run of Table, 10 3/4 inches.

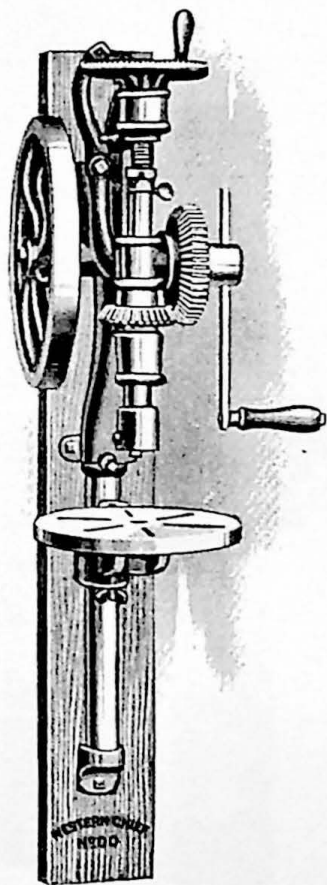
Greatest distance from Spindle to Table, 13 inches.

Size of Pulleys for Power, 8 x 2 1/8 inches. Should run 200 revolutions per minute.

Spindle bored for 1/2 or 41-64 inch Shank Bits. Always state size when ordering.

Weight, 110 pounds.

Light Wheel Rims can be drilled by removing table and using forked support as a wheel-holder.



Price.....\$10.00

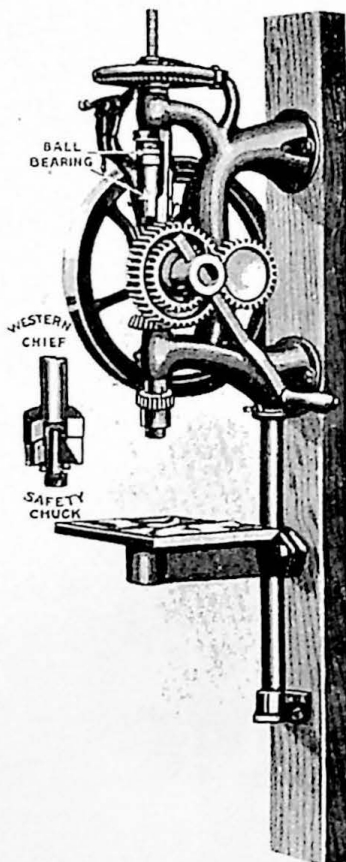
Power Attachment, \$2.00 net extra

For List of Repairs, See Page 170



Western Chief Drill No. 1

"Quick Return"



Self-feed, with three different speeds to feed: slow, medium and fast.

Double Geared for slow or fast speed.

Slotted, Rotating, Swinging Table.

Drills to center of 15-inch Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle, 2¾ inches.

Up and Down run of Table, 13 inches.

Greatest distance from Table to Spindle, 13 inches.

Size of Pulleys for Power, 8 x 2½ inches. Should run 200 revolutions per minute.

Spindle bored for ½ or ¾ inch shank bits. Always state size when ordering.

Weight, 130 pounds.

Wheel Rims can be drilled by removing table and using forked support as a wheel-holder.

Price.....\$15.00

Power Attachment, \$2.00 net extra

For List of Repairs, See Page 172

Western Chief Drill No. 2

A First-class Drill at a Very Reasonable Price

Self-feed, with three different speeds to feed: slow, medium and fast.

Double Geared for Slow or Fast speed.

Slotted, Rotating, Swinging Table.

Drills to center of 15-inch Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle, 3¼ inches.

Up and Down run of Table, 13 inches.

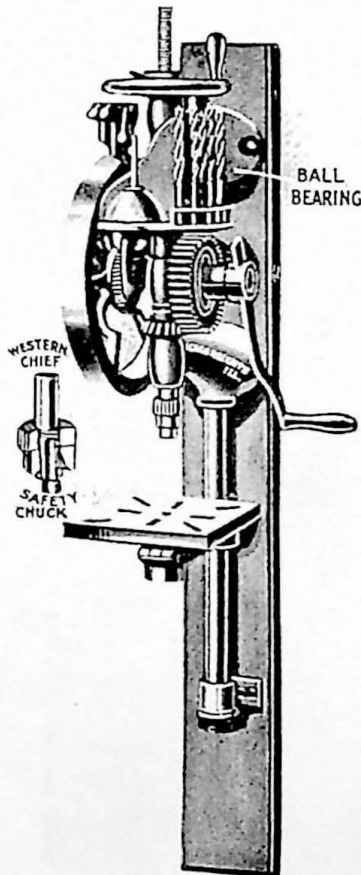
Greatest distance from Table to Spindle, 13 inches.

Size of Pulleys for Power, 8 x 2½ inches. Should run 200 revolutions per minute.

Spindle bored for ½ or 41-64 inch shank bits. Always state size when ordering.

Weight, 125 pounds.

Wheel Rims can be drilled by removing table and using forked support as a wheel-holder.



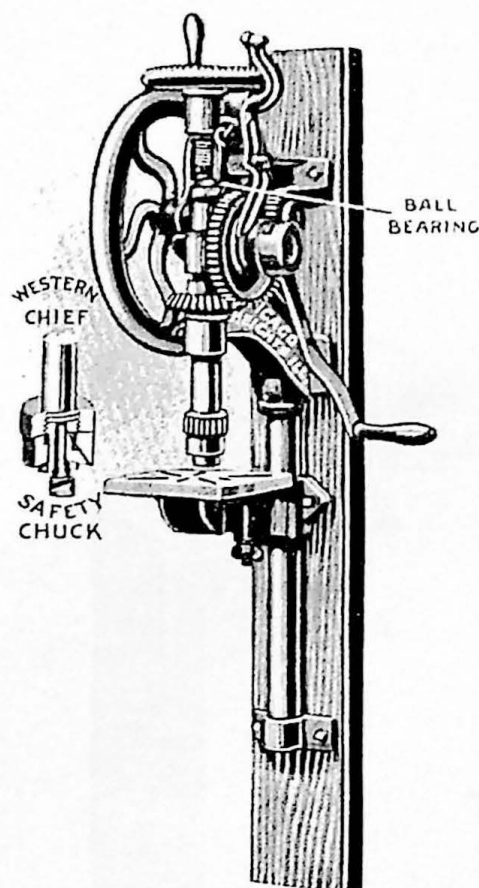
Price\$14.50

Power Attachment, \$2.00 net extra

For List of Repairs, See Page 172

Western Chief Drill No. 3

Not a Cheap Babbitted Affair, but a Successful Self-feed Drill,
Built on Mechanical Principles



Automatic Self-feed.

Drills to center of $14\frac{1}{2}$ -inch Circle.

Bores 0 to 1 inch.

Up and Down run of Spindle, $3\frac{1}{2}$ inches.

Up and Down run of Table, 11 inches.

Greatest distance from Table to Spindle, $10\frac{1}{2}$ inches.

Size of Pulleys for Power, $8 \times 2\frac{1}{2}$ inches. Should run 200 revolutions per minute.

Spindle bored for $\frac{1}{2}$ or 41-64 inch shank bits. Always state size when ordering.

Weight, 95 pounds.

Wheel Rims can be drilled by removing table and using forked support as a wheel-holder.

Price.....\$10.00

Power Attachment, \$2.00 net extra

For List of Repairs, See Page 174

Western Chief Drill No. 7

CUT GEARS ONLY USED IN THIS DRILL

Automatic Self-feed.

Fast and slow speed, instant change.

Drills to center of 21-inch Circle.

Bores 0 to 1½ ins.

Up and Down Run of Spindle, 5 inches.

Up and Down run of Table, 16½ inches.

Greatest distance from Table to Spindle, 19½ inches.

Size of Pulleys for Power, 10¾x2½ ins. Should run 175 to 180 revolutions per minute.

Spindle bored for ½ or ⅝ inch shank bits. **ALWAYS STATE SIZE WHEN ORDERING.**

WEIGHT

Hand Power

275 pounds

Pulley Power

295 pounds

The shaft on this drill (when ordered hand power) is left extended to receive pulleys any time thereafter.

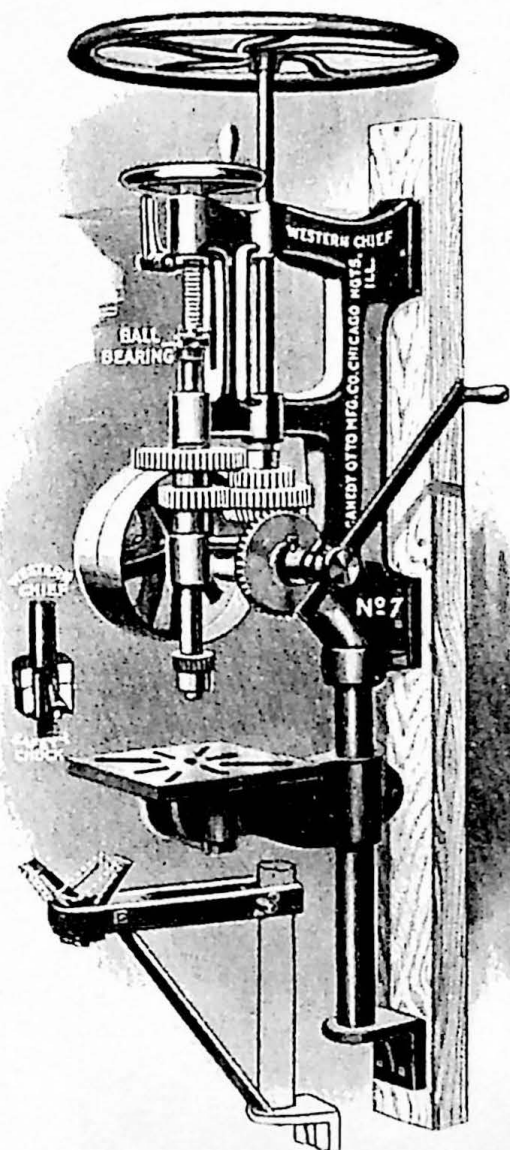
Wheel Rims can be drilled by removing table and using the forked support as a wheel-holder. A Special Wheel-holder Attachment, as illustrated, is furnished, when ordered, for \$2.00 extra.

Always shipped without pulleys, unless ordered.

Wheel-holder Attachment, \$2.00 extra.

Price, Without Pulleys, Hand Power only..... \$33.50

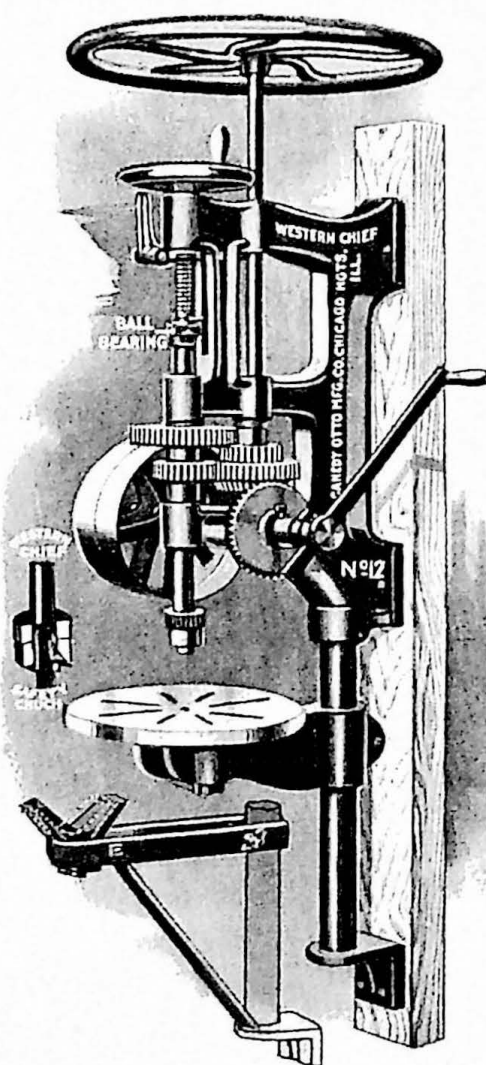
Price, With Pulleys (as illustrated)..... 37.50



For List of Repairs, See Page 178

Western Chief Drill No. 12

CUT GEARS ONLY USED IN THIS DRILL.



Automatic Self-feed.
Fast and slow speed, instant change.
Drills to center of 16-inch Circle.
Bores 0 to 1½ inches.
Up and Down run of Spindle, 4 inches.
Up and Down run of Table, 15½ inches.
Greatest distance from Table to Spindle, 16 inches.

Size of Pulleys for Power, 10¾ x 2½ inches. Should run 175 to 180 revolutions per minute.

Spindle bored for ½ or 41-64 inch shank bits. Always state size when ordering.

Weight, Hand Power, 215 pounds.

Weight, Pulley Power, 235 pounds.

The shaft on this drill (when ordered hand power) is left extended to receive pulleys any time thereafter.

Wheel Rims can be drilled by removing table and using forked support as a wheel-holder. A Special Wheel-holder Attachment as illustrated, is furnished, when ordered, for \$2.00 extra.

Always shipped without pulleys, unless ordered.

Wheel-holder Attachment \$2.00 extra.

Price, Without Pulleys, Hand Power only.....	\$27.50
Price, With Hand and Pulley Power Attachments (as illustrated)	31.50

For List of Repairs, See Page 178

Western Chief Drill No. 8

A Self-feed Hand Drill, Designed for Use Anywhere Upon the
Floor; No Post or Wall to Attach it to Necessary

Hand Power only.

Changeable Self-feed.

Drills to center of 23-inch
Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle,
5 inches.

Up and Down run of Table,
20 inches.

Greatest distance from Table
to Spindle, 18 inches.

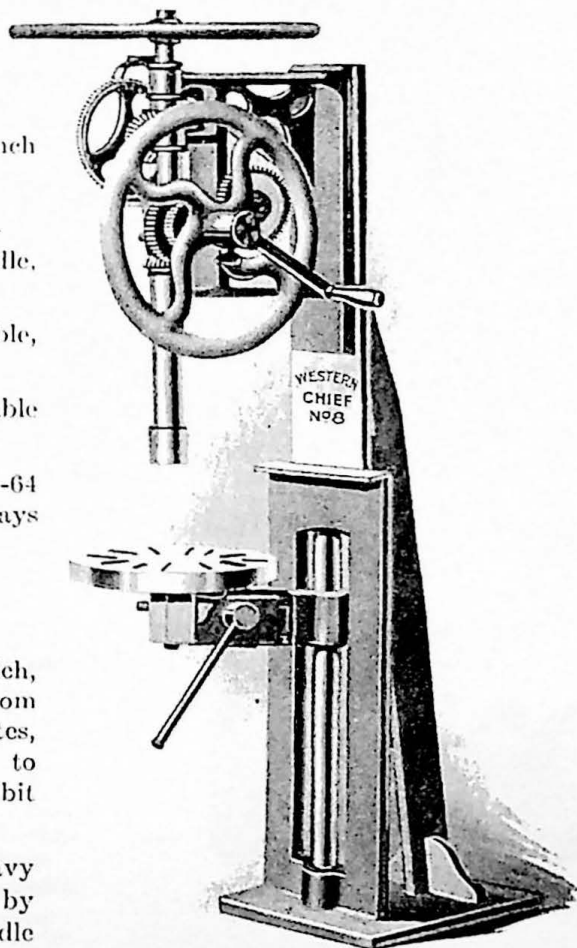
Spindle bored for ½ or 41-64
inch shank bits. Always
state size when ordering.

Height, 60 inches.

Weight, 380 pounds.

It has a slotted table which,
in addition to swinging from
side to side, also rotates,
enabling the operator to
bring his work under the bit
at any place desired.

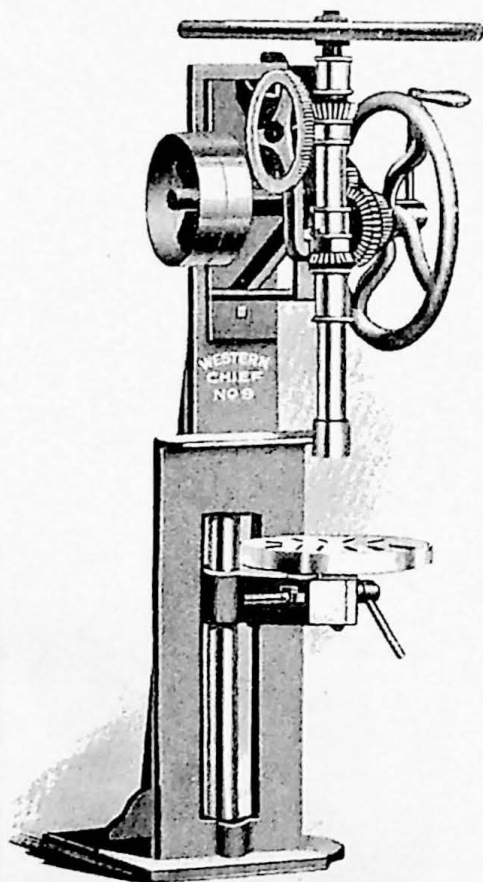
A second speed for heavy
work is readily obtained by
inserting the crank handle
into rim of fly-wheel.



Price.....\$30.00

Western Chief Drill No. 9

Combined Hand and Power Self-feed Floor Drill



Both Hand and Pulley Power
Changeable Self-feed.

Drills to Center of 23-inch
Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle,
5 inches.

Up and Down run of Table
20 inches.

Greatest distance from Table
to Spindle, 18 inches.

Spindle bored for ½ or 41-64
inch shank bits. Always
state size when ordering.

Height, 60 inches.

Weight, 390 pounds.

It has a slotted table, which
in addition to swinging from
side to side, also rotates, en-
abling the operator to bring
his work under the bit at any
place desired.

A second speed for heavy
work is readily obtained by
inserting the crank handle in-
to rim of fly-wheel.

Price.....\$35.00

Western Chief Drill No. 14

Straight and Bevel Gears are Cut. Fast and slow speed, instant change. Horizontal, gear-driven, positive, self-feed, changeable instantly to fast, slow or medium, as desired. Raise and lower device to table.

It has automatic quick return, allowing rapid withdrawal of the bit at will, without *stopping or reversing* machine. Or, it can be set to drill any depth desired and will *automatically* (whether running by power or hand) reverse itself, withdraw the bit and start drilling again and again indefinitely, all without stopping the motion of the machine, or turning it backward. This feature is independent of Drill, and need not be used unless desired.

Drills to center of 21-inch Circle.

Bores 0 to $1\frac{1}{4}$ inches.

Up and Down run of Spindle, 4 inches.

Up and Down run of Table, $16\frac{1}{2}$ inches.

Greatest distance from Table to Spindle, 18 inches.

Size of Pulleys, $10\frac{1}{4} \times 2\frac{1}{2}$ inches. Should run 175 to 180 revolutions per minute.

Spindle bored for $\frac{1}{2}$ or $\frac{3}{4}$ inch shank bits. **ALWAYS STATE SIZE WHEN ORDERING.**

Weight, Hand Power, 295 pounds.

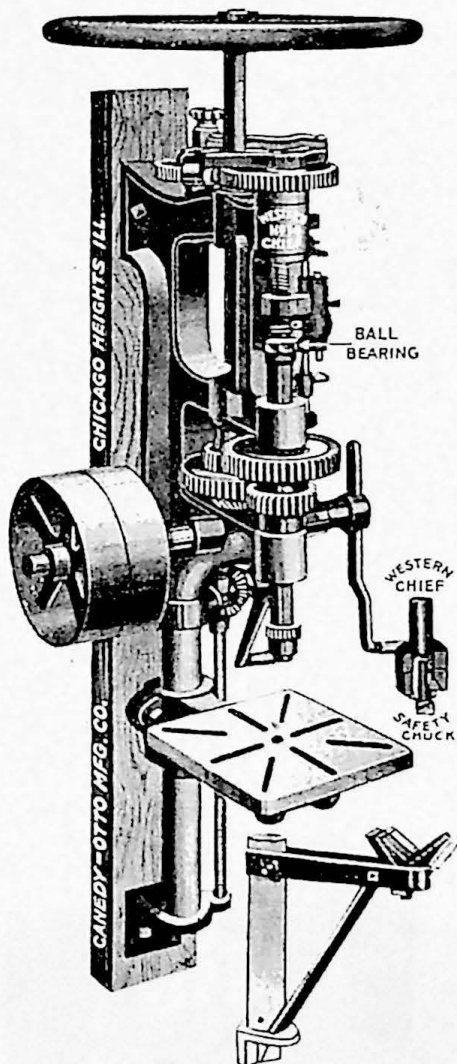
Weight, Hand and Power, 315 pounds.

Wheel Rims can be drilled by removing table and using the forked support as a wheel-holder. A special Wheel-holder Attachment, as illustrated, is furnished, when ordered, for \$2.00 extra.

The Shaft on this Drill (when ordered Hand Power) is left extended to receive pulleys at any time thereafter.

Always shipped without pulleys, unless ordered.

Wheel-holder Attachment, \$2.00 extra



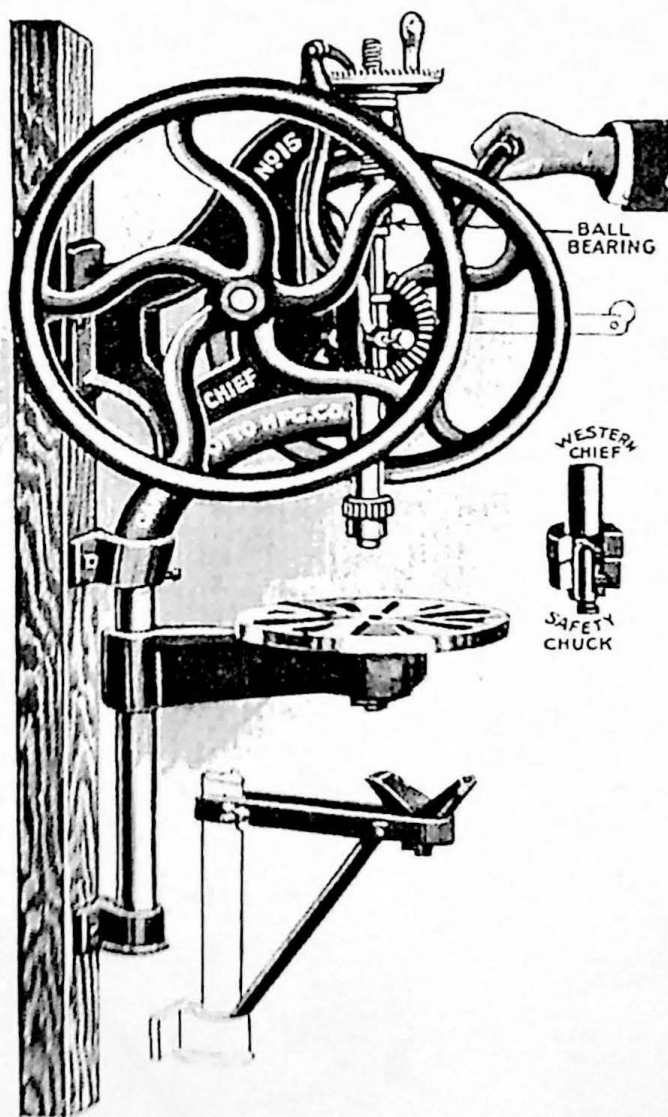
Price, Hand Power only.....\$38.50

Price, Both Hand Power and Pulley Power (as illustrated)..... 42.50

For List of Repairs, See Page 180

Western Chief Drill No. 15

Spur Gears are Cut. Back Geared. Self-feed. Changeable Speed



Drills to center of 19-inch Circle.

Bores 0 to 1½-inches.

Up and Down run of Spindle, 4 inches.

Up and Down run of Table, 11¾ inches.

Greatest distance from Table to Spindle, 13¾ inches.

Size of Pulleys, 8x2½ inches. Should run 200 revolutions per minute.

Spindle bored for ½ or ¾ inch shank bits. ALWAYS STATE SIZE WHEN ORDERING.

WEIGHT

Hand Power.....180 lbs.
Hand and Power...190 lbs.

Has two speeds, Fast and Slow, and for heavy drilling the slow speed is instantly obtained by inserting the crank handle in rim of fly-wheel.

The shaft on this Drill (when ordered Hand Power) is left extended to receive Pulleys at any time thereafter.

Wheel Rims can be drilled by removing the table and using the forked support as a Wheel-Holder. A special Wheel-holding Attachment, as illustrated, is furnished, when desired, for \$2.00 extra.

Always shipped without pulleys, unless ordered.

Wheel-holder Attachment, \$2.00 extra.

Price, Hand Power (as illustrated).....\$17.50

Price, Hand and Pulley Power.....19.50

For List of Repairs, See Page 176

Western Chief Drill No. 16

Largest Post Drill Made. A Post Drill with the Fine Features of Machine Shop Floor Drills

Straight and Bevel Gears are cut.

Fast and Slow speed, instant change.

Hand Lever Feed, also Horizontal Gear-driven Positive Self-feed, changed to fast, slow or medium speed instantly. These feeds work independently of each other, and bit is lifted quickly.

Raise and lower device to Table.

Drills to center of 24-inch Circle.

Bores 0 to $1\frac{1}{2}$ inches. Up and Down run of Spindle, $6\frac{1}{4}$ inches.

Up and Down run of Table, $15\frac{1}{2}$ inches.

Greatest distance from Table to Spindle, $18\frac{1}{2}$ inches.

Size of Pulleys, $10\frac{3}{4} \times 2\frac{1}{2}$ inches. Should run 175 to 180 revolutions per minute.

Spindle bored for $\frac{1}{2}$ or $\frac{11}{16}$ -inch shank bits. Always state size when ordering.

Weight, Hand Power, 340 pounds. Weight, Hand and Power, 360 pounds.

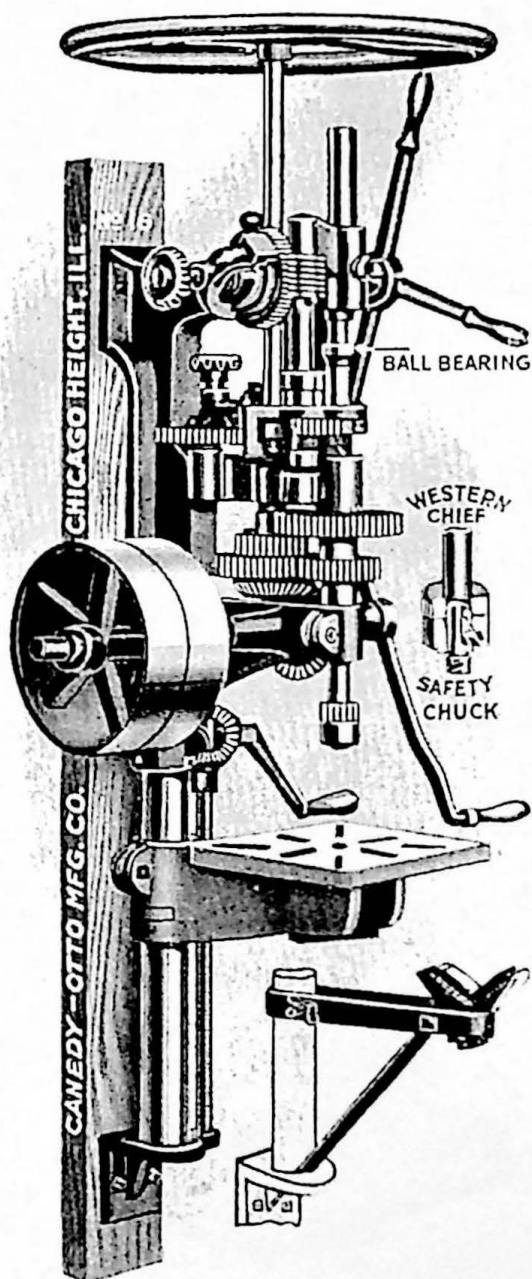
Wheel Rims can be drilled by removing table and using the forked support as a wheel-holder.

When ordered hand power only, the shaft is left extended, so that Pulleys may be placed at any time.

Always shipped without Pulleys, unless ordered.

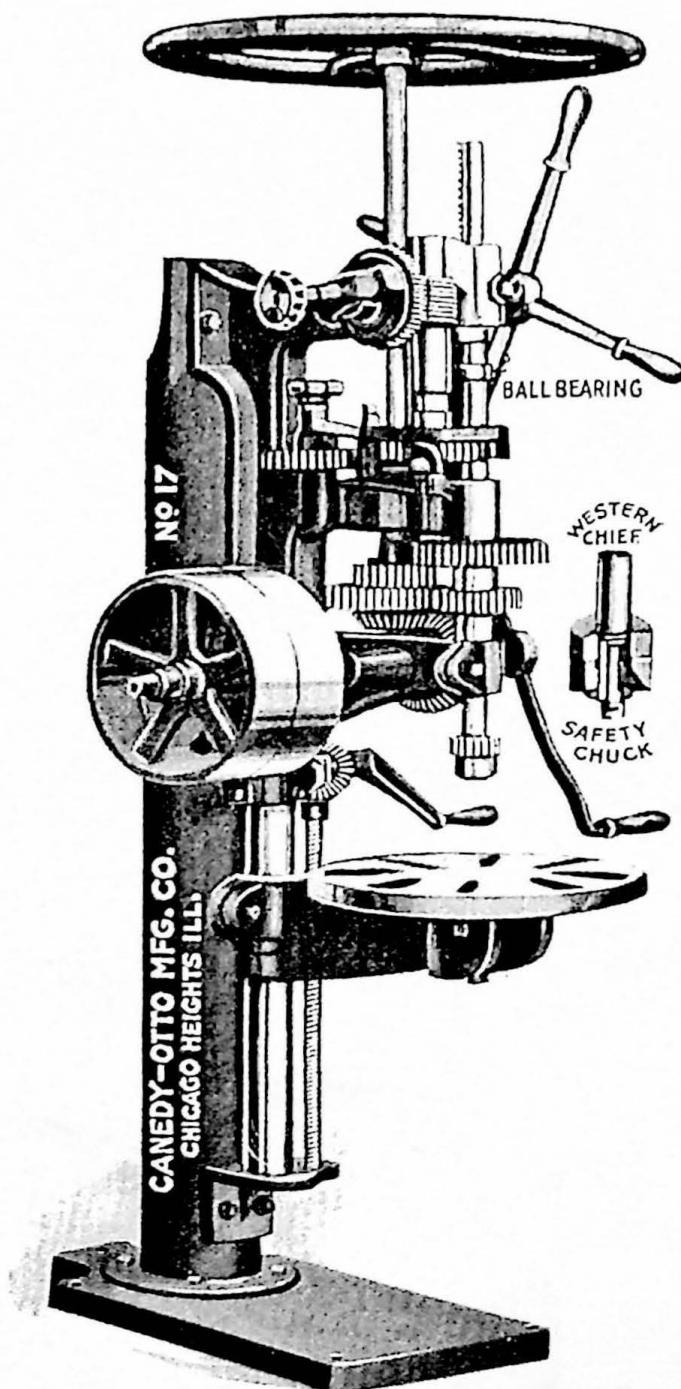
PRICE, Hand Power only.....\$42.50

PRICE, With Pulleys (as illustrated)....\$46.50



For List of Repairs, See Page 182

Western Chief Drill No. 17



A FINISHED FLOOR DRILL, BOTH HAND AND PULLEY POWER. Straight and Bevel Gears are cut.

Fast and Slow speed, instant change.

Hand Lever Feed, also Horizontal Gear-driven Positive Self-feed, changed to fast, slow or medium instantly. These feeds work independently of each other, and bit is lifted quickly.

Raise and lower device to Table.

Drills to center of 24-inch Circle.

Bores 0 to 1½ inches. Up and Down run of Spindle, 6¼ inches. Up and Down run of Table, 15½ inches. Greatest distance from Table to Spindle, 18½ inches.

Height of Machine, 71 inches.

Floor space, 15x26 inches. Size of Pulleys, 10¾x2½ inches. Should run 175 to 180 revolutions per minute.

Spindle bored for ½ or ¾ inch shank bits.

ALWAYS STATE SIZE WHEN ORDERING.

When specially ordered we will bore spindle to receive No. 3 Morse taper.

Weight 535 pounds. Wheel Rims can be drilled by removing table and using forked support as a wheel-holder. Special Wheel-holder Attachment can be furnished for \$2.00 net.

Price, Hand and Pulley Power (as illustrated).....\$65.00
For List of Repairs, See Page 182

Western Chief Drill No. 18

Spindle is equipped with Ball Bearings.

Straight and Bevel Gears are cut.

Fast and Slow Speed, instant change.

Horizontal Positive Gear-driven Self-feed, changeable instantly to fast, slow or medium, as desired.

Hand Lever Feed, working independent of Self-feed; the most powerful of any post drill on the market. Permits a quick lift or return of Spindle, an excellent feature for wood-boring.

Raise and lower device to Table.

Drills to center of 21-inch Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle, 5½ inches.

Up and Down run of Table, 16½ inches.

Greatest distance from Table to Spindle, 18 inches.

Size of Pulleys, 10¾ x 2½ inches. Should run 175 to 180 revolutions per minute.

Spindle bored for ½ or ¾ inch shank bits. ALWAYS STATE SIZE WHEN ORDERING.

Weight, Hand Power... 300 lbs.

Weight, Hand and

Power..... 320 lbs.

Wheel rims can be drilled by removing table and using forked support as a wheel-holder.

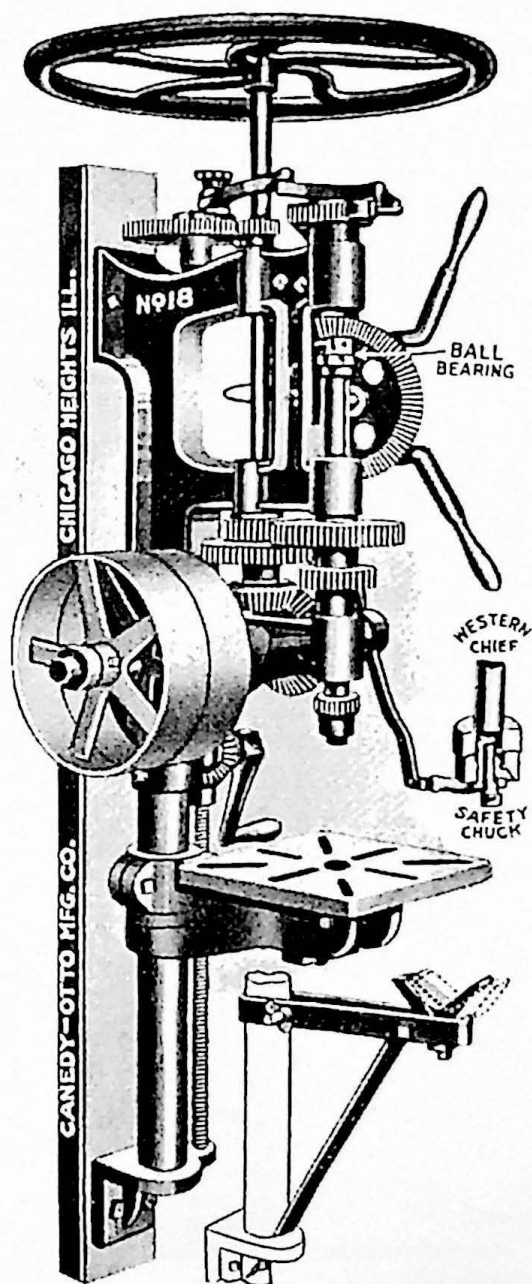
When ordering hand power only, shaft is left extended so that pulleys may be placed at any time.

Always shipped without pulleys, unless ordered.

Special Wheel-holder Attachment, \$2.00 extra.

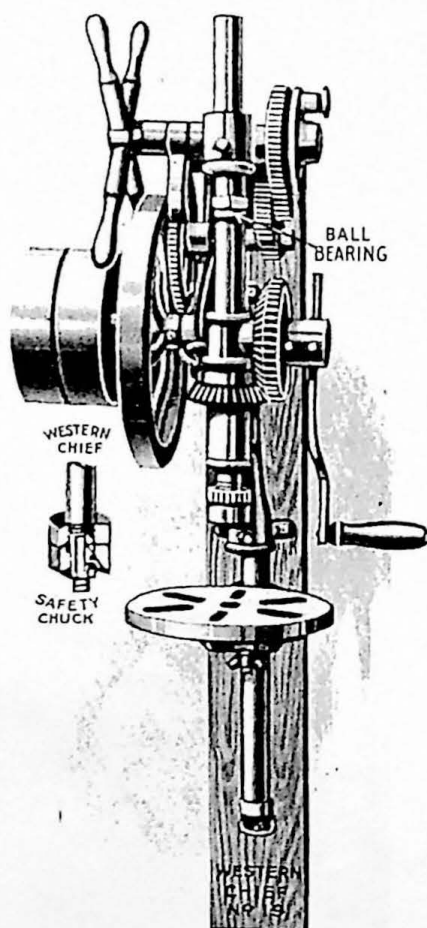
Price, Hand Power only..... \$40.50

Price, With Pulleys (as illustrated)..... 44.50



Western Chief Drill No. 19

A Low-priced Combined Hand and Self-feed Drill. Adapted to Ordinary Shop Use



The Hand and Self-feed are independent of each other, and for quick work, such as wood boring, it is unsurpassed, as bit is quick-lifted.

Drills to Center of 16½-inch Circle.

Bores 0 to 1¼ inch.

Up and Down run of Spindle, 5½ inches.

Up and Down run of Table, 11 inches.

Greatest distance from Table to Spindle, 14 inches.

Size of Pulleys, 8 x 2 inches. Should run 190 to 200 revolutions per minute.

Spindle bored for ½ or ¾ inch shank bits. ALWAYS STATE SIZE WHEN ORDERING.

Weight, Hand Power... 130 lbs.
Weight, Hand and

Power..... 140 lbs.

When ordered hand power only, the shaft is left extended, so that Pulleys may be placed at any time.

Always shipped without Pulleys, unless ordered.

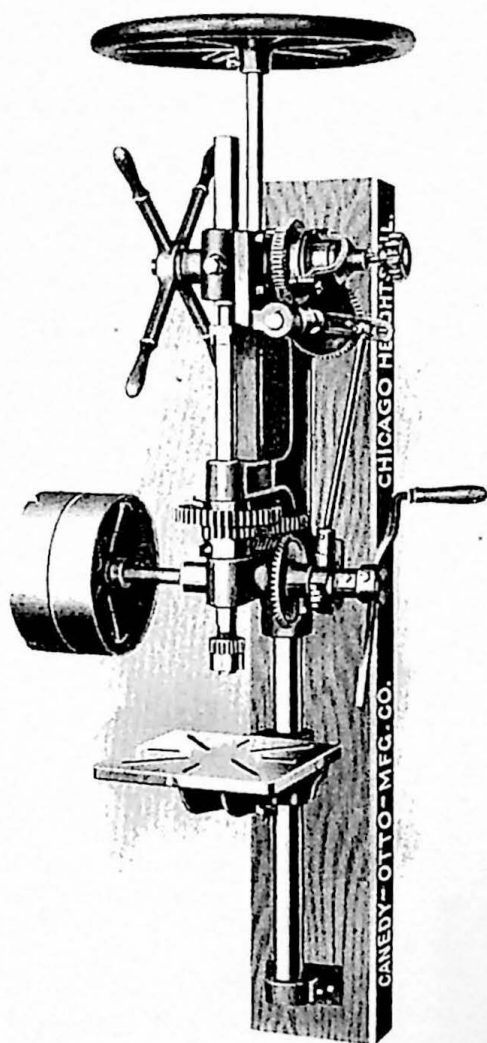
Wheel Rims can be drilled by removing table and using the forked support as a holder.

Price, Hand Power only.....\$18.00
Price, With Pulleys (as illustrated)..... 20.00

For List of Repairs, See Page 186

Western Chief Drill No. 20

The Long Stroke Drill



Description:

All gears are cut.
Fast and slow speed,
instant change.

Horizontal positive gear
driven worm feed,
changeable instantly to
fast, slow or medium,
as desired.

Has up and down run of
spindle of 8 inches,
which is very important
for shops, especially
where wood work is done.
Drills to center of 18-
inch circle.

Bores 0 to 1½ inches.

**Up and down run of
spindle 8 inches.**

Up and down run of
table 20 inches.

Greatest distance from
table to spindle 19 inches.

Size of pulleys 10¾x2½
inches.

Should run 175 to 180
R. P. M.

Spindle bored for ½ or
¾ inch shank bits.

**ALWAYS STATE
SIZE WHEN ORDER-
ING.**

Weight, hand power,
..... 270 lbs.

Weight, hand and power
..... 290 lbs.

Price, hand power only,
..... \$38.00

Price, with pulley as
illustrated..... 42.00

Western Chief Electric Drill No. 20

A long stroke post drill equipped with a high class, powerful motor of the best make, costing less than 25c a day to operate.

There are no belts, the motor being directly connected with spur gear drive, accurately cut. Fast and slow speed, instant change.

Horizontal positive gear driven worm feed, changeable instantly to fast, slow or medium, as desired.

Up and down run of spindle of 8 inches which is very important for shops, especially where woodwork is done.

Drills to center of 18-inch circle.

Bores 0 to 1½ inches.

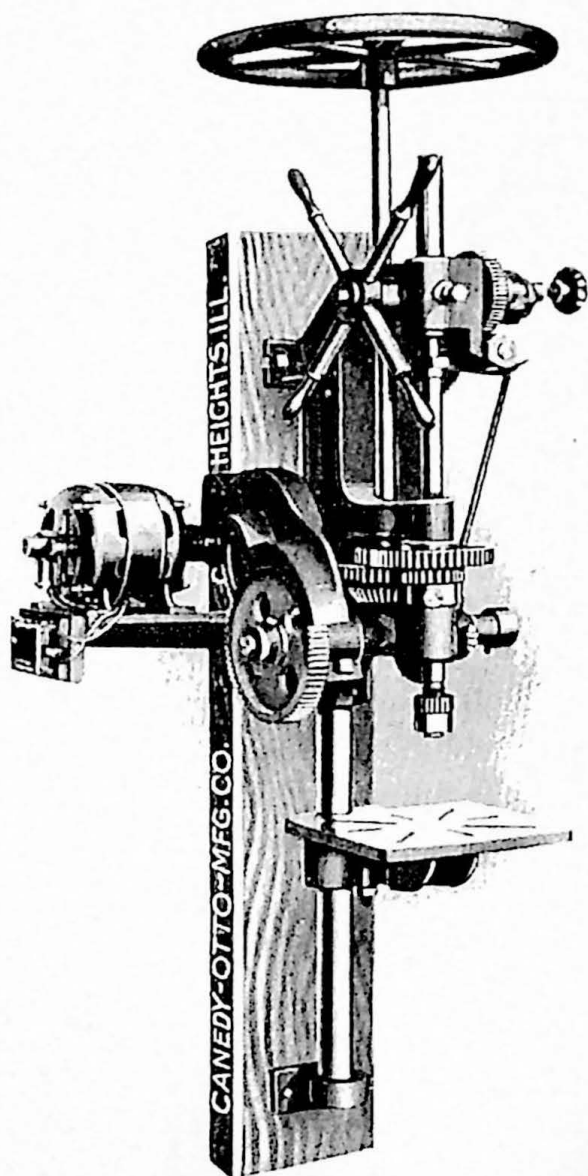
Up and down run of spindle 8 inches.

Up and down run of table 20 inches.

Greatest distance from table to spindle 19 inches.

Spindle bored for ½ or 41-64 inch shank bits—**ALWAYS STATE SIZE WHEN ORDERING.**

Weight, 350 lbs.



Price, as illustrated.....\$135.00

Western Chief Electric Drill No. 16

Post Drill with the fine features of a machine shop floor drill, equipped with a high-class, powerful motor of the best make, costing less than 25c a day to operate. There are no belts, the motor being directly connected with spur gear drive, accurately cut.

Fast and Slow speed, instant change.

Hand Lever Feed, also Horizontal Gear-driven Positive Self-feed, changed to fast, slow or medium speed instantly. These feeds work independently of each other, and bit is lifted quickly.

Raise and lower device to Table.

Drills to center of 24-inch Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle, 6½ inches.

Up and Down run of Table, 15½ inches.

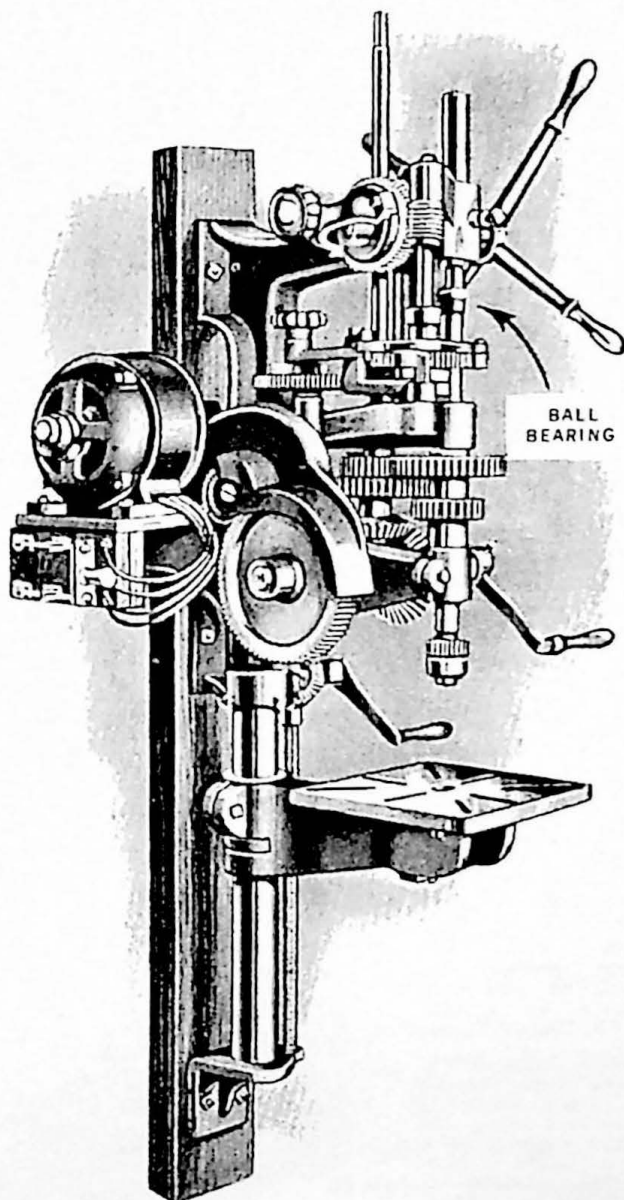
Greatest distance from Table to Spindle, 18½ inches.

Spindle bored for ½ or 41-64 inch shank bits.
ALWAYS STATE
SIZE WHEN ORDER-
ING.

Weight, 400 pounds.

Wheel Rims can be drilled by removing table and using the forked support as a wheel-holder.

Special Wheel-holder Attachment, \$2.00 extra.



Price, as illustrated.....\$150.00

Western Chief Electric Drill No. 17

A finished Floor Drill, equipped with a high-class powerful motor of the best make, costing less than 25c a day to operate. There are no belts, the motor being directly connected with spur gear drive.

Straight and Bevel Gears are cut.

Fast and Slow speed, instant change.

Hand lever Feed, also Horizontal Gear-driven Positive Self-feed, changed to fast, slow or medium speed instantly. These feeds work independently of each other, and bit is lifted quickly.

Raise and lower device to Table.

Drills to center of 24-inch Circle.

Bores 0 to 1½ inches.

Up and Down run of Spindle, 6½ inches.

Up and Down run of Table, 15½ inches.

Greatest distance from Table to Spindle, 18½ inches.

Height of Machine, 71 inches.

Floor space, 15x26 inches.

Spindle bored for ½ or 41-61-inch shank bits. ALWAYS STATE SIZE WHEN ORDERING.

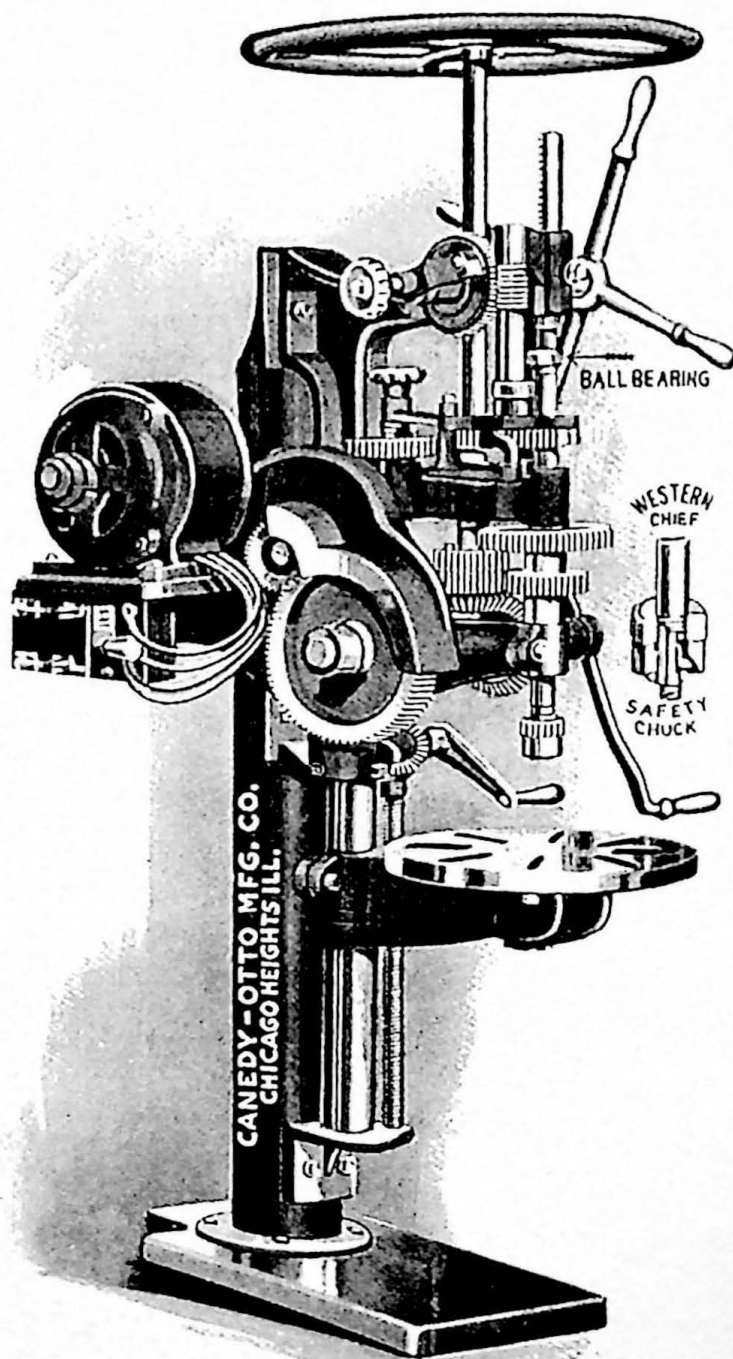
When specially ordered, we will bore Spindle to receive No. 3 Morse Taper.

Weight, 590 pounds.

Wheel Rims can be drilled by removing table and using the forked support as a wheel-holder.

Special Wheel-holder Attachment can be furnished for \$2.00 net.

Price.....\$175.00



Western Chief Sensitive Floor Drill No. 27

For Light and Rapid Drilling



Drills to center of 16-inch Circle.

Bores 0 to $\frac{3}{8}$ inch.
Vertical traverse of Spindle, 4 inches.

Vertical traverse of Table, 2 feet 8 $\frac{1}{2}$ inches.
Greatest distance from Table to Spindle, 2 feet 7 inches.

Diameter of Column, 3 $\frac{1}{2}$ inches.

Size of tight and loose Pulley 6 x 2 $\frac{1}{2}$ inches.

Size of large Cone Pulley, 4 $\frac{3}{4}$ x 1 $\frac{3}{4}$ inches.

Size of second Cone Pulley, 4 $\frac{1}{2}$ x 2 $\frac{3}{4}$ inches.

Size of third Cone Pulley, 3 $\frac{1}{4}$ x 2 $\frac{3}{4}$ inches.

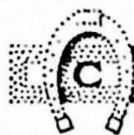
Size of small Cone Pulley, 2 x 2 $\frac{3}{4}$ inches.

Spindle is fitted with holes for drills having No. 2 taper shanks.

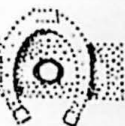
Height, 66 inches.

Weight, 210 pounds.

Price.....\$60.00

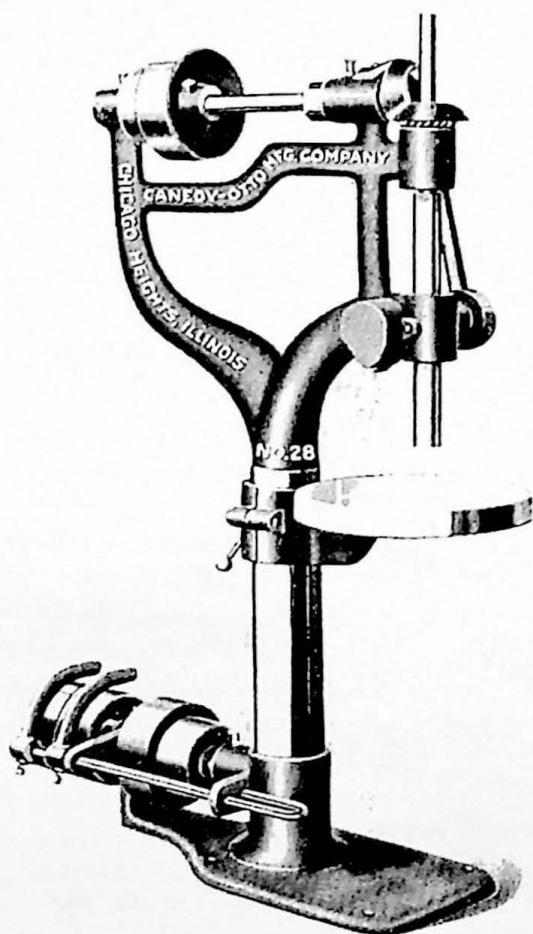


CANEDY-OTTO MFG. CO.



Western Chief Sensitive Bench Drill No. 28

For Light and Rapid Drilling



Drills to the center of a 9-inch Circle.

Bores 0 to $\frac{1}{2}$ inch.

Vertical traverse of Spindle, $3\frac{1}{4}$ inches.

Vertical traverse of Table, 8 inches.

Greatest distance from Table to Spindle, 8 inches.

Diameter of Column, $2\frac{1}{2}$ inches.

Size of tight and loose Pulleys, $4 \times 1\frac{5}{8}$ inches. Should run 650 revolutions per minute.

Size of large Cone Pulley, $4\frac{3}{8} \times 1\frac{1}{2}$ inches.

Size of small Cone Pulley, $3 \times 1\frac{1}{2}$ inches.

Spindle is fitted with holes for drills having No. 1 taper shanks.

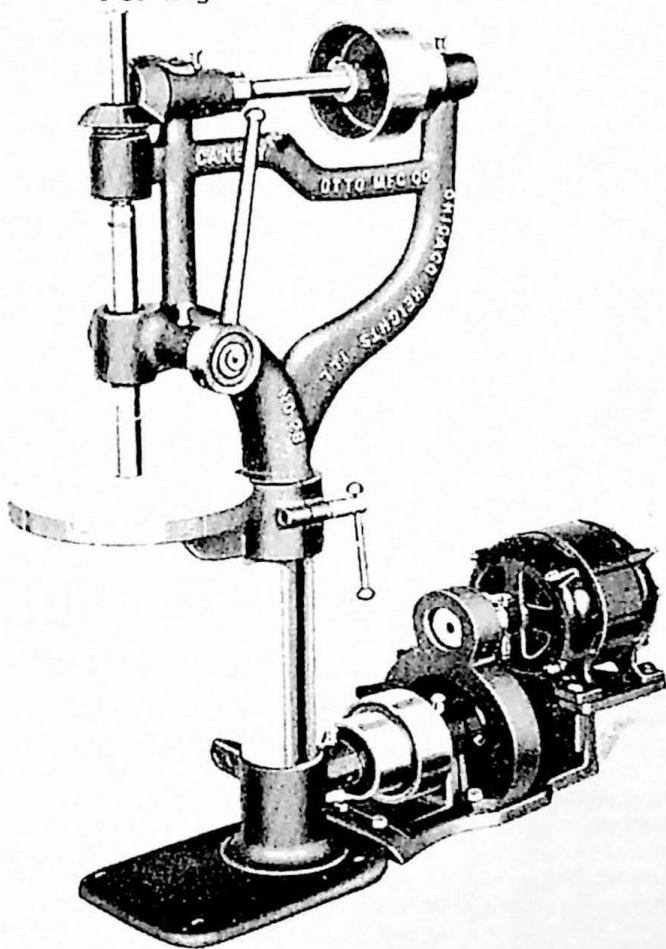
Height, 32 inches.

Weight, 85 pounds.

PRICE.....\$25.00

Motor Driven Bench Drill No. 28

For Light and Rapid Drilling



An accurately made sensitive Bench Drill, equipped with a high-class powerful motor of the best make, costing less than 25 cents a day to operate. There are no belts, the motor being directly connected with spur gear drive, accurately cut. Drills to the center of 9-inch circle.

Bores.....	0 to 1 1/2 inch
Vertical traverse of spindle.....	3 1/4 inches
Vertical traverse of table.....	8 inches
Greatest distance from table to spindle.....	8 inches
Diameter of column.....	2 1/2 inches
Size of large cone pulley.....	4 3/4 x 1 1/2 inches
Size of small cone pulley.....	3 x 1 1/2 inches
Spindle is fitted with holes for drills having No. 1 taper shanks.	

Height, 32 inches

Weight, 120 pounds

PRICE.....

\$85.00

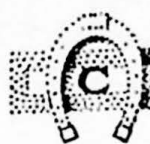
Description of Nos. 30 and 31 Drills

For illustration, see pages 127, 128 and 129.

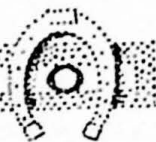
Height of Drill, 67 inches.
 Greatest distance between round base and spindle, $42\frac{1}{2}$ inches.
 Greatest distance between square base and spindle, 41 inches.
 Greatest distance between table and spindle, 29 inches.
 Travel of spindle, 9 inches.
 Diameter of spindle in sleeve, $1\frac{5}{8}$ inches.
 Diameter of spindle above sleeve, $1\frac{1}{4}$ inches.
 Spindle bored to receive No. 3 Morse taper.
 Feeds of bit per revolution of spindle, .005, .015, .030 inches.
 Drills to center of 21-inch circle.
 Diameter of table, 16 inches.
 Diameter of column, $5\frac{5}{8}$ inches.
 Travel of table on column, $18\frac{1}{2}$ inches.
 Diameter of spur gears, $7\frac{1}{4}$, $5\frac{7}{8}$, $4\frac{5}{8}$ and 3 inches.
 Size of pulleys, $8 \times 2\frac{1}{2}$ inches.
 Pulleys should be speeded to run about 425 revolutions per minute.
 Floor space required for round base, 28×20 inches.
 Floor space required for square base, 38×15 inches.
 Weight, net, round base, 570 pounds.
 Weight, net, square base, 660 pounds.
 Add for machine crated, about 50 pounds.

Superior Points

No cone pulleys to wear out belts.
 No countershaft on the floor to gather up dirt and wear out.
 More power, because gears substitute cone pulleys and **gears do not slip.**
 More wearing surface, because bearings are larger.
 Better adapted to use of "high-speed" bits, because of greater power and speed combined.
 No loose gears on shaft to run idle and wear out. All gears turn with the shafts, insuring a true-running and long-lasting gear.
 Four changes of speed by shifting gears; more convenient and quicker than shifting a belt.
 Better self-feed, because independent of lever feed; built strong; no loose joints, and has automatic stop. (**Self-feed Automatic Stop on No. 31 only.**)
 Gears are noiseless, because cut by modern methods and special tools.
 No clutches to wear, get loose and fail to work.
 Both table and supporting arm can be clamped tight in position by use of clamp screws with lever handles, thus avoiding use of separate wrenches.
 Spindle is equipped with ball bearings.
 More power and speed combined than any 20-inch drill on the market.



CANEDY-OTTO MFG. CO.



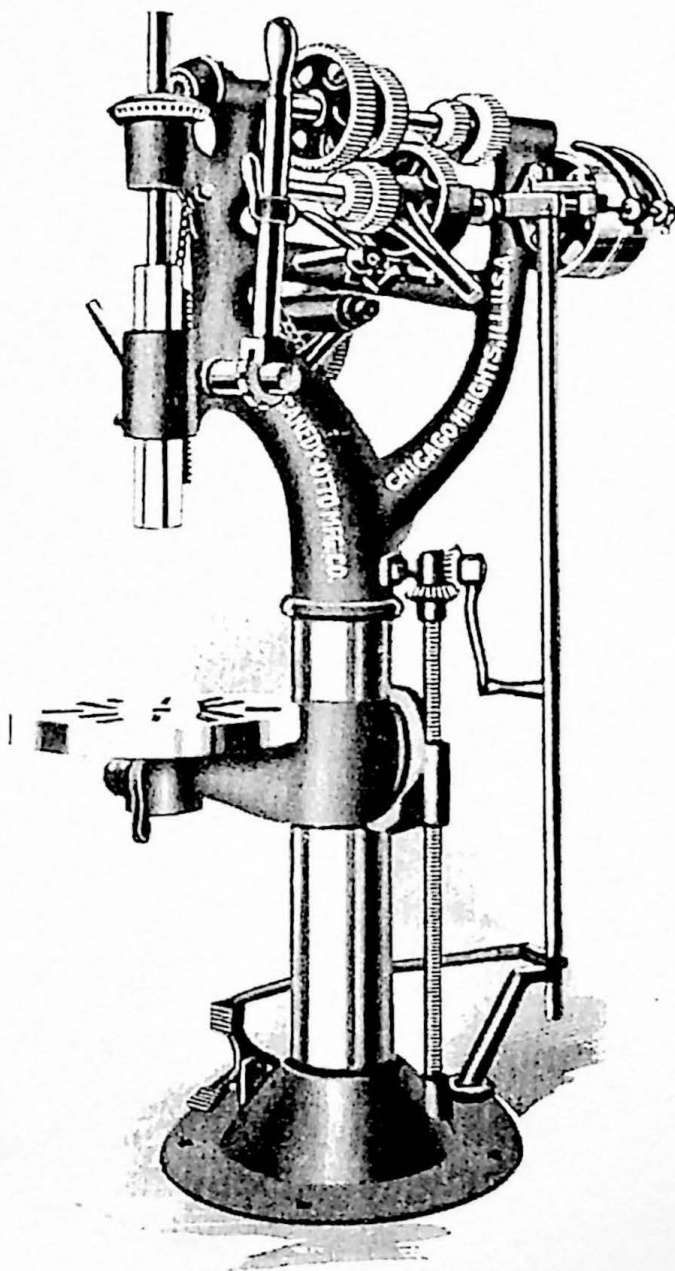
Canedy-Otto 20-Inch Upright Drill No. 30

No. 30 Drill

Is furnished with
Lever Feed only.

No. 30 Drill

Is furnished with
Round Base.



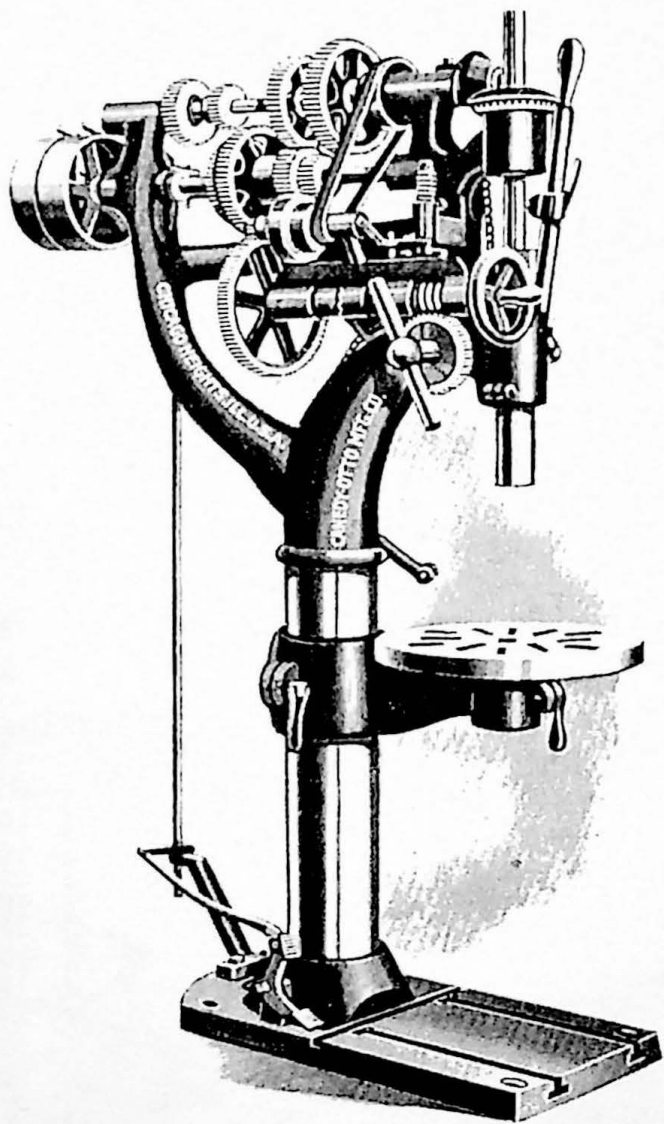
For description, see page 126.

Canedy-Otto 20-Inch Upright Drill No. 31

No. 31 Drill

Right side view.
Has both Lever
and Self-feed.

For description
see page 126.

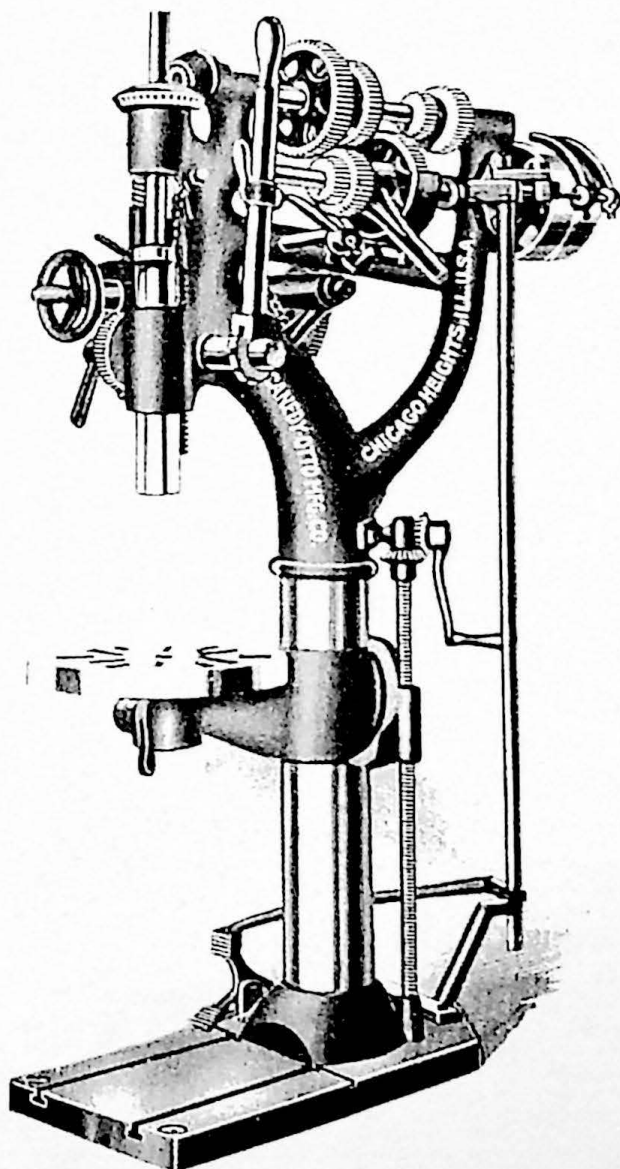


All Gearing has proper shield guards to prevent injury to operator,
though not shown in illustrations.

Canedy-Otto 20-Inch Upright Drill No. 31

No. 31 Drill

Right side view.
Has both Lever and
Self-feed.



For description, see
page 126.

No. 31 Drill is furnished with Square Base, has Hand-lever Feed, also Power Self-feed with Automatic Stop.

Canedy-Otto 20-Inch Upright Drill No. 40

A new machine shop floor drill that has several desirable features not to be found on any other floor drill manufactured.

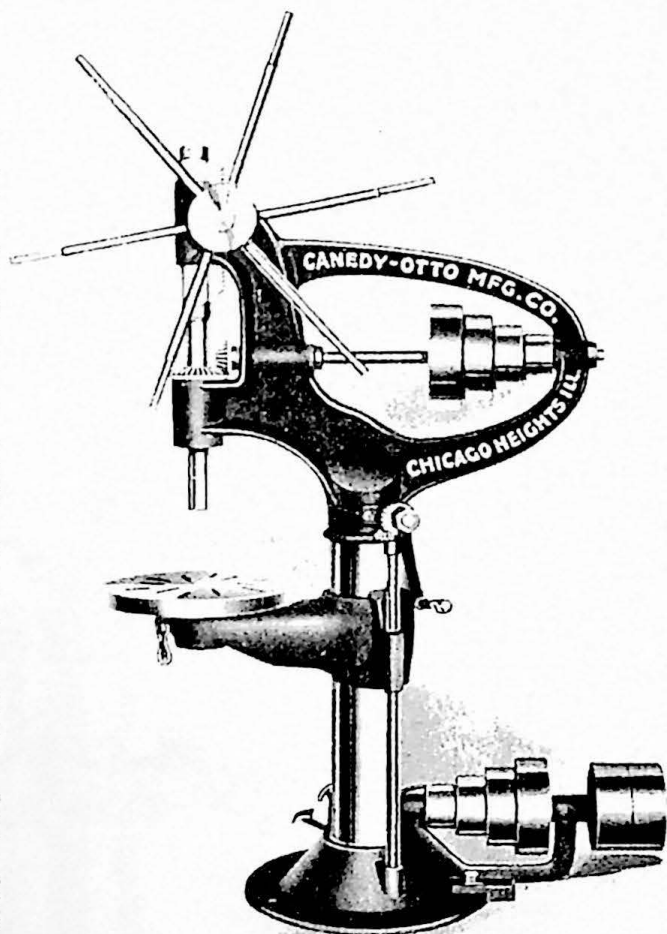
The spindle is solid, extra large and very rigid, and so constructed that the wear and looseness can be taken up at the bottom bearing, it being a split phosphor bronze bushing. The bearings both at the top and bottom are larger than on any 20 inch drill up to date.

The bevel gear drive is near the work, where it should be to get the most accurate results.

The long handled star lever hand feed is the most convenient and rapid method known to drill users.

The frame is heavy and so designed that it will resist heavy strains.

The drift hole is very convenient to get at, there being no sleeve to obstruct it.



SPECIFICATIONS

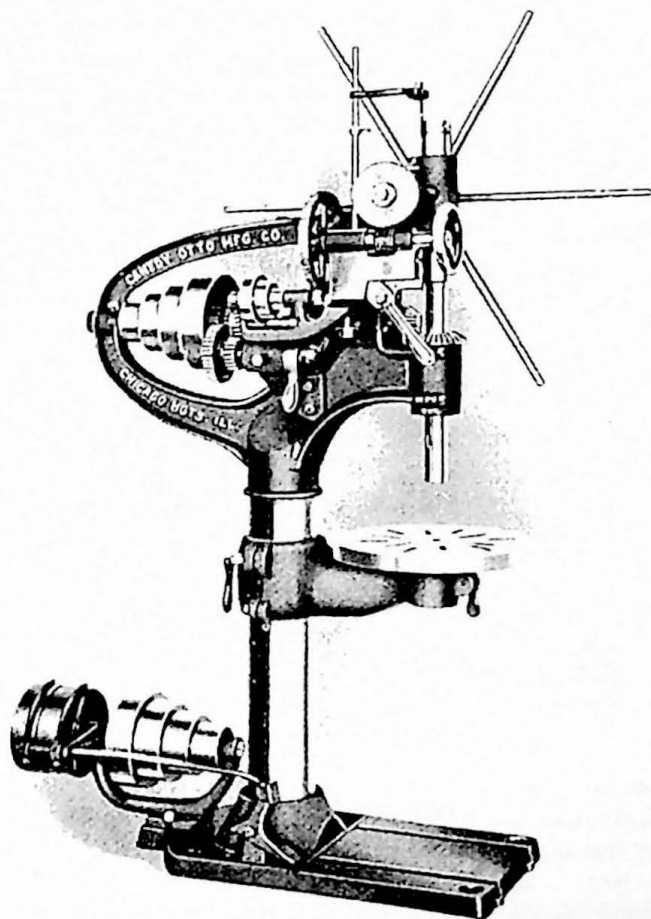
Height of drill, 70 inches.
Greatest distance between base and spindle, 39 inches.
Greatest distance between table and spindle, 26½ inches.
Travel of spindle, 9½ inches.
Diameter of spindle in sleeve, 1½ inch.
Diameter of spindle below sleeve, 1¼ inch.
Spindle socket No. 3, Morse.
Drills to center of 21 inch circle.
Diameter of column, 5½ inches.

Travel of table on column, 19 inches.
Diameter of table, 16 inches.
Size of cone pulleys, 8⅞, 7¼, 5½, 4x2¼ inch face.
Diameter of tight and loose pulleys, 8x2¼ inch face.
Floor space required for drill, 20x36 inches.
Speed of countershaft about 380 revolutions per minute.
Net weight, 580 pounds.

Price, \$95.00



Canedy-Otto 20-Inch Upright Back Geared Drill No. 41



A new machine shop floor drill that has several desirable features, adapted for quick, accurate, heavy and light drilling. Its construction is quite different from and superior to the general run of drills. The bevel gear drive is placed near the work to be done, so as to get better results.

The spindle is solid, extra large and very rigid, and so constructed that the wear and looseness can be taken up at the bottom bearing, it being a split phosphor bronze bushing. The bearings, both at the top and bottom, are larger than on any 20-inch drill up to date. The long handled star lever feed is the most convenient and rapid method known to drill users.

The frame is heavy and so designed that it will resist heavy strains.

The drift hole is very convenient to get at, there being no sleeve to obstruct it.

It is equipped with self-feed, having eight speeds, automatic stop and back gear.

Equipped with all necessary guards and safety appliances (not illustrated).

SPECIFICATIONS

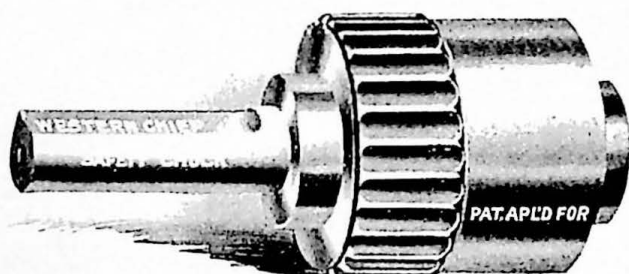
Height of drill, 70 inches.
Greatest distance between base and spindle, 39 inches.
Greatest distance between table and spindle, 26½ inches.
Travel of spindle, 9½ inches.
Diameter of spindle in sleeve, 1½ inch.
Diameter of spindle below sleeve, 1¾ inches.
Spindle socket No. 3 Morse.
Drills to center of 21-inch circle.

Diameter of table, 16 inches.
Diameter of column, 5¾ inches.
Travel of table on column, 19 inches.
Size of cone pulleys, 8¾, 7¼, 5¾, 4x2¼ inch face.
Diameter of tight and loose pulleys, 8x2¼ inch face.
Speed of countershaft about 380 revolutions per minute.
Net weight, 670 pounds.

Price, \$140.00

Western Chief Safety Drill Chucks Nos. 1, 2, 3 and 4

The Western Chief Safety Chuck is so made as to eliminate the use of set-screws, keys or wrench. Drill bits can be inserted or removed in an instant, and when bit is in chuck it can never slip.
No Wrenches. Opened and closed with the hand.
No Set-screws.



Cut one-half size.

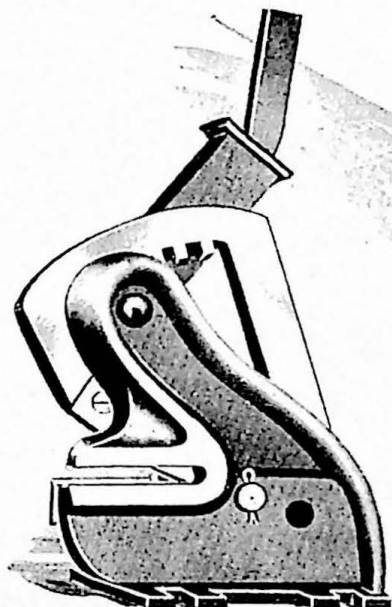
When Drill Spindles are bored $\frac{1}{2}$ -inch, and bits on hand are $\frac{11}{16}$ -inch shank—or spindle is bored $\frac{11}{16}$ -inch and bits on hand have $\frac{1}{2}$ -inch shank, or you have bits on hand with both size shanks—these Chucks provide a way out of the trouble. See Chucks 1 and 2.

Western Chief Drills, Nos. 1, 2, 3, 7, 12, 14, 15, 16, 17, 18, 19, and 20, have Spindles equipped with our Safety Chuck without extra charge. See page 101.

Owners of Drills with old-style Chuck with set-screw can be supplied with W. C. Safety Chuck to fit hole in mandrel on their drill. See Chucks 3 and 4.

Chuck No. 1, Arbor $\frac{1}{2}$ -inch, Hole $\frac{11}{16}$ -inch.....	\$3.00
Chuck No. 2, Arbor $\frac{11}{16}$ -inch, Hole $\frac{1}{2}$ -inch.....	3.00
Chuck No. 3, Arbor $\frac{1}{2}$ -inch, Hole $\frac{1}{2}$ -inch.....	3.00
Chuck No. 4, Arbor $\frac{11}{16}$ -inch, Hole $\frac{11}{16}$ -inch.....	3.00

Canedy-Otto Shear No. 1



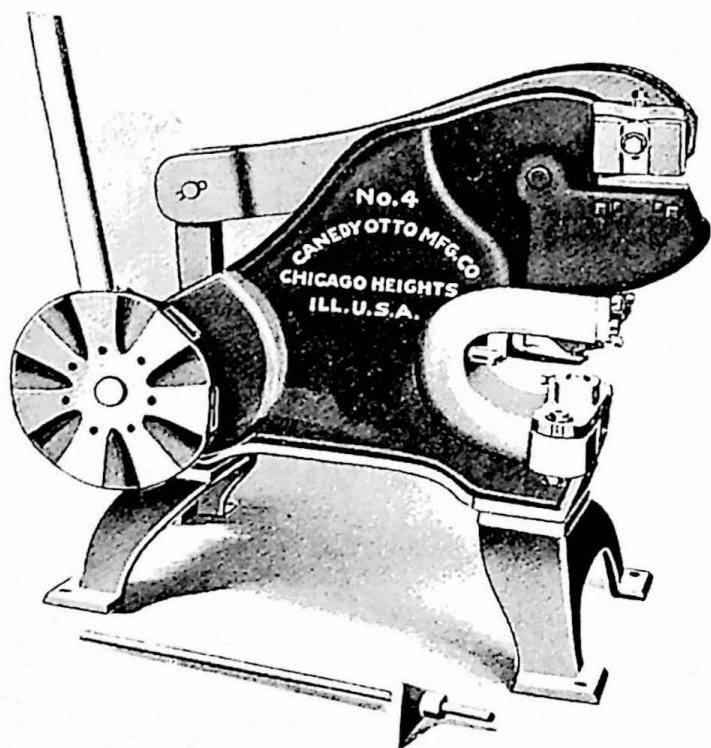
A strong machine, with capacity to cut $\frac{3}{4}$ -inch round bars and $\frac{3}{8} \times 3$ -inch flat bars, each cutting attachment working independent of the other, thereby making an easier operated and more accurate machine.

The best of material and workmanship used throughout.

Weight, 100 pounds.

Price.....\$12.50

Canedy-Otto Combination Punch and Shear No. 4



The No. 4 Combination Punch and Shear is a modern and powerfully built machine.

It can be operated toward the front or back, whichever is convenient for the user, a feature seldom found on this class of machines.

The material and workmanship are of the best. The knives, punches and dies are made of the best tool steel, properly tempered.

Will shear $\frac{1}{2}$ x 4-inch flat bars. Will punch $\frac{1}{2}$ -inch hole in $\frac{1}{2}$ -in. plate.

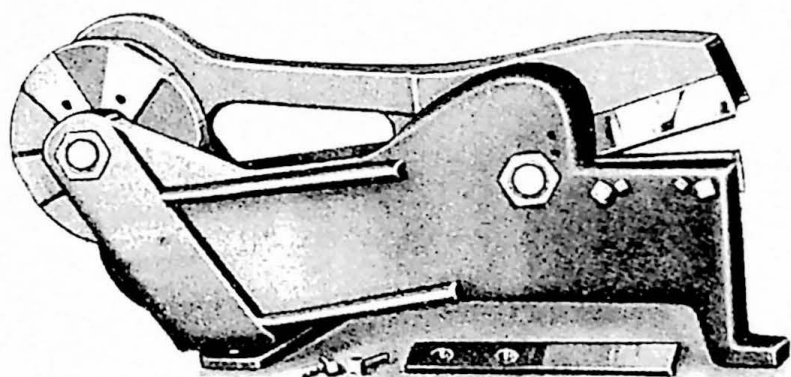
Will shear 1-inch round bars. Depth of throat 6 inches.

This machine is furnished with $\frac{1}{4}$ -inch, $\frac{3}{8}$ -inch and $\frac{1}{2}$ -inch punches and dies, also a lever bar.

Weight, 750 pounds.

Price.....\$80.00

Canedy-Otto Shear No. 6



The No. 6 Shear is built on scientific and mechanical principles throughout. The lever works toward the front, allowing the operator to stand directly in front of his knives, doing away with guessing and trusting to luck on work which has to be accurate.

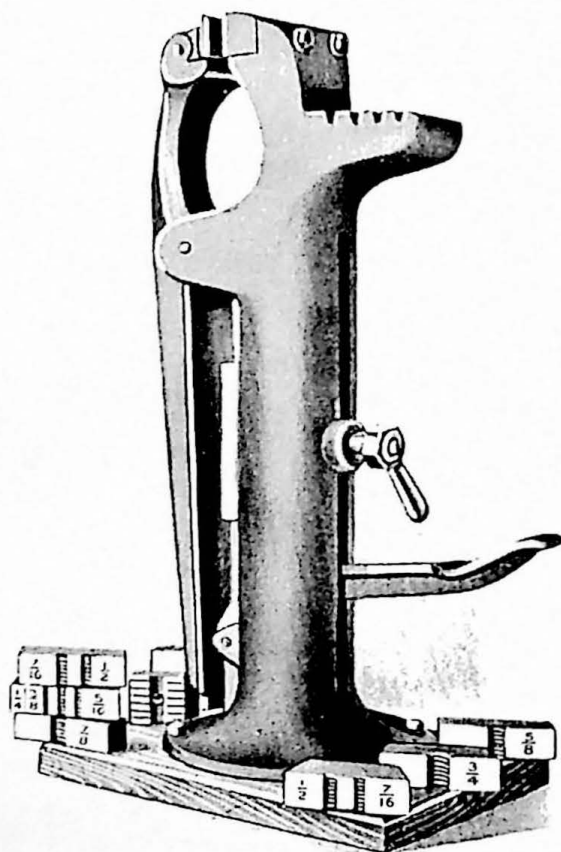
The bearings are smoothly drilled and reamed; the shafts are smoothly turned and polished; the knives are seven inches long, extra heavy and adjustable, made of the best steel, machined and properly tempered; will cut all sizes up to and including 4 x $\frac{3}{4}$ -inches flat, and $\frac{3}{4}$ -inch round mild steel and iron with ease.

No lever furnished with machine.

Weight, 450 pounds.

Price.....\$48.00

Canedy-Otto Foot Vise and Bolt Header



A powerful, strongly built machine for making bolt heads, forming calks, shaping tools, and everything where a first-class, quickly operated vise is needed.

Furnished with or without dies of the following sizes: $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$.

Price, Complete with Shocing and Bolt Heading Dies.....\$24.50

Price, Without Bolt Heading Dies..... 21.50

Weight Complete, 170 pounds. Less Bolt Heading Dies, 160 pounds.

ILLUSTRATIONS OF
REPAIRS

With Prices and Descriptions

For

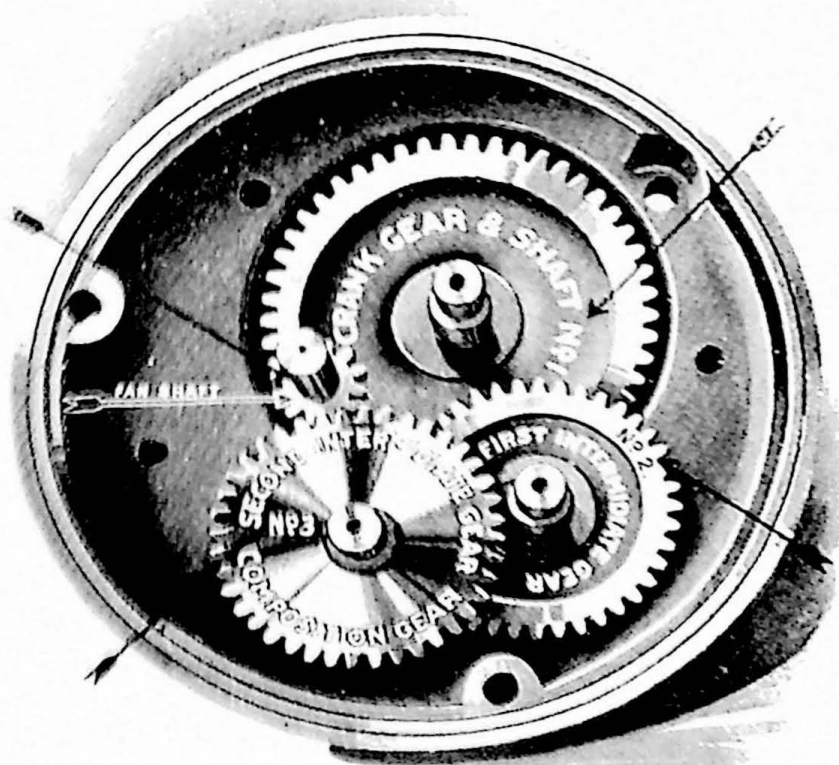
**Forges, Blowers
and Drills**

will be found on the following pages

*See back of each illustration for Number
Description and Price*

Gears with Casing Complete No. 934

Fits Royal Blower and All Royal Forges,
Except No. 76.



When ordering Gears for Royal Blower Head, ALWAYS follow these rules:

Give Shop Number (this is found near oil cup on case).

Crank Gear, No. 1.

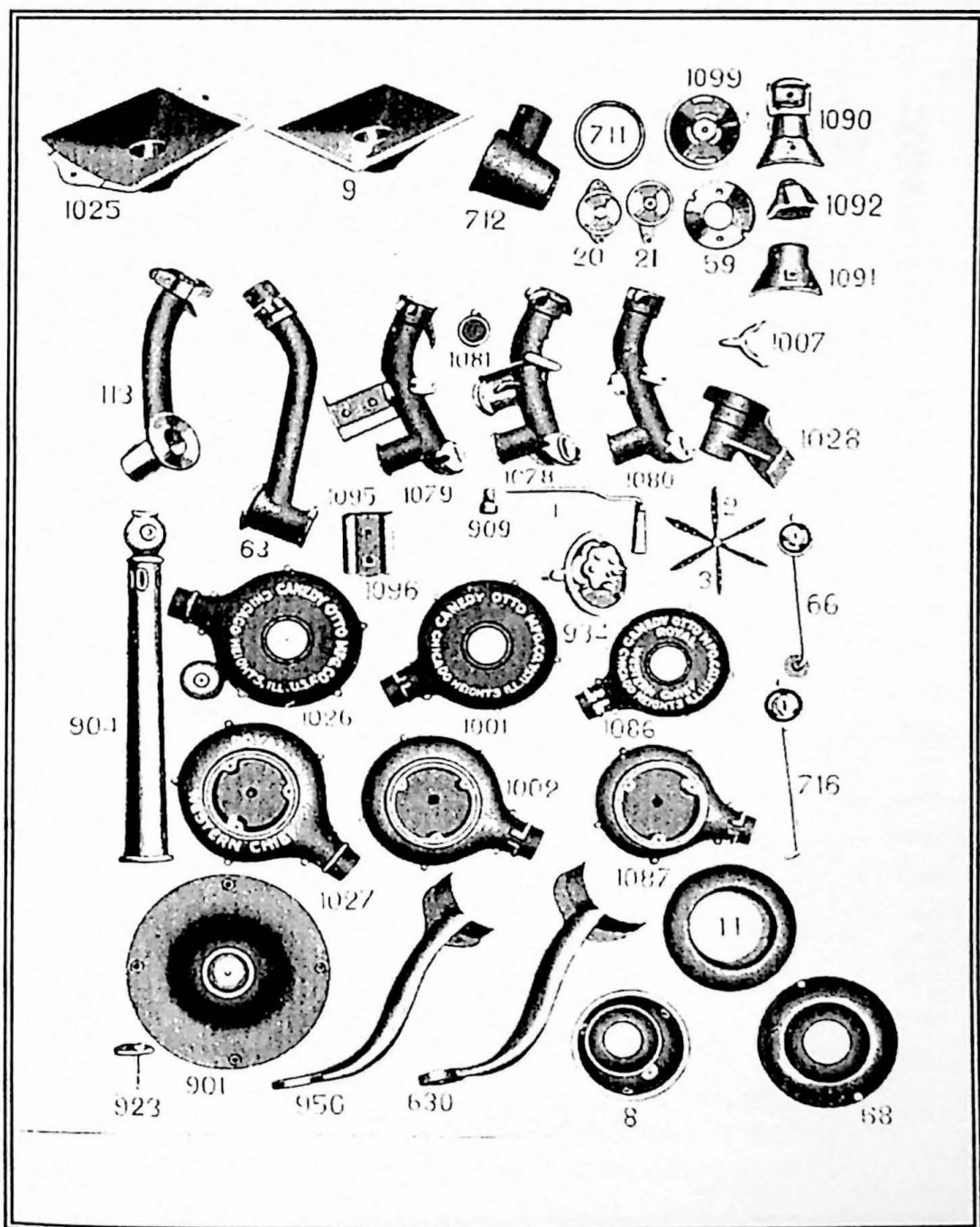
1st. Inter., No. 2.

2nd Inter., No. 3.

Fan Shaft, No. 4.

No. 934, complete set of gears with casing.

Royal Forges and Blowers



Repair List of Royal Forges and Blowers

When Ordering, State Number and Name of Part Wanted

No.	Name of Part.	Price.
1	Crank Handle, all Forges and Blowers.....	\$ 0.90
2	Fan, fits Royal Blower, also Nos. 8, 9, 10, 15, 20, 30, 35, 99, 100 and 200 Forges.....	1.75
3	Fan, Nos. 40, 50, 55, 60, 70, 75, 80, 102, 103, 104 and 105 Forges.....	1.50
8	Fire-pot, fits Nos. 100 and 200 Forges (Old Style).....	1.00
9	Square Fire-pot (New Style), fits Nos. 8, 9, 10, 15, 20, 30 and 35 Forges.....	4.00
11	Goose Nest, fits Nos. 100 and 200 Forges (Old Style)...	1.50
20	Ash Door, fits Nos. 10, 15, 20, 30, 35, 100 and 200 Forges.....	.25
21	Ash Door, fits Nos. 10, 15, 20, 30, 35, 100 and 200 Forges.....	.25
59	Tuyere Cap, fits Nos. 36, 37, 102, 103, 104, 105 Forges...	.75
63	Blower Tube, fits Nos. 102, 103 Forges.....	4.00
66	Tuyere Ball, fits Nos. 36, 37, 102, 103, 104, 105 Forges..	.50
68	Duck Nest, fits Nos. 36, 37, 102, 103, 103 1/4 Forges.....	1.75
113	Blower Tube, fits Nos. 104, 105 Forges.....	4.00
630	Blower Support, fits Nos. 8 and 9 Forges.....	2.00
711	Tuyere Ring, fits Nos. 10, 15, 20, 30, 35, 99, 100 and 200 Forges.....	.40
712	Ash Pot, fits Nos. 10, 15, 20, 30, 35, 36, 37, 99, 100 and 200 Forges.....	1.25
716	Tuyere Ball, fits Nos. 10, 15, 20, 30, 35, 99, 100 and 200 Forges.....	.50
901	Base, for Royal Blower.....	1.00
904	Pedestal, for Royal Blower.....	1.00
909	Handle Hub, fits all Royal Forges and Blowers.....	.50
923	Nut, connecting Pedestal and Base, Royal Blower.....	.20
934	Gears with Casing and Yoke complete, fits Royal Blower and all Royal Forges except No. 76.....	10.50
950	Blower Support, fits Nos. 99, 100 and 200 Forges.....	2.00
1001	Back Fan Side, fits Nos. 10, 15, 20, 30 and 35 Forges...	3.00
1002	Front Fan Side, fits Nos. 10, 15, 20, 30 and 35 Forges...	3.50
1007	Blower Tube Support, fits Nos. 10, 15, 20, 30 and 35 Forges.....	.60
1025	Square Fire-pot (New Style), fits Nos. 99, 100 and 200 Forges.....	3.00
1026	Back Fan Side, Royal Blower, also 8, 9, 99, 100 and 200 Forges.....	3.00
1027	Front Fan Side, Royal Blower, also 8, 9, 99, 100 and 200 Forges.....	3.50
1028	Blower Tube, fits Nos. 10, 15, 20, 30 and 35 Forges.....	2.50
1078	Blower Tube, fits Nos. 41 and 61 Forges.....	4.00
1079	Blower Tube, fits Nos. 40, 50, 55, 60, 70 and 75 Forges..	4.00
1080	Blower Tube, fits Nos. 80, 81 and 82 Forges.....	4.00
1081	Ash Door, fits Nos. 40, 50, 55, 60, 70, 75, 80, 102, 103, 104 and 105 Forges.....	.25
1086	Back Fan Side, fits Nos. 40, 50, 55, 60, 70, 75, 80, 81, 82, 102, 103, 104, 105 Forges.....	3.00
1087	Front Fan Side, fits Nos. 40, 50, 55, 60, 70, 75, 80, 81, 82, 102, 103, 104, 105 Forges.....	3.50
1090	Leg Bracket (Long), fits Nos. 41 and 61 Forges.....	1.25
1091	Leg Bracket (Short), fits Nos. 41 and 61 Forges.....	1.00
1092	Leg Bracket (Inside), fits Nos. 41 and 61 Forges.....	.50
1095	Leg Bracket (Front), fits Nos. 40, 50, 55, 60, 70, 75 Forges.....	.75
1096	Leg Bracket (Back), fits Nos. 40, 50, 55, 60, 70, 75 Forges.....	.75
1099	Tuyere Cap, fits Nos. 40, 50, 55, 60, 70, 75, 80, 81 and 82 Forges.....	.75

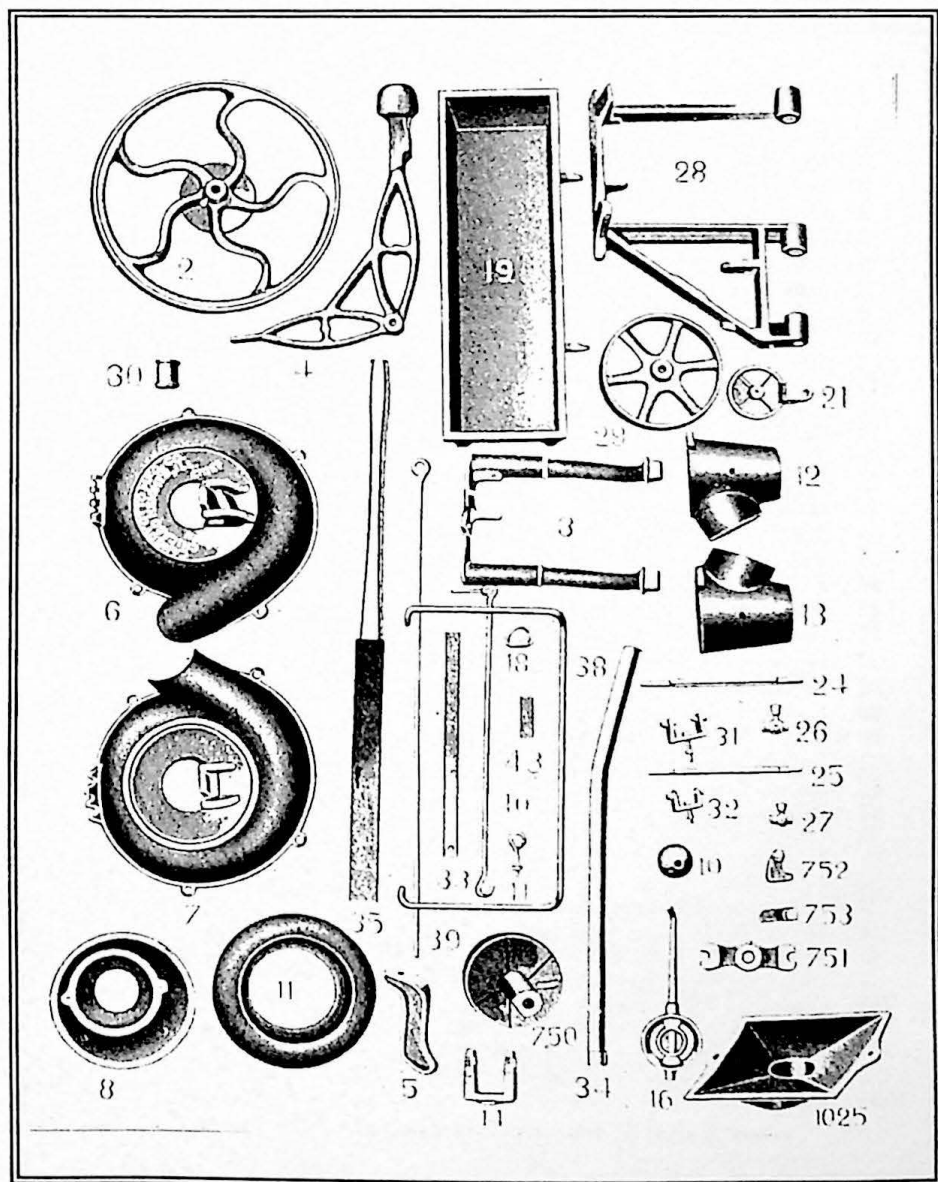
NOTE.—For General Forge parts of Forges Nos. 8 and 9, see repairs for BB and XBB Forges.

For general Forge parts of Nos. 99, 100 and 200, see repairs for AA Forges.

For general Forge parts of Nos. 102 and 103, see repairs for Nos. 2 and 3 Forges.

Western Chief Forges

Nos. 1 and 1-1/2



Repair List of Western Chief Forges Nos. 1 and 1½

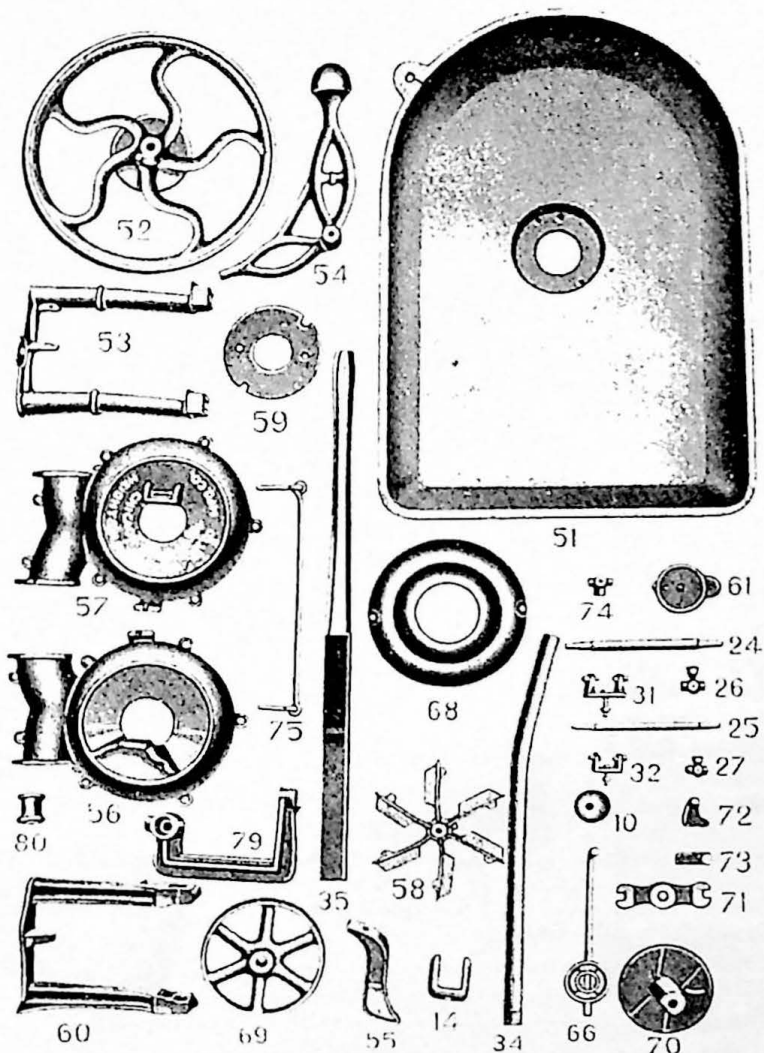
When Ordering, Give Name of Forge and Number of Part
Wanted.

No.	Name of Part.	Price.
1	Hearth (not illustrated), state if for round or square fire-pot	\$12.50
—	Hood (not illustrated)	3.25
2	Fly-wheel	2.50
3	Wheel Hanger	2.00
4	Lever Casting	1.75
5	Lever Bracket	.35
6	Fan Side (Pulley Side)	2.50
7	Fan Side	2.50
8	Fire-pot (Old Style)	1.00
10	Ball	.10
11	Goose Nest (Old Style)	1.50
12	Ash Pot, Right	.50
13	Ash Pot, Left	.50
14	Handle Loop	.30
16	Tuyere Ball	.50
18	Finger Pull	.10
19	Water Tank	3.25
21	Ash Door	.25
23	Fan (not illustrated)	1.50
24	Fly-wheel Shaft	.50
25	Fan Shaft	.50
26	Brass Box and Cup (Fly-wheel Shaft)	.90
27	Brass Box and Cup (Fan Shaft)	.80
28	Power Hanger	2.50
29	Power Pulley	1.75
30	Fan Pulley	.30
31	Large Loop (Fly-wheel Shaft)	.50
32	Small Loop (Fan Shaft)	.40
33	Wheel Bracket Brace	.15
34	Leg	.30
35	Handle	.50
38	Side Rod	.35
39	Side Rod Support	.25
40	Lever Rod	.40
41	Lever Rod Eye	.10
43	Clip for Goose Nest	.10
750	Clutch Hub	1.25
751	Clutch Lever	.75
752	Clutch Dog	.15
753	Clutch Piece	.10
1025	Square Fire-pot (New Style)	3.00

Long Belts, \$1.00. Pull Straps, 40 Cents Each.

Western Chief Forges

Nos. 2, 3, 3-1/4 and 3-1/2



Repair List of Western Chief Forges

Nos. 2, 3, 3 $\frac{1}{4}$ and 3 $\frac{1}{2}$

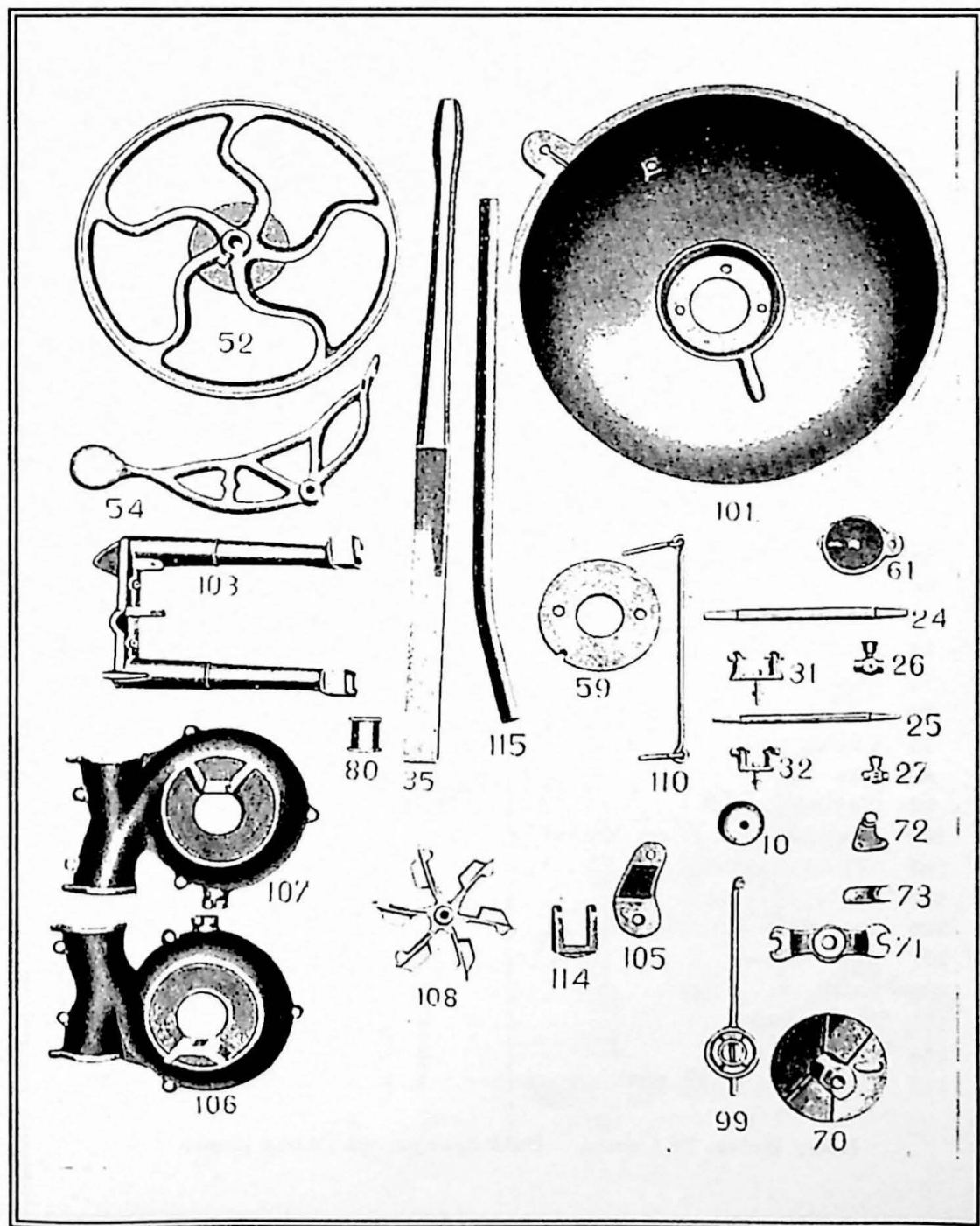
When Ordering, Give Name of Forge and Number of Part
Wanted

No.	Name of Part.	Price.
—	Shield (No. 2 Forge), not illustrated	\$ 0.75
—	Hood (Nos. 3 and 3 $\frac{1}{2}$ Forge), not illustrated.....	3.00
—	Hood (No. 3 $\frac{1}{4}$ Forge), not illustrated.....	4.50
10	Ball	.10
14	Handle Loop	.30
24	Fly-wheel Shaft	.50
25	Fan Shaft	.50
26	Brass Box and Cup (Fly-wheel Shaft)	.90
27	Brass Box and Cup (Fan Shaft).....	.80
31	Large Loop (Fly-wheel Shaft)	.50
32	Small Loop (Fan Shaft)	.40
34	Leg	.30
35	Handle	.50
51	Hearth	6.00
52	Fly-wheel	2.25
53	Wheel Hanger	2.00
54	Lever Casting	1.50
55	Lever Bracket	.30
56	Fan Side (Pulley Side)	2.25
57	Fan Side	2.25
58	Fan	1.25
59	Tuyere Cap	.75
60	Power Hanger	2.00
61	Ash Door	.20
66	Tuyere Ball	.50
68	Ducks Nest	1.75
69	Power Pulley	1.75
70	Clutch Hub.....	1.25
71	Clutch Lever.....	.75
72	Clutch Dog.....	.15
73	Clutch Piece.....	.10
74	Brass Box, Old Style	.80
75	Lever Rod	.40
79	Shifter Bracket	.90
80	Fan Pulley	.30

Long Belts, 75 Cents. Pull Straps, 40 Cents Each

Western Chief Forges

Nos. 4, 5 and 5-1/2





Repair List of Western Chief Forges Nos. 4, 5 and 5½

When Ordering, Give Name of Forge and Number of Part
Wanted

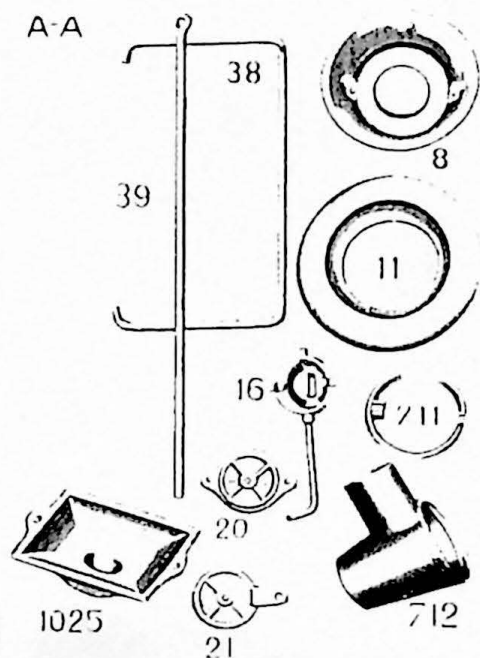
No.	Name of Part.	Price.
—	Shield (No. 4 Forge), not illustrated.....	\$ 0.60
—	Hood (No. 5 Forge), not illustrated.....	2.75
—	Hood (No. 5½ Forge), not illustrated.....	4.00
10	Ball	.10
24	Fly-wheel Shaft	.50
25	Fan Shaft	.50
26	Brass Box and Cup (Fly-wheel Shaft).....	.90
27	Brass Box and Cup (Fan Shaft).....	.80
31	Large Loop (Fly-wheel Shaft).....	.50
32	Small Loop (Fan Shaft).....	.40
35	Handle	.50
52	Fly-wheel	2.25
54	Lever Casting	1.50
59	Tuyere Cap	.75
61	Ash Door	.20
70	Clutch Hub.....	These Form { Clutch { Complete {
71	Clutch Lever.....	
72	Clutch Dog.....	
73	Clutch Piece.....	
80	Fan Pulley	.30
99	Tuyere Ball	.50
101	Hearth (state if for Round or U-Shaped Legs).....	5.00
103	Wheel Hanger	2.00
105	Lever Bracket	.25
106	Fan Side (Pulley Side).....	2.25
107	Fan Side	2.25
108	Fan	1.25
110	Lever Rod	.40
114	Handle Loop	.30
115	Leg (state if Round or U-shape).....	.30

Long Belts, 75 Cents. Pull Straps, 40 Cents Each.

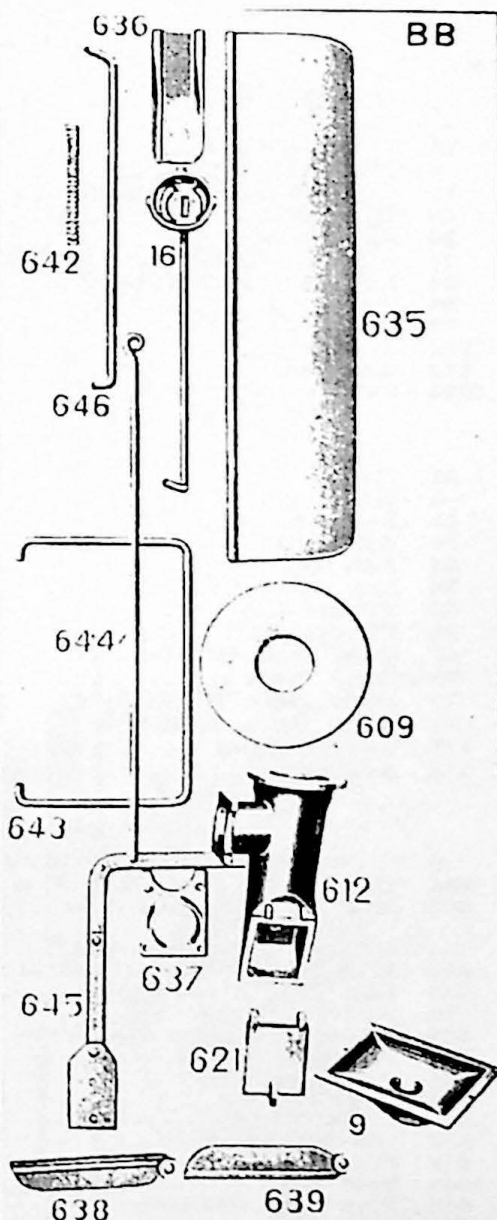
Western Chief Forges

Sizes AA, BB, XBB and CC

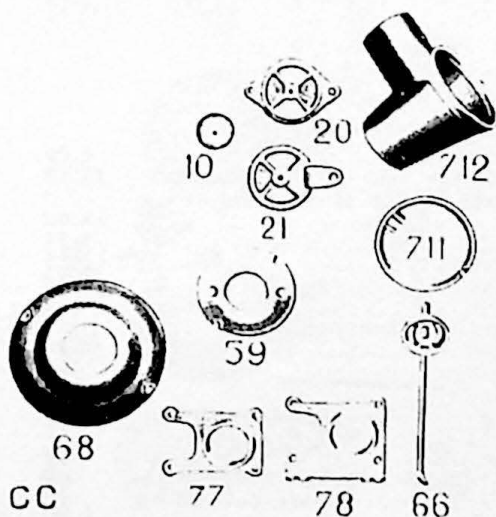
A-A

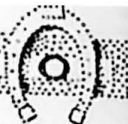


BB



CC





Repair List of Western Chief Forges

Sizes AA, BB, XBB and CC

When Ordering, Give Name of Forge and Number of Part
Wanted

AA

No.	Name of Part.	Price.
1	Hearth (not illust'd; state if for R'd or Sq. Fire-pot) ..	\$12.50
—	Hood (not illustrated)	3.25
19	Water Tank (not illustrated)	3.25
8	Fire-pot (Old Style)	1.00
11	Goose Nest (Old Style)	1.50
16	Tuyere Ball	.50
20	Ash Door	.25
21	Ash Door	.25
34	Leg (not illustrated)	.30
38	Side Rod	.35
39	Side Rod Support	.25
711	Tuyere Ring	.40
712	Ash Pot	1.25
1025	Square Fire-pot (New Style)	3.00

CC

51	Hearth (not illustrated)	6.00
—	Hood (not illustrated)	3.00
10	Ball	.10
20	Ash Door	.25
21	Ash Door	.25
34	Leg (not illustrated)	.30
50	Tuyere Cap	.75
66	Tuyere Ball	.50
67	Pipe (not illustrated)	.60
68	Duck Nest	1.75
77	Blast Gate, Right Side	.50
78	Blast Gate, Left Side	.60
711	Tuyere Ring	.40
712	Ash Pot	1.25

BB and XBB

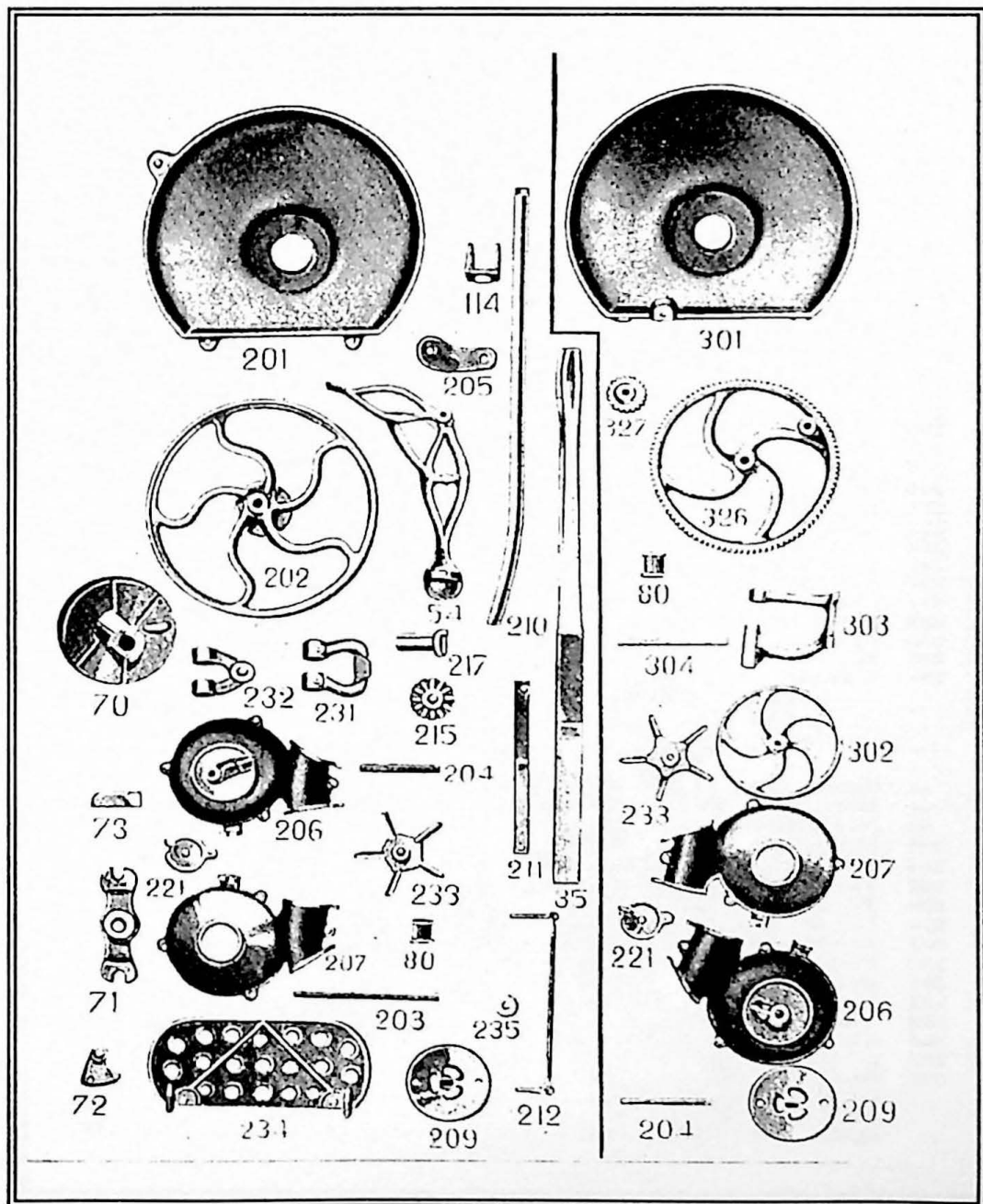
0	Square Fire-pot (New Style)	4.00
601	Hearth, BB (not illust'd; say if for R'd or Sq. Fire-pot) ..	16.50
602	Hearth, XBB (not illust'd; state if for R'd or Sq. Fire-pot) ..	18.00
—	Hood (not illustrated)	3.25
610	Water Tank (not illustrated)	3.25
634	Leg (not illustrated)	1.50
10	Tuyere Ball	.50
609	Tuyere Cap (for Old Style, Round Fire-pot)	1.50
612	Ash Pot	3.00
621	Ash Door	.50
635	Divider	1.00
636	Tank Support	.50
637	Blast Gate Side	.75
642	Spring	.35
643	Side Rod	.35
644	Side Rod Support	.25
645	Damper	1.00
646	Ash Door Rod	.40

Hero Forges

Nos. 6 and 7

Leader Forges

Nos. 11, 12, 13 and 14



Repair List of Hero Forges Nos. 6 and 7, Leader Forges Nos. 11, 12, 13 and 14

**When Ordering, Give Name of Forge and Number of Part
Wanted**

HERO FORGES Nos. 6 and 7

No.	Name of Part.	Price.
—	Shield (No. 6 Forge), not illustrated.....	\$ 0.60
—	Hood (No. 7 Forge), not illustrated.....	2.75
35	Handle.....	.50
54	Lever Casting.....	1.50
70	Clutch Hub.....	1.25
71	Clutch Lever.....	.75
72	Clutch Dog.....	.15
73	Clutch Piece.....	.10
80	Fan Pulley.....	.30
114	Handle Loop.....	.30
201	Hearth.....	4.75
202	Fly-wheel.....	2.00
203	Fly-wheel Shaft.....	.40
204	Fan Shaft.....	.30
205	Lever Bracket.....	.25
206	Fan Side (Pulley Side).....	2.25
207	Fan Side.....	2.25
209	Tuyere Cap.....	1.00
210	Leg.....	.30
211	Leg Brace.....	.10
212	Lever Rod.....	.40
215	Clutch (Old Style).....	.60
217	Hub (Old Style).....	.60
221	Ash Door.....	.20
231	Long Leg Bracket.....	.60
232	Short Leg Bracket.....	.50
233	Fan.....	.60
234	Shelf.....	.75
235	Washer.....	.10

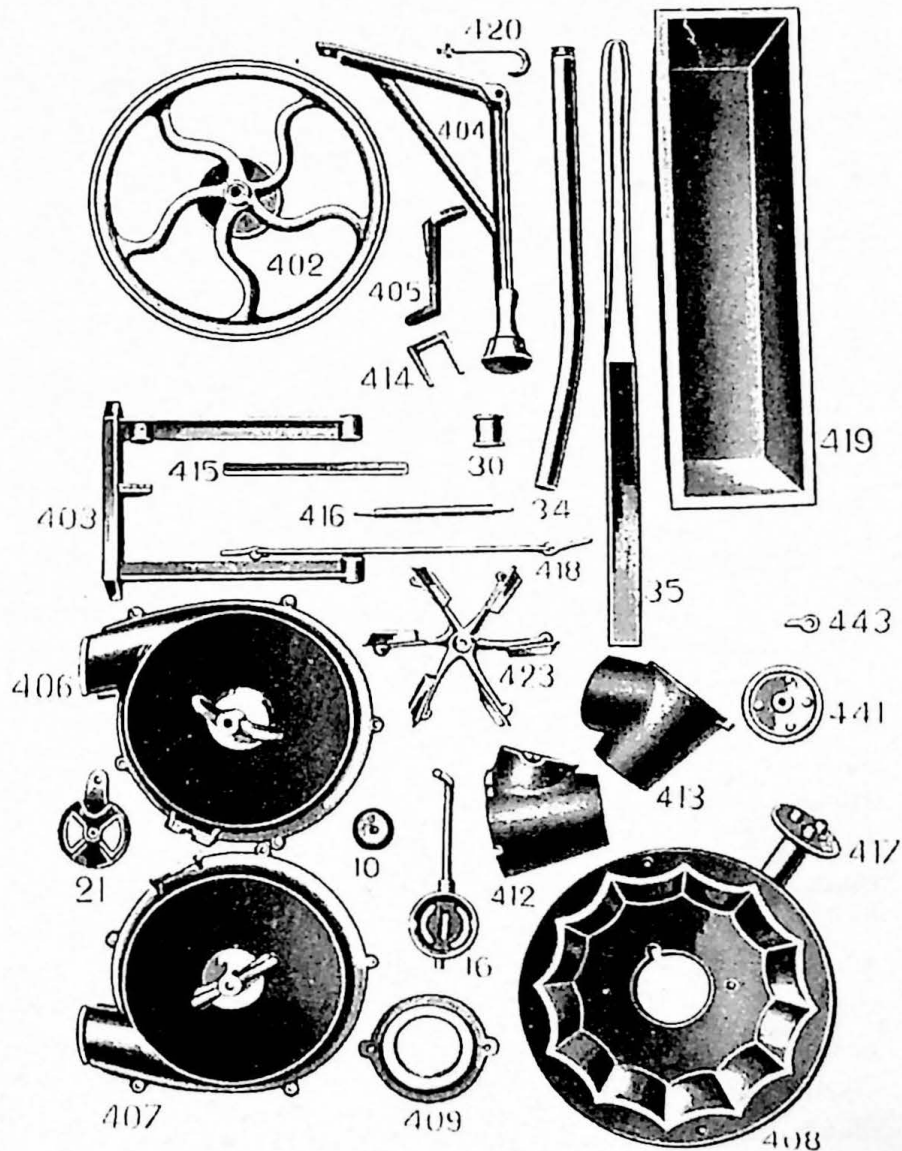
Long Belts, 60 Cents. Pull Straps, 30 cents each.

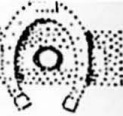
LEADER FORGES Nos. 11, 12, 13 and 14

—	Shield (Nos. 11 and 13 Forges), not illustrated.....	.60
—	Hood (Nos. 12 and 14 Forges), not illustrated.....	2.75
80	Fan Pulley.....	.30
204	Fan Shaft.....	.30
206	Fan Side (Pulley Side).....	2.25
207	Fan Side.....	2.25
209	Tuyere Cap.....	1.00
210	Leg.....	.30
221	Ash Door.....	.20
233	Fan.....	.60
301	Hearth.....	4.50
302	Large Pulley.....	1.00
303	Wheel Hanger.....	1.00
304	Fly-wheel Shaft.....	1.00
326	Large Gear.....	.40
327	Small Gear.....	1.50
	Leather Belt.....	.30
	Legs (Nos. 13 and 14).....	.35
	Crank (not illustrated).....	.50
		.75

Challenge Forges

No. 1c





Repair List of Challenge Forge No. 1c

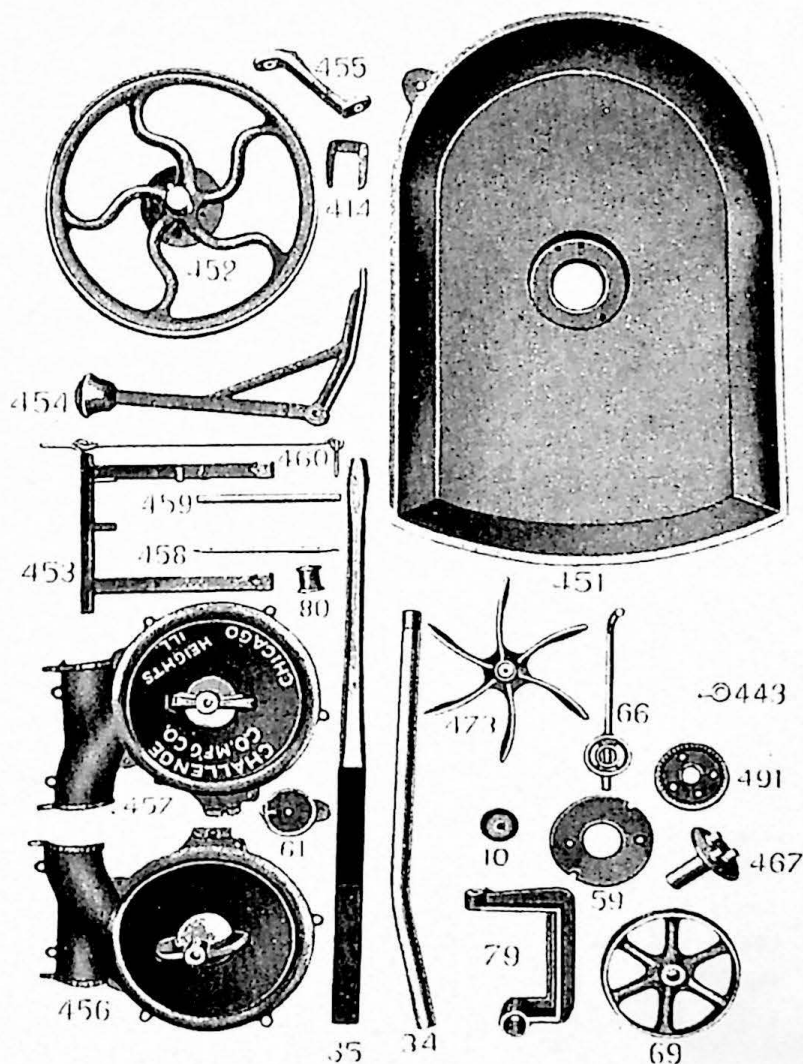
When Ordering, Give Name of Forge and Number of Part
Wanted

No.	Name of Part.	Price.
—	Hood (not illustrated).....	\$ 3.25
10	Ball	.10
16	Tuyere Ball	.50
21	Ash Door	.25
30	Fan Pulley	.30
34	Leg	.30
35	Handle	.50
401	Hearth (not illustrated)	11.50
402	Fly-wheel	2.00
403	Wheel Hanger	2.00
404	Lever Casting	1.60
405	Lever Bracket	.35
406	Fan Side (Pulley Side)	2.50
407	Fan Side	2.50
408	Fire-pot	2.00
409	Tuyere Cap	.75
412	Ash Pot, Right	.50
413	Ash Pot, Left	.50
414	Handle Loop	.30
415	Fly-wheel Shaft	.40
416	Fan Shaft	.50
417	Clutch Hub	1.25
418	Level Rod	.40
419	Water Tank	3.00
420	Wheel Hanger Brace	.25
423	Fan	1.50
441	Clutch Ratchet	.50
443	Clutch Dog	.10

Long Belts, \$1.00. Pull Straps, 40 Cents Each.

Challenge Forges

Nos. 2c and 3c





Repair List of Challenge Forges Nos. 2c and 3c

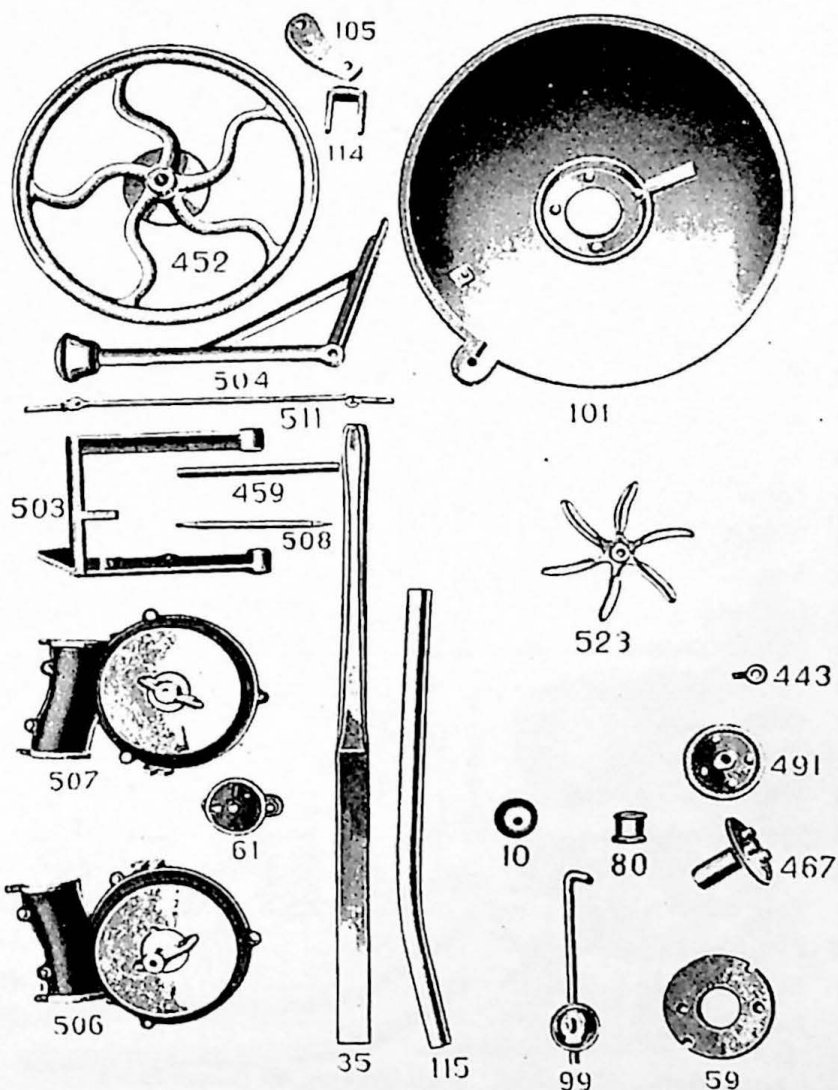
When Ordering, Give Name of Forge and Number of Part
Wanted

No.	Name of Part.	Price.
—	Shield (No. 2 Forge), not illustrated	\$ 0.75
—	Hood (No. 3 Forge), not illustrated	3.00
10	Ball	.10
34	Leg	.30
35	Handle	.50
59	Tuyere Cap	.75
61	Ash Door	.20
66	Tuyere Ball	.50
69	Power Pulley	1.75
79	Shifter Bracket	.90
80	Fan Pulley	.30
414	Handle Loop	.30
443	Clutch Dog	.10
451	Hearth	6.00
452	Fly-wheel	2.00
453	Wheel Hanger	1.75
454	Lever Casting	1.50
455	Lever Bracket	.35
456	Fan Side (Pulley Side)	2.50
457	Fan Side	2.50
458	Fan Shaft	.50
459	Fly-wheel Shaft	.40
460	Lever Rod	.40
467	Clutch Hub	1.25
473	Fan	1.00
491	Clutch Ratchet	.50

Long Belts, 75 Cents. Pull Straps, 40 Cents Each.

Challenge Forges

Nos. 4c, 5c and 5-1/2c



Repair List of Challenge Forges Nos. 4c, 5c and 5½c

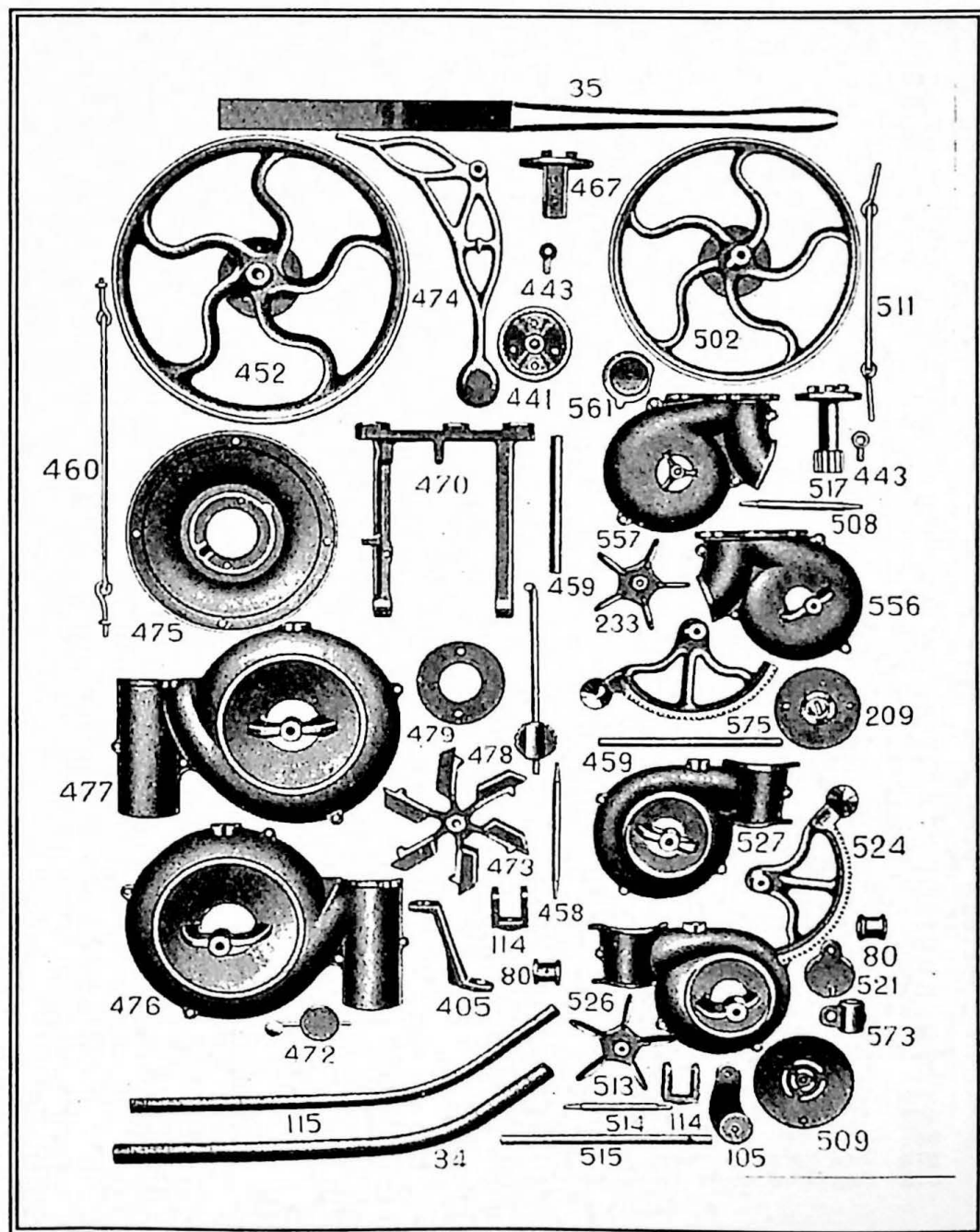
When Ordering, Give Name of Forge and Number of Part
Wanted

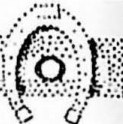
No.	Name of Part.	Price.
—	Shield (No. 4 Forge), not illustrated.....	\$ 0.60
—	Hood (No. 5 Forge), not illustrated	2.75
—	Hood (No. 5½ Forge), not illustrated.....	4.00
10	Ball	.10
35	Handle	.50
59	Tuyere Cap	.75
61	Ash Door	.20
80	Fan Pulley	.30
99	Tuyere Ball	.50
101	Hearth (state if for Round or U-shape Legs).....	5.00
105	Lever Bracket	.25
114	Handle Loop	.30
115	Leg (state if Round or U-shape)	.30
443	Clutch Dog	.10
452	Fly-wheel	2.00
459	Fly-wheel Shaft	.40
467	Clutch Hub	1.25
491	Clutch Ratchet	.50
503	Wheel Hanger	1.75
504	Lever Casting	1.50
506	Fan Side (Pulley Side).....	2.25
507	Fan Side	2.25
508	Fan Shaft	.50
511	Lever Rod	.40
523	Fan	.90

Long Belts, 75 Cents. Pull Straps, 40 Cents Each.

Chicago Forges

Nos. 150, 151, 152, 153, 154 and 155





Repair List of Chicago Forges Nos. 152 and 153

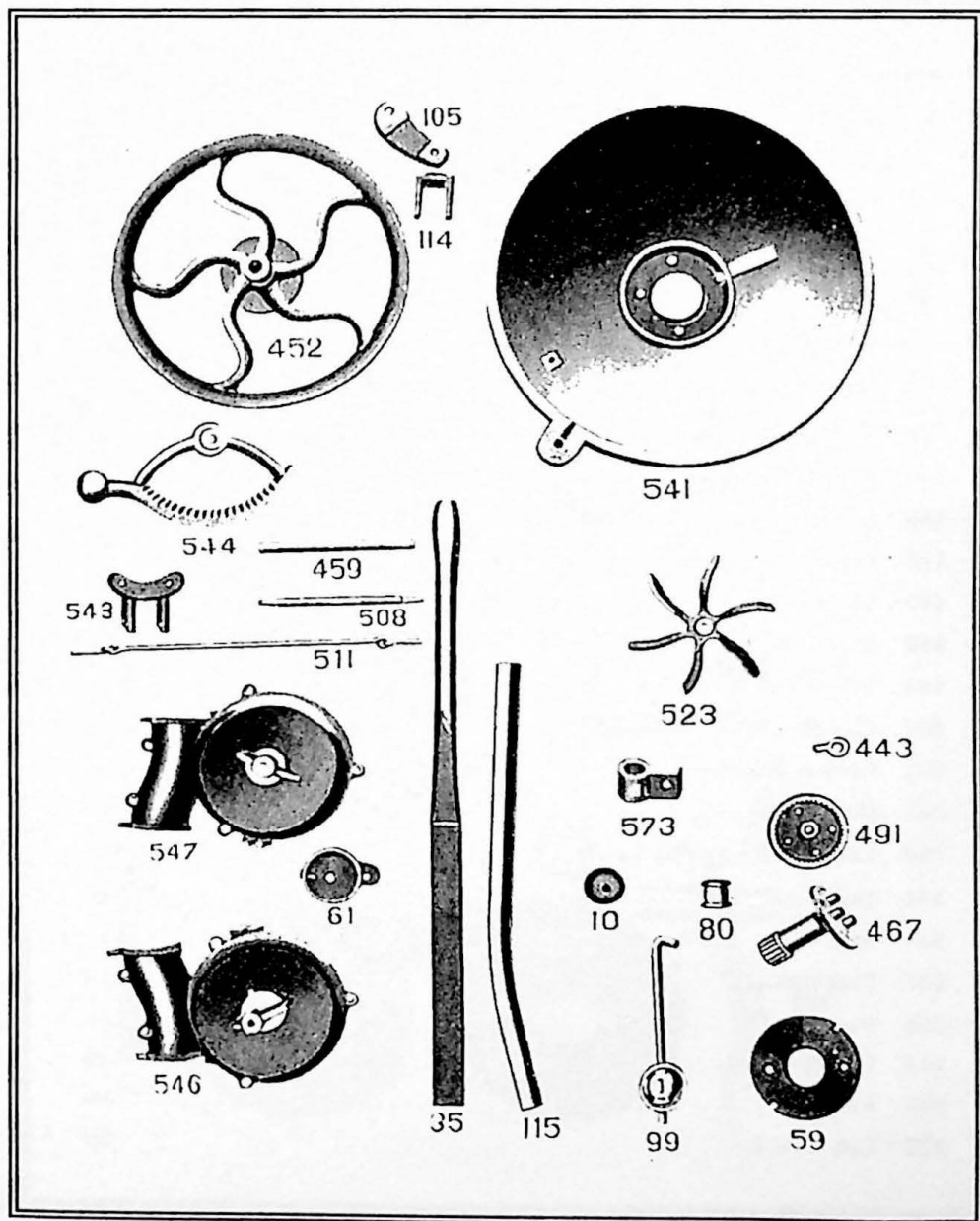
No.	Name of Part.	Price.
—	Shield (No. 152 Forge), not illustrated.....	\$ 0.60
—	Hood (No. 153 Forge), not illustrated.....	2.75
34	Leg.....	.30
35	Wood Hdle. (Fits Nos. 150, 151, 152, 153, 154, 155 Forges)	.50
80	Fan Pulley (Fits Nos. 150, 151, 152, 153, 154, 155 Forges)	.30
114	Handle Loop.....	.30
405	Lever Bracket.....	.35
441	Clutch Ratchet.....	.50
443	Clutch Dogs (Fits Nos. 150, 151, 152, 153, 154, 155 Forges)	.10
452	Fly-wheel.....	2.00
458	Fan Shaft.....	.50
450	Fly-wheel Shaft.....	.40
460	Lever Rod.....	.40
467	Clutch Hub.....	1.25
470	Wheel Hanger.....	1.75
471	Hearth (not illustrated).....	6.00
472	Ash Door.....	.20
473	Fan.....	1.00
474	Lever Casting.....	1.50
475	Fire-pot.....	1.50
476	Fan Side (Pulley Side).....	2.50
477	Fan Side.....	2.50
478	Tuyere Ball.....	.40
479	Tuyere Cap.....	.75

Nos. 150, 151, 154 and 155

—	Shield (not ill'd; for Forges 150 & 154; say which Forge)	.30
—	Hood (not ill'd; for Forges 151 & 155; say which Forge)	2.50
105	Lever Bracket.....	.35
114	Handle Loop.....	.30
115	Leg (state if Round or U-shape).....	.30
209	Tuyere Cap (fits Nos. 150 and 151 only).....	.50
233	Fan (fits Nos. 150 and 151 only).....	.60
459	Fly-wheel Shaft (fits Nos. 150 and 151 only).....	.40
501	Hearth (not illustrated; fits 154 and 155 only; say if for Round or U-shape Legs).....	3.00
502	Fly-wheel.....	1.75
508	Fan Shaft (fits 150 and 151 only).....	.50
509	Tuyere Cap (fits 154 and 155 only).....	.60
511	Lever Rod.....	.40
513	Fan (fits 154 and 155 only).....	.70
514	Fan Shaft (fits 154 and 155 only).....	.50
515	Fly-wheel Shaft (fits 154 and 155 only).....	.40
517	Clutch Hub and Gear.....	1.25
521	Ash Door (fits 154 and 155 only).....	.20
524	Segment Gear (fits 154 and 155 only).....	1.25
526	Fan Side, Pulley Side (fits 154 and 155 only).....	2.25
527	Fan Side (fits 154 and 155 only).....	2.25
551	Hearth (not illustrated; fits 150 and 151 only; say if for Round or U-shape Legs).....	2.75
556	Fan Side, Pulley Side (fits 150 and 151 only).....	2.25
557	Fan Side (fits 150 and 151 only).....	2.25
561	Ash Door (fits 150 and 151 only).....	.20
573	Leg Bracket (say if for Round or U-shape Legs).....	.30
575	Segment Gear (fits 150 and 151 only).....	1.25

Chicago Forges

Nos. 156 and 157





Repair List of Chicago Forges Nos. 156 and 157

When Ordering, Give Name of Forge and Number of Part
Wanted

No.	Name of Part.	Price.
—	Shield (No. 156 Forge), not illustrated.....	\$ 0.50
—	Hood (No. 157 Forge), not illustrated.....	2.75
10	Ball	.10
35	Handle	.50
59	Tuyere Cap	.75
61	Ash Door	.20
80	Fan Pulley	.30
99	Tuyere Ball	.50
105	Lever Bracket	.25
114	Handle Loop	.30
115	Leg	.30
443	Clutch Dog	.10
452	Fly-wheel	2.00
459	Fly-wheel Shaft	.40
467	Clutch Hub	1.25
491	Clutch Ratchet	.40
541	Hearth	5.00
543	Loop for Segment Gear	.40
544	Segment Gear	1.50
546	Fan Side, Pulley Side	2.25
547	Fan Side	2.25
508	Fan Shaft	.50
511	Lever Rod	.40
523	Fan	.90
573	Leg Bracket	.30

Repair List of Western Chief Blowers, Sizes A, B and C

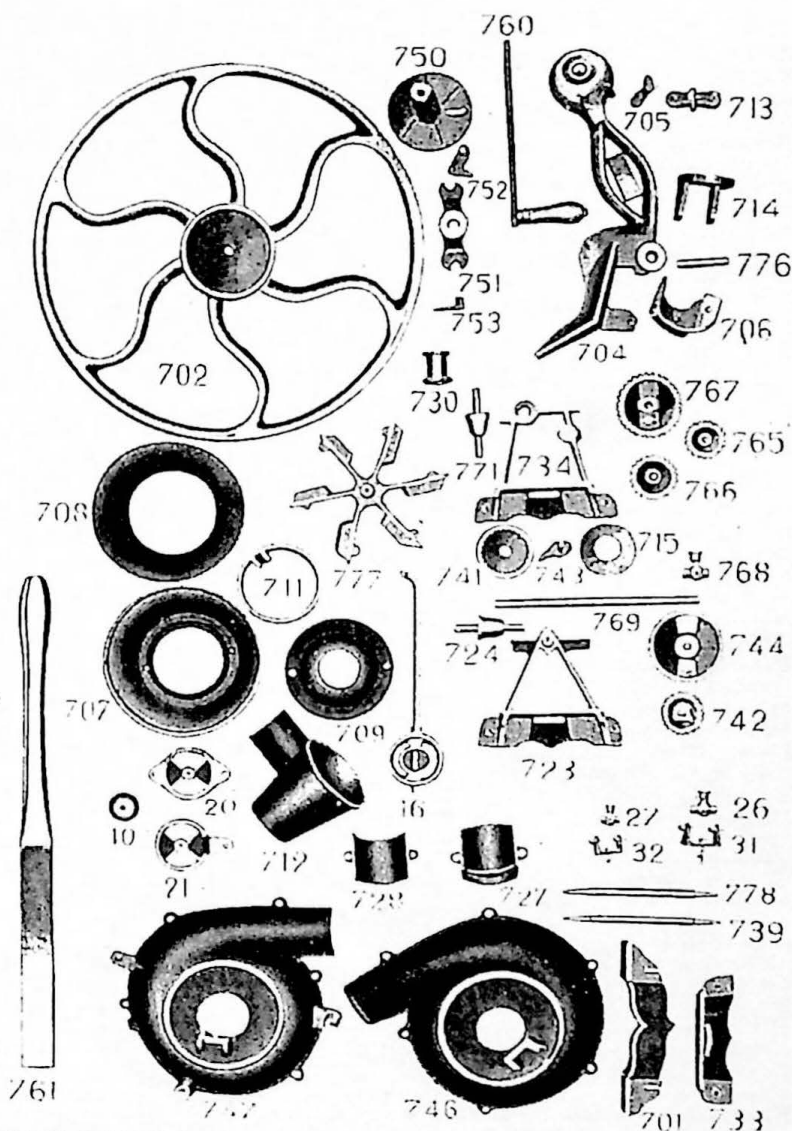
When Ordering, Give Name of Blower and Number of
Part Wanted

No.	Name of Part.	Price.
10	Ball	\$ 0.10
16	Tuyere Ball	.50
20	Ash Door	.25
21	Ash Door	.25
26	Brass Box (Fly-wheel Shaft, Size B, only)	.90
27	Brass Box (Fan Shaft, A, B and C)	.80
31	Large Loop (Fly-wheel Shaft)	.50
32	Small Loop (Fan Shaft)	.40
701	Frame Foot	.50
702	Fly-wheel	2.75
704	Lever Casting	2.75
705	Lever Catch	.15
706	Lever Top	.25
707	Fire-pot	1.00
708	Fire Ring	.80
709	Tuyere Cap	.75
711	Tuyere Ring	.40
712	Ash Pot	1.25
713	Yoke Top	.20
714	Yoke for Lever Casting	.40
715	Crank Ratchet Plate	.30
723	Crank Bracket (for old style Cast Gear)	.70
724	Crank Gear Stud (old style)	.35
725	Nose, Long Side	.30
726	Nose, Short Side	.25
730	Fan Pulley	.30
733	Box Bracket	.50
734	Crank Bracket (for new style Cut Gears)	.70
736	Fan Side, Pulley Side	2.75
737	Fan Side	2.75
738	Fan Shaft (for Sizes A, B or C)	.50
739	Fly-wheel Shaft (for Size B only)	.50
741	Ratchet	.50
742	Small Gear (old style, cast)	.50
743	Ratchet Dog	.20
744	Large Gear (old style, cast)	1.00
750	Clutch Hub	1.25
751	Clutch Lever	.75
752	Clutch Dog	.15
753	Clutch Piece	.10
760	Crank	.50
761	Handle	.50
765	Small Gear (new style, cut)	.75
766	Medium Gear (new style, cut)	1.00
767	Large Gear (new style, cut)	1.75
768	Brass Box (Fly-wheel Shaft, Sizes A and C)	.90
769	Fly-wheel Shaft (Sizes A and C)	.65
771	Crank Gear Stud (new Gears, cut)	.35
772	Fan	1.60
776	Lever Casting Shaft	.10

Long Belts, \$1.25. Pull Straps, 40 Cents Each.

Western Chief Blowers

Sizes D, E and F



Repair List of Western Chief Blowers, Sizes D, E and F

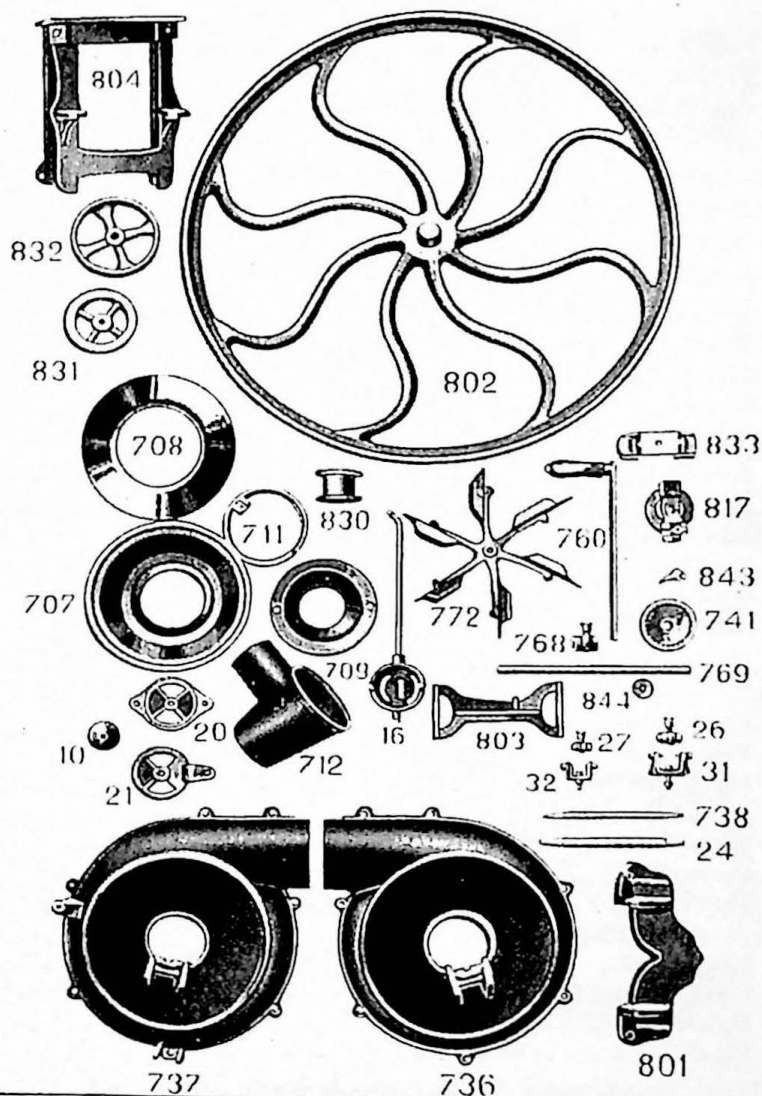
When Ordering, Give Name of Blower and Number of
Part Wanted

No.	Name of Part.	Price.
10	Ball	\$ 0.10
16	Tuyere Ball	.50
20	Ash Door	.25
21	Ash Door	.25
26	Brass Box (Fly-wheel Shaft, Size E, only)	.90
27	Brass Box (Fan Shaft D, E, and F)	.80
31	Large Loop (Fly-wheel Shaft)	.50
32	Small Loop (Fan Shaft)	.40
701	Frame Foot	.50
702	Fly-wheel	2.75
704	Lever Casting	2.75
705	Lever Catch	.15
706	Lever Top	.25
707	Fire-pot	1.00
708	Fire Ring	.80
709	Tuyere Cap	.75
711	Tuyere Ring	.40
712	Ash Pot	1.25
713	Yoke Top	.20
714	Yoke for Lever Casting	.40
715	Crank Ratchet Plate	.30
723	Crank Bracket (for old style Cast Gears)	.70
724	Crank Gear Stud (old style)	.35
727	Nose, Long Side	.30
728	Nose, Short Side	.25
730	Fan Pulley	.30
733	Box Bracket	.50
734	Crank Bracket (new style, for Cut Gears)	.70
739	Fly-wheel Shaft (for Size E only)	.50
741	Ratchet	.50
742	Small Gear (old style, cast)	.50
743	Ratchet Dog	.20
744	Large Gear (old style, cast)	1.00
746	Fan Side, Pulley Side	2.50
747	Fan Side	2.50
750	Clutch Hub	1.25
751	Clutch Lever	.75
752	Clutch Dog	.15
753	Clutch Piece	.10
760	Crank	.50
761	Handle	.50
765	Small Gear (new style, cut)	.75
766	Medium Gear (new style, cut)	1.00
767	Large Gear (new style, cut)	1.75
768	Brass Box (Fly-wheel Shaft D and F)	.90
769	Fly-wheel Shaft (Sizes D and F)	.65
771	Crank Gear Stud (new Gears, cut)	.35
776	Lever Casting Shaft	.10
777	Fan	1.50
778	Fan Shaft (Sizes D, E or F)	.50

Long Belts, \$1.25. Pull Straps, 40 Cents Each.

Western Chief Blowers

Sizes G





Repair List of Western Chief Blower, Size G

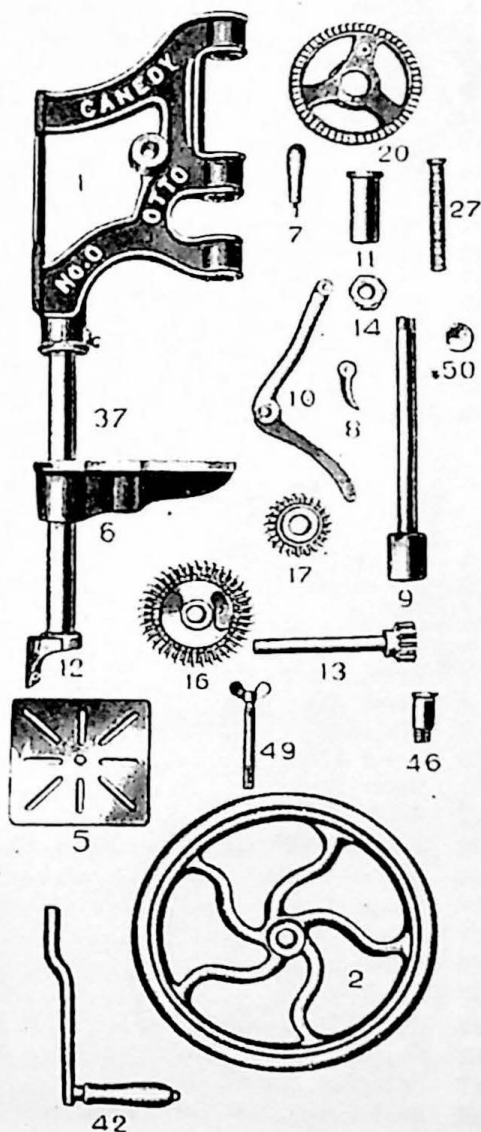
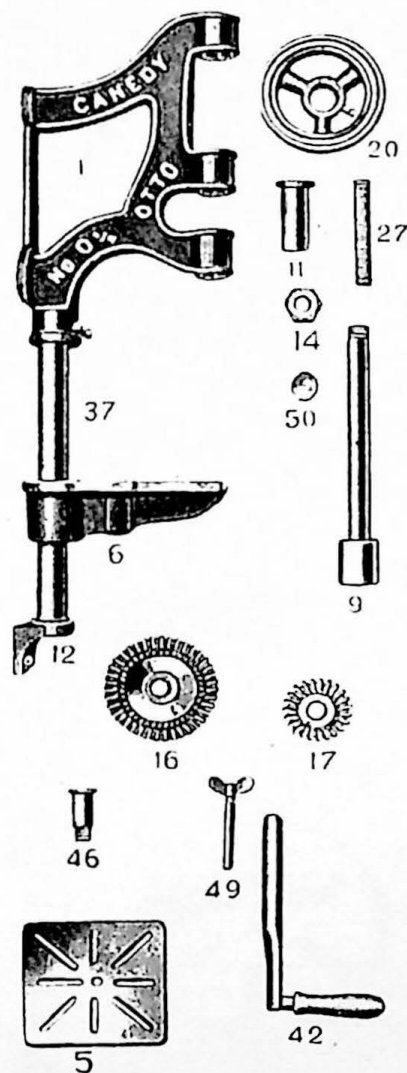
When Ordering, Give Name of Blower and Number of
Part Wanted

No.	Name of Part.	Price.
10	Ball	\$ 0.10
16	Tuyere Ball	.50
20	Ash Door	.25
21	Ash Door	.25
24	Countershaft	.50
26	Brass Box for Countershaft	.90
27	Brass Box for Fan Shaft	.80
31	Loop for Fly-wheel and Countershaft	.50
32	Loop for Fan Shaft	.40
707	Fire-pot	1.00
708	Fire Ring	.80
709	Tuyere Cap	.75
711	Tuyere Ring	.40
712	Ash Pot	1.25
736	Fan Side, Pulley Side	2.75
737	Fan Side	2.75
738	Fan Shaft	.50
741	Ratchet	.50
760	Crank	.50
768	Brass Box for Fly-wheel Shaft	.90
769	Fly-wheel Shaft	.65
772	Fan	1.60
801	Frame Foot	.50
802	Fly-wheel	3.00
803	Frame Bracket	.50
804	Countershaft Bracket	1.00
817	Crank Hub	.40
830	Fan Pulley	.30
831	Flange Pulley	.75
832	Large Pulley	.80
833	Square Box	.40
843	Ratchet Dog	.20
844	Steel Collar	.10

Long Belts, \$1.50. Short Belts, 60 Cents.

Western Chief Drills

Nos. 0-1/2 and 0



Repair List of Drill No. 0 $\frac{1}{2}$

When Ordering, Give Number of Drill and Number of Part Wanted

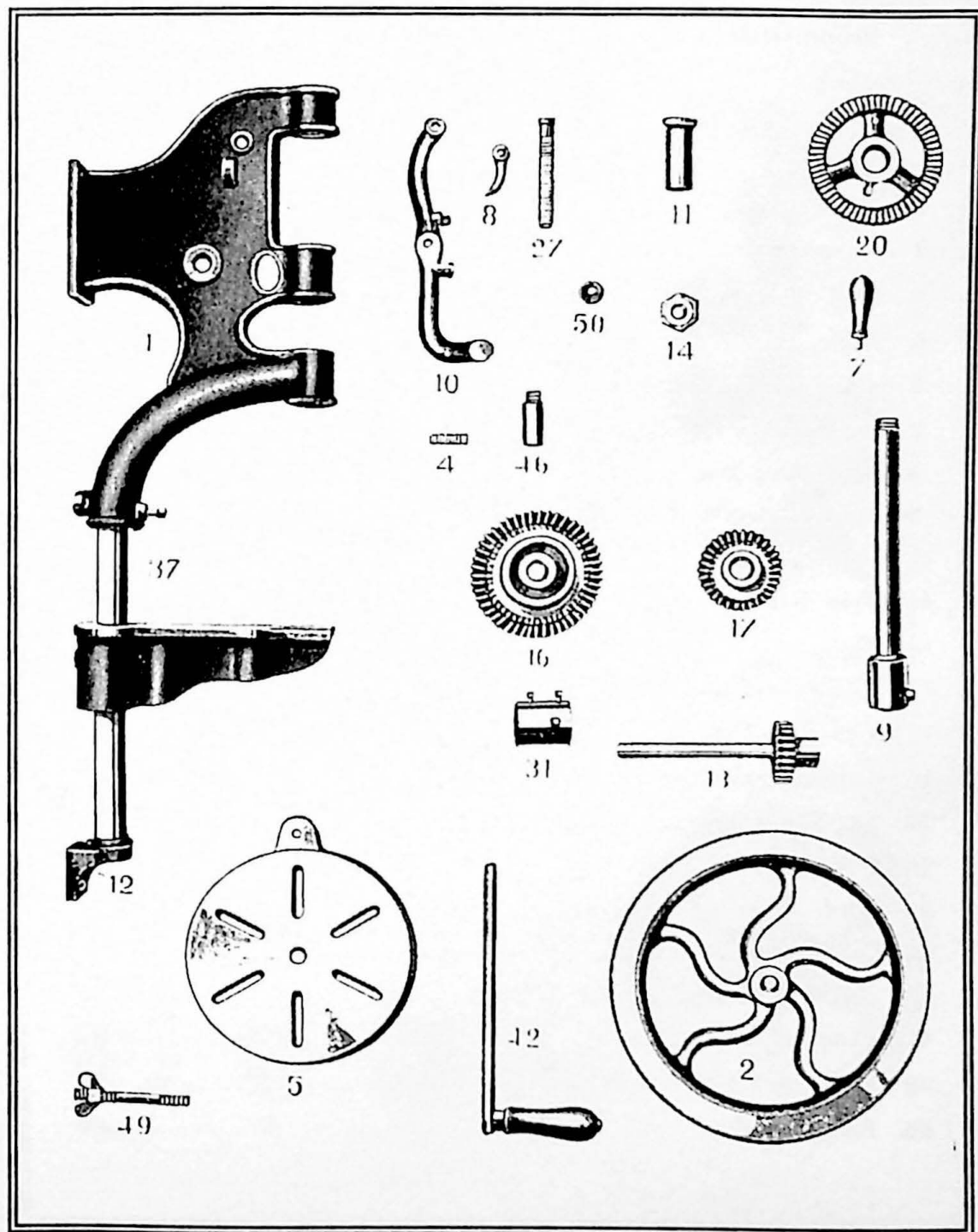
No.	Name of Part.	Price.
1	Frame	\$ 2.50
5	Table	.50
6	Table Rest	.75
9	Mandrel	1.80
11	Feed Nut	.60
12	Foot	.30
14	Hexagon Nut	.30
16	Large Crank Gear	1.00
17	Small Bevel Gear	.50
20	Feed Wheel	.75
27	Feed Screw	.50
37	Table Rest Shaft	1.25
42	Crank	.50
46	Stud for No. 16 Gear	.40
49	Screw and Nut for Table	.10
50	Fiber Washer.....	.05

Repair List of Drill No. 0

1	Frame	\$ 2.50
2	Fly-wheel	1.50
5	Table	.50
6	Table Rest	.75
7	Feed Wheel Handle	.10
8	Feed Arm Dog	.10
9	Mandrel	1.80
10	Feed Arm	.70
11	Feed Nut	.60
12	Foot	.30
13	Small Gear and Fly-wheel Shaft.....	.80
14	Hexagon Nut	.30
16	Large Crank Gear	1.25
17	Small Bevel Gear	.50
20	Feed Wheel	.75
27	Feed Screw	.50
37	Table Rest Shaft	1.25
42	Crank	.50
46	Stud for No. 16 Gear	.40
49	Screw and Nut for Table	.10
50	Fiber Washer	.05

Western Chief Drill

No. 00





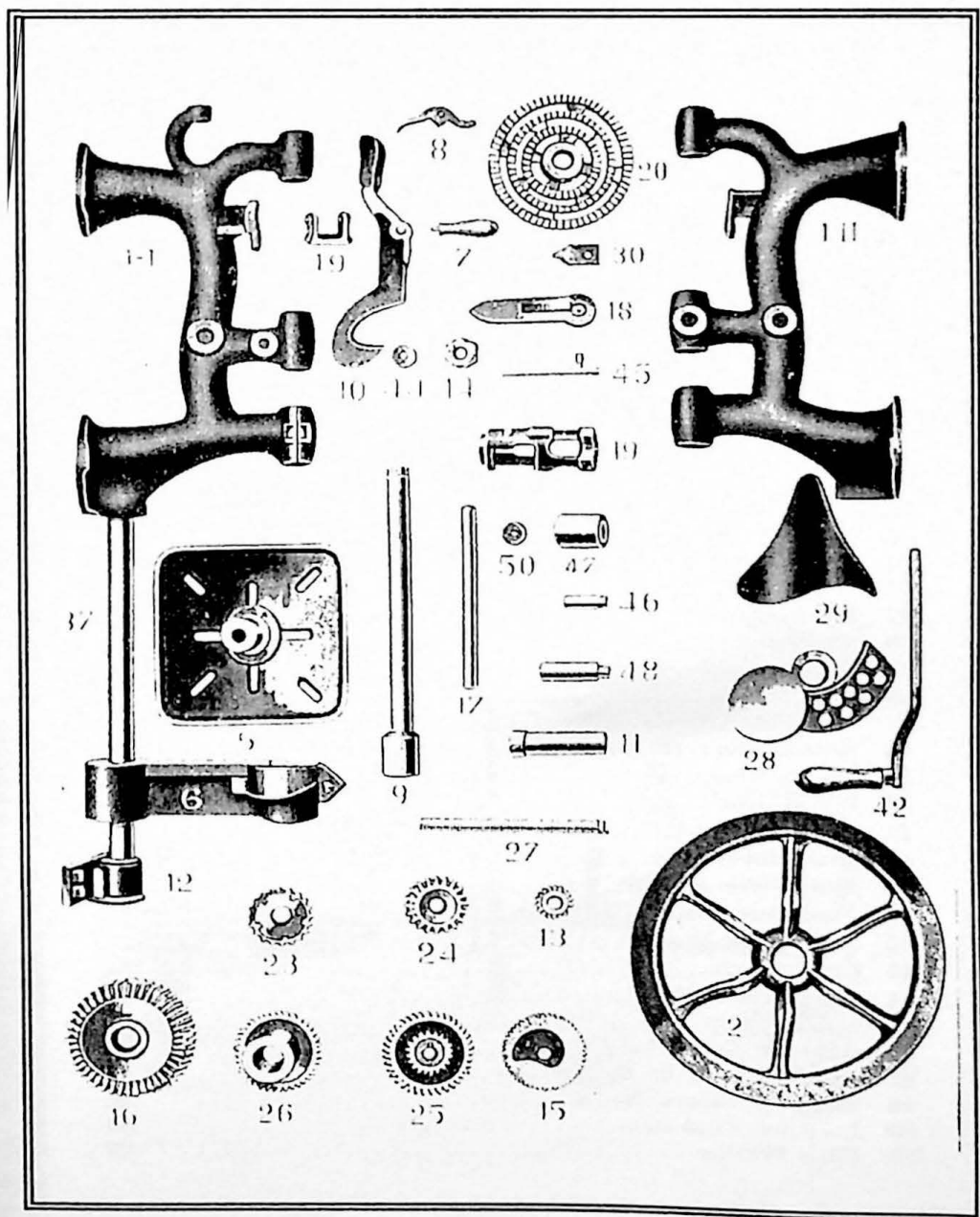
Repair List of Drill No. 00

When Ordering, Give Number of Drill and Number of
Part Wanted

No.	Name of Part.	Price.
1	Frame	\$ 3.00
2	Fly-wheel	1.50
4	Feed Arm Spring	.10
5	Table	1.60
6	Table Rest	1.00
7	Feed Wheel Handle	.10
8	Feed Arm Dog	.10
9	Mandrel (state if $\frac{1}{2}$ or $\frac{11}{64}$ inch)	1.80
10	Feed Arm	.75
11	Feed Nut	.60
12	Foot	.30
13	Small Gear and Fly-wheel Shaft	.80
14	Hexagon Nut	.30
16	Large Bevel Gear	1.50
17	Small Bevel Gear	.50
20	Feed Wheel	.75
27	Feed Screw	.50
31	Crank Hub	.80
42	Crank	.50
46	Stud for No. 16 Gear	.40
49	Screw and Nut for Table	.10
50	Fiber Washer	.05

Western Chief Drills

Nos. 1 and 2



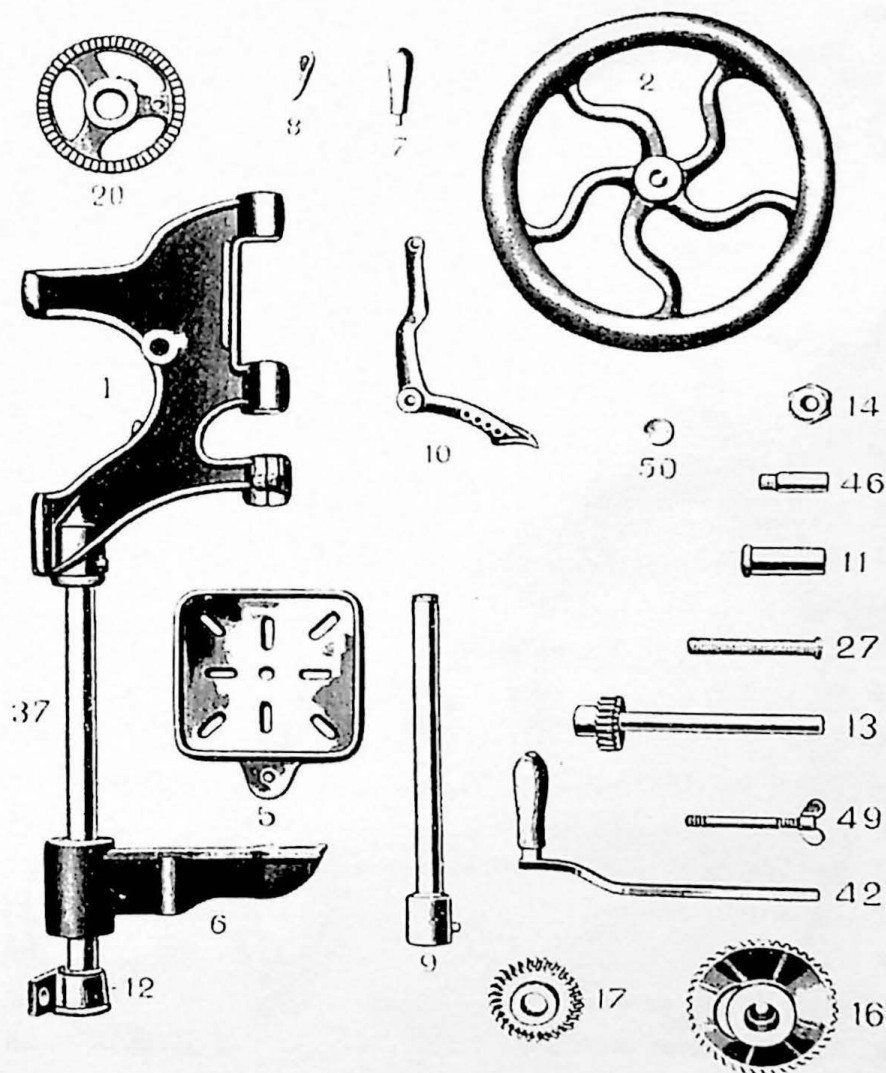
Repair List of Western Chief Drills Nos. 1 and 2

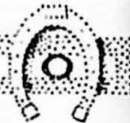
When Ordering, Give Number of Drill and Number of
Part Wanted

No	Name of Part.	Price.
I-1	Frame (No. 1 Drill)	\$ 6.00
II-1	Frame (No. 2 Drill)	6.00
2	Fly-wheel	2.00
5	Table	2.50
6	Table Rest	1.25
7	Feed Wheel Handle	.20
8	Feed Rod Dog	.10
9	Mandrel (bored $\frac{1}{2}$ or $\frac{41}{64}$ inch), old style, not ball-bearing	1.80
9	Mandrel, ball-bearing and with Safety Chuck, $\frac{1}{2}$ or $\frac{41}{64}$	3.80
10	Feed Arm	.75
11	Feed Nut	.80
12	Foot	.40
13	Small Feed Gear	.30
14	Brass Nut	.50
15	Large Feed Gear	.80
16	Large Bevel Gear	1.75
17	Fly-wheel Shaft	.50
18	Arm Stop	.30
19	Return Yoke	.75
20	Feed Wheel	1.00
23	Top Gear (Bevel)	.50
24	Bottom Gear (Bevel)	.50
25	Double Gear	1.00
26	Crank Gear	1.25
27	Feed Screw (state if for ball-bearing or not)	.50
28	Drill Holder (No. 2 Drill)	.50
29	Shield (No. 2 Drill)	.30
30	Feed Screw Stop (No. 2 Drill)	.10
37	Table Rest Shaft	1.50
42	Crank	.50
44	Feed Arm Roller	.20
45	Return Trip	.20
46	Stud for No. 15 Feed Gear	.30
47	Sleeve for No. 26 Crank Gear	.60
48	Stud for Sleeve No. 47	.40
49	Loop for Feed Arm	.20
50	Fiber Washer	.05

Western Chief Drill

No. 3





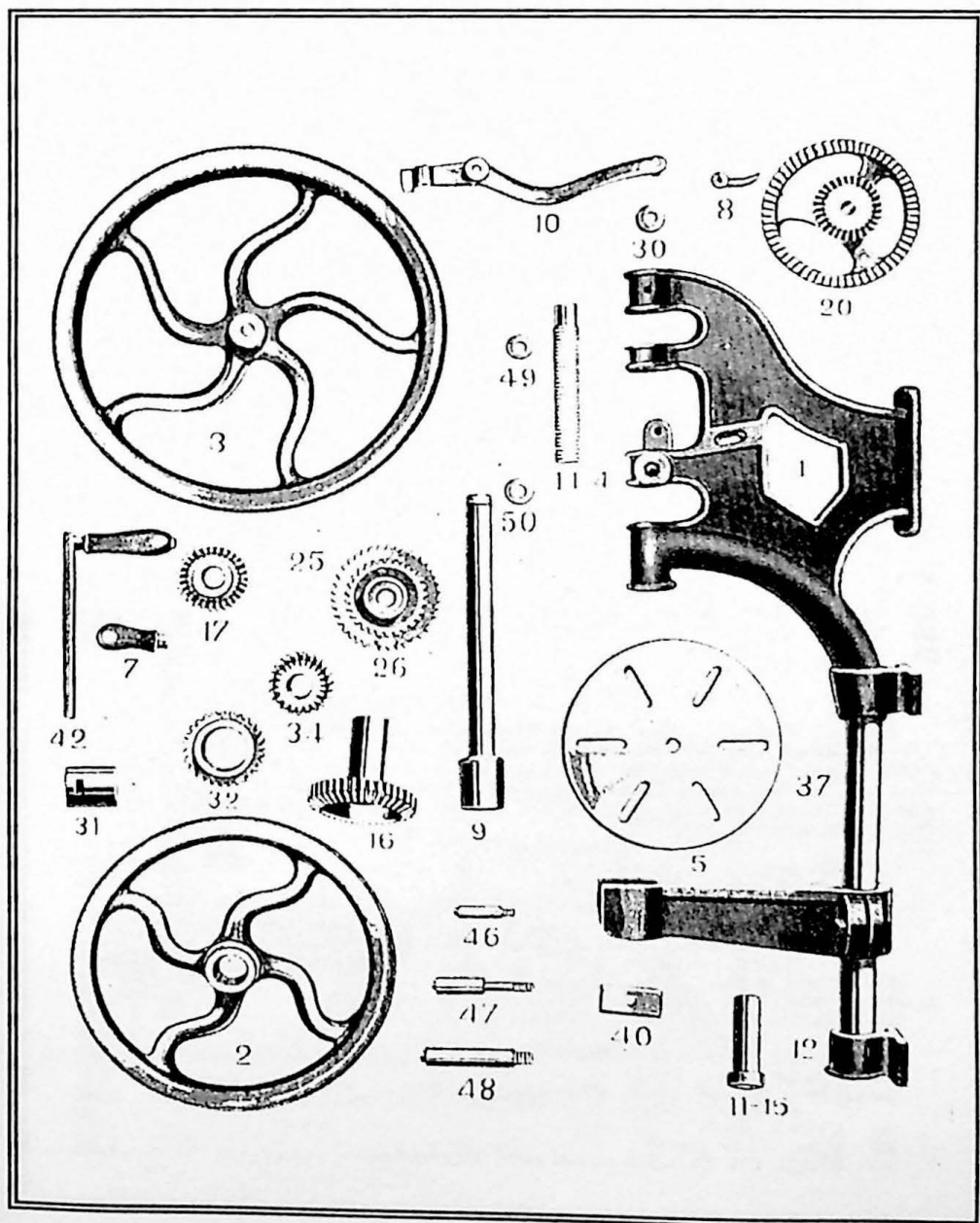
Repair List of Western Chief Drill No. 3

When Ordering, Give Number of Drill and Number of
Part Wanted

No.	Name of Part.	Price.
1	Frame	\$ 3.00
2	Fly-wheel	1.50
5	Table	1.60
6	Table Rest	1.00
7	Feed Wheel Handle	.20
8	Feed Arm Dog	.10
9	Mandrel (bored $\frac{1}{2}$ or $\frac{41}{64}$ inch), old style, not ball-bearing	1.80
9	Mandrel, ball-bearing and with Safety Chuck, $\frac{1}{2}$ or $\frac{41}{64}$	3.80
10	Feed Arm	.80
11	Feed Nut	.60
12	Foot	.30
13	Small Gear and Fly-wheel Shaft	.80
14	Brass Nut	.50
16	Large Bevel Gear	1.50
17	Small Bevel Gear	.50
20	Feed Wheel	.75
27	Feed Screw (say if for ball-bearing or not)	.50
37	Table Rest Shaft	1.25
42	Crank	.50
46	Stud for No. 16 Bevel Gear	.40
49	Screw and Nut for Table	.10
50	Fiber Washer	.05

Western Chief Drills

Nos. 4 and 15



Repair List of Western Chief Drills Nos. 4 and 15

When Ordering, Give Number of Drill and Number of
Part Wanted

No. 4 DRILL

No.	Name of Part.	Price.
1	Frame	\$ 6.50
2	Fly-wheel (with Gear)	2.00
3	Fly-wheel (Top)	2.25
5	Table	2.50
6	Table Rest	1.40
8	Feed Arm Dog	.10
9	Mandrel (bored $\frac{1}{2}$ or $\frac{41}{64}$ inch)	2.10
10	Feed Arm	.75
11-1	Feed Nut	1.25
12	Foot	.40
16	Large Bevel Gear	1.75
17	Small Bevel Gear	.50
20	Feed Wheel	1.25
25	Small Gear	{ To Make }
26	Large Gear	
30	Iron Washer	2.25
31	Crank Hub	.05
32	Flat Gear	.60
34	Eccentric Bevel Gear	.75
37	Table Rest Shaft	.80
40	Table Clamp	1.80
42	Crank	.10
46	Stud for No. 20 Feed Wheel	.50
47	Stud for Double Gears Nos. 25 and 26	.30
48	Stud for No. 16 Large Bevel Gear	.50
49	Fiber Washer, top of Feed Nut	.60
50	Fiber Washer, bottom of Feed Nut	.05

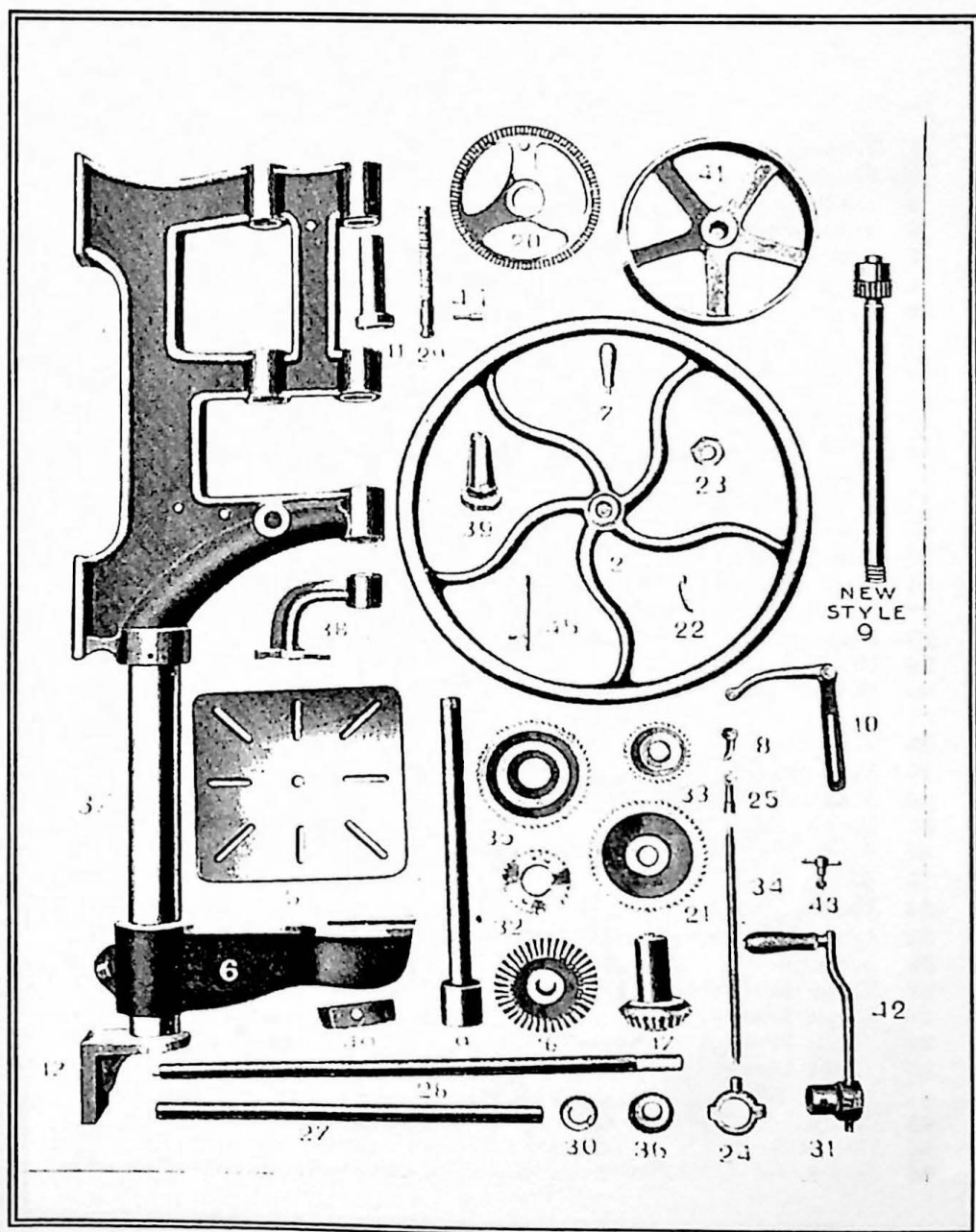
No. 15 DRILL

Many of the No. 4 Drill Repairs will fit No. 15 Drill. Those listed below are **exclusively** for No. 15 Drill, and therefore care should be observed in ordering to be sure to state whether wanted for old No. 4 Drill or the new improved No. 15 Drill. Parts not mentioned below are same as for No. 4, and will be found under No. 4 list above.

No.	Name of Part.	Price.
1	Frame	\$ 6.50
3	Fly-wheel, Pulley Side	2.25
9	Mandrel (bored $\frac{1}{2}$ or $\frac{41}{64}$ inch), old style, not ball-bearing	2.10
9	Mandrel, ball-bearing and with Safety Chuck, $\frac{1}{2}$ or $\frac{41}{64}$	4.10
10	Feed Arm	.75
11-15	Feed Nut	1.25
16	Large Bevel Gear (cut)	2.50
20	Feed Wheel	1.25
25	Small Gear (cut)	{ To Make }
26	Large Gear (cut)	
29	Feed Screw (not illustrated), say if for ball-bearing or not	3.00
31	Crank Hub	1.00
32	Flat Gear (cut)	.60
—	Shaft for Double Gear and Fly-wheel	1.25
		1.00

Western Chief Drills

Nos. 7 and 12



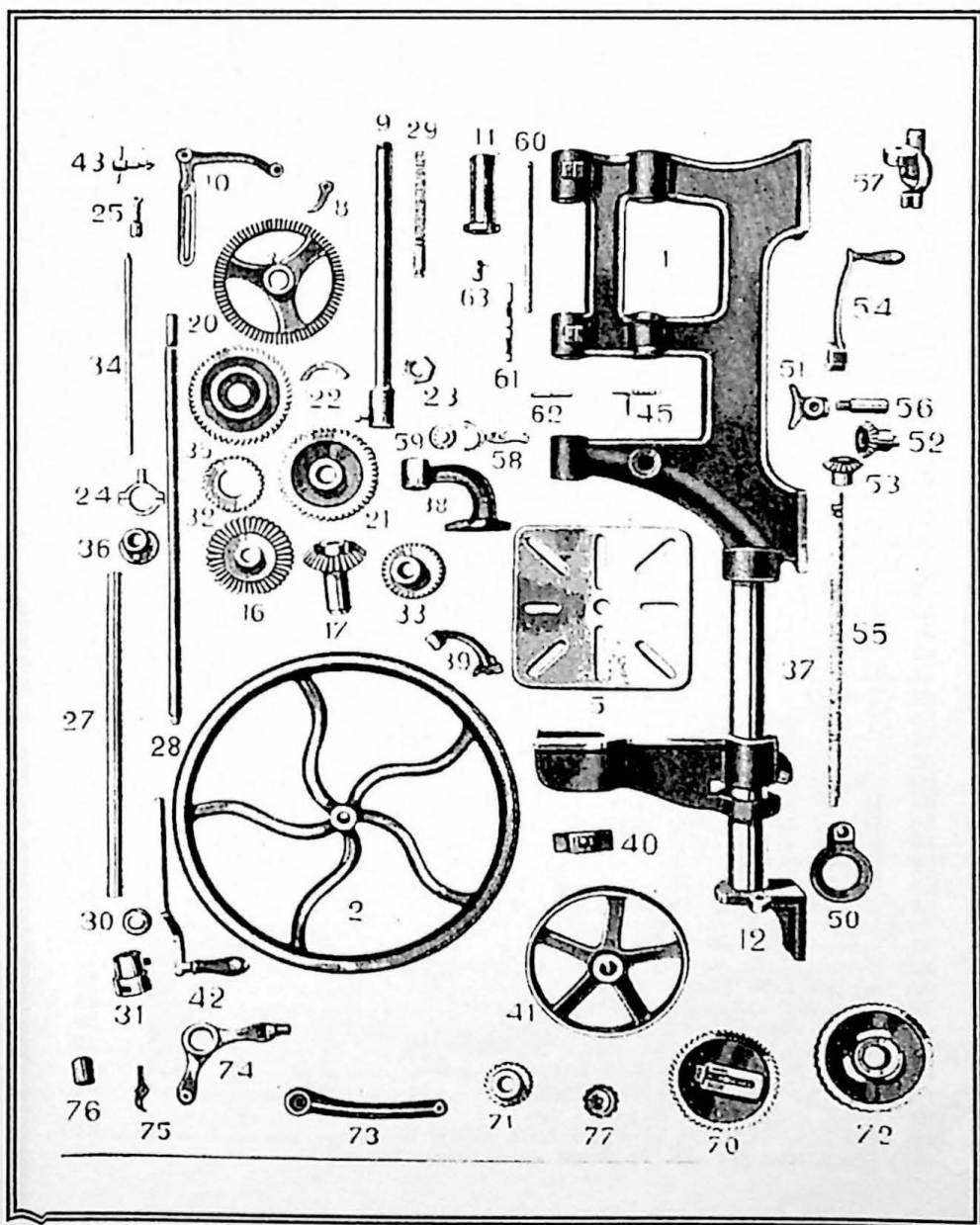
Repair List of Western Chief Drills Nos. 7 and 12

When Ordering, Give Name of Part Wanted and State
PARTICULARLY Whether for No. 7 or No. 12 Drill

No	Name of Part.	Price.
1	Frame	\$ 8.00
2	Fly-wheel	2.25
5	Table	3.00
6	Table Rest	2.00
7	Feed Wheel Handle	.15
8	Feed Arm Dog	.10
9	Mandrel (bored $\frac{1}{2}$ or $\frac{41}{64}$ inch), old style, not ball-bearing	2.50
9	Mandrel, ball-bearing and with Safety Chuck, $\frac{1}{2}$ or $\frac{41}{64}$	4.50
10	Feed Arm	.60
11	Feed Nut	.90
12	Foot	.50
16	Large Bevel Gear	2.50
17	Small Bevel Gear	2.00
20	Feed Wheel	.60
21	Large Gear with Hub	2.25
22	Latch, to change Gear	.50
23	Brass Nut	.50
24	Brass Eccentric Strap	.65
25	Brass Pitman Head	.50
27	Pulley and Crank Shaft	.90
28	Fly-wheel and Gear Shaft	1.00
29	Feed Screw (say if ball-bearing or not)	1.00
30	Washer, cast for Pulley Shaft	.20
31	Crank Hub	1.50
32	Small Flat Gear (always furnished with No. 35 Gear)	1.40
33	Small Hub Gear	1.50
34	Pitman Rod	.20
35	Large Straight Gear (always furnished with No. 32 Gear) ..	2.00
36	Eccentric	.60
37	Table Rest Shaft	2.25
38	Large Bracket	.60
39	Small Bracket	.50
40	Table Clamp	.20
41	Pulley for Power	2.00
42	Crank	.50
43	Eccentric Bolt	.30
44	Screw, for Feed Screw	.10

Western Chief Drill

No. 14

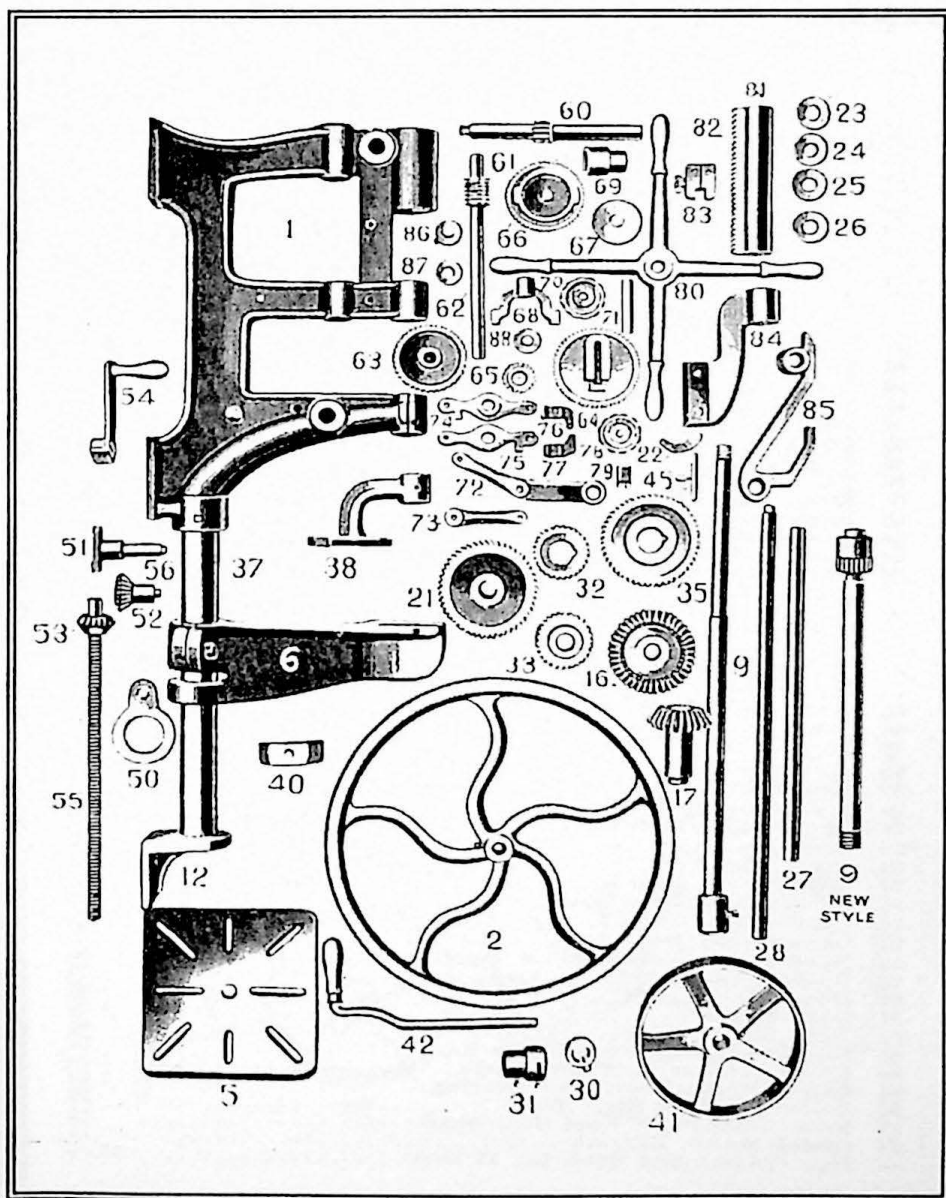


Repair List of Western Chief Drill No. 14

No.	Name of Part.	Price.
1	Frame	\$ 8.50
2	Fly-wheel	2.25
5	Table	3.00
6	Table Rest	2.00
8	Feed Arm Dog	.10
9	Mandrel (bored $\frac{1}{2}$ or $\frac{41}{64}$ inch), old style, not ball-bearing.	2.50
9	Mandrel, ball-bearing and with Safety Chuck, $\frac{1}{2}$ or $\frac{41}{64}$	4.50
10	Feed Arm	.60
11	Feed Nut	.90
12	Foot	.50
16	Large Bevel Gear	2.50
17	Small Bevel Gear	2.00
20	Feed Wheel	.60
21	Large Gear with Hub	2.25
22	Latch, to change Gear	.50
23	Brass Nut	.50
24	Brass Eccentric Strap	.65
25	Brass Pitman Head	.50
27	Pulley and Crank Shaft	.90
28	Fly-wheel and Gear Shaft	1.00
29	Feed Screw (say if ball-bearing or not)	1.00
30	Washer, cast for Pulley Shaft	.20
31	Crank Hub	1.50
32	Small Flat Gear (always furnished with No. 35 Gear)	1.40
33	Small Hub Gear	1.50
34	Pitman Rod	.20
35	Large Straight Gear (always furnished with No. 32 Gear)	2.00
36	Eccentric	.60
37	Table Rest Shaft	2.25
38	Large Bracket	.60
39	Small Bracket	.50
40	Table Clamp	.20
41	Pulley for Power	2.00
42	Crank	.50
43	Eccentric Bolt	.30
45	Trip for Gear Latch	.20
50	Table Rest Screw Nut	.70
51	Screw Bearing	.40
52	Raise and Lower Crank Pinion	.50
53	Raise and Lower Top Pinion	.60
54	Raise and Lower Crank	.60
55	Raise and Lower Screw	1.00
56	Stud	.25
57	Feed Yoke	1.00
58	Return Lever	.90
59	Return Lever Collar	.80
60	Stop Shaft	.20
61	Feed Yoke Plunger	.40
62	Catch with Spring to No. 61 Plunger	.20
63	Upper and Lower Stops	.30
70	Large Feed Gear (New Style)	.60
71	Small Feed Gear (New Style)	.30
72	Ratchet Feed Gear (New Style)	.70
73	Long Feed Arm (New Style)	.60
74	Cross Feed Arm (New Style)	.40
75	Feed Dog (New Style)	.10
76	Bushing for No. 73 Feed Arm (New Style)	.30
77	Lock Nut for No. 73 Feed Arm (New Style)	.10

Western Chief Drills

Nos. 16 and 17

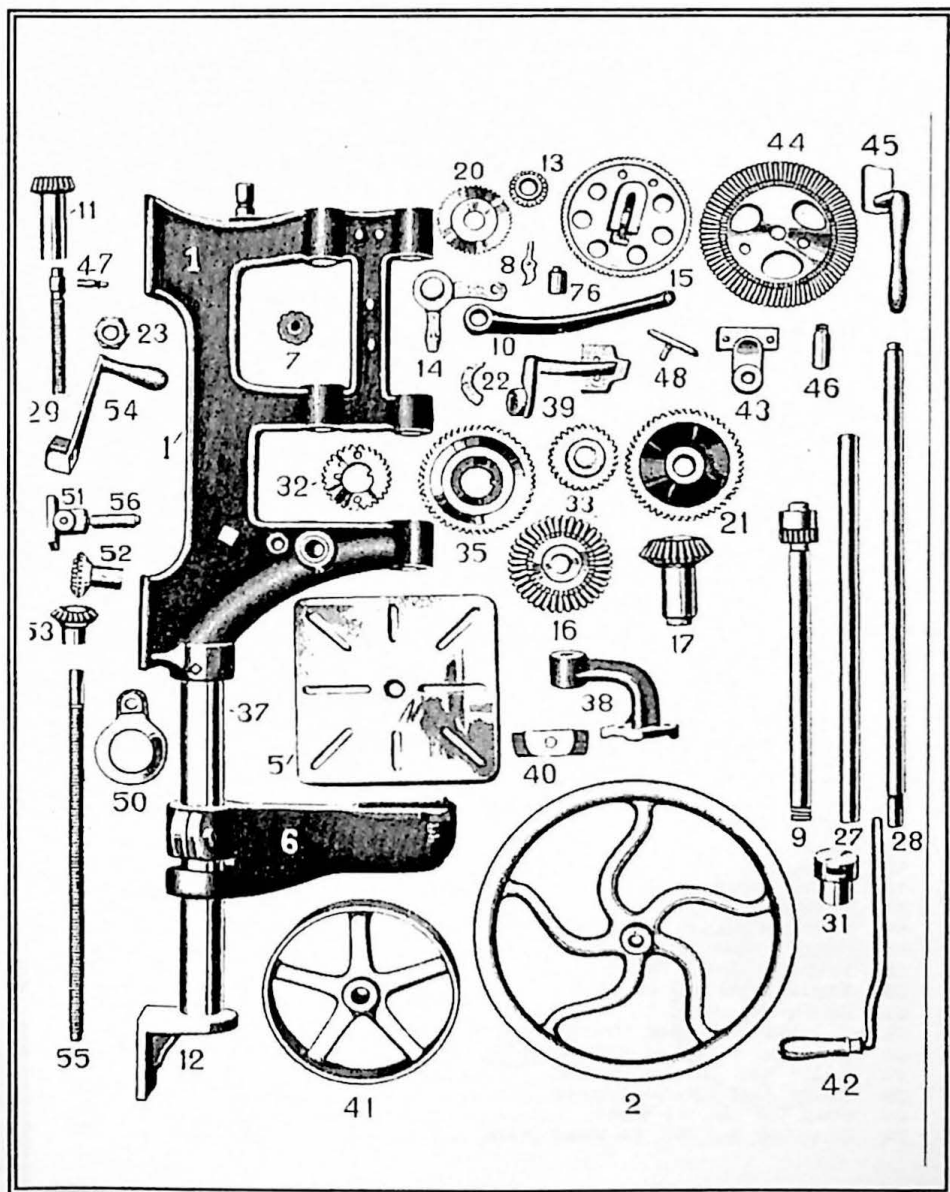


Repair List of Drills Nos. 16 and 17

No.	Name of Part.	Price.
1	Frame	\$10.00
2	Fly-wheel	2.50
5	Table	3.00
6	Table Rest	2.50
9	Mandrel with Safety Chuck, bored $\frac{1}{2}$ or $\frac{1}{4}$ inch; state if for single ball-bearing or train of balls.....	5.00
12	Foot	.50
16	Large Bevel Gear.....	2.50
17	Small Bevel Gear.....	2.00
21	Large Gear with Hub.....	2.25
22	Latch to Change Gear.....	.50
23	Upper Lock-nut for Mandrel.....	.40
24	Upper Adjusting Nut for Mandrel.....	.40
25	Ball-bearing Washer	.20
26	Ball Retainer (Brass).....	.40
27	Pulley and Crank Shaft.....	.90
28	Fly-wheel and Gear Shaft.....	1.00
30	Collar for Pulley Shaft.....	.20
31	Crank Hub	1.50
32	Small Flat Gear (furnished with No. 35 Gear).....	1.40
33	Small Hub Gear.....	1.50
35	Large Straight Gear (furnished with No. 32 Gear).....	2.00
37	Table Rest Shaft.....	2.25
38	Large Bracket	.60
40	Table Clamp	.20
41	Pulley for Power.....	2.00
42	Crank	.50
45	Trip for Gear Latch.....	.20
50	Table Rest Screw Nut.....	.70
51	Screw Bearing (51, 52 and 56 always assembled).....	.40
52	Raise and Lower Crank Pinion.....	.50
53	Raise and Lower Top Pinion.....	.50
54	Raise and Lower Crank.....	.60
55	Raise and Lower Screw.....	1.00
56	Stud	.25
60	Lever and Feed Gear Shaft, with Gear.....	1.50
61	Worm Feed Gear.....	.80
62	Worm Feed Gear Shaft.....	.50
63	Ratchet Feed Gear.....	.60
64	Large Feed Gear.....	.60
65	Small Feed Gear.....	.30
66	Large Spiral Feed Gear.....	1.00
67	Clutch Hub for Spiral Feed Gear.....	.30
68	Clutch Bracket	.30
69	Sleeve for No. 60 Shaft.....	.30
70	Clutch Hand Wheel.....	.25
71	Large Feed Gear Shaft.....	.25
72	Long Feed Arm.....	.60
73	Short Arm Feed.....	.30
74	Upper Cross Feed Arm.....	.30
75	Lower Cross Feed Arm.....	.30
76	Upper Feed Dog.....	.10
77	Lower Feed Dog.....	.10
78	Hand Wheel, Lock-nut for Feed Arm.....	.20
79	Bushing for Long Feed Arm.....	.30
80	Hand, Feed Lever.....	1.50
81	Feed Sleeve	1.50
82	Feed Sleeve Rack.....	.60
83	Brass Clamp for Feed Sleeve Rack.....	.80
84	Upper Bracket for Feed Bearing.....	1.00
85	Lower Bracket for Feed Bearing.....	1.00
86	Collar for Feed Gear Shaft.....	.20
87	Fiber Washer for Feed Gear Shaft.....	.10
88	Clutch Screw, Bearing.....	.15
—	Iron Column and Base, No. 17 Drill.....	15.70

Western Chief Drill

No. 18



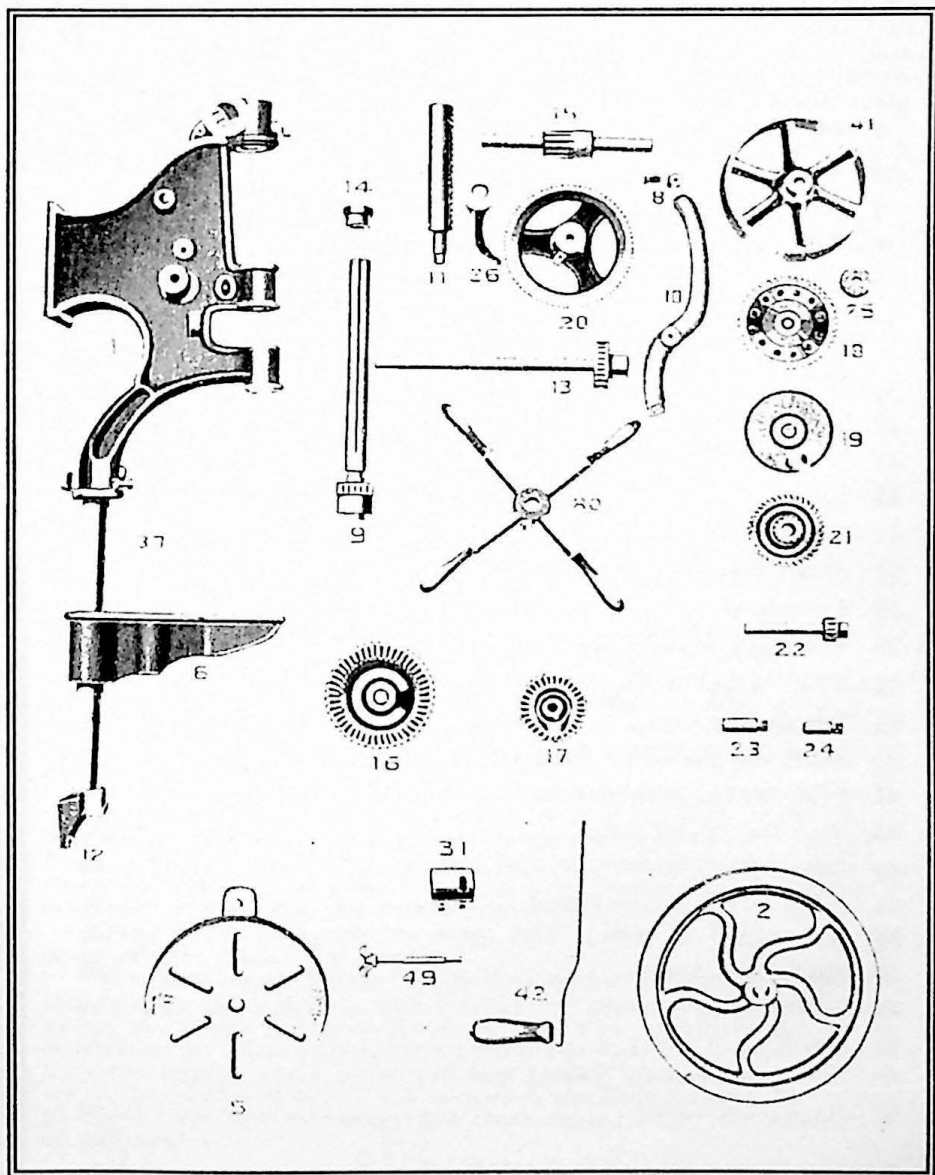
Repair List of Western Chief Drill No. 18

When Ordering, Give Number of Drill and Number of
Part Wanted

No.	Name of Part.	Price.
1	Frame	\$ 8.50
2	Fly-wheel	2.25
5	Table	3.00
6	Table Rest	2.00
7	Lock-nut for No. 10 Feed Arm.....	.30
8	Feed Dog	.10
9	Mandrel (bored $\frac{1}{2}$ or $\frac{1}{4}$ inch) Safety Chuck.....	4.50
10	Long Feed Arm.....	.60
11	Feed Nut and Pinion.....	1.00
12	Foot	.50
13	Small Feed Gear.....	.30
14	Cross Feed Arm.....	.40
15	Large Feed Gear.....	.60
16	Large Bevel Gear.....	2.50
17	Small Bevel Gear.....	2.00
20	Ratchet Feed Gear.....	.60
21	Large Gear, with Hub.....	2.25
22	Latch to Change Gears.....	.50
23	Brass Nut	.50
27	Pulley and Crank Shaft.....	.90
28	Fly-wheel and Gear Shaft.....	1.00
29	Feed Screw	1.00
30	Collar for Pulley Shaft (not shown).....	.20
31	Crank Hub	1.50
32	Small Flat Gear (always sent with No. 35 Gear).....	1.40
33	Small Hub Gear.....	1.50
35	Large Flat Gear (always sent with No. 32 Gear).....	2.00
37	Table Rest Shaft.....	2.25
38	Large Bracket	.60
39	Small Bracket (for No. 14 Cross Feed Arm).....	.50
40	Table Clamp	.20
41	Pulley for Power.....	2.00
42	Crank	.50
43	Feed Gear Bracket.....	.50
44	Lever Feed Gear.....	1.00
45	Feed Gear Lever.....	.50
46	Stud for Lever Feed Gear.....	.40
47	Feed Screw Stop.....	.10
48	Trip for Gear Latch.....	.20
50	Table Rest Screw Nut.....	.70
51	Screw Bearing	.40
52	Raise and Lower Crank Pinion.....	.50
53	Raise and Lower Top Pinion.....	.50
54	Raise and Lower Crank.....	.60
55	Raise and Lower Screw.....	1.00
56	Stud for No. 51 Gear.....	.25
76	Bushing for No. 10 Feed Arm.....	.30

Western Chief Drill

No. 19



Repair List of Drill No. 19

When Ordering, Give Number of Drill and Number of
Part Wanted

No.	Name of Part.	Price.
1	Frame	\$ 3.50
2	Fly-wheel	1.50
5	Table	1.60
6	Table Rest	1.25
8	Dog for Feed Arm	.10
9	Mandrel with Safety Chuck (state if $\frac{1}{2}$ or $\frac{41}{64}$ inch)...	3.80
10	Feed Arm	.90
11	Feed Rack	2.00
12	Foot	.30
13	Fly-wheel Shaft and Pinion	.80
14	Brass Nut	.50
15	Rack Pinion and Shaft.....	2.00
16	Large Bevel Gear	1.50
17	Small Bevel Gear	.50
18	Lock Gear	1.50
19	Plate and Plunger for Lock Gear	1.25
20	Feed Wheel	.75
21	Double Gear	1.00
22	Shaft and Pinion for Feed Wheel	.80
23	Stud for Large Bevel Gear	.30
24	Stud for Double Gear	.30
25	Collar for Pulleys	.20
26	Large Dog for Feed Wheel	.30
31	Crank Hub	.60
37	Table Rest Shaft	1.25
41	Pulley	1.50
42	Crank	.50
49	Screw and Nut for Table	.10
80	Hand Feed Lever	1.25

The Smith

The Sovereign of all Artisans



IN the year B. C. 1005, Solomon, King of Israel, spake unto his servants and saith, "Now that the Temple is finished, let us declare praise unto him who deserveth praise," and he bade them each speak of the works he hath done.

And Hiram of Tyre, a worker in brass, spoke of the images he had wrought for the mighty Temple by his talent, *aided by the tools of steel that were made by the Smith.*

And Abinadab, a carver of cedar and kindred woods, declared aloud his praise of the *Ironsmith, who created the tools for his handiwork*

And Geber, a hewer of stone, and Baana, who wrought wonders in iron, and each of the mighty throng of builders, who gathered around the wise King, all admitted that *without the Smith who made their tools* whereby they carved the precious stones, hewed the marble slabs, and wrought in hammered brass and gold the cherub images for the lordly temple, they would have been helpless and without power.

Then spoke King Solomon, "Bring forth the Smith! Command him into my presence, that he may hear of all this." And straightway cometh from among the artisans a bearded Vulcan of the forge, brawny in face and arms, and with sinews of iron, much amazed with wonder at his presence before the high King of Israel.

"Didst thou, humble worker of iron, create within thy grizzled brain, and didst thou shape with thy cunning hands, the tools of Hiram, of Abinadab, of Geber, that they might please me with their handiwork? Didst thou fashion the chisel of steel that chipped the marble pillars of the great palace? And didst thou forge from flaming iron those tools so cunningly devised, that the worker might carve the cedar of Lebanon?"

"Yea, verily, most gracious King, hath I done all this, but all for praise of thee, and of thy Temple."

"Fear not, I beseech thee, though thou art but an humble Smith. To thee belongs the honor, to thee belongs the praise, and to thee a seat within the temple and upon the throne, for thou hast fashioned by the cunning of thy brain and strength of arm the tools of all those who did build my temple, and I will create thee greater than all these, for thou art the foundation of all." And thereupon the King declared throughout all Israel "*that iron was king*" and the humble Smith "*the Sovereign of all Artisans.*"

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