



1842

1906

# J.I. CASE THRESHING MACHINE CO.

## *SIXTY-FOURTH ANNUAL CATALOG*

**I**N this publication we have presented such information concerning the construction of CASE Machinery as, we hope, will enable the purchaser to determine its many meritorious features.

¶

CASE Machinery has always been high-grade, and we have no difficulty in convincing customers of its superiority where it is convenient for them to make a personal examination. To facilitate such inspection we place every year hundreds of sample rigs in the hands of local agents throughout the country.

¶

It is also in furtherance of this "Show Me" policy that induces us, though at great expense, to include the large number of engravings in this catalog. All are made from photographs and faithfully show CASE Machinery as it is built--not as the artist's imagination draws it.

¶

Especial attention is directed to these illustrations as it is possible to obtain from them a much better understanding of the machinery than can be conveyed by words alone.

¶

We appreciate, however, the impossibility of elucidating every point to the satisfaction of all and therefore court the fullest inquiry on the part of intending buyers.

FACTORY, GENERAL AND EXECUTIVE OFFICES AT

## RACINE, WIS. U.S.A.

# Contents

Introductory .....	1	Engine Tender .....	29
Branch Houses .....	2	Steel Separator .....	35-36
Contents .....	2	Separator Desc. Matter .....	30-31-32-33-34
Engines .....	3	Separator Side Gear .....	34-36
Boilers .....	3-4	Separator 36-inch 18 x 22 Cylinder.....	37
Mounting .....	4-5	Separator 42-inch 24 x 22 Cylinder .....	38
Traction Gears .....	6	Separator 46-inch 28 x 22 Cylinder.....	39
Engine Mechanism .....	7	Separator 50-inch 28 x 32 Cylinder.....	40
Valve Gear .....	8	Separator 54-inch 32 x 32 Cylinder .....	41
Friction Clutch .....	9	Separator 58-inch 36 x 32 Cylinder.....	42
Engine Descriptive Matter .....	9-10	Separator 62-inch 40 x 32 Cylinder.....	43
Traction Engines—9-horse .....	11	Separator 66-inch 44 x 32 Cylinder.....	44
12-horse .....	12	Feeder and Band Cutter .....	45-46
15-horse .....	13	Mounted Feed Carrier .....	46
20-horse .....	14	Wind Stacker .....	47-48
25-horse .....	15	Combination Stacker .....	49
32-horse .....	16	Attached Automatic Stacker .....	50
Road Locomotive .....	17	Independent Automatic Stacker.....	51
Road Roller .....	18	Side Stacker.....	52
Compounded Engine .....	19-20	Chaff Separator .....	53
Winding Spool .....	21	Straw Chopper and Shredder .....	53
Engine, Tender and Canopy Top .....	21	Grain Handlers .....	54-55
Portable Engine, 6-horse .....	22	Recleaner .....	56
Portable Engine Descriptive Matter.....	23	Clover, Pea and Bean Attachments .....	57
Skid Engine and Boiler .....	24	Dingee-Woodbury Power .....	58
Mounted Boiler .....	24	Husker-Shredder .....	59
Plow Attachment .....	25-26	Price List .....	60-61-62
Tank and Trucks .....	27-28	Table of Dimensions, etc. ....	63-64

## Branch Houses

Aberdeen, South Dakota.  
Amarillo, Texas.  
Atlanta, Georgia.  
Buenos Aires, 447 Calle Peru,  
Argentine Republic, S. A.  
Calgary, Alberta.

Dallas, Texas.  
Denver, Colo., 1400 Wazee St.  
Des Moines, Iowa.  
Devils Lake, North Dakota.  
Fargo, North Dakota.  
Fergus Falls, Minnesota.  
Freeport, Illinois.  
Grand Forks, North Dakota.  
Greensboro, North Carolina.  
Harrisburg, Pennsylvania.  
Harvey, North Dakota.  
Hillsboro, North Dakota.  
Holdrege, Nebraska.  
Indianapolis, Ind., 241 Ky. Ave.  
Jackson, Michigan.

Kansas City, Mo., 1416  
West 11th Street.  
Lake Charles, Louisiana.  
Lincoln, Nebraska.  
Louisville, Ky., 1317 W. Main.  
Madison, Wisconsin.  
Mankato, Minnesota.  
Memphis, Tenn., 36 E. Carolina.  
Mason City, Iowa.  
Minneapolis, Minn., 613 Wash-  
ington Avenue, South.  
Mitchell, South Dakota.  
Nashville, Tenn., 173 N. College.  
Oklahoma, Oklahoma.  
Oshkosh, Wisconsin.

Carrington, North Dakota.  
Cassleton, North Dakota.  
Chicago, Ills., 26 W. Randolph.  
Columbus, Ohio.  
Cooperstown, North Dakota.

Park River, North Dakota.  
Peoria, Illinois, 617 S. Water.  
Portland, Oregon.  
Regina, Saskatchewan.  
San Francisco, Cal.  
Spokane, Washington.  
St. Louis, Mo., 17th & Austin.  
Syracuse, N. Y.  
Toronto, Ontario, 245 Dufferin.  
Wahpeton, North Dakota.  
Waterloo, Iowa.  
Watertown, South Dakota.  
Wichita, Kansas.  
Winnipeg, Man., Princess &  
James Streets.

Factory and General Offices at Racine, Wis., U. S. A.





With a maximum shop capacity of sixty complete engines a week we are barely enabled to supply the constantly increasing demand for CASE engines. Their great popularity is accounted for by the unvarying satisfaction they give in doing well the work they are built to do.

That our engines do this is because the principles of construction are right, the proportions are right, materials the best to be had, and the workmanship unsurpassed. We ask a careful perusal of the following description in detail as evidence to support our statements.

We pride ourselves particularly on the reputation of our boilers for stability and steam-producing qualities. The demand for them for sawmill and other semi-stationary purposes has induced us to furnish them on skids and mounted separately on wheels, as outlined on another page.

**Type**—We build only the tubular locomotive type with full open-bottom firebox. They cost more than other types but are safer and more substantial. Every one is built in our own shops by the most modern methods embracing hydraulic, pneumatic, and electrical machinery, which insures exact work and expeditious handling.

**Material**—Plates are of open-hearth flange steel with the standard tensile strength of 60,000 pounds per square inch. All material is subjected to thorough chemical and physical tests in our own laboratories.

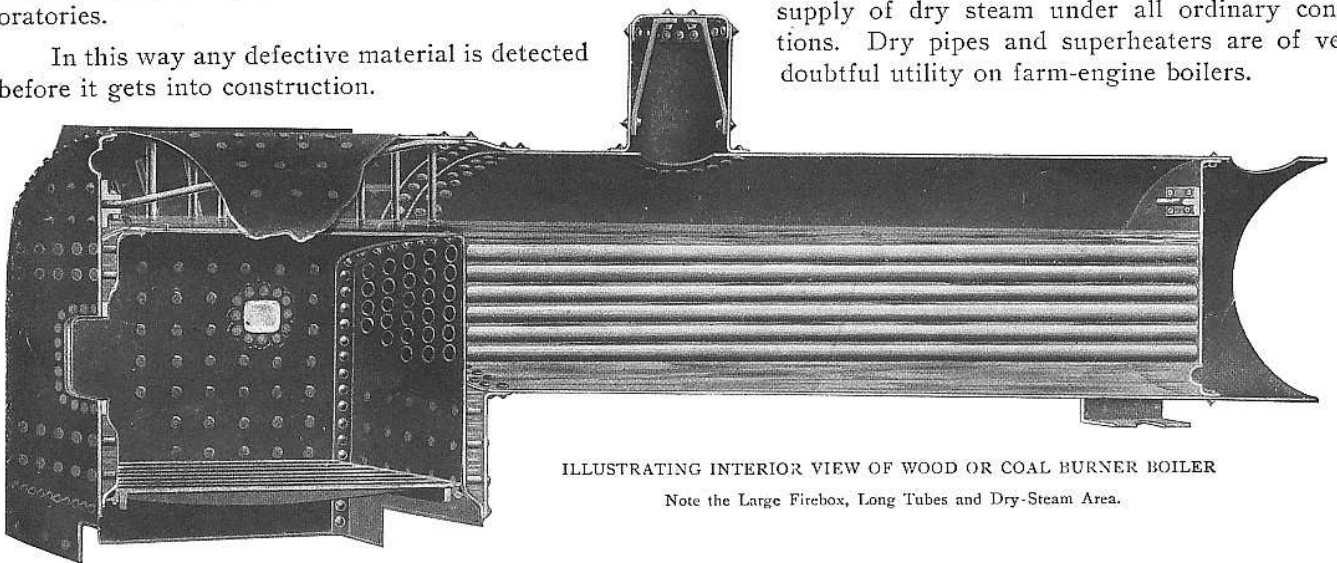
In this way any defective material is detected before it gets into construction.

**Tubes**—Seamless steel tubes are used by us exclusively. They are vastly superior to the old butt or lap welded varieties. Constituted of very ductile and absolutely flawless steel they are easy to bead, to expand, and fit into the flue sheet so accurately that ferrules are entirely unnecessary. Of unusual length they radiate practically all the heat so that only a small amount escapes through the stack.

We use a greater number of tubes in our boilers than do most manufacturers, as frequent penetration of the water makes it easier to raise it to a high temperature than is possible where a fewer number of tubes are used.

**Stay Bolts** are  $4\frac{1}{2}$  inches between centers, of standard size and pitch.

**The Dome** is located near the center, is well braced and of sufficient size to secure an ample supply of dry steam under all ordinary conditions. Dry pipes and superheaters are of very doubtful utility on farm-engine boilers.



ILLUSTRATING INTERIOR VIEW OF WOOD OR COAL BURNER BOILER

Note the Large Firebox, Long Tubes and Dry-Steam Area.

Prices Quoted On Pages 60, 61 and 62.

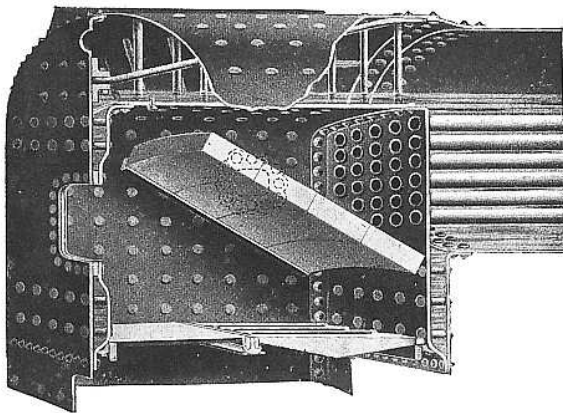


# J.I. Case Threshing Machine Co. *RACINE WISCONSIN* U. S. A.

**The Firebox.** A large firebox is desirable because the greater body of fire induces better draft, without artificial forcing; affords extensive heating surface where it is most effective, and therefore secures rapid generation of steam on a nominal consumption of fuel.

In speaking of their engines CASE customers invariably emphasize the fact that they are "easy steamers" and economical on fuel and water.

**Triple Tests.** Each boiler undergoes a hydrostatic or cold water test of 200 pounds per inch while the seams and rivets are being tightened. When the completed engine comes from the erection shop it is steamed to a pressure of 130 pounds for several hours and is then belted to a "Prony" brake and made to develop continuously three times the rated horsepower. An indicator card, which is an infallible test of the power developed at each stage of the stroke, is taken from every engine. Because of these thorough tests we have no complaints from our customers on account of leaky boilers.



SECTIONAL VIEW OF FIREBOX, STRAW-BURNER BOILER, SHOWING FIREBRICK ARCH AND SHORT GRATES.

Our many years of experience with the large number of engines built has given us superior advantages for testing and trying out theories of the technical engineers, combined with the actual field demonstrations and necessities. After which we have designed a steam-generating boiler that is economical in the use of fuel and water. On this boiler we have placed a cylinder especially designed for it, which is large in diameter and yet not wasteful of steam. Therefore we are enabled by this combination to give our purchasers a larger and more powerful general-purpose

engine of the same rated horse-power than any built by other manufacturers.

**The Case Straw Burner Boiler** differs from the Coal Burner only in the use of a firebrick arch, and short grates with a dead plate, in place of the regular coal or wood grates. The firedoor is fitted with a chute to facilitate the feeding of straw. A small door or "peep hole" is placed in the left side of the firebox so that what ashes accumulate below the tubes and behind the arch can be removed.

After the boiler has been fired for a short time the firebrick arch becomes "white hot" and maintains a constant temperature in the firebox. This secures perfect combustion and produces uniform evaporation. An even, unvarying temperature in the firebox prevents expansion and contraction strains so productive of leaky tubes, rivets and stay bolts.

**The Draft** enters from the front ash door and its direction is toward the straw, not away from it as is the case in "Return Flue" boilers.

The splendid success of the CASE Straw Burners has led to the discontinuance of the "Return Flue" type by most manufacturers and their adoption of the firebrick arch principle.

## BOILER MOUNTED ON SPRINGS.

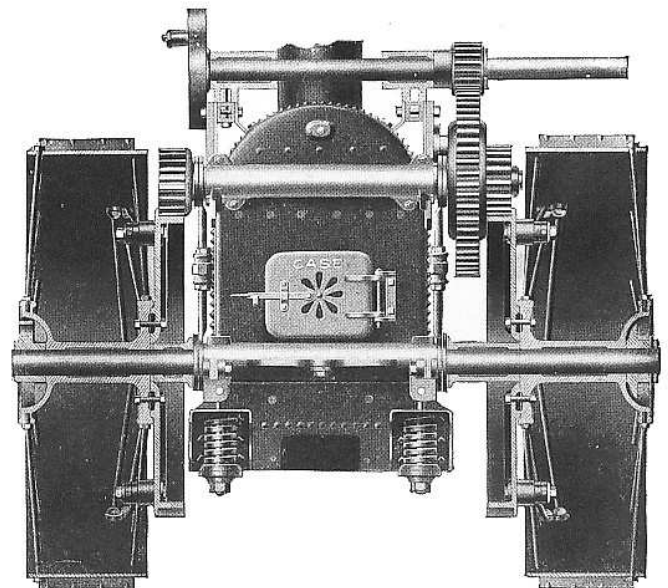


ILLUSTRATION TO SHOW BEARINGS OF COUNTER SHAFT AND REAR AXLE, LONG HUBS OF TRACTION WHEELS, DISTANCE BARS, AND SPRINGS SUPPORTING BOILER.

Prices Quoted on Pages 60, 61 and 62.



The wide popularity of our engines is due, in a large degree, to the splendid system we employ for mounting the boiler on springs and which relieves it of the serious strains imparted by the traction gear in passing over rough or stony roads.

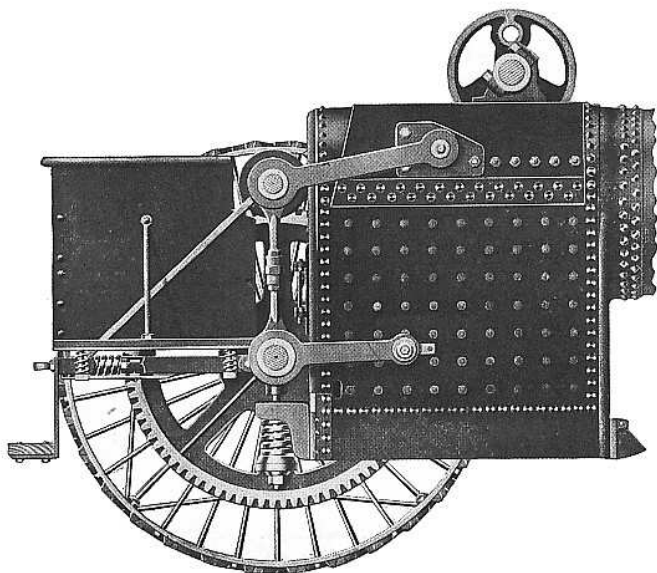
Such strains are very injurious and in time weaken a boiler to such an extent as to render it very dangerous, although apparently in sound condition.

Our success with a spring mounted engine has naturally led other builders to emulate our example but with far less satisfactory results.

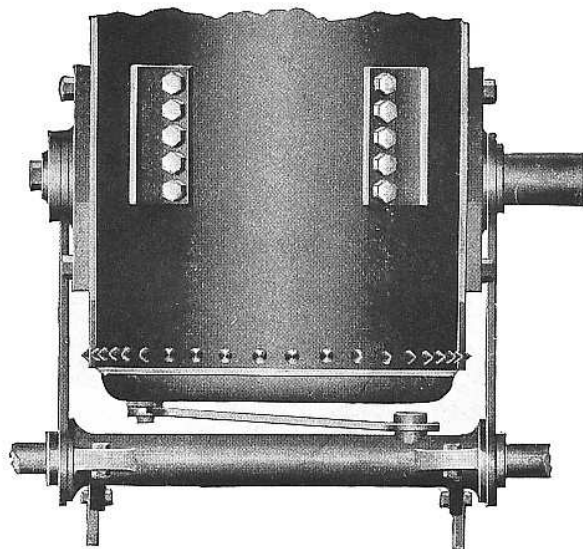
Two Steel Radius or Drag Links on either side of the boiler connect with the cross-shaft and the axle of the drive wheels. These permit an up-and-down movement of the boiler, without disturbing its horizontal position, and save it from all strain of the traction gear.

The Turnbuckle Bars, extending from the cross-shaft to the drive-wheel axle maintain the vertical position of the former. They are easily adjustable to take up any wear of the cross-shaft pinions.

A Steel Crosslink bolted to the top of the boiler on a stud bearing, and to a trunnion on the upper can-



VIEW OF RADIUS LINKS, DISTANCE BAR AND ONE OF THE SPRINGS SUPPORTING BOILER.



SHOWING UPPER CANNON BEARING HELD IN POSITION ENDWISE BY CROSSLINK.

Proper meshing of the traction gear must be maintained no matter what degree of undulation the boiler undergoes.

How this is accomplished on the rear, double-gear CASE engine we have endeavored to make clear in the accompanying engravings. It will be observed the boiler has spring-pot brackets on the lower corners (these brackets form part of the boiler), which suspend the weight on the double spiral springs. The latter are hung from the lower cannon bearing on eyebolts which do not interfere with their expansion or compression.

non bearing, prevents any independent side play of the boiler or cross-shaft.

The Lower Cannon Bearing has a strong lug cast next to the boiler. This lug is fitted with a malleable slide which is kept in position by steel guides bolted to the boiler under fire-door. This, with the crosslink above, prevents all side or end play.

The Pitch Lines of the teeth in the driving-gears are always maintained in their proper relative position by the action of the radius links and distance bars. This point is of great importance and is not attained so successfully by any other device.

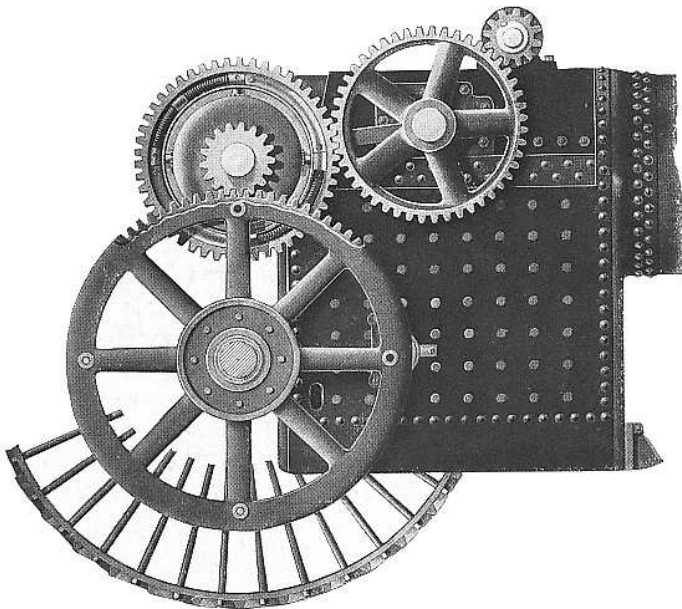




# J. I. Case Threshing Machine Co. *RACINE WISCONSIN* U. S. A.

The boiler is not only relieved of the severe strains of the driving gears and breakage reduced to the minimum, but the greatest freedom of vertical movement, with reference to the axle, is secured and therefore the best possible results of a spring-mounted engine.

## TRANSMISSION OF TRACTION POWER.



ARRANGEMENT OF TRACTION GEARS.

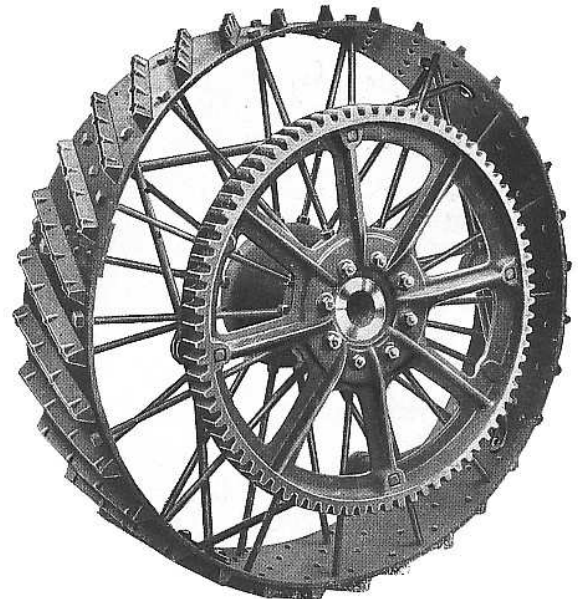
The Traction Gears on all CASE engines are made of special semi-steel and for that reason are much more durable and 40 per cent. stronger than the ordinary cheap cast gears usually found on farm engines. That our gears have great strength has been demonstrated by the hard work they have been put to with the increased uses and demands on traction engines, such as plowing, breaking, road grading and freighting.

The Crankshaft Pinion is keyed on to a sleeve, loose on the shaft. Power is applied through the friction clutch.

The Intermediate or idler gear is mounted on a stub bracket journal bolted to a side plate (not to the boiler) on the outside of the upper radius link.

The Spring Differential Gear is on the counter-shaft. In operation power is first transmitted to the spur gear rim, which contains the cushion springs, thence by the springs to the center ring containing the four bevel pinions, which bear equally upon the bevel gears on either side. The whole differential gear moves together as one wheel when the engine is moving straight ahead or back, but when turning a corner the four pinions revolve in the bevel gears just in proportion to the sharpness of the curve. All shocks caused by sudden starting of the engine in either direction are absorbed by the springs, and the motion transmitted gently to the driving gears.

Power is applied to both drive wheels by the heavy cross-shaft pinions to the large bull gears bolted to the hubs and braced from the tires of the drivers.



TRACTION WHEEL AND GEAR.

The Traction Wheels have steel spokes and tires and are therefore stronger and lighter than the cast iron kind. The tires vary in width according to size of engine from 14 to 24 inches, and 36 inches for plow engines.

The grouters are riveted diagonally across the tires. They are  $1\frac{3}{4}$  inches high and give the wheels a good grip in soft ground or on slippery grades.

Prices Quoted on Pages 60, 61 and 62.

# J. I. Case Threshing Machine Co. RACINE WISCONSIN U. S. A.



On the rear, double geared CASE engines the axle revolves with the drive wheels in a bearing extending the full width of the boiler. This extensive bearing surface keeps the wheels and gears in perfect alignment not possible with other makes using stub axles bolted to the firebox sides. The stub axle wears in the journal, and, with no provision for adjustment, the wheels soon "tip in" at the top with cut-out gears as a speedy result. This style of mounting is undoubtedly economical (to the builder) but a perpetual expense to the purchaser.

**A Hill Climber.** The modern threshing-rig aggregates a much larger tonnage than in the old days. It is, consequently, one of the first requisites that an engine should have the traction ability to haul the rig on bad roads and up steep hills. The weight of the engine should also be distributed as much as possible on front and rear axles to make it safer on bridges and to prevent "bobbing up" in front in pulling on an up grade.

CASE Engines possess these characteristics, and we confidently assert that no other make dare compete with them in tests to demonstrate these qualities.

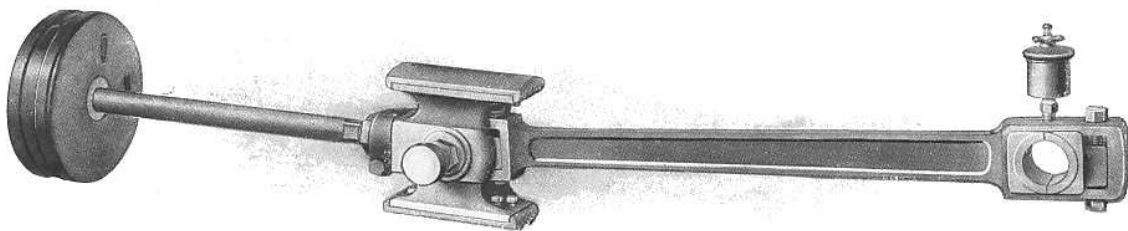
**The Cylinder and Steam Chest** are cast in one piece of a special, close-grained hard iron, which insures a smooth, durable and easily lubricated surface. To guard against expansion, caused by heat

true surface and then scraped by hand to insure a perfect steam-tight fit.

**The Piston** is a single hollow casting of sufficient width to give good bearing and wearing surface. The hole for the piston rod is bored to a standard taper; the rod is turned to the same taper and the head is forced on by a pressure of twelve tons in a powerful hydraulic press. As additional security, a nut is put on and set up solidly against the piston and the end of the rod is then riveted over.

**The Piston Packing-Rings** are self-adjusting. After they are bored, turned and cut, they are sprung together, placed in a clamp, machined to exact size and made exactly round. This insures a perfect-fitting ring that will make a steam-tight joint with the least possible friction and eliminates the losses that would otherwise occur from friction and from leakage of steam to the wrong side of piston.

**The Connecting-Rod** is forged from a single piece of I-bar steel, without a weld, no straps, gibs or keys being used. It is made unusually long, thereby lessening the angular thrust, and reducing the friction between cross-head and guides. The boxes are made of high-grade phosphor bronze, compounded by a formula adopted by us after careful practical tests. We have found it to be the best and most durable anti-



THE STRONG ARM OF CASE ENGINES.

from the boiler, the cylinders of all our engines overhang the frame and are not bolted to the boiler or to a heater.

The steam ports are of ample area to prevent wire-drawing, with all unnecessary clearance or waste space avoided.

**Slide Valve** is the plain D style. The valve and valve seat on every engine is carefully machined to a

friction material obtainable, and, with any reasonable usage, will not heat or cut.

**The Crosshead** is light, strong and convenient. It is fitted with shoes accurately turned to the same radius as the guides. These shoes have large bearing surface and an exceedingly convenient provision for their adjustment, so that wear may be taken up and the piston rod kept in proper alignment.

Prices Quoted on Pages 60, 61 and 62.



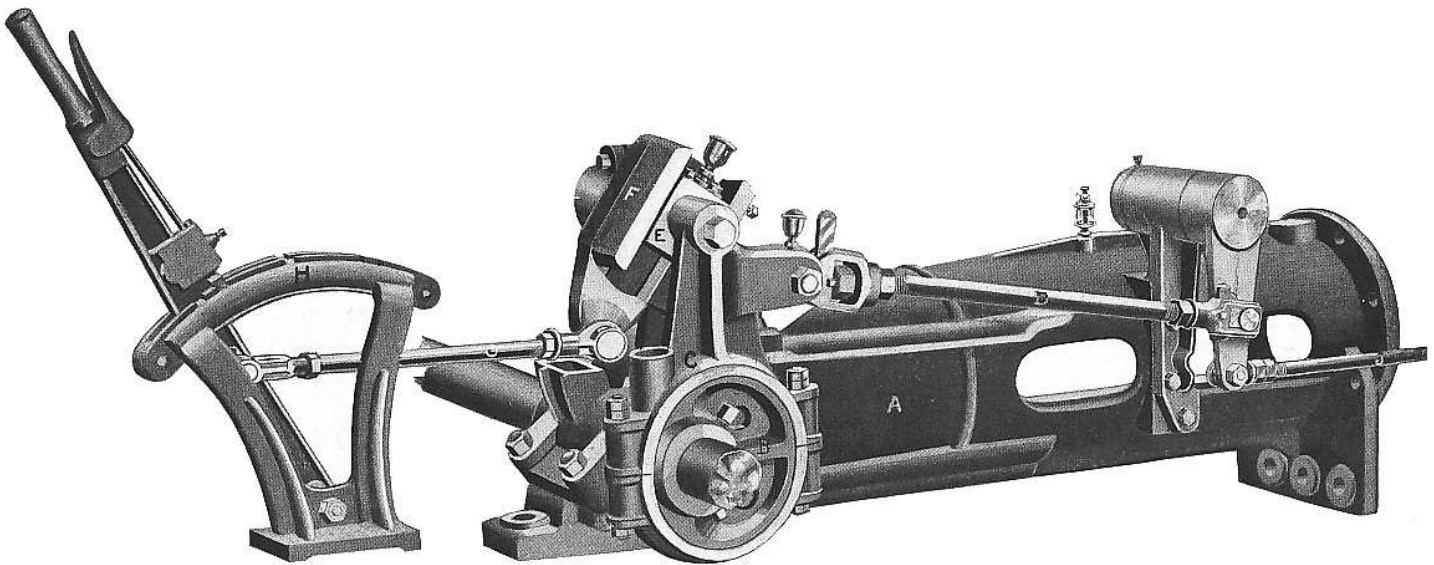
# J.I. Case Threshing Machine Co. RACINE WISCONSIN U. S. A.

In Our Valve Gear we combine simplicity with utility. All trappy and complex parts are avoided. All wearing parts are reduced to the smallest possible number and constructed with a view to readiness of adjustment.

We Use a Single Eccentric fastened to crankshaft

a central notch in which position the engine will remain stationary should the throttle be opened inadvertently.

Our valve motion can be reversed quickly under a full head of steam without danger either to the piston or the valve gear.



SINGLE ECCENTRIC VALVE GEAR.

by two set-screws counter-sunk in the shaft, which prevent slipping. The eccentric strap has an extended arm, pivoted in a wooden block sliding in a guide. The direction of this guide can be changed by the reverse lever and the inclination or angle at which it is set determines the direction in which the engine is to run. The degree of this angle also fixes the "point of cut-off," which governs the amount of steam admitted to the cylinder during each stroke.

The Eccentric Strap is adjustable so that all wear can be readily taken up. The wood block in slide is made of hard maple boiled in oil.

The Eccentric Rod is provided with brass boxes, all wear being taken up with keys. The rocker-arm end of valve rod is also provided with brass boxes and key, which makes a valve gear that can be easily adjusted in the field, thus insuring a smooth-running engine at all times.

The Quadrant is provided with two notches at each end, which allows the operator to adjust the cut-off of valve according to the load or the work the engine is doing. The quadrant is also provided with

Another important advantage of our reverse is that it gives perfect control of the engine on the steepest hills.

At the St. Louis Exposition the CASE engine on an incline with a rise of 60 in 100 feet, was under perfect control, being stopped half way up ascending or descending.

### Likes Our Reverse Gear.

We are well pleased with the reverse, as it runs nicely on the half cut-off; in fact, we have used it altogether, threshing on the one-half cut-off, as it saves water and fuel.

The boiler is an easy and steady steamer and economical in both fuel and water. We consider the engine to be the best we have had any experience with and we have seen a few engines at that.

Hilton, New York, Nov. 2, 1904. E. H. Tompkins.

The CASE Friction Clutch is a most efficient and convenient device for transmitting power from the engine to the traction gear. It is positive and reliable in operation. It can be engaged or disengaged when the engine is stationary or when it is running and power applied gradually or instantaneously.

With our clutch the belt can be tightened while threshing, without reversing the engine it can be

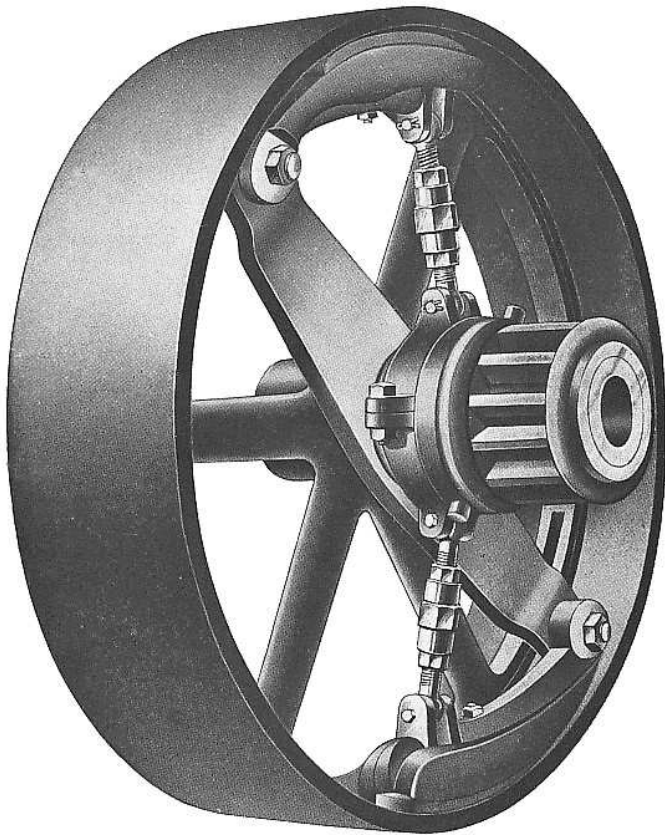
Prices Quoted on Pages 60, 61 and 62.





backed slowly until the belt is as tight as desired, and without loss of valuable time.

**Turnbuckles With Lock Nuts** are placed in the toggle levers for adjusting their length to take up the wear on the wooden friction shoes. Such adjustment is very important and is easily made, so that the levers will stay in place without bringing any strain on the shifting-collar.



FLY WHEEL AND FRICTION CLUTCH.

A notch has been added to the quadrant for clutch lever and the dog made to fit over it. When the lever is thrown forward the dog engages the notch and secures the lever until dog is raised. This prevents the clutch from being accidentally drawn into engagement.

The **Fly-wheel** on CASE Engines is placed on the righthand side from platform, same as is the steering-wheel, which will be found a real convenience in getting the engine in line with separator.

It is within easy reach from the platform but clear of the drive wheel so there is no difficulty in putting on or taking off the belt. Nor is there the possibility of damage to the belt should it be thrown off while the engine is running, as is the case with engines having fly-wheel mounted between drive-wheel and boiler.

Face of the fly-wheel is turned down in a lathe with a slight crown in the middle to make the belt run true.

The **Steering-Gear** is fitted to the front end of fire-box with strong brackets, which hold the chain roller in place. The right-hand bracket has a bearing for the hand-wheel shaft.

The chain roller is cast on the principle of a right-hand auger, forming a guide channel for the chain to prevent it from crowding or overlapping.

The steering chains are supplied with springs and are kept the same distance from the king bolt, by circular flanges attached to front axle, whether the wheels be straight or cramped to their utmost.

With this arrangement the chains are kept at the same tension and guiding of the engine is done with comparative ease.

The **King Bolt** supporting the bolster, is of steel and is pivoted upon a steel pin which passes through it and the axle; this permits the axle to oscillate perpendicularly, relieving the engine of jolts and jars while on the road, and preventing any side strain on the boiler.

The saddle, riveted to underside of boiler, is made of boiler plate and the bolster is bolted to it. The bolster can be removed, if necessary, without disturbing either the saddle or boiler shell.

The **Platform** is made of sheet steel entirely and is mounted independently on four spiral springs, supported by a strong wrought-iron frame attached to the cannon bearings.

It is supplied with spacious tool boxes, seats for the operator, and is so constructed that he can stand on the ground and fire the engine without inconvenience.

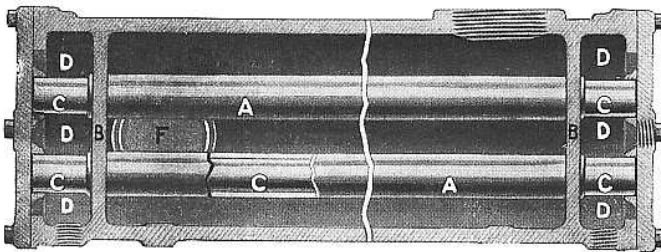
The **Levers** for reverse, throttle, and friction clutch, and independent pump and injector are within easy reach of the platform.

The **Draw Bar** is made of steel and supplied with a heavy spiral spring, which absorbs the shock of starting heavy loads and prevents breaking of tongues or draft chains.



# J.I. Case Threshing Machine Co. RACINE WISCONSIN U. S. A.

**The Heater** with which our engines are equipped is cylindrical in form and is placed on the forward left side of boiler extending from the cylinder to smokebox. It is very simple in construction, comprising three tubes, expanded and calked in the head at each end; in each tube is placed a pipe extending its full length, which forms an annular space about one-eighth of an inch wide through which the feed water must pass and is raised to a high temperature by the exhaust steam surrounding the tubes.



FEED WATER HEATER.

Our heater is provided with drain cocks and will cause no annoyance from burst pipes and leaky joints, is easy of access to clean and repair.

**Iron Steps** with a long run-board are furnished on all engines above the 9-horse size. This makes the engine mechanism easy to get at.

**The Smoke Stack** is made of iron, cast in one piece and bolted to the base. A cone screen with adjustable lifter and spark-collecting device is provided which is a good safeguard against fire from flying sparks regardless of the kind of fuel used.

**The Fittings** on CASE Engines are the best money can buy. They comprise the CASE oil pump for lubricating the cylinder, which is positive and perfect in operation in even the coldest weather. We furnish them exclusively.

The Marsh is the simplest steam pump that can be had and is a reliable boiler feeder.

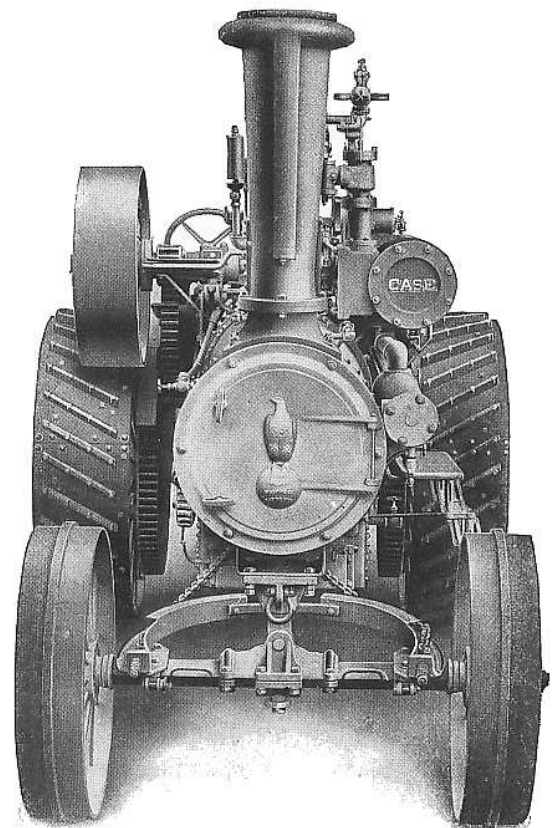
Some operators prefer an injector to the steam pump so we equip our engines with both. The Penberthy injector is perfectly automatic in that it picks up the water again, should the current be broken

from any cause, without any attention by the operator.

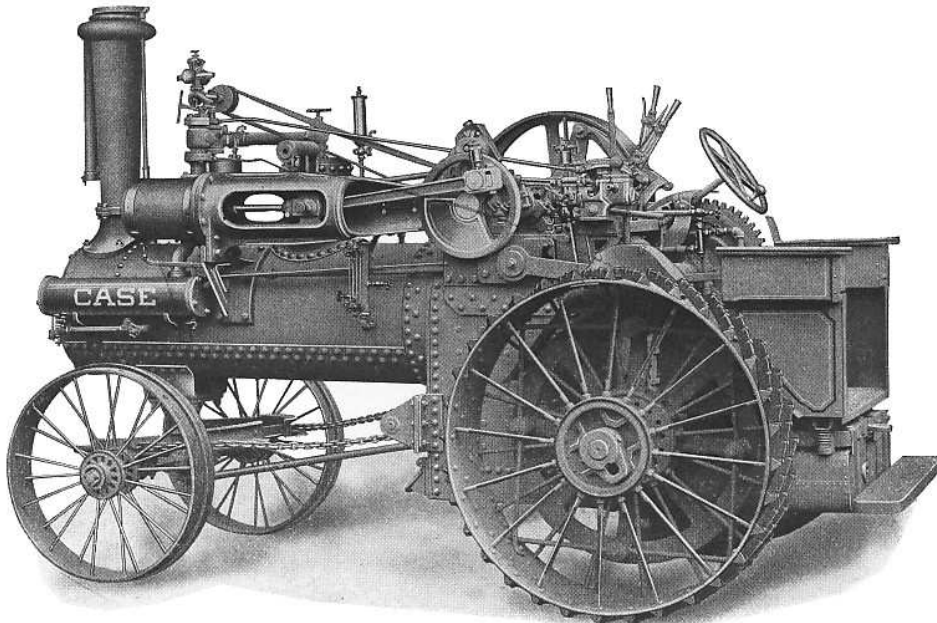
Both pumps and injector have a separate suction pipe to the tank, so they can be worked independently should one or the other get clogged or refuse to work.

**Governor.** We have used the Waters governor many years and consider it superior to all others for traction and portable engines. The valve seats are all in one casting, with provision for contraction and expansion. They can never get out of line or lose their relative distance from one another. The valve seat can be easily renewed should it become necessary.

Other essential fittings are the steam gauge, water gauge, safety valve, Swift lubricator for pump, globe and angle valves, compression grease and oil cups, whistle, complete set of wrenches, flue scraper, etc.—a complete list of which will be found on page 62.



FRONT VIEW OF TRACTION ENGINE.



## 7 1/4 x 10 Cylinder Simple Traction Engine.

This is our smallest traction engine and is rated by us at 9-horse power. Under the brake test it develops fully 30-horse power. For driving our smallest machines up to the 50-inch separator, corn shellers and the like, it cannot be excelled.

Says Mr. A. G. Harvey of Canaseraga, New York: Your 9-horse engine is equal in power, under belt or on the road, to any 12-horse engine built. Its weight is below the bridge law of this state, making it an exceptionally desirable engine for threshermen who are compelled to operate it in a territory where weak bridges abound. They are the best for rough and mountainous countries; being spring mounted, they ride as easy as a buggy.

### SPECIFICATIONS:

Built as tractions or portables with simple or compounded cylinders. Furnished as coal or wood burner only.

**Boiler Barrel**—26 inches in diameter.

**Firebox**—Length, 30 inches; width, 23 1/2 inches; height, 29 1/2 inches.

**Tubes**—Number, 38. 1 3/4-inch diameter; 66 1/4 inches long.

**Heating Surface** of boiler, 119.3 square feet.

**Grate Area**—4.87 square feet.

**Steam Pressure**—130 pounds per square inch.

**Fly Wheel**—36-inch dia.; face, 9 1/2 inches; speed, 250 r. p. m.

**Front Wheels**—Height, 38 inches; tires, 6 inches wide.

**Traction Wheels**—Height, 4 feet 5 inches; tires, 14 inches wide.

**Traction Speed**—Miles per hour, 2.32.

**Extreme Width** of engine is 7 feet 6 inches.

**Distance** between axles, 8 feet 3 inches.

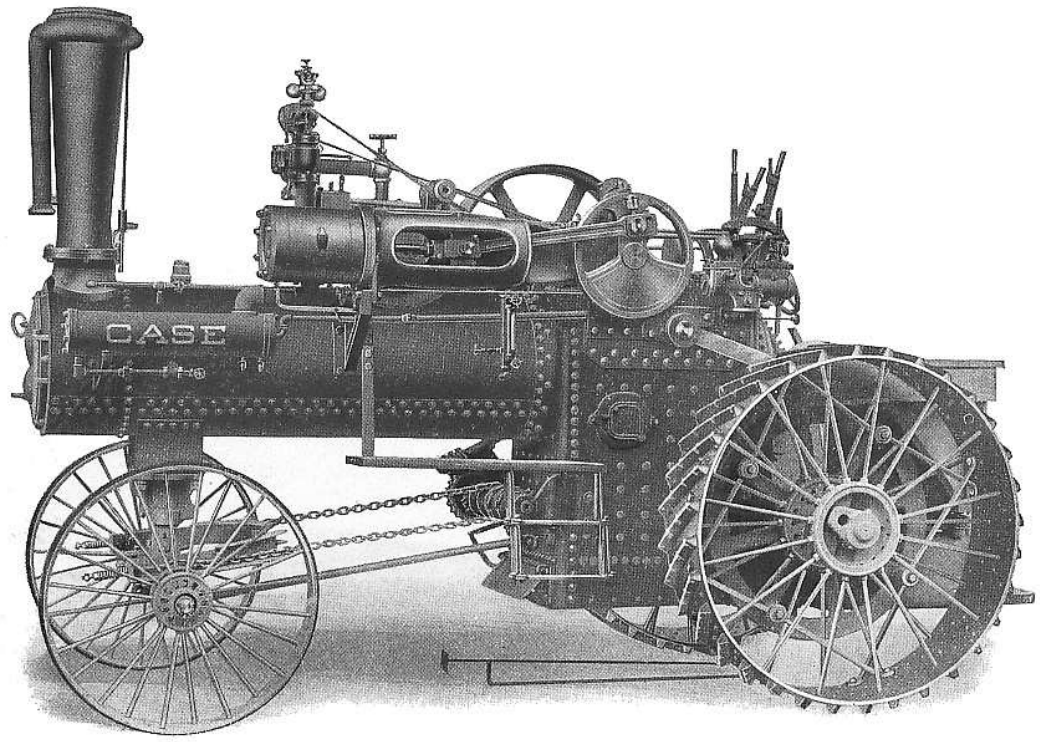
**Weight** with boiler empty, 11,000 pounds.

Prices Quoted on Pages 60, 61 and 62.





*J.I. Case Threshing Machine Co.* RACINE WISCONSIN  
U. S. A.



### 8 1/4 x 10 Cylinder Simple Traction Engine

We rate the engine illustrated above as a 12-horse-power. The actual brake power as determined in our testing room, is 36-horse-power. The cylinder dimensions of an engine and the brake tests are the best bases for rating the power. The present method, while popular, is inaccurate and largely a matter of convenience or choice with the manufacturer. For this reason we give the cylinder sizes, the brake horse-power and the popular rating.

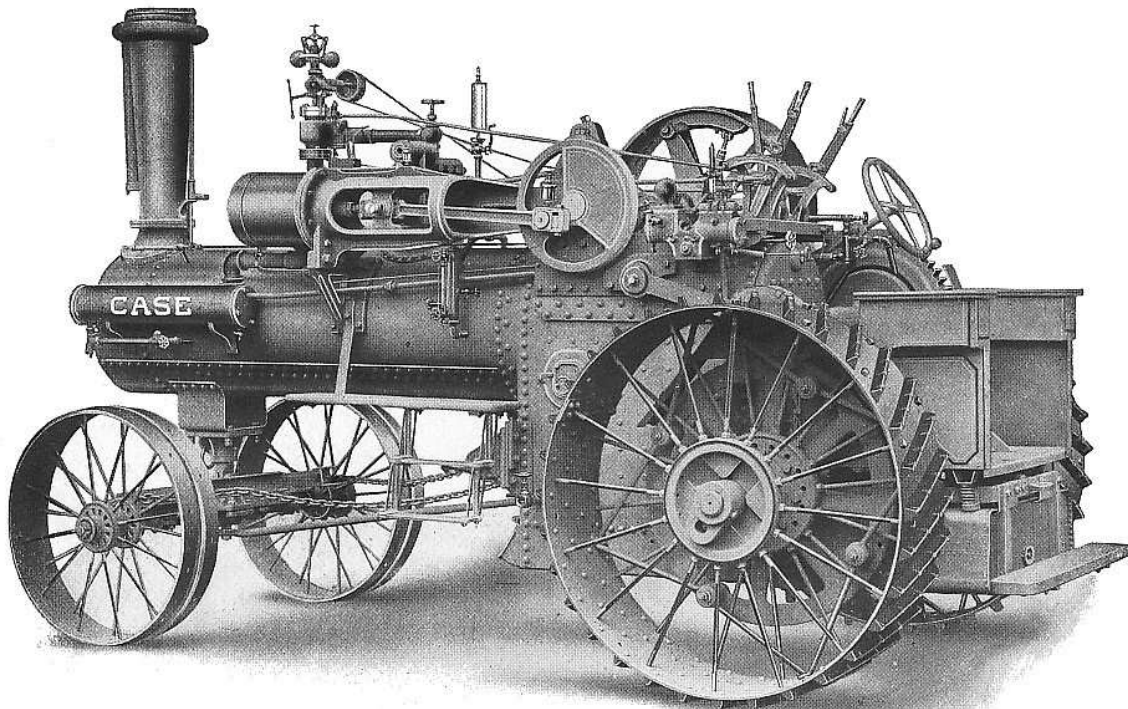
Messrs. J. T. Belew & Sons, of Mechum River, Virginia, report of their CASE 12-horse engine: "It furnishes much more power and pulls larger loads than any other of the same size—due to its being double geared with no friction in the gearing. The best hill-climber ever sold in this section."

#### SPECIFICATIONS:

Built as tractions or portables with simple or compounded cylinders. Furnished as coal, wood or straw burner.

- |   |   |
|---|---|
| <b>Boiler Barrel</b> —26 inches in diameter.                                    | <b>Fly Wheel</b> —40-inch diameter; face, 9 1/2 inches; speed, 250 revolutions. |
| <b>Firebox</b> —Length, 35 inches; width, 25 1/2 inches; height, 37 1/2 inches. | <b>Front Wheels</b> —Height, 42 inches; tires, 8 inches wide.                   |
| <b>Tubes</b> —Number, 30; 2-inch diameter; 76 1/2 inches long.                  | <b>Traction Wheels</b> —Height, 5 feet; tires, 16 inches wide.                  |
| <b>Heating Surface of boiler</b> , 134.5 square feet.                           | <b>Speed</b> —Miles per hour, 2.6.  |
| <b>Grate Area</b> —6.17 square feet.  | <b>Extreme Width of engine</b> is 7 feet 10 inches.                             |
| <b>Steam Pressure</b> —130 pounds per square inch.                              | <b>Distance between axles</b> , 9 feet 5 inches.                                |
|   | <b>Weight with boiler empty</b> , 13,220 pounds.                                |

Prices Quoted on Pages 60, 61 and 62.



## 9 x 10 Cylinder Simple Traction Engine.

This is an ideal engine for threshing purposes, for driving the CASE husker-shredder, saw-mills, rock crushers, road graders. We rate it 15-horse-power. Under the brake it develops 45-horse-power. They are in operation in all sections of the country and give splendid results in connection with CASE 54- and 58-inch separators equipped with all the latest attachments.

We furnish them as portables or tractions, simple or compounded, fitted for burning coal and wood, or straw, as ordered. Customers praise them as good pullers and easy to control on the road, simple to manage, economical on repairs, fuel and water, and more powerful than any other engine of the same rating.

### SPECIFICATIONS:

Built as tractions or portables with simple or compounded cylinders; wood, coal or straw burner boilers.

**Boiler Barrel**—28 inches in diameter.

**Firebox**—Length, 40 inches; width, 25½ inches; height, 37 inches.

**Tubes**—Number, 36. 2-inch diameter; 84 inches long.

**Heating Surface of boiler**, 169.3 square feet.

**Grate Area**—6.94 square feet.

**Steam Pressure**—130 pounds per square inch.

**Fly Wheel**—40-inch diameter; face, 12 inches; speed, 250 revolutions per minute.

**Front Wheels**—Height, 42 inches; tires 10 inches wide.

**Traction Wheels**—Height, 5 feet; tires, 18 inches wide.

**Speed**—Miles per hour, 2.74.

**Extreme Width of engine** is 8 feet.

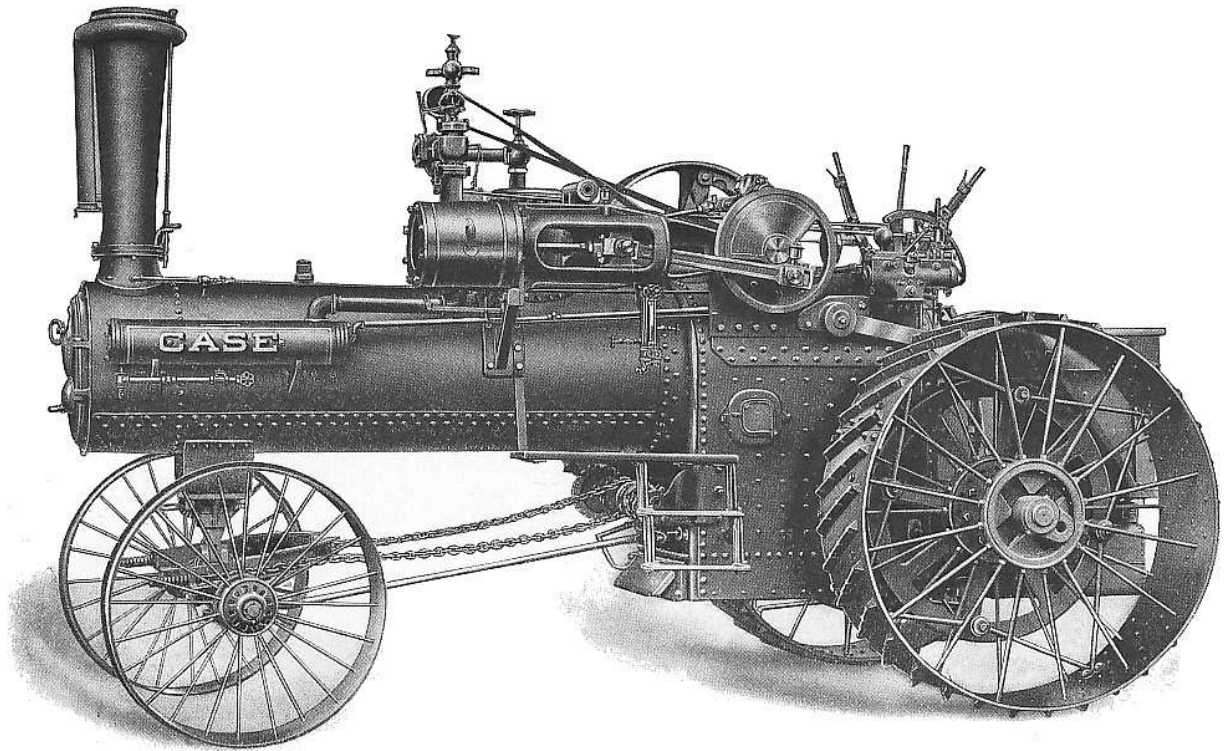
**Distance between axles**, 10 feet 5 inches.

**Weight**, with the boiler empty, 14,420 pounds.

Prices Quoted on Pages 60, 61 and 62.



*J.I. Case Threshing Machine Co.* RACINE WISCONSIN  
U. S. A.



## 10 x 10 Cylinder Simple Traction Engine.

One of our best selling engines is the one shown on this page. Popularly rated as a 20-horse-power, it will under the brake develop continuously fully 60-horsepower. It is largely used in connection with CASE 58- 62- and 66-inch separators, preferably the 62-inch machine.

On special order we will equip this engine with contractor's tank, as shown on the road roller on page 18. This tank has a capacity of 260 gallons of water and 1,250 pounds of coal, and is fitted with X L Penberthy Ejector No. 4, and twenty-five feet of 1½-inch suction hose which will fill the tank in ten minutes. This makes an ideal contractor's engine and we recommend it especially to railway contractors for grading work, etc.

Mr. Fred Thayer, of Britton, South Dakota, who owns one of the 20-horse straw-burning engines, says: "I have plowed 300 acres of land with it in ten days. It is an easy steamer, a fuel saver, a fast traveler, and easy to handle."

The tendency each year is toward larger engines, but the purchaser of a CASE 20-horse can depend on sufficient power for all ordinary purposes during the life of his engine.

### SPECIFICATIONS:

Built as tractions or portables with simple or compounded cylinders. Furnished as coal, wood or straw burner.

**Boiler Barrel**—29 inches in diameter.

**Firebox**—Length, 42 inches; width, 27 inches; height, 37½ inches.

**Tubes**—Number, 44. 2-inch diameter; 90 inches long.

**Heating Surface of boiler**, 213.4 square feet.

**Grate Area**—7.88 square feet.

**Steam Pressure**—130 pounds per square inch.

**Fly Wheel**—40-inch dia.; face, 12 inches; speed, 250 r. p. m.

**Front Wheels**—Height, 44 inches; tires, 10 inches wide.

**Traction Wheels**—Height, 5 feet 6 inches; tires, 20 inches wide.

**Speed**—Miles per hour, 2.74.

**Extreme Width of engine** is 8 feet 4 inches.

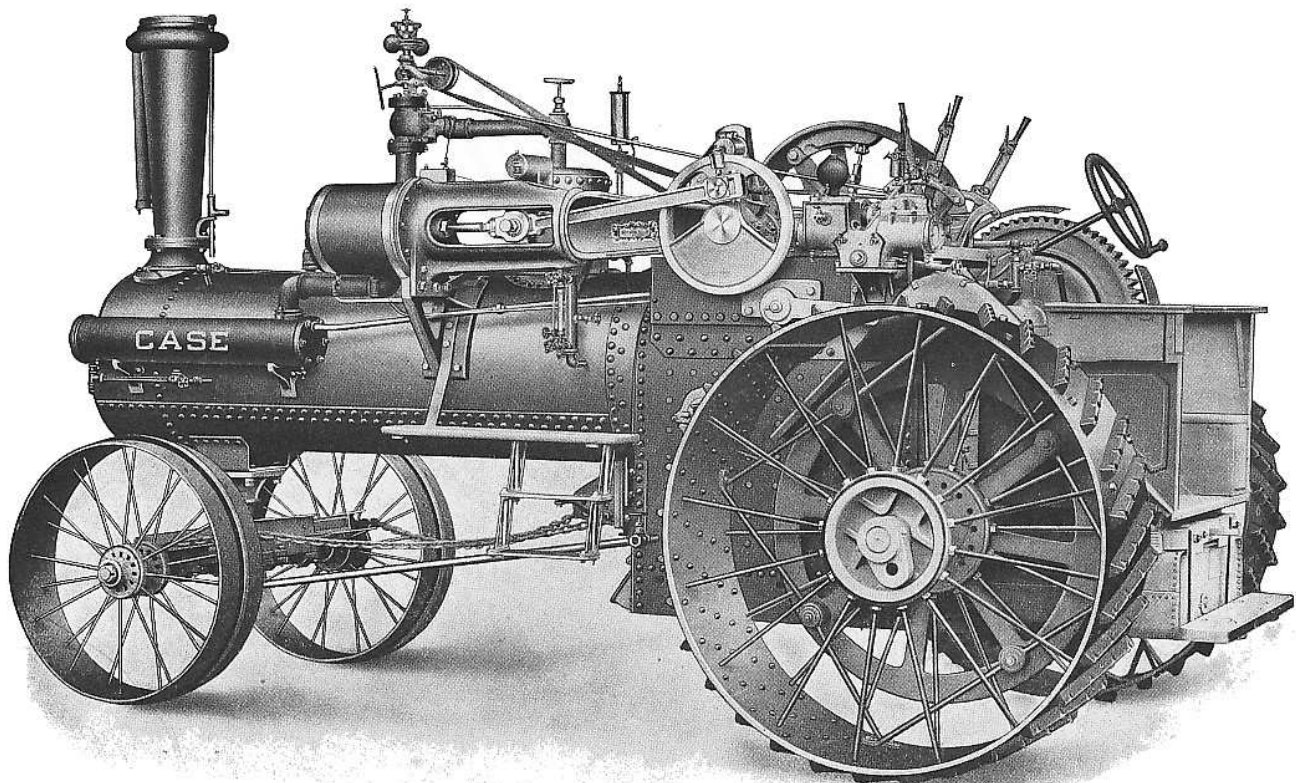
**Distance between axles**, 11 feet 2 inches

**Weight with the boiler empty**, 15,690 pounds.

Prices Quoted on Pages 60, 61 and 62.



*J. I. Case Threshing Machine Co.* RACINE WISCONSIN  
U. S. A.



## 11 x 11 Cylinder Traction Engine.

Above is one of our "Big Boys," 25-horse size, or 75 brake horse-power. It is a good freighting engine, and, with the CASE plow tender, will plow from 30 to 40 acres per day easily. It is not too large for use with the CASE 62- and 66-inch separators.

When specially ordered we will equip it with the two-speed gear and friction steering device. This mechanism is very similar to that used on the CASE Road Locomotive. The slow speed will run the engine 2.55 miles per hour, the fast speed 5.76 miles and the engine is guided at will by slight pressure on a lever.

By Mr. C. W. King, of Rozel, Kansas: "I have a CASE 25-horse compounded engine and am pulling 14-inch breaker plows averaging 35 acres a day, and have to go three miles to my work. Can break 50 acres per day, if close to work, with 1,500 to 1,800 pounds of coal."

### SPECIFICATIONS:

Built as tractions or portables with simple or compounded cylinders. Furnished as coal, wood or straw burner.

Boiler Barrel—32 inches in diameter.

Firebox—Length, 44 inches; width, 29 inches, height, 38 inches.

Tubes—Number, 52. 2-inch diameter; 96½ inches long.

Heating Surface of boiler, 262.3 square feet.

Grate Area—8.74 square feet.

Steam Pressure—130 pounds per square inch.

Fly Wheel—40-inch dia.; face, 12 inches; speed, 250 r. p. m.

Front Wheels—Height, 44 inches; tires, 12 inches wide.

Traction Wheels—Height, 5 feet 6 inches; tires, 24 inches wide. On plow engine, 36 inches wide.

Traction Speed—Miles per hour, 2.5.

Extreme Width of engine is 9 feet 1 inch.

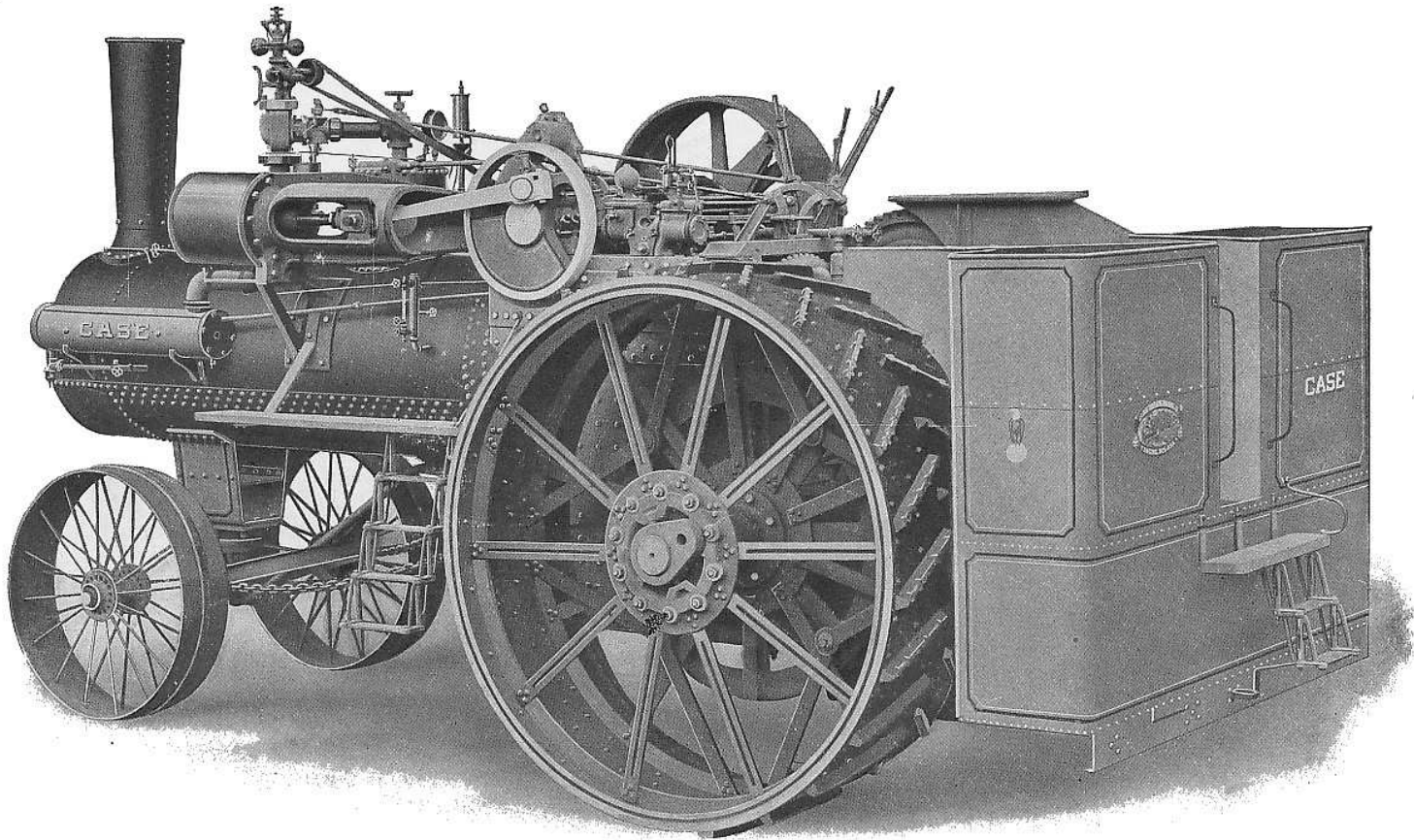
Distance between axles, 11 feet 10 inches.

Weight with the boiler empty, 18,575 pounds.

Prices Quoted on Pages 60, 61 and 62.



*J.I. Case Threshing Machine Co.* RACINE WISCONSIN  
U. S. A.



## 12 x 12 Cylinder Simple Traction Engine.

This engine is a new addition to our line and is rated at 32-horse-power. With a mean effective pressure of 70 pounds and a piston speed of 460 feet per minute it will develop 110 horse-power.

It is a general-purpose engine designed for heavy plowing, threshing, freighting; in fact, for all kinds of work necessitating a large amount of horse-power.

### SPECIFICATIONS:

Built only as a simple engine, either portable or traction.

**Boiler Barrel**—38-inch diameter. Stay bolts, 1-inch diameter.  
Three long stays running full length of boiler.

**Pressure**—160 pounds per square inch.

**Tubes**—Number, 78. 2-inch diameter; 8 feet 4½ inches long.

**Firebox**—Length, 50½ inches; width, 35¼ inches; height, 40½ inches.

**Grate Area**—12.4 square feet.

**Heating Surface** of boiler, 401 square feet.

**Fuel**—Will burn wood, coal or straw.

**Fly Wheel**—Dia. 43½ inches; face, 16 inches; 230 r. p. m.

**Two Speeds**—Slow, 2.57 miles per hour; fast, 5 miles an hour.

**Front Wheels**—Height, 54 inches; tires, 14 inches wide.

**Traction Wheels**—Height, 7 feet; 30-inch rims.

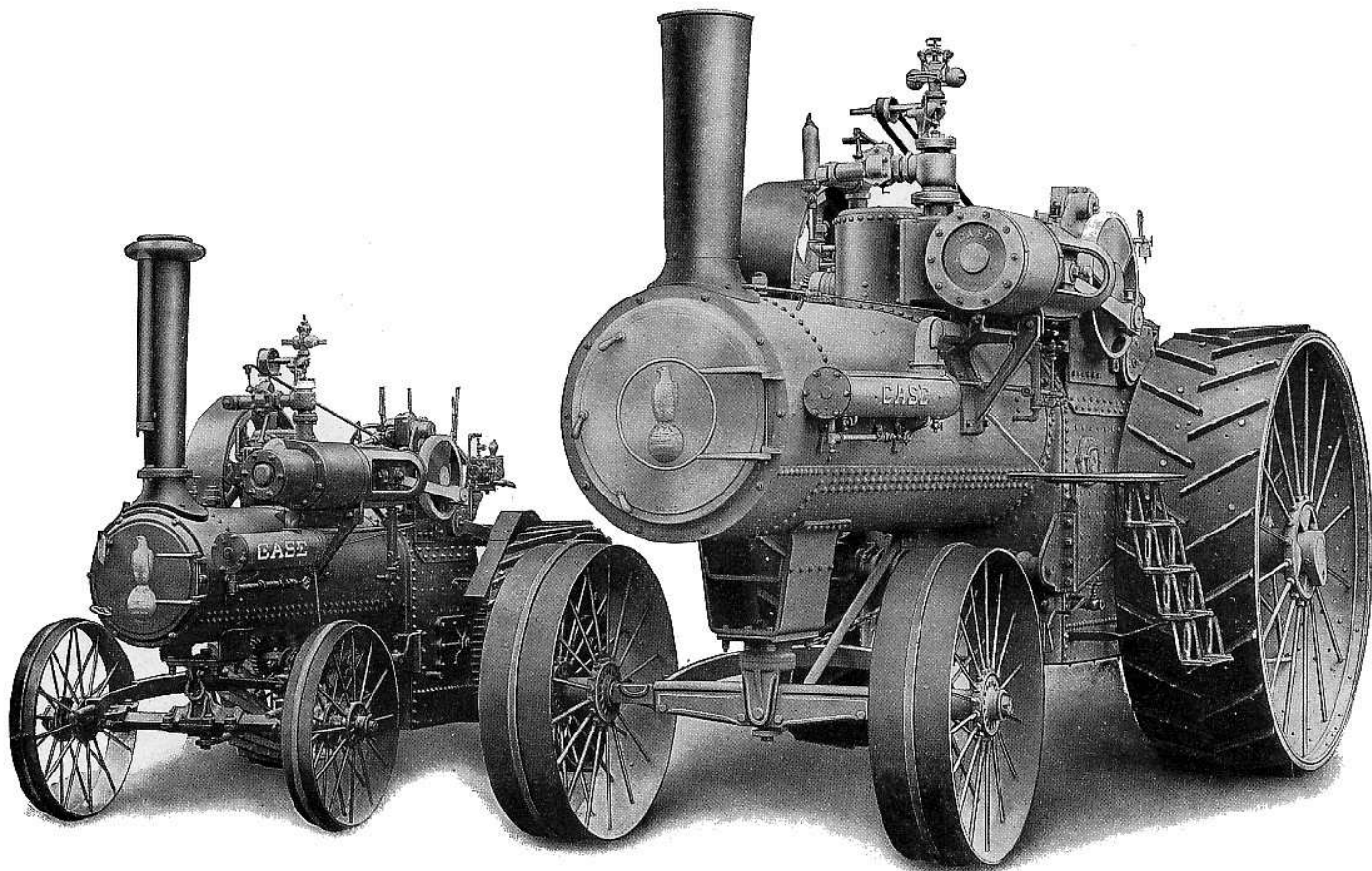
When specially ordered reenforced tires 36 or 42 inches wide will be furnished.

**Extreme Width** of engine is 10 feet, length, 22 feet 5 inches.

**Distance Between Axles**—12 feet 2 inches.

**Friction Steering Mechanism** is driven from crank shaft. The front wheels may be turned when the rear wheels are stationary. This makes it possible to turn the engine around very sharp corners.

Prices Quoted on Pages 60, 61 and 62.



## 14x14 Cylinder Road Locomotive.

(Compared with one of Our Small Tractions.)

The CASE Road Locomotive has been designed to supply the demands of mine owners, contractors, lumbermen and farmers for a large and powerful hauling engine. That our road locomotive combines all the essential features required in an engine for this class of work we believe will be established by close investigation on the part of intending purchasers. Special specification sheets will be furnished on application.

### SPECIFICATIONS:

Built as a traction with simple cylinder only. Furnished as coal or wood burner only.

**Boiler Barrel**—42 inches in diameter.

**Firebox**—Length, 58¼ inches; width, 39¼ inches; height, 45½ inches.

**Tubes**—Number, 93. 2-inch diameter; 108½ inches long.

**Heating Surface of boiler**, 508.5 square feet.

**Grate Area**—15.8 square feet.

**Steam Pressure**—160 pounds per square inch.

**Fly Wheel**—50-inch dia.; face, 16 inches; speed 200 r. p. m.

**Front Wheels**—Height, 54 inches; tires, 14 inches wide.

**Traction Wheels**—Height, 8 feet; tires, 36 inches wide.

**Two Speeds**—Miles per hour, fast, 5.69; slow, 2.64.

**Extreme Width of engine** is 11 feet 4 inches. Length, 24 feet 9 inches.

**Distance between axles**, 14 feet 2 inches.

**Weight with boiler empty**, 18 tons.

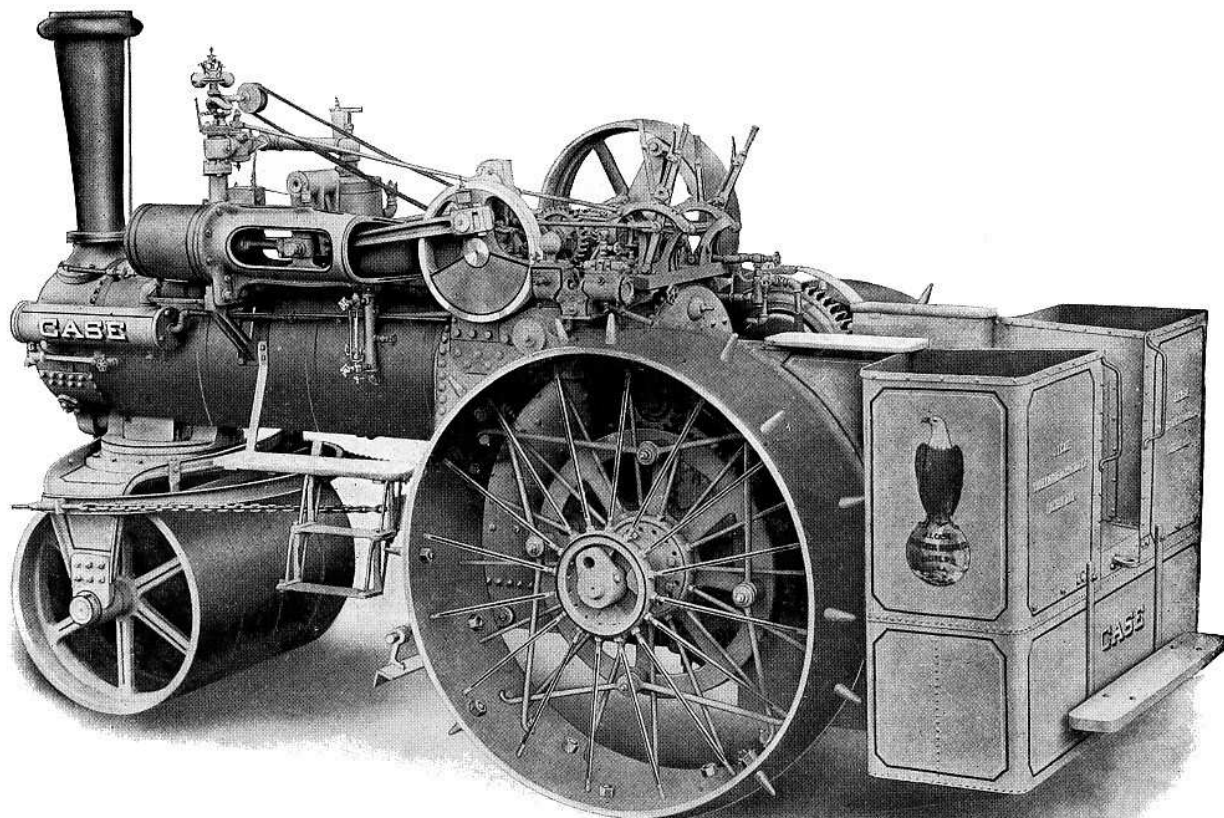
**Friction Steering Mechanism** is furnished.

Prices Quoted on Pages 60, 61 and 62.





*J.I. Case Threshing Machine Co.* RACINE WISCONSIN  
U. S. A.



## 8 $\frac{1}{4}$ x 10 Cylinder 10-Ton Road Roller.

The CASE Steam Road Roller merits the careful investigation of paving contractors, city, village and township boards who are interested in good streets, good roads and machinery for such construction.

We have produced the best steam road roller now on the market for use on macadam, gravel and dirt roads or streets; for hauling material, drawing plows, breaking up old roads, driving stone crushers, concrete mixers, and for stationary work.

It is most compactly built; length over all is only 16 feet 7 inches, and extreme width a trifle over 7 feet. The distance between axles is but 9 feet 5 inches, affording a very short coupling which permits its being turned on narrow roads in less space than any other make.

### SPECIFICATIONS:

Built with simple or compounded cylinders; jacketed boilers and cabs furnished in all cases. Coal or wood burner.

**Boiler Barrel**—26 inches in diameter.

**Firebox**—Length, 35 inches; width, 25 $\frac{1}{2}$  inches; height, 37 $\frac{1}{2}$  inches.

**Tubes**—Number, 30. 2-inch diameter; 76 $\frac{1}{2}$  inches long.

**Heating Surface** of boiler, 134.5 square feet.

**Grate Area**—6.17 square feet.

**Steam Pressure**—130 pounds per square inch.

**Fly Wheel**—36-inch diameter; face, 9 $\frac{1}{2}$  inches; speed, 250 revolutions.

**Front Roll**—41-inch diameter, 50-inch face (four sections).

**Rear Rolls**—6 feet in diameter and 20-inch face.

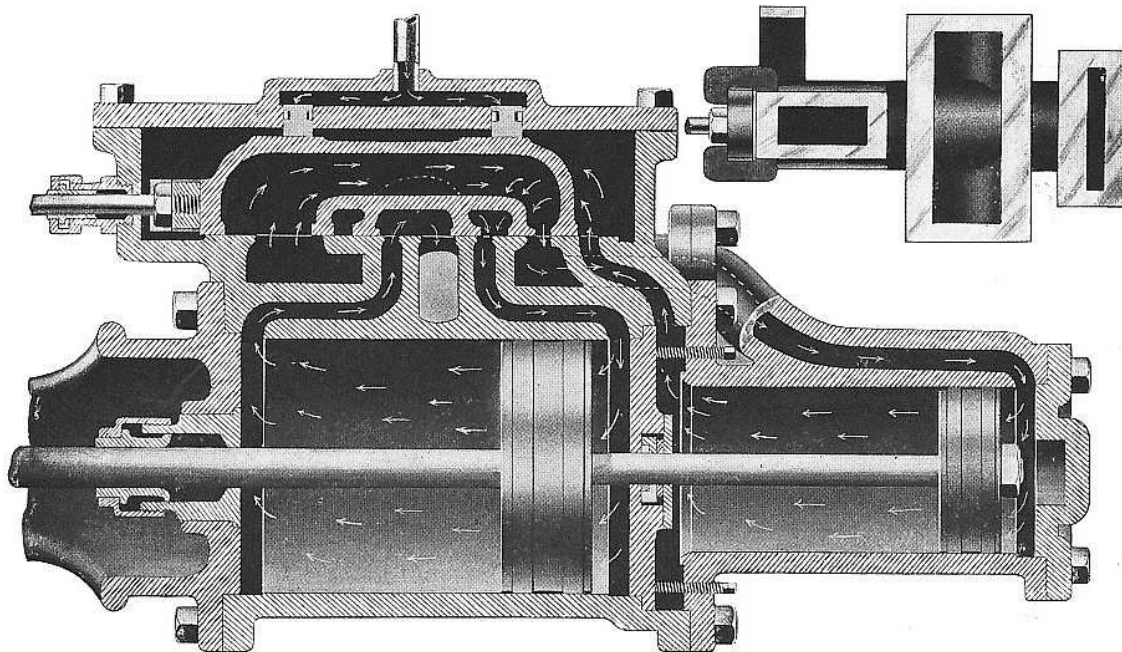
**Traction Speed**—Miles per hour, 3.1.

**Extreme Width** is 7 feet 1 inch. Length 16 feet 7 inches.

**Distance** between axles, 9 feet 5 inches.

**Friction Steering Mechanism** is furnished.

Prices Quoted on Pages 60, 61 and 62.



Compounded Cylinder and Valve, Internal View.

In the CASE Compounded Engine all the advantages are derived from double expansion of steam. Cylinder condensation is lessened and the maximum economy is realized with the simplest possible mechanism. The gain in power will depend on the conditions under which the comparison is made. The gain is not, however, dependent on the use of excessively high pressure of steam, for we limit the "compounded" to 130 pounds pressure, the same as in our "simples."

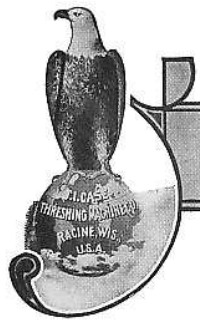
Our "Compounded" Engine has the fewest possible number of parts. There are no more stuffing boxes to look after than on the simple, and any one who can handle a "simple" can run our "compounded" engine. The internal arrangement of valve and cylinders, with their steam passages, is clearly shown in the accompanying cut. The cylinders are brought so close together that a single head or partition between them serves for both. Where the piston rod passes through this partition exceedingly durable and self adjusting metallic packing is used. The steam chest is not a receptacle for steam from the boiler, but receives the exhaust from the small cylinder for distribution.

The Valve is a single casting and performs all valve functions for both cylinders. In setting it the central section pertaining to the large cylinder is treated as if it were on a simple cylinder and adjusted accordingly. The valve is held to its seat when the engine is running down hill, or without a load, by plunger pistons located in the steam chest cover. The high pressure steam, entering from the valve seat, has access to a limited area on the face of the valve. This counteracts or relieves the pressure of the steam on its back. So when the engine is working the valve is admirably balanced without the addition of a single piece or complication of any sort.

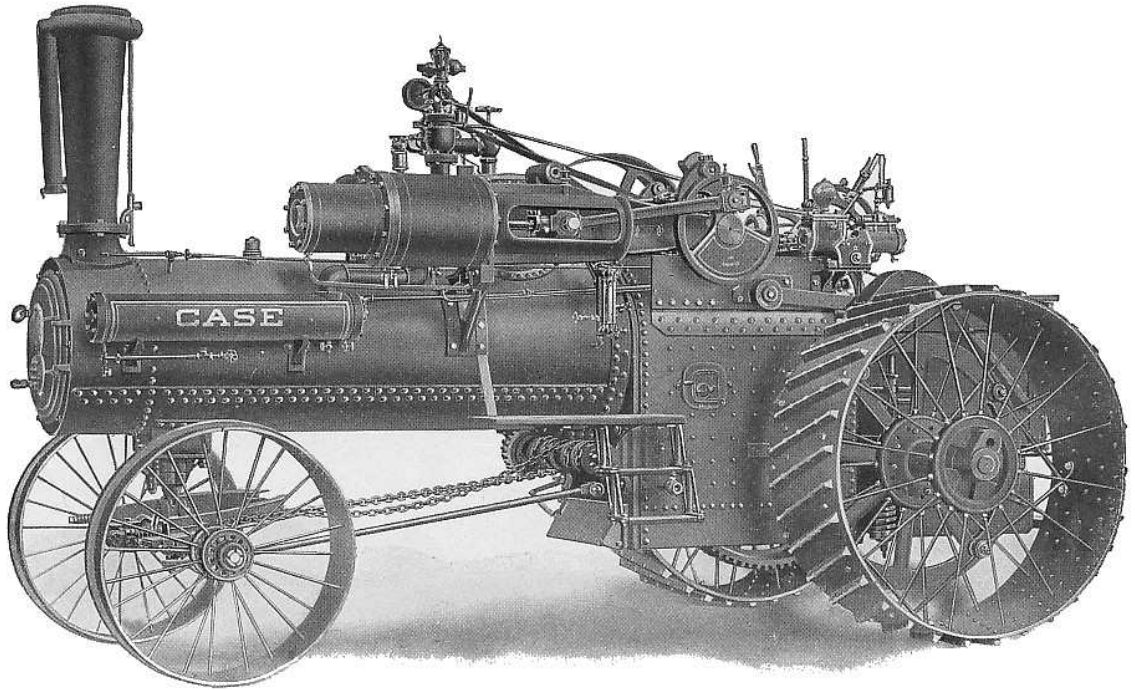
Aside from the cylinder mechanism our "compounded" engines are identical in construction to the CASE "simples." We build them in sizes from 9-horse up to and including the 25-horse, either as portables or tractions.

The purchaser with a preference for the compounded-cylinder type of engine will find in the CASE all the advantages that can be secured from double expansion of steam on a farm engine.

Prices Quoted on Pages 60, 61 and 62.

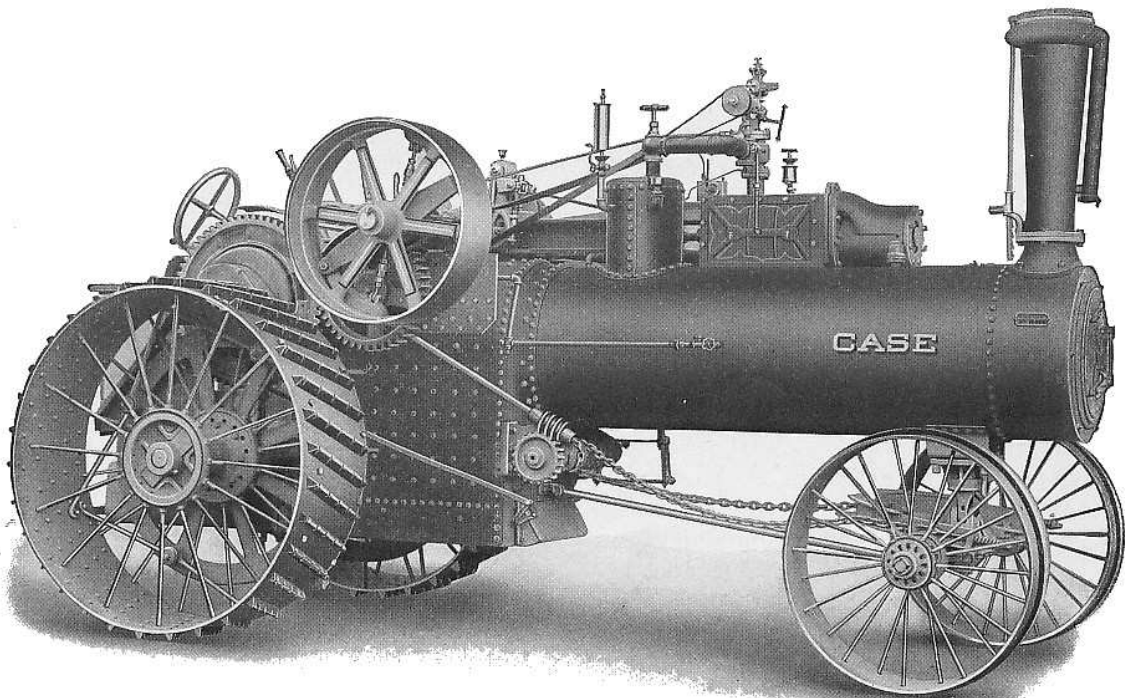


*J. I. Case Threshing Machine Co. RACINE WISCONSIN U. S. A.*



OBVERSE SIDE

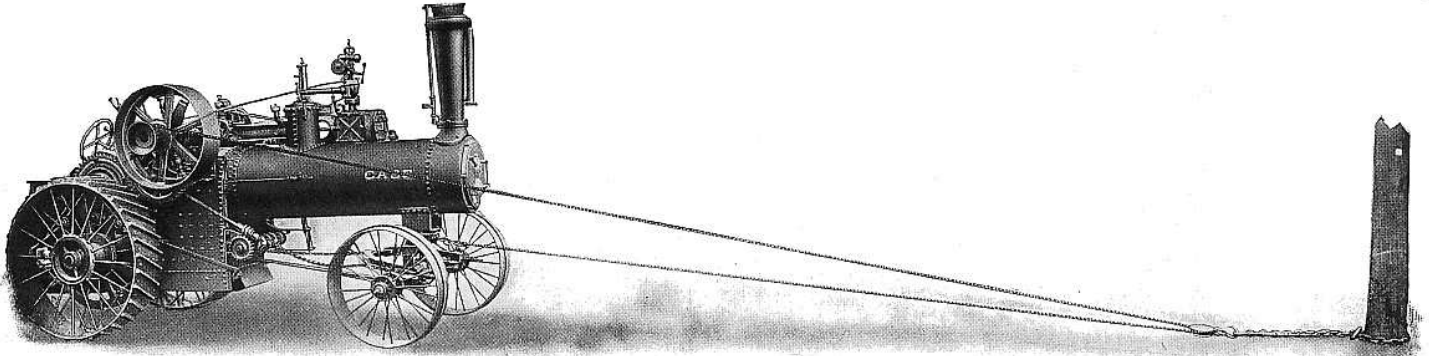
Compounded Traction Engines.



REVERSE SIDE

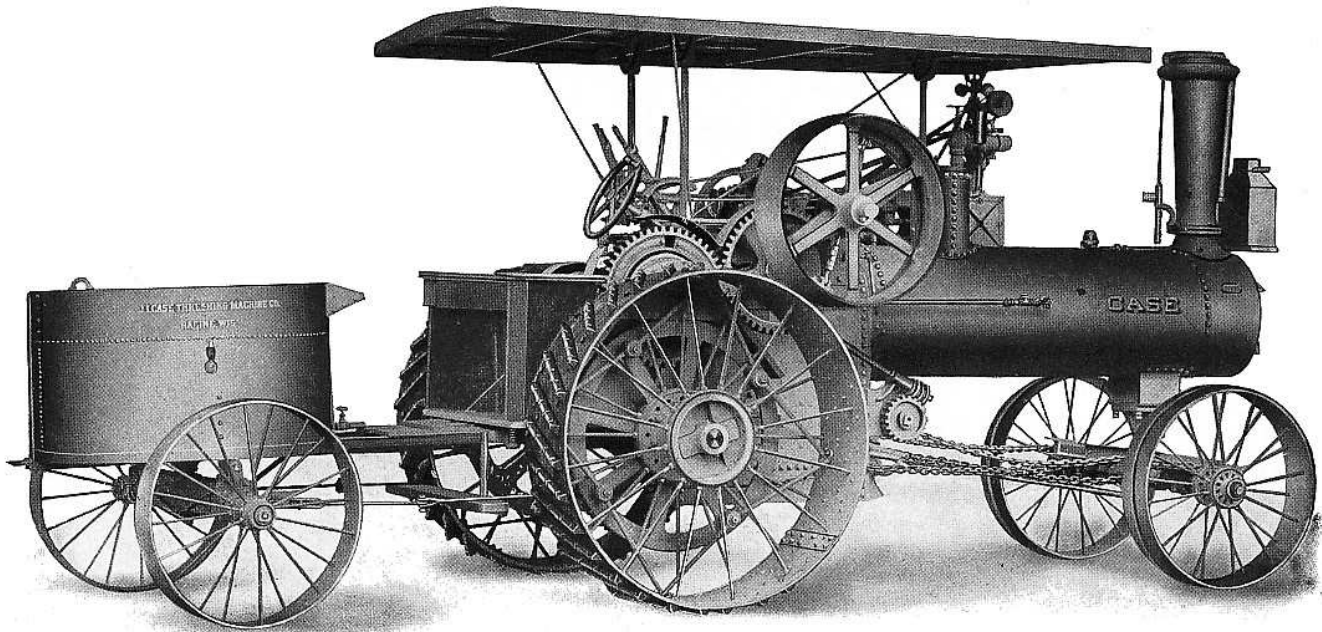


*J.I. Case Threshing Machine Co. RACINE WISCONSIN  
U. S. A.*



### Winding Spool for Traction Engine.

This spool is furnished on special order of the purchaser at an extra price of \$17.00. In localities where the roads and fields are often in a swampy condition it will save an immense amount of time and trouble in getting the engine onto solid footing. A single-block pulley and  $\frac{3}{4}$  or 1-inch rope will answer all purposes.



### Engine with Tender and Canopy Top.

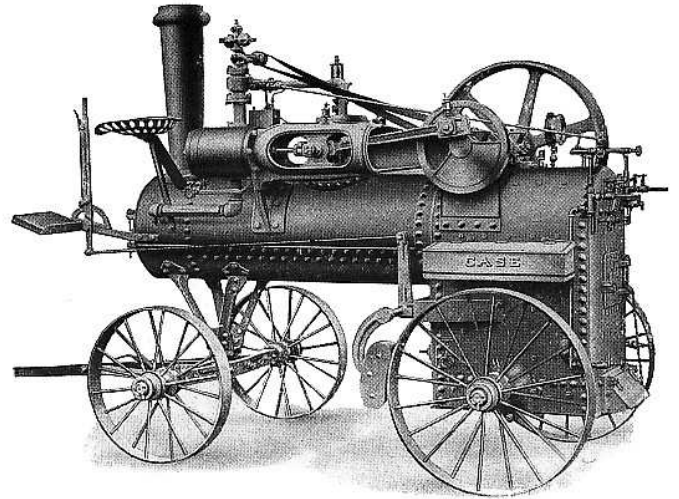
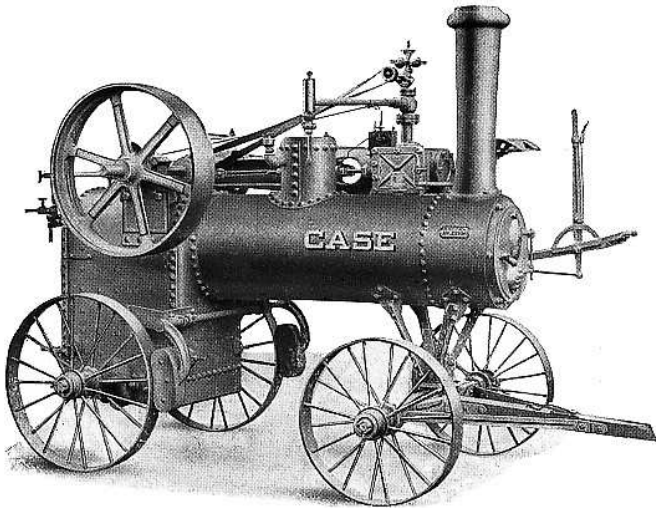
This engraving shows our 20-horse traction engine, right side, with two-wheel tender and canopy top attached. The tender is fully described on another page. It is very convenient on the road and readily guides with the engine either forward or backward. Canopy tops are furnished in eight and eleven-foot lengths, six feet in width. They are a protection to the operator and to the working parts of the engine.

For \$7.00 additional we supply one of the celebrated Ham headlights, shown in front of the smoke-stack. This gives a powerful light and the flame will not extinguish on rough roads. For the enterprising thresherman this headlight will prove an invaluable aid in making after-dark moves.

Prices Quoted on Pages 60, 61 and 62.



*J.I. Case Threshing Machine Co.* RACINE WISCONSIN  
U. S. A.



## 6 x 8 Cylinder Simple Portable Engine.

The CASE 6-horse portable engine (18-brake horse-power) has been on the market two years and has proved to be a ready seller. It fully meets the demand of the general farm public for a small engine of general utility and reliability for such work as feed grinding, ensilage cutting, corn shelling, and for driving small grain separators.

The illustrations mark the extreme simplicity of this little engine. Absence of all complicated mechanism makes its operation a very simple matter—an engine which will appeal to the young man on the farm.

### SPECIFICATIONS.

Built only with simple cylinder and as a portable engine. Coal or wood burner only

**Boiler Barrel**—22 inches in diameter.

**Firebox**—Length, 26 inches; width, 20 inches; height, 31 inches.

**Tubes**—Number, 32.  $1\frac{3}{4}$ -inch diameter; 54 inches long.

**Heating Surface of boiler**, 82 square feet.

**Grate Area**—3.6 square feet.

**Steam Pressure**—130 pounds per square inch.

**Fly Wheel**—36-inch dia.; face,  $7\frac{1}{2}$  inches; speed 250 r.p.m.

**Front Wheels**—Height, 30 inches; tires,  $3\frac{1}{2}$  inches wide.

**Rear Wheels**—Height, 36 inches; tires,  $3\frac{1}{2}$  inches wide.

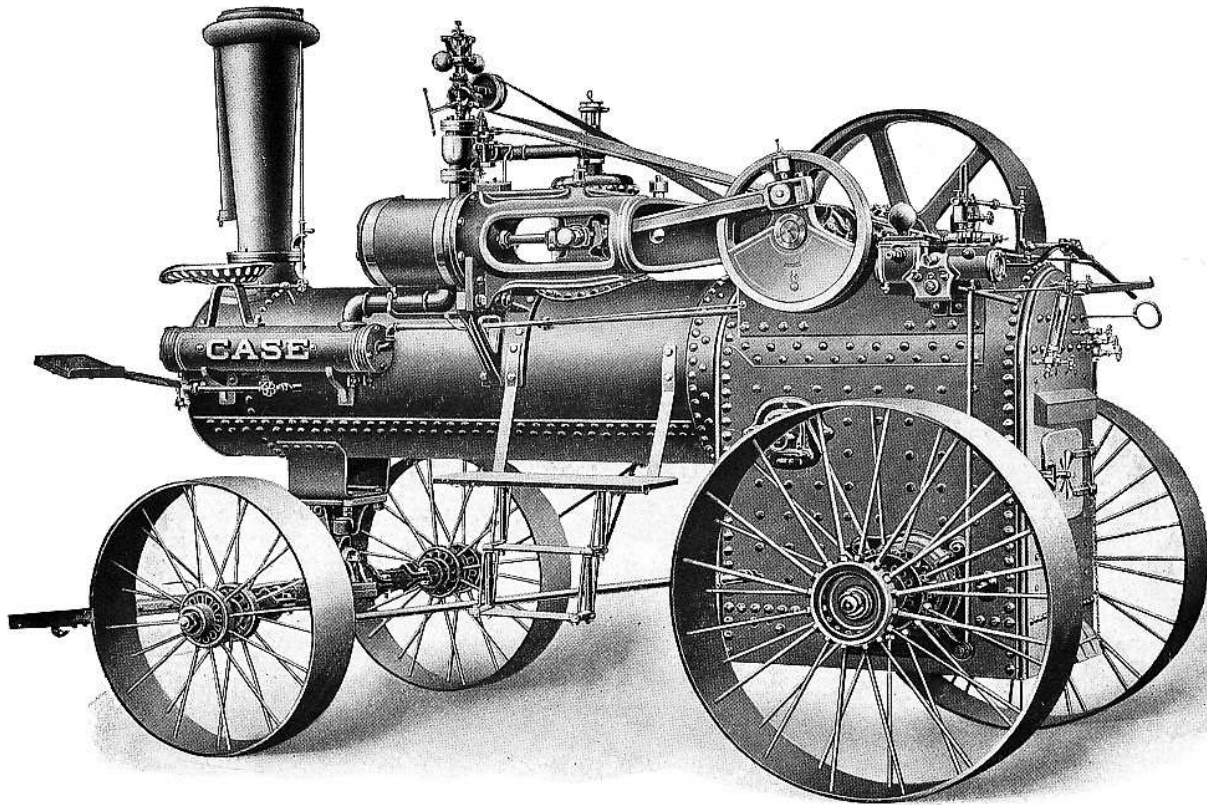
**Weight with boiler empty**, 4,250 pounds.

A 2,400 pound team will handle this engine on the ordinary country road.

**The Brake** has sufficient power to control the engine on steep grades. It is included only when ordered at extra price.

Feed-water heater and steam pump are omitted. Two injectors are furnished.

Prices Quoted on Pages 60, 61 and 62.



## 9 x 10 Cylinder Simple Portable Engine.

The illustration on this page showing our portable engine, rated 15-horse-power, is typical of our entire line of portable engines from the 9-horse to the 32-horse-power sizes.

They are built along the same symmetrical lines as the CASE Tractions, have the same type of boiler, engine frame, cylinder and connecting rod, crank shaft and disc, fly-wheel, and heater, with pump and injector at the rear end, the same brasses and fittings.

The rear end is supported by steel axle arms which are held by strong brackets bolted to the side sheets of the boiler. The axle arms have bearing in the long hubs of extra large wheels. The latter are our regular steel rim and spoke type with smooth surfaces and sufficiently large to insure easy draft.

All sizes above the 9-horse can be fitted with our straw-burning attachment, including jacketed boiler, at an extra cost of \$50.00.

Our portable engines, with good care will last almost a life time, and at the reduced prices we now quote on them they furnish the most economical power that can be obtained in the country.

**"Develops Fifty Horse Power."**

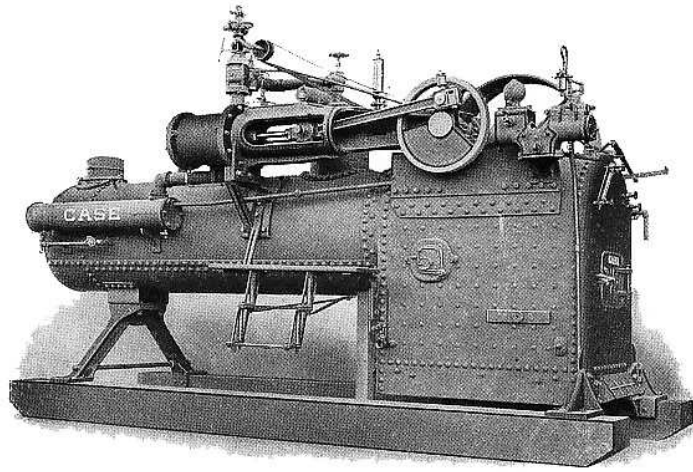
"The CASE 20-horse engine is away ahead of our expectations. With a large firebox it is easy to fire, and easy to supply with water. It develops fully fifty horse power. Practical saw mill men come for miles to see it work, and are amazed at such a powerful engine for its size—so smooth, easy to handle and keep in order." J. A. & Lewis Davis, Henley, Ohio.

Prices Quoted on Pages 60, 61 and 62.





# J.I. Case Threshing Machine Co. RACINE WISCONSIN U. S. A.



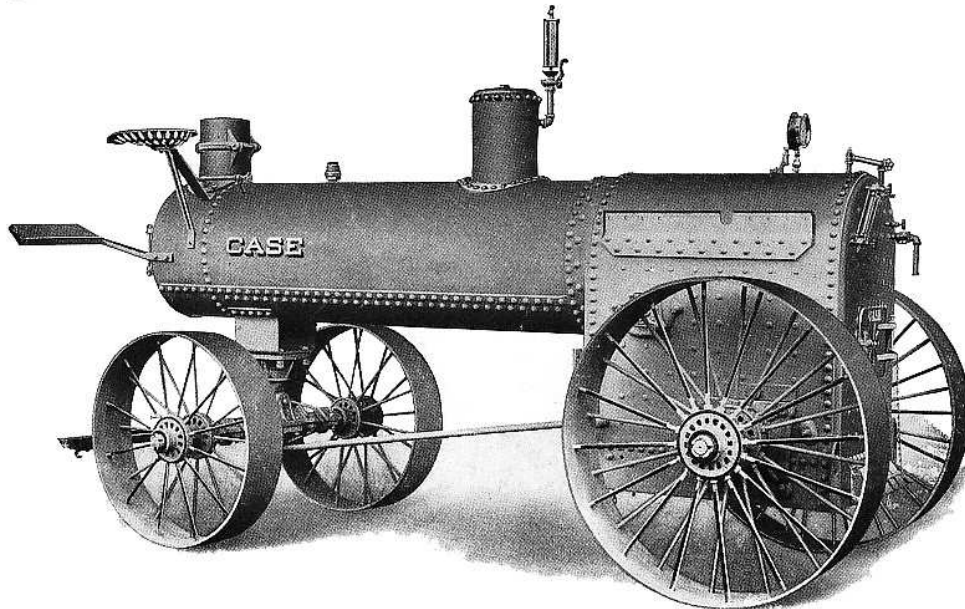
SKID ENGINE AND BOILER.

**Skid Engines.** The large heating surface, grate area, large cylinder and liberal dimensions generally of CASE engines make them especially well adapted for saw-mill and stationary work. We have, therefore, prepared to furnish our engines on skids as well as on wheels. The purchaser of a CASE engine is well assured of promptly getting any repairs that may be needed, as a full line is kept at our branch houses ready for immediate shipment. All skid engines are furnished with a straight smokestack twenty feet long, in ten-foot sections.

Our skid engines will be built in the following sizes:

6-Horse, simple only; 9-, 12-, 15-, 20-, 25-Horse, simple or compounded, and 32-Horse, simple only.

These engines have the same boiler and engine, fixtures, etc., as the regular CASE Portable, but are mounted on skids instead of wheels.



MOUNTED BOILER.

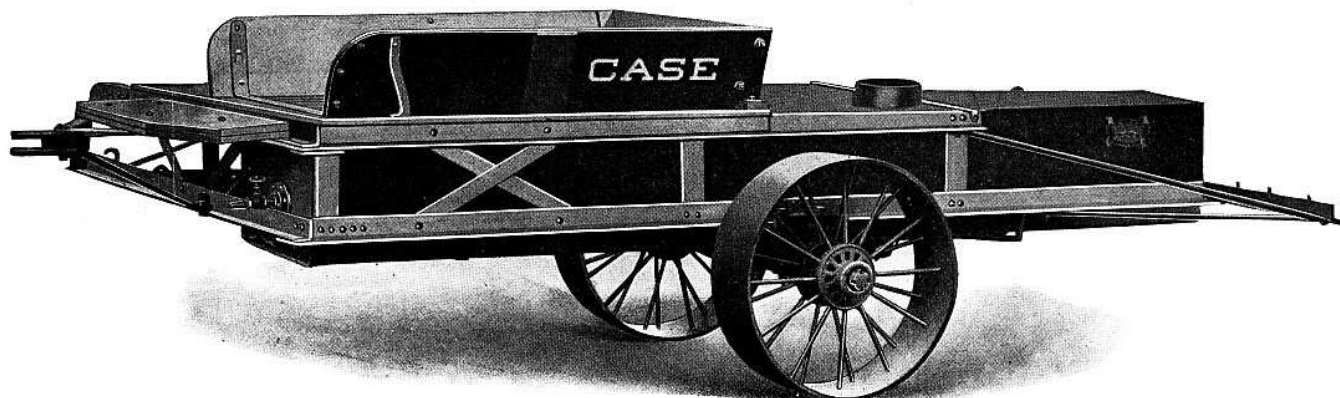
**Boilers on Skids or Wheels.** We are also prepared to furnish any of the boilers in the list above on skids or wheels, and anyone desiring a portable or semi-portable boiler can do no better than to purchase a CASE.

Our boilers are especially well made and carefully tested. Those from the 6 to the 25-Horse sizes are designed to carry 130 pounds steam pressure and are tested at the factory at 200 pounds hydrostatic pressure. The 32-Horse carries 160 pounds and is tested at 250 hydrostatic pressure. All boilers are steam tested in addition to the hydrostatic test.

For dimensions of boilers see page 63 of general dimensions of engines.

The boilers mounted on skids or wheels have fixtures as follows: Smoke-stack 20 feet long, ash pan and grates, safety valve, whistle, steam gauge, glass water gauge, gauge cocks, blow-off and Penberthy injector complete with connections.

Prices Quoted On Pages 60, 61 and 62.



## CASE Plow Tender Attachment.

This attachment has been especially designed for use with CASE Traction engines 20-, 25-, or 32-horse sizes. It has been on the market now for four years and has been demonstrated a success beyond peradventure.

To attach plows of any kind direct to the engine is impractical, as no engine has sufficient fuel and water-carrying capacity, or means for properly hitching the plows. Our plow tender tank has a capacity of eight barrels in addition to tank underneath engine platform. This is sufficient to keep the engine supplied though the plowing is done a considerable distance from the water supply.

**The Coal Bunker** holds about a ton of coal. To plow with the greatest economy the rig should be kept in continuous operation from ten to twelve hours daily. Our attachment makes this entirely feasible.

**The Truck Wheels** of the tender have 32-inch diameter and 10-inch tires. They are centrally located and the whole structure is evenly balanced on the axle. Such an arrangement eliminates all strain in passing over rough, uneven ground. Corners can be turned with precision, and handling of the engine is in no way interfered with.

Plowing with a CASE Steam Plow is a gainful occupation after and before the threshing season begins. Owners of our larger traction engines should study the conditions and possibilities existing in their localities with a view of initiating this improved method of farm work.

**Fields of Twenty Acres** and upwards can be profitably plowed by steam if the ground be reasonably free from obstructions in the nature of stumps, large rocks and mire holes.

For plowing we advise the use of our special 36-rim drive wheels, as with these more plows can be drawn with less loss of power by slipping, and softer ground can be gone over.

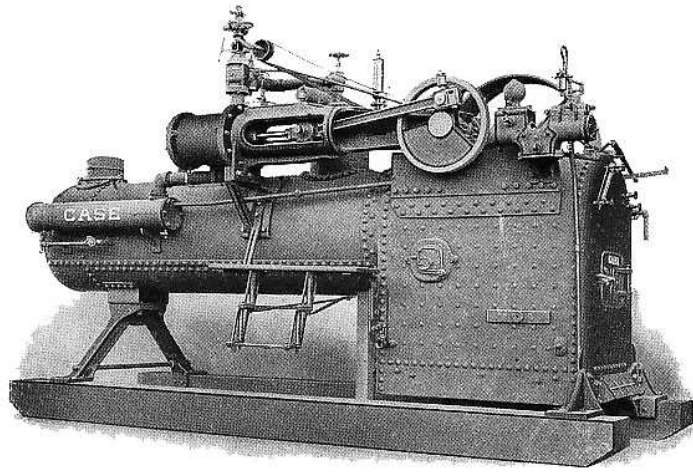
### Better Work Than Team Plowing.

The quality of work done by the steam plow is not to be compared with that done by teams. It is more regular, evenly turned, of a uniform depth, and the trash well hidden; particularly is this true in plowing prairie land having a tough sod and many "tussocks."

Prices Quoted on Pages 60, 61 and 62.



# *J. I. Case Threshing Machine Co.* RACINE WISCONSIN U. S. A.



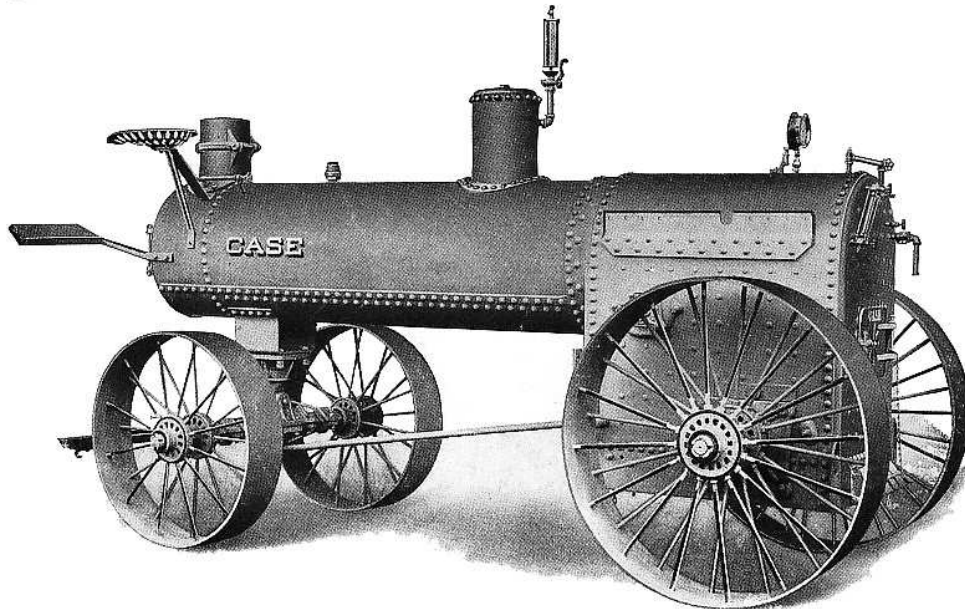
SKID ENGINE AND BOILER.

**Skid Engines.** The large heating surface, grate area, large cylinder and liberal dimensions generally of CASE engines make them especially well adapted for saw-mill and stationary work. We have, therefore, prepared to furnish our engines on skids as well as on wheels. The purchaser of a CASE engine is well assured of promptly getting any repairs that may be needed, as a full line is kept at our branch houses ready for immediate shipment. All skid engines are furnished with a straight smokestack twenty feet long, in ten-foot sections.

Our skid engines will be built in the following sizes:

6-Horse, simple only; 9-, 12-, 15-, 20-, 25-Horse, simple or compounded, and 32-Horse, simple only.

These engines have the same boiler and engine, fixtures, etc., as the regular CASE Portable, but are mounted on skids instead of wheels.



MOUNTED BOILER.

**Boilers on Skids or Wheels.** We are also prepared to furnish any of the boilers in the list above on skids or wheels, and anyone desiring a portable or semi-portable boiler can do no better than to purchase a CASE.

Our boilers are especially well made and carefully tested. Those from the 6 to the 25-Horse sizes are designed to carry 130 pounds steam pressure and are tested at the factory at 200 pounds hydrostatic pressure. The 32-Horse carries 160 pounds and is tested at 250 hydrostatic pressure. All boilers are steam tested in addition to the hydrostatic test.

For dimensions of boilers see page 63 of general dimensions of engines.

The boilers mounted on skids or wheels have fixtures as follows: Smoke-stack 20 feet long, ash pan and grates, safety valve, whistle, steam gauge, glass water gauge, gauge cocks, blow-off and Penberthy injector complete with connections.

Prices Quoted On Pages 60, 61 and 62.



# Price List — Continued.

## "SIMPLE" PORTABLE ENGINES.

Locomotive Boiler.	Coal and Wood Burner.	
6 x 8-inch Cylinder, Rated 6-horse, coal and wood burner only		\$ 475
7 1/4 x 10-inch Cylinder, Rated 9-horse, coal and wood burner only		650
8 1/4 x 10-inch Cylinder, Rated 12-horse		750
9 x 10-inch Cylinder, Rated 15-horse		850
10 x 10-inch Cylinder, Rated 20-horse		950
11 x 11-inch Cylinder, Rated 25-horse		1,050
12 x 12-inch Cylinder, Rated 32-horse		1,200
For Straw-Burning Attachment, including Jacket on Boiler, add \$50 to prices above.		

## "COMPOUNDED" PORTABLE ENGINES.

5 3/4 x 8 1/2 x 10-inch Cylinder, Rated 9-horse, coal burner only		\$ 750
6 1/8 x 9 x 10-inch Cylinder, Rated 12-horse		850
7 x 10 x 10-inch Cylinder, Rated 15-horse		950
7 3/4 x 11 x 10-inch Cylinder, Rated 20-horse		1,050
9 1/4 x 13 x 11-inch Cylinder, Rated 25-horse		1,150
For Straw-Burning Attachment, including Jacket on Boiler, add \$50 to prices above.		

## "SIMPLE" TRACTION ENGINES.

7 1/4 x 10-inch Cylinder, Rated 9-horse, coal burner only		\$1,150
8 1/4 x 10-inch Cylinder, Rated 12-horse		1,275
9 x 10-inch Cylinder, Rated 15-horse		1,425
10 x 10-inch Cylinder, Rated 20-horse		1,650
11 x 11-inch Cylinder, Rated 25-horse		1,950
12 x 12-inch Cylinder, Rated 32-horse		2,400
For Straw-Burning Attachment, including Jacket on Boiler, add \$50 to prices above.		

Simple. Compounded.

14x14-inch Cylinder Road Locomotive	\$4,000
8 1/4 x 10-inch Cylinder 10-Ton Road Roller	2,200 \$2,300

## "COMPOUNDED" TRACTION ENGINES.

5 3/4 x 8 1/2 x 10-inch Cylinder, Rated 9-horse, coal burner only		\$1,200
6 1/8 x 9 x 10-inch Cylinder, Rated 12-horse		1,375
7 x 10 x 10-inch Cylinder, Rated 15-horse		1,525
7 3/4 x 11 x 10-inch Cylinder, Rated 20-horse		1,750
9 1/4 x 13 x 11-inch Cylinder, Rated 25-horse		2,050
For Straw-Burning Attachment, including Jacket on Boiler, add \$50 to prices above.		

Plowing Attachment (without Plows).....\$250

## SKID ENGINES AND BOILERS.

Size.	Skid Engine.	Skid Boiler.	Mounted Boiler.
6-Horse	\$400	\$225	\$300
9-Horse	540	265	375
12-Horse	600	285	435
15-Horse	660	310	500
20-Horse	750	350	550
25 Horse	850	400	600
32-Horse	950	450	650

All Straw-Burning Engines are jacketed unless otherwise ordered.

For Jacketing Coal-Burning Engine add \$30.00.

If wider tires than those regularly furnished on engines are wanted, for each two inches extra width, add to list price \$25.00. No reduction if narrower tires are ordered. Tires for drive wheels between 24 and 36 inches in width will not be furnished, except on 22-horse engine.

A reduction of \$17.50 will be allowed from list price of engine when platform tank is not wanted with engine.

In ordering Engines, state plainly "Simple" or "Compounded", Coal, Wood or Straw Burner. All Engines are furnished with everything necessary to complete them for the use intended, including an Improved, Patented, Spark-Arresting Cast Iron Stack.

## FITTINGS FOR ENGINE.

- 1 Steam Gauge with syphon and supporting casting.
- 1 Pop Safety Valve.
- 1 Case Oil Pump.

- 1 Small Swift Lubricator (except 6-horse power Portable).
- 1 Water Gauge complete with glass and rods.
- 2 Gauge Cocks.
- 1 Whistle.
- 1 Penberthy Injector complete (2 used on 6-horse Portable).
- Globe valve for Blow-off. One 1 1/4 x 3 Nipple.
- 1 Compression grease cup for Cross Head.
- 1 Grease cup for Crank Pin.
- 1 Oiler for Reverse Block (Traction only).
- 1 Glass Oiler for Guides.
- 1 Small Oiler for Eccentric Rod (except 6-horse Portable).
- 1 Oil Can.
- 1 Strainer for Suction Hose.
- 1 Strainer for Funnel.
- 4 ft. 6-inch Hose for Injector (Traction only).
- 5 ft. 6-inch Hose for Pump (Traction only).
- 2 Nipples 3/4 x 2 1/2-inch for Hose (Traction only).
- 2 1-inch Hose Clamps (Traction only).
- 2 3/4-inch Hose Strainers (Traction only).
- 1 1 lb. Can CASE Hard Oil.
- 1 12-inch Combination Pipe Wrench.
- 1 3/4-inch Globe Valve for Injector (Except 6-horse Portable).
- 2 1/2-inch Globe Valves for Injector (6-horse Portable only).
- 1 3/4 x 2 1/4-inch Nipple for Injector (Except 6-horse Portable).
- 1 3/4 x 6 1/4-inch Nipple Ground for Injector (Except 6-horse Portable).
- 1 3/4 x 15-inch Nipple (Traction only).
- 2 1/2 x 6-inch Ground Nipple (6-horse Portable only).
- 2 1/2 x 3-inch Ground Nipple (6-horse Portable only).
- 1 1 1/4-inch Street Elbow (Portables only).
- 1 3/4-inch Elbow (Except 6-horse Portable).
- 1 3/4-inch Elbow 45 degrees (Traction only).
- 1 Set of Wrenches for Pump (Except 6-horse Portable).
- 1 Cylinder Cock (1 is left in place).
- 2 Stop Cocks to drain Heater (Except 6-horse Portable).
- 1 Stop Cock for Hose Coupling on Pump (Except 6-horse Portable).
- 1 Bibb Nose Cock for Pump (Except 6-horse Portable).
- 2 Pet Cocks for Pump Frame (Except 6-horse Portable).
- 2 Pet Cocks for Steam Cylinder of Pump (Except 6-horse Portable).
- 1 Pet Cock for Water Cylinder of Pump (Except 6-horse Portable).
- 1 Pet Cock for Throttle (Except 6-horse Portable).
- 1 Pet Cock for Exhaust Pipe (6-horse Portable only).
- 1 Pet Cock for Feed Pipe from Pump (Except 6-horse Portable).
- 1 Pet Cock for Feed Pipe from Injector (Except 6-horse Portable).
- 2 Pet Cocks for Feed Pipes from Injectors (6-horse Portables).
- 1 Governor Belt.
- 1 Flue Scraper.
- 1 Extra Set of Valve Rod Packing.
- 1 Extra Set of Piston Rod Packing.
- 15 ft. 1-inch Suction Hose (Except 6-horse Portable).
- 15 ft. 3/4-inch Suction Hose (6-horse Portable only).
- 10 ft. 1/2-inch Sprinkling Hose (Except 6-horse Portable).
- 1 S Wrench 880-C Except 25 S and 25 C.
- 1 S Wrench 882-C.
- 1 S Wrench 883-C.
- 1 S Wrench 884-C.
- 1 S Wrench 886-C.
- 1 S Wrench 887-C.
- 1 S Wrench 888-C.
- 1 Crosshead Wrench 890-C.
- 1 Socket Wrench 885-C, 6-horse Portable, 9 S and 9 C, 12 S and 12 C.
- 1 Socket Wrench 881-C, 15 S and 15 C, 20 S and 20 C, 25 S and 25 C.
- 1 Socket Wrench 501-C, 25 S and 25 C.
- 1 771-C Nozzle, 6-horse Portable.
- 1 717-C, 1 771-C Nozzle, 9 S and 9 C.
- 1 717-C, 1 1001-C Nozzle, 12 S and 12 C.
- 1 715-C, 1 753-C Nozzle, 15 S and 15 C, 20 S and 20 C.
- 1 816-C, 1 873-C, 1 895-C Nozzle, 25 S and 25 C.
- Extras. Glasses for Swift Lubricator, water glass, two pieces rubber packing for pump plunger and reverse block 01161-C-1. Traction only.