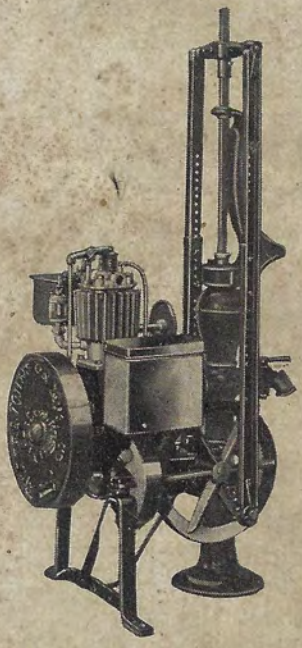
Price List

Instruction Book with List of Parts

FOR THE

FULLER & JOHNSON FARM PUMP ENGINE



Be sure to read each tag and study the instructions carefully before attempting the manipulation of any part. Do not remove any tag except those actually necessary in operating the engine.

Follow all instructions carefully.

Fuller & Johnson Mfg. Co.

Established 1840

MADISON, WISCONSIN, U. S. A.

Cable Address "Fullerjohn"—ABC, 5th Edition; Lieber's; Western Union Universal; Western Union Five Letter; Bentleys

Form 385

Setting Up and Operating

SETTING UP

To attach engine to pump, clamp engine to side of pump opposite spout with the two clamps on engine base (see fig. 12, page 16). Put cross head on pump rod. Turn fly wheel until the pitman crank pins are at the lowest point of stroke. Put on the pitmans and attach them to cross head so that the pump plunger will not come nearer than half an inch from the extreme bottom of stroke. After connecting pitmans to cross head on pump rod turn engine slowly and see that there is plenty of clearance on both ends of pump stroke. When the engine leaves the factory the pins are set for a 5″ stroke. If a longer stroke is desired change the pins to another hole. The middle holes give 7½″ stroke and the outer holes give 10″ stroke.

The engine as regularly furnished fits any of the ordinary pump standards. Odd or special types of standards require adapters, and these can be furnished promptly at a reasonable price, if you give us the manufacturer's name and number of your pump.

LUBRICATION—Cylinder

Attach cylinder oil cup (in packing box) to the elbow on small pipe threaded into the side of the lower end of the cylinder. Fill the cup with *Special Gas Engine Cylinder Oil.* The cup has adjustable sight feed. To adjust the flow of oil turn the drop lever on the top of oiler to a vertical position, turn the knurled thumb nut up or down until the oil drops about 6 drops a minute. When you stop the engine, always stop the flow of oil, which is done by turning the drop lever over to a horizontal position. (See cold weather suggestions, page 3.)

LUBRICATION—Bearings

The crank pin is lubricated by the grease cup at the outer end of the crank shaft. Before starting the engine give this and each of the other grease cups on the engine two complete turns. This is sufficient for a half day's run. (See fig. 12, page 16.)

The grease cup that lubricates the crank pin is attached to the end of the crank shaft. Turn this cup to the LEFT to force grease through the hollow crank shaft to the crank pin.

The Piston Pin—is hollow and picks up oil from the cylinder lubricator.

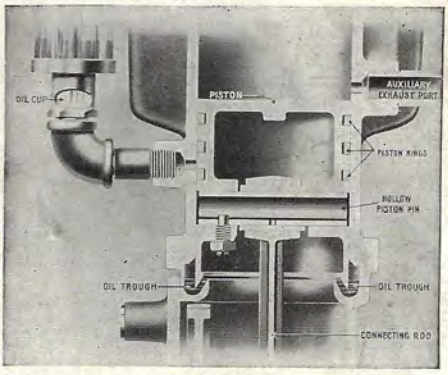


FIG. 1

The oil enters from the oil cup and accumulates in the oil trough. The lower edge of the piston dips into the trough of oil at the bottom of every stroke. At the right is shown the auxiliary exhaust port where the very hot gases escape the instant they have done their work.

TO START ENGINE

1. Fill grease cups (see fig. 12, page 16).
2. Fill gasoline tank to one-half inch of top.
3. Raise lever of cylinder oiler and see that it feeds properly.
4. Open throttle valve to No. 1. (See tag.)
5. Hold damper down for two turns of fly wheel. (See tag.)
6. Turn engine fly wheel rapidly in direction of arrow.
7. As soon as engine takes first explosion, open damper, close and adjust throttle valve. (For ordinary light loads throttle valve set at No. 2 should be correct.)

If the exhaust shows black smoke, this indicates too much gasoline, and the throttle should be closed to between 2 and 3 or possibly 3. (Gray exhaust denotes too much lubricating oil.) These throttle settings may vary. Always set throttle so engine will take least number of explosions and the speed be maintained.

TO STOP ENGINE

1. First close the engine throttle valve (see tag.)
2. Close switch (see tag).
3. Close oil cup.

Always close gasoline throttle first, as otherwise the piston will continue to draw gasoline into the cylinder and expel it through the exhaust port.

If battery ignition, always open the battery switch when engine is stopped, otherwise you may waste your battery.

COLD WEATHER SUGGESTIONS

Always strain gasoline through chamois skin to prevent water from entering gasoline tank.

Gasoline when cold evaporates slowly; therefore, in starting engine under these conditions it requires an extra amount of gasoline to enter the cylinder so that enough will evaporate to produce an explosive gas. To accomplish this proceed as follows:

Open throttle to No. 1, then blow in vent hole in top of tank; this creates a pressure which forces gasoline up into the mixing device, giving a rich mixture, which is necessary for easy starting. Then proceed according to instructions 5, 6, and 7 given above.

Moisture sometimes collects around the center part of the spark plug, causing short circuit; therefore, it is advisable to have an extra plug on hand, which is kept clean and dry, and use this for starting when weather is extremely cold.

In cold weather the lubricating oil will be more sluggish, and special attention will be required to see that it is feeding properly. If necessary, thin it by adding 25% or 30% of kerosene or enough to make it flow freely, in which case increase the flow to 8 or 10 drops per minute. For lubricating the cylinder always use **special gas engine oil** in oil cup.

Spark Plug

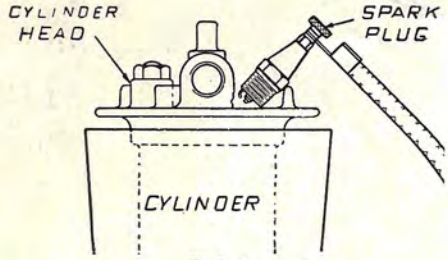


FIG. 2

The spark plug should be kept clean at all times. If the inside end becomes covered with soot or carbon, it may become short circuited, that is, the electric current will pass through the carbon deposit instead of jumping across between the points. To test the spark plug to see that it is working right, take it out of the cylinder, and leaving it connected with the wire lay the plug on the cylinder head (see fig. 2). Let only the threaded part of the plug touch the cylinder head. With the battery switch closed, turn engine until vibrator works. (If magneto ignition, crank engine rapidly.) If no spark shows, clean the spark plug thoroughly of all sooty deposit on the points and the center part of the plug. The distance between the points should be about 1-32″, or about the thickness of two ordinary playing cards. After cleaning and adjusting the points on the plug, test again. (See cold weather suggestions, page 3.)

ELECTRIC BATTERY AND SPARK COIL

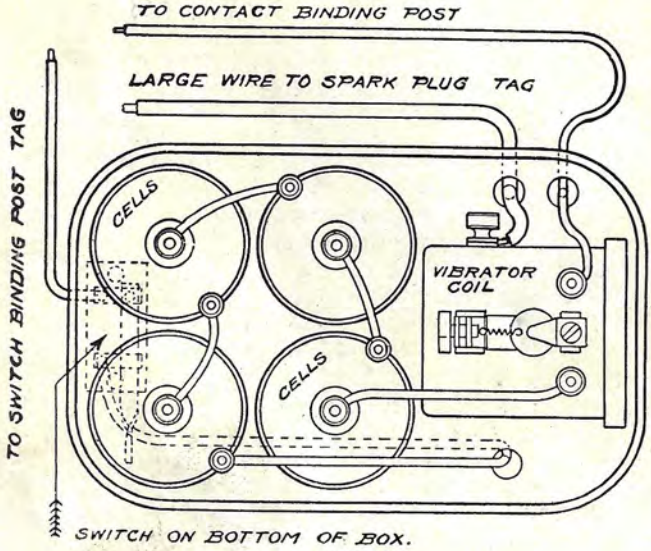


FIG. 3

Note the cells are connected in series. All short wires must connect center post of one cell with side post of next.

See that none of the wires are broken, that binding nuts are tight. *Keep the battery dry.*

Don't disconnect a wire until you know how to replace it.

To renew, order new cells of the factory, or your dealer, and connect up same as this drawing.

The side binding post on a cell should never touch the next cell nor the side of the battery box but be as far from it as possible (see diagram).

AMMETER

The use of an ammeter affords a ready and certain means of knowing that your batteries are of the proper strength to give a hot spark. A fresh cell usually shows from 20 to 25 amperes, and their life depends on the amount of usage, also on their being kept dry. When a cell reads as low as 6 or 7 amperes it should be scrapped and replaced by a new cell.

(See cold weather suggestions, page 3.)

FIG. 4
Ammeter in Position.

Spark Coil

Before coil leaves factory it is properly adjusted. To test coil close switch, then turn engine so contact pin touches timer spring. If adjustment is correct, vibrator will work. If vibrator does not work, be sure that battery connections are all tight and that no connections are broken. If vibrator does not work now, turn adjusting screw on end of coil a little to the right or left. If it still sticks, take off vibrator blade and smooth off contact points with a very fine file, or with fine sandpaper fastened on a flat stick. (These points will become roughened after having been used for some time.) When vibrator is adjusted so it will work, do not tamper with it.

Do not leave engine in contact more than an instant with the vibrator working as a long contact may damage your coil or battery.

Magneto

When the engine leaves the factory the magneto is properly connected up, the engine being run the last thing before it is crated so as to be absolutely certain everything is in proper adjustment.

Before starting the engine, oil the magneto bearings at each end of the magneto where the oil holes are marked.

Oiling is necessary only once every couple of weeks. Do not use thick, heavy oil; **use a light oil** of **good quality**,—an oil similar to sewing machine oil is excellent for the purpose.

If, for any reason, the magneto should be removed from the engine, it is absolutely necessary to engage the teeth of the gears in exactly the same relation as when you receive the engine. This relationship is necessary on account of the proper timing of the spark. The teeth of the gears where the engagement is to be made are marked. Two teeth on the gear are marked with three dots—**one** tooth on magneto pinion is marked with dots to correspond. In engaging these gears be absolutely certain that the single marked tooth on a gear enters between the two similarly marked teeth in the engaging gear. It should seldom be necessary to make any such disengagements, however, this information is given only in case such necessity arises.

If unable to locate the marks on the gears or if new marks are not made before separating the gears, then in order to set the magneto in correct time it will be necessary to proceed as follows: Rotate the fly wheel in the direction which engine runs until the piston moves upward on the **compression** stroke, and the word "spark" stamped on

the face of the fly wheel is exactly opposite the vertical exhaust push rod, then **stop.** Remove the end plate of the magneto and rotate the magneto armature in the direction in which it runs, and stop just as the points separate. Hold the armature of the magneto in **this** position and set the magneto so that the magneto gear will mesh with the driving pinion. It would be well to rotate the fly wheel to check this setting before securely fastening the magneto.

Be sure that the rubber covered wire connecting the spark plug and the magneto has a good and secure contact at both ends.

GOVERNOR

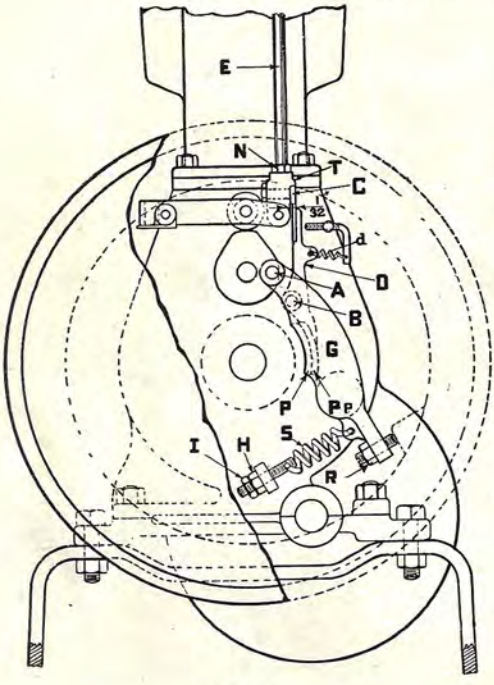


FIG. 5

The governor on the Farm Pump Engine is the Hit-and-Miss type, that is, the number of explosions is in proportion to the load. The accompanying drawing shows the action of the governor. The governor weight is pivoted at "A." When the engine is running the centrifugal force causes the governor weight "G" to move outward. When the proper speed is reached, the extreme outward movement of the governor weight "G" causes the pad "P" to come in contact with the lower end "Pp" of the detent swivel "D" and forces this outward. As "D" is pivoted at "B," the upper end of the detent swivel is forced into the detent catch "C," thus with the governor weight "G" in this position, the exhaust valve is held open. With exhaust valve open no suction is produced by the movement of the piston, therefore no charge is sucked in. If the load on the engine is not changed, the speed will quickly lower slightly when the tension on governor spring "S" is sufficient to pull the governor weight nearer the center. This permits the small detent spring "d" to pull the detent swivel out of the catch, allowing the exhaust valve to close on the suction stroke and a charge is sucked into the cylinder. The strength of the explosion of this charge tends to increase the speed, causing the governor weight to move outward and again force the detent "D" into the catch "C." If the engine is heavily loaded, it may require several successive explosions before engine reaches the normal speed.

When the engine leaves the factory the governor is properly adjusted and operates perfectly. If it is necessary at any time to check these adjustments, proceed as follows:

Turn the fly wheel until detent is raised in the position as shown in

fig. 5. When the pads "P" and "Pp" are even as shown, the detent "D" can then be pushed into the catch "C." There should be a clearance of 1-16 of an inch between the point of the detent "D" and the catch "C." If the clearance is less, grind off the point of "D" to give proper clearance. With pads "P" and "Pp" in above position press governor weight back so that the set screw "R" bears against the pad on the fly wheel. In this position there should be a clearance of 1-32 of an inch between the **back** of the detent "D" and the face of the catch "C." If not, adjust the set screw to obtain this setting. Then examine the catch "C" to see that the point of detent "D" fits properly into the notch. If notch is worn, reverse the catch block so as to use the other notch.

SPEED OF ENGINE

The normal speed of the engine is 500 revolutions per minute, which will drive the pump at about 31 strokes per minute, and the small pulley shaft at about 155 revolutions per minute. The speed is controlled by the tension spring on the governor weight, which is located on the inside of the fly wheel. (See fig. 7, page 9.)

The speed may be changed by changing the tension of the **governor spring "S"** (see Fig. 5, page 6). To increase the speed, increase the tension; that is, loosen the lock nut "I" on the eye bolt, then turn the inner nut "H" forward on the bolt. To decrease the speed, decrease the tension; that is, turn the inner nut backward on the eye bolt. When the position is correct and the speed where desired, tighten up lock nut "I" so as to keep adjustment permanent. Best results are obtained when operating the engine at normal speed.

TIMING GEARS

When the engine is adjusted at the factory timing gears are set in correct relation to each other, so that the various parts operated by them will move in correct time. Then two teeth on the gear and one tooth on the pinion are marked. If for any reason they should be separated, be very careful to replace them with the marks together so as to bring them into the original position, otherwise the parts operated will not move in correct time. If original marks cannot be found make new ones before separating.

EXHAUST VALVE SETTING

When the timing gears are set in correct relation, the exhaust valve will open when the piston is at the lowest position (moving downward on the power stroke) and will close when the piston reaches the highest position (moving upward on the idle stroke); that is, the exhaust valve remains open while the fly wheel makes one-half revolution. A slight adjustment can be made by varying the length of the push rod "E" by means of the threaded end "T" (see Fig. 5).

When the **necessary** adjustments are made be sure to tighten the lock nut "N" (Fig. 5), so the adjustments will remain permanent.

TIME OF IGNITION

Ignition should occur just as the word "spark," stamped on the face of the fly wheel, is even with the vertical exhaust push rod, the piston moving upward on the compression stroke. If it becomes

necessary to reset the ignition, turn the fly wheel around in the direction which engine runs to the above position, then be sure to open the switch. As the contact blade is slotted to permit adjustment, then loosen nut and screw holding the contact blade, and adjust the blade so that it touches the contact pin in the cam, on the side that it would first touch it when engine is running. Close switch and by turning fly wheel around slowly, test to see if the setting is correct.

COMPRESSION

If the engine loses compression this is probably due to the valves leaking. The exhaust valve is the one to test first because through the admission valve passes only air and gasoline. To test: disconnect wire from spark plug then turn fly wheel round slowly and listen at cylinder head exhaust opening. If the gas escapes when piston is moving up on compression stroke, the exhaust valve may be sticking, or there may be dirt on the valve seat. To remedy this put kerosene on valve stem and rotate the valve. If valve works freely and still leaks it will be necessary to regrind the valve. Take off head, remove valve from head. Put a little oil on the valve seat, then sprinkle on a little emery dust (about No. 120), put valve in place and turn back and forth with screw driver. After regrinding wash all parts clean with gasoline, then reassemble the valve and again test.

CHECK VALVE

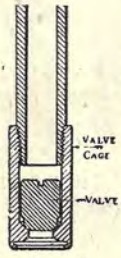


Fig. 6
Check Valve.

To maintain a constant gasoline level, a check valve is placed at the lower end of the stand pipe (see Fig. 6). With the throttle properly set, if the engine sucks several times before the explosion occurs, and if when the damper is held down the first suction or charge explodes, and there is no black smoke in the exhaust, this condition indicates that the check valve is leaking, caused possibly by dirt on the valve seat.

To clean the check valve, unscrew the four nuts holding the gasoline tank, and allow the tank to drop downward, then unscrew the valve cage at the lower end of the stand pipe. After cleaning, replace the check with the slotted end UP and then fill the valve cage with gasoline to test for leakage. If the valve still leaks it will be necessary to regrind the valve or replace with a new one. In reassembling, be sure the valve cage is screwed tightly to the stand pipe.

MUFFLER

Sometimes the muffler becomes clogged on account of the use of too much oil or a **poor grade** of oil. Should this occasion arise, take the muffler off and clean same with a wire so that the air will pass through freely. With a pointed stick or nail clean the small holes which lead into the cylinder, where the muffler pipe is connected to the cylinder. Do this when the engine is **not** running.

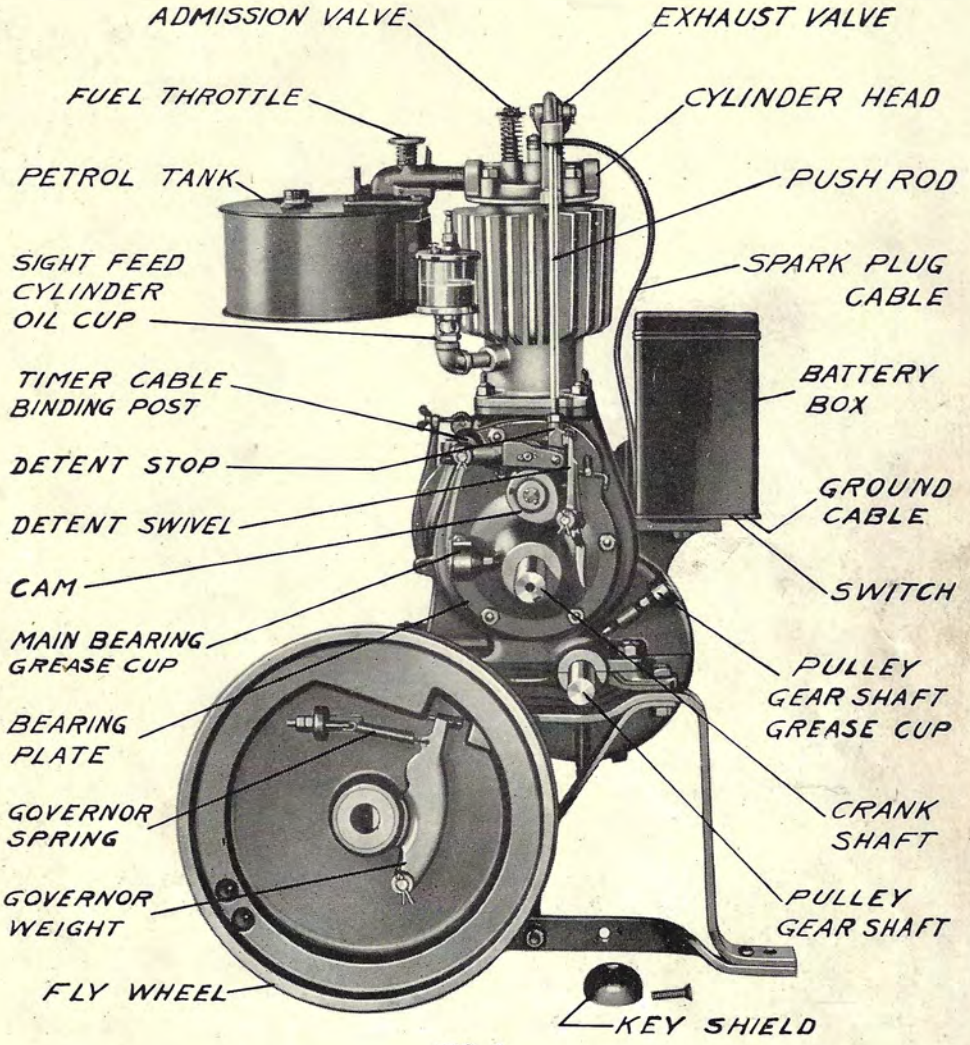
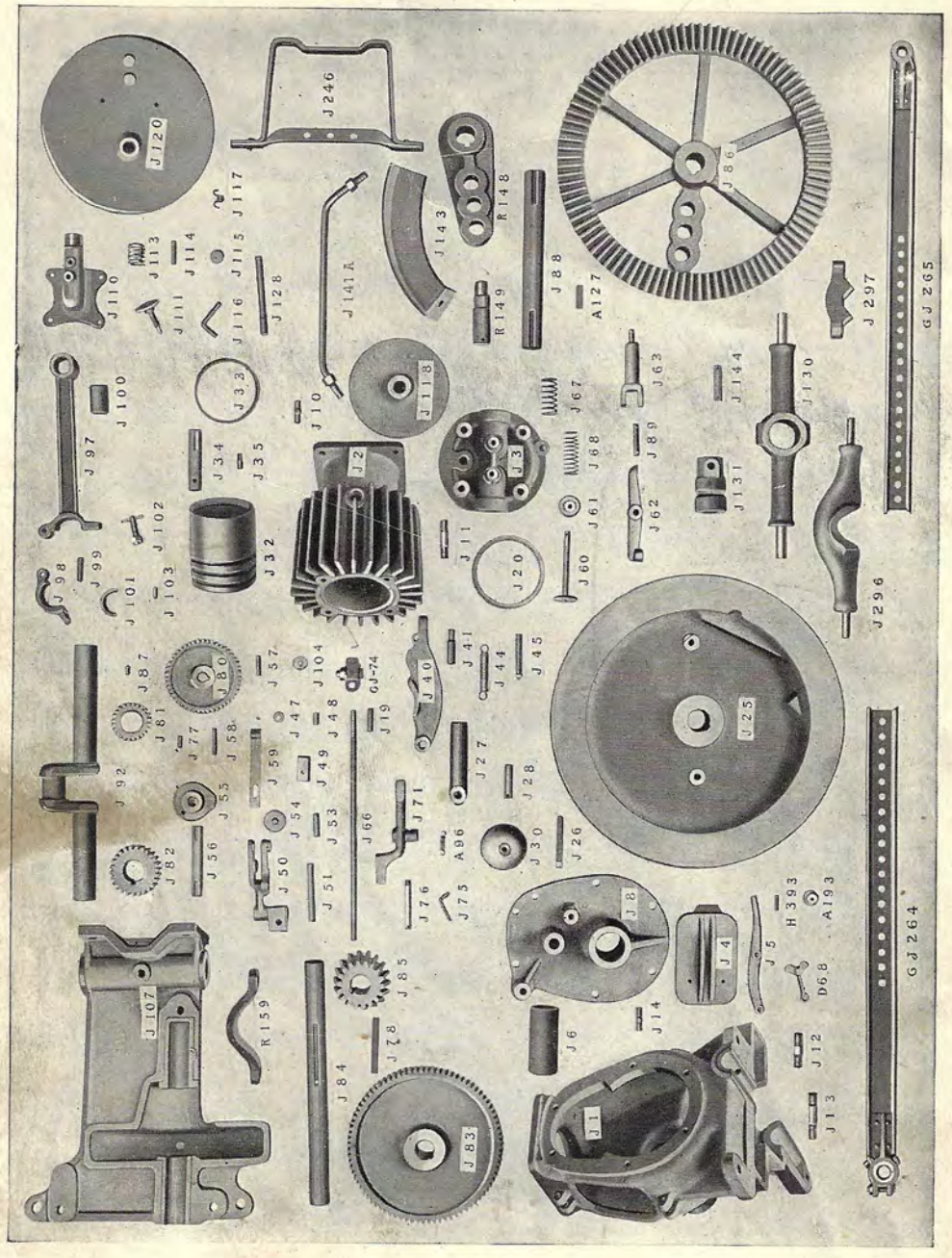


FIG. 7

FARM PUMP ENGINE (FLY WHEEL REMOVED)


J120
J246
J143
R148
J86
J297
GJ 265
J110
J113
J111
J114
J116
J115
J117
J128
J141A
R149
J88
A127
J100
J33
J10
J118
J63
J144
J130
J97
J34
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J54
J53
J66
J30
J26
J50
J51
J76
J75
A96
J8
J4
J5
H393
A193
J107
R159
J85
J78
J14
D68
J6
J12
J84
J83
J1
J13
GJ 264

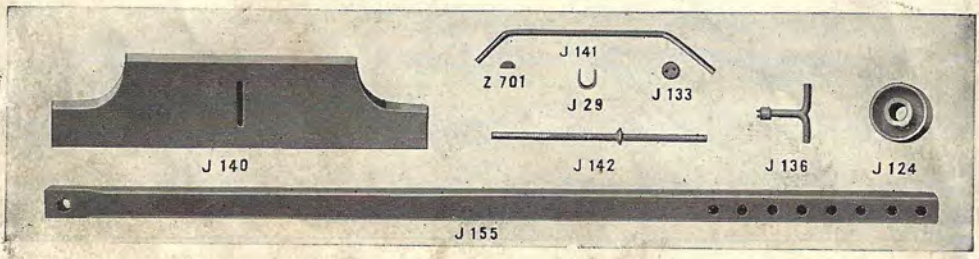
J 140
J 141
Z 701
J 29
J 133
J 142
J 136
J 124
J 155

FIG. 9

NOTICE!

In ordering parts always give the number of the casting or part according to the cut, also the description of it according to the list.

IMPORTANT—Always give the number of your engine

This number will be found stamped on the brass name plate, or on the fly wheel near the shaft cap.

EFFECTIVE OCTOBER 10, 1923

All Prices Subject to Change Without Notice **TERMS: CASH WITH ORDER**

FARM PUMP ENGINE REPAIR LIST

F. O. B. FACTORY

Symbol No.	Description	Price
GJ-1B	Crank case (Battery ignition) complete with 1 XJ-6 Babbitt bushing, 4 J-10 Studs, 6 J-14 Studs, 3 ⅜ Nuts	$13.50
GJ-1C	Crank Case complete (Magneto ignition) with 1 XJ-6 Babbitt bushing, 4 J-10 Studs, 6 J-14 Studs, 3 ⅜ Nuts	14.00
XJ-2	†Cylinder (Old Style) (Not furnished) use XJ-2A New style cylinder with XJ-3B New style head	10.50
**XJ-2A	†Cylinder (New style) with 4 J-11 Studs	7.50
XGJ-2A	†Cylinder with 4 J-11 Studs (New style) fitted with 1 GJ-32D Piston, rings and ring pins	13.50
XJ-3C	†Cylinder head only with spark plug opening	3.00
GJ-3C	†Cylinder Head Complete with valves and springs	6.00
J-4	Crank case cover	.35
GJ-4	Crank case cover complete with 1 J-5 Clamp, 1 J-16 Pin, 2 $\frac{9}{16}$x$\frac{7}{16}$ Co. Sunk Hd. Rivets	.80
J-5	Crank case cover clamp	.20
XJ-6	Crank case and plate bushing (Reamed) Hand Ld 1.05	.80
XGJ-8	Bearing Plate (Battery ignition) with XJ-6 bushing	6.50
XGJ-8M	Bearing plate (Magneto ignition) with XJ-6 bushing	8.50
GJ-8	Bearing plate XGJ-8 (Battery ignition) complete with 2 J-77 Keys, 1 J-80 Timing gear, 1 J-55 Cam, 1 J-58A Pin, 1 J-56 Cam shaft, 2 $\frac{5}{16}$x$\frac{5}{8}$ Sq. Hd. Cp. Pt. Set screws	11.50
GJ-8M	Bearing plate XGJ-8M (Magneto ignition) complete with 1 J-55 Cam, 1 J-56 Cam shaft, 3 J-77 Keys, 1 J-80 Timing gear, 1 J-291A Magneto pinion, 1 J-292 Magneto gear, 1 J-293 Magneto gear shaft, One J-295 Gear Shield, 1 No. 725 Washer, 2 $\frac{5}{16}$x$\frac{5}{8}$ Sq. Hd. Cp. Pt. Set screws, 1–$\frac{1}{8}$x$\frac{3}{4}$ Cotter pin	17.50
J-9	Oil Shield	.10
J-10	Cylinder stud	.10
J-11	Cylinder head stud	.10
J-12	Crank case to frame stud (Short)	.10
J-13	Crank case to frame stud (Long)	.10
J-14	Bearing plate stud	.10
J-15	Cover clamp pin (Long)	.05
J-16	Cover clamp pin (Short)	.05
J-17	¼" Wing Nut	.10
J-19	Detent catch pin	.15
J-20	Cylinder head gasket 4" O. D. Diameter	.20 30 ¢
XGJ-25	Fly wheel with 1 J-27 Handle, 1 J-28 Pin, 1 J-41 Stud	12.00
J-26	Fly wheel key	.25
J-27	Fly wheel handle	.30
J-28	Pin for fly wheel handle	.10
J-30	Fly wheel key shield	.15
XGJ-32D	Piston with 3 11N-39 ring pins	4.00
GJ-32D	Piston complete with 3 J-33A Piston rings, 3 11N-39 Piston ring pins	5.50
J-33A	Piston rings 3½ X 1¼	.40
J-34	Piston pin (For old style oiling system)	.90
*J-34A	Hollow piston pin (New style oiling system)	.90

*Effective on engine Nos. 102791 and up.
**Effective on engine Nos. 102701 and up.
†New style cylinder head fits old style cylinder.
Old style cylinder head *does not* fit new style cylinder.

WE MUST HAVE YOUR ENGINE NUMBER WHEN ORDERING PARTS

Symbol No.	Description	Price
J-35	Piston pin set screw	$0.10
11N-39	Piston ring pin	.10
XGJ-40	Governor weight with 1 ¼x1¼ Sq. Hd. full thread cap screw, 1 ¼" Hex. Nut	.90
J-41	Governor weight stud	.20
J-44	Governor weight spring	.10
J-45	Governor weight adjusting spring stud	.20
J-47	Cam rocker insulating washer	.05
J-48	Cam rocker insulating tube	.05
J-49	Cam rocker insulator	.15
XJ-50	Rocker arm (Battery ignition) with 1 J-48 Bushing, 1 J-57A Cam insulator pin	1.75
XGJ-50	Rocker arm J-50 complete with 1 J-57A Pin, 1 J-59 Spring, 1 J-104 Nut, 2 No. 711 Washer, 1 ¼x2 Button Head cap screw, 2 $\frac{3}{32}$x½ Cotter pin, 1 ¼" Nut, 1 J-47 Washer, 1 J-48 Bushing, 1 J-49 Insulator, 1 J-53 Pin, 1 J-54 Roller	3.25
GJ-50	Rocker arm XGJ-50 complete with 1 GJ-74 Detent catch block complete	5.00
XGJ-50M	Rocker arm J-50 (Magneto ignition) complete with 1 J-53 Pin, 1 J-54 Cam roller, 2 $\frac{3}{32}$x½ Cotter pins	2.75
GJ-50M	Rocker arm XGJ-50M complete (Magneto ignition) with 1 J-19 Pin, 1 GJ-74 Push rod end catch block, 1 $\frac{3}{32}$x¾ Cotter pin	4.50
J-51	Cam rocker and detent swivel pin	.15
J-53	Cam roller pin	.25
J-54	Cam roller	.50
XJ-55A	Cam complete with 1 J-58A contact maker	1.25
J-56	Cam shaft	.40
J-57B	Cam insulator	.10
J-58A	Contact maker	.10
J-59	Timer spring	.10
J-60	Exhaust and Admission valve (Each)	.70
J-61	Exhaust and Admission valve nut	.20
J-62	Exhaust lever	.50
J-63	Exhaust lever bracket only	1.00
GJ-63	Exhaust lever bracket J-63 complete with 1 J-62 Lever, 1 J-89 Pin, 1 ⅜ Half nut, 2 $\frac{3}{32}$x⅝ Cotter pins	1.75
J-66	Push rod	.20
J-67A	Exhaust valve spring	.15
J-68	Admission valve spring	.15
D-68	Cover clamp eye bolt	.10
J-69	Detent Catch (Use GJ-74)	
XJ-70	Detent blade (Only) hardened	.30
GJ-71	Detent J-71 complete with 1 XJ-70 Blade, 2 $\frac{3}{16}$x½ Co. Sunk hd. rivets	1.20
J-73	Detent catch only	.80
J-74	Detent catch block only	.70
GJ-74	Detent catch block J-74 complete with 1 J-73 Catch, 1 ¼" Grip nut (Interchangeable with old style J-69)	1.60
J-75	Detent spring stud	.15
J-76	Detent stop stud	.15
J-77	Cam shaft key	.05
J-78	Bevel pinion key	.15
J-80	Timing gear	2.00
J-81	Governor pinion	1.25
J-82	Driving pinion	2.25
J-83	Driven gear	4.50
J-84	Driving gear shaft	1.00
GJ-84	Driving gear shaft J-84 complete with 1 J-78 Key, 1 J-83 Driven gear, 1 J-85 Bevel pinion	7.50
J-85	Bevel pinion	1.25
J-86	Bevel gear	4.00
J-87	Timing pinion key	.10
J-88	Bevel gear shaft	1.00
J-89	Exhaust lever pin	.15
GXJ-92	Crank shaft (Old style) J-92 with 1 J-87 Key	7.50
GJ-92	Crank shaft J-92 (Old style) complete with 1 J-81 Pinion, 1 J-82 Pinion, 1 J-87 Key, 1 "B" Woodruff key	12.00

Symbol No.	Description	Price
*XGJ-92A	Crank shaft (New style oiling system) with 1 J-87 Key	$ 7.50
*GJ-92A	Crank shaft (New style oiling system) complete with 1 J-81 Pinion, 1 J-82 Pinion, 1 J-87 Key, 1 "B" Woodruff key	12.00
J-96	Detent spring	.10
XGJ-97B	Connecting rod J-97B (Old style oiling system) complete with 1 J-98B Cap, 1 J-99 Connecting rod cap bolt, 1 XJ-100 Piston pin bushing, 1 J-103 Oil tube dowel, 1 J-105 Oil tube with 1 J-102A connecting rod cap bolt, 1 Pr. XJ-101 Babbitt bushings, 1 GJ-133 Grease cup follower	7.00
*XGJ-97C	Connecting rod J-97C (New style without oiling system) complete with 1 J-98C con. rod cap, 1 J-99 Pin, 1 XJ-100 Piston pin bushing with 1 Pr. XJ-101A Babbitt bushings, 1 J-102A Bolt, 1 ⅜ Half Nut, 1 ⅛x¾ Cotter pin	5.50
XJ-98B	Connecting rod cap (Old style) fitted	2.00
XJ-98C	Connecting rod cap (New style) fitted	2.00
J-99	Connecting rod cap pin	.05
XJ-100	Connecting rod bushing (Piston end)	.50
GJ-101 (Pair)	Connecting rod bushing (Crank end) (Old style)	.40
GJ-101A (Pair)	Connecting rod bushing (Crank end) (New style)	.40
J-102A	Connecting rod clamp bolt	.30
J-103	Connecting rod dowel (For old style GJ-97B connecting rod)	.05
J-104	¼" Binding nut	.10
J-105	Piston pin oil tube (For old style GJ-97B connecting rod)	.15
J-106	Vaporizer stud	.10
XGJ-107A	Main frame J-107 with 2 J-12 studs, 1 J-13 stud and babbitt bearings	8.50
XGJ-110A	Vaporizer with 1 J-114 Pin	1.75
GJ-110A	Vaporizer J-110A complete with 1 GJ-112 Throttle valve, 1 J-113 Spring, 1 J-114 Index Pin, 1 XJ-115 Damper, 1 XJ-116 Handle, 1 J-117 Spring, 1 ⅜x⅜ Cotter pin	3.00
GJ-112	Throttle valve stem complete with J-111 knob	.50
J-113	Throttle valve spring	.10
J-114	Index pin	.05
XJ-115	Damper drilled for cotter pin	.05
XGJ-115	Damper complete with damper handle and cotter pin	.30
XJ-116	Damper handle drilled for damper	.25
J-117	Damper spring	.10
GJ-118	Muffler J-118 complete with 1 J-119 Muffler cover, 2 3/16 Rd. head rivets, 1 ½x4 Nipple	.70
GJ-120A	Gasoline tank only	2.00
GJ-120A-110A	Gasoline tank complete with 1 GJ-110A Vaporizer, 1 GJ-128 Stand pipe	5.50
A-127	Bevel gear and crank key	.10
J-128	Gas stand pipe only	.40
GJ-128	Gas stand pipe J-128 complete with 1 J-127 Check valve weight, 1 J-129 Body	1.00
XGJ-129	Check valve body J-129 fitted with J-127 check valve	.60
J-130	Pump rod yoke	1.35
GJ-130	Pump rod yoke J-130 complete with 1 J-131 Swivel, 2 J-139 Set Screws, 2 No. 717 Washers, 2 ½" Half Nuts, 2 ⅛x1 Cotter pins	2.00
J-131	Pump yoke swivel	.30
GJ-133	Grease cup follower (For old style GJ-97B connecting rod)	.60
J-136	Grease cup follower wrench	.15
J-139	Pump yoke set screw	.10
J-141A	Foot Support brace rod	.50
J-143	Large bevel gear shield	.35
J-143A	Large bevel gear shield (top part) (also see J248)	.35
J-145A	Foot support cross brace	.30
R-148	Pump crank	1.20
R-149	Pump crank pin	.50
R-159	Main frame clamp (Each)	.35
GJ-160	Belt tightener for wood base	5.00
GJ-160A	Belt tightener for steel base	5.00
A-193	Binding post nut	.15
J-200	General work stand	3.00
GJ-246	Foot support complete with 1 J-247 Foot support (Lower)	2.50

*Effective on engine Nos. 102791 and up.

Symbol No.	Description	Price
*J-248	Large bevel gear shield (Lower part) (See J-143A)	$1.25
J-264	Crank pin bearing casting only	.70
GJ-264	Crank pin bearing J-264 complete with J-268 channel and rivets (Assembled less bushing)	1.65
XGJ-264	Lower half pitman complete with channel, bearing, casting, bolt, nut and babbitt bushing	2.50
XGJ-264 and 265	Upper and lower pitman complete assembled (Each)	4.00
J-265	Upper half yoke pin bearing (Casting only)	.35
GJ-265	Upper half yoke pin bearing J-265 complete with 1 J-267 Channel (Assembled)	1.50
J-266	Lower half crank pin bushing	.35
J-267	Pitman channel only (Upper)	.75
J-268	Pitman channel only (Lower)	.75
J-291A	Magneto pinion	1.75
J-292	Magneto gear	1.75
J-293	Magneto gear shaft	.50
J-295	Magneto gear shield	.35
J-296	Hex. rod yoke (Texas cross head)	1.25
XGJ-296A	Texas cross head with J-297 and two bolts	1.85
J-297	Hex. rod yoke clamp (Texas cross head) (Each)	.50
J-298	Pump pitman (Texas type wood) (Each)	2.50
GJ-310	Primary cable (To contact) with terminals	.30
GJ-311	Primary cable (To switch) with terminals	.30
GJ-312	Primary cable	.20
GJ-313	Secondary cable (To spark plug) with terminals	.60
GJ-320A	Battery box complete with cover, coil bracket, bolts, coils, 4 dry cells, switch, cables and connectors	10.00
GJ-321	Battery box only with cover, coil, bracket, and bolts	1.75
GJ327	Battery box cover with clamps	.45

*Effective on engine Nos. 117801 and up.

"MULTIMOTOR" PARTS

J–350	**BASE** for "Multimotor"	9.00
J–384	Gear Shaft for "Multimotor"	1.75
J–392	Crank Shaft "Multimotor"	8.50

MISCELLANEOUS

No. 7 Monkey Wrench	.40
7" Gas Pliers	.60
No. 485A Sight feed cylinder oil cup	1.75
Glass body for No. 485A cylinder oil cup	.60
Sight feed glass for No. 485A cylinder oil cup	.20
No. 0 or small grease cup	.15
No. 1 or large grease cup	.20
No. 1 Grease cup (Left hand thread for J-92C)	~~.20~~ .35
"B" Woodruff Key	.05
High Tension Magneto only	25.00

BATTERIES AND COIL

Dry Battery Cell (Each)	.40
3" Battery Terminal connectors (Each)	.05
6" Battery Terminal connectors (Each)	.05
No. 1 Switch	.30
Vibrator Spark Coil (See note below)	4.50
Primary or small cable (Per foot)	.05
Secondary or large cable (Per foot)	.10
Cable Terminal ends (Large or small each)	.05
Spark plug	.75

Note.—In ordering parts for spark coils or cylinder oilers be sure to give name of manufacturer and number of coil or oiler.

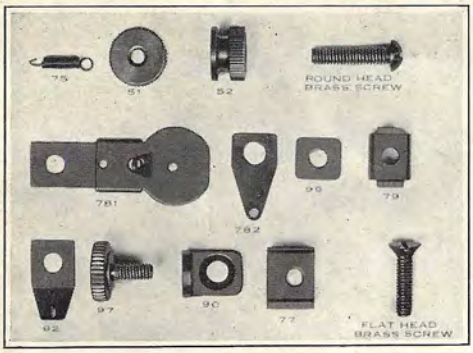

FIG. 10
Coil No. 15

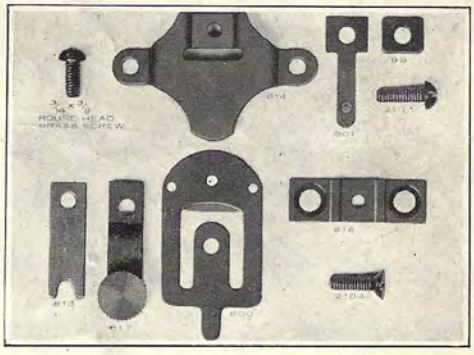

FIG. 11
Coil No. 36

IGNITION COILS

No. 15 Fansteel

51	Round knurled nut	$0.10
52	Round knurled top nut	.10
75	Spiral tension spring, '09	.10
77	Brass armature support	.10
79	Support for No. 782 spring	.10
90	Large angle '09 vib	.10
92	Steel ratchet spring	.10
97	Adjusting screw '09	.10
99	Square washer	.10
781	'09 armature	.75
782	Plat. spring bronze, 1-64 inch thick	.60
	Round head brass screw	.06
	Flat head brass screw	.06

No. 36 Fansteel

99	Square washer	.10
800	Vibrator complete, with contact	.75
801	Bronze spring with contact	.60
813	Adjusting screw spring	.12
814	Bronze spring support	.15
816	Die cast support for No. 800 vibrator spring	.15
817	Adjusting screw, washer and support, assembled	.25
2104	$\frac{3}{16}$" by 8-32 flat head brass screws	.06
2111	$\frac{1}{2}$" by 8-32 round head brass screws	.06
	$\frac{3}{16}$" by $\frac{3}{8}$" round head brass screws	.06

Note.—In ordering parts for spark coils or cylinder oilers be sure to give name of manufacturer and number of coil or oiler.

The Farm Pump Engine will pump any ordinary well as follows:

TOTAL HEAD AND CORRESPONDING SIZE AND CAPACITY OF PUMP CYLINDERS AT 35 5-INCH STROKES PER MINUTE

Total Lift of Water (Feet)	Diameter of Cylinder (Inches)	Water Delivered (U. S. Gallons per hour)	Total Lift of water (Feet)	Diameter of Cylinder (Inches)	Water Delivered (U. S. Gallons per hour)	Total Lift of water (Feet)	Diameter of Cylinder (Inches)	Water Delivered (U. S. Gallons per hour)
500	$1\frac{3}{8}$	65	200	$2\frac{3}{4}$	240	100	4	550
400	$1\frac{3}{4}$	95	175	3	290	65	5	800
275	$2\frac{1}{4}$	170	125	$3\frac{1}{2}$	400	45	6	1150

SIZE AND CAPACITY OF CYLINDERS WHEN OPERATED AT 35 STROKES PER MINUTE U. S. Gallons Per Hour

Diameter of Cylinder (Inches)	Length of Stroke (Inches)			Diameter of Cylinder (Inches)	Length of Stroke (Inches)		
	5	7½	10		5	7½	10
$1\frac{3}{8}$	65	95	125	3	290	435	580
$1\frac{3}{4}$	95	135	190	$3\frac{1}{2}$	400	600	800
$2\frac{1}{4}$	170	255	330	4	550	775	1100
$2\frac{1}{2}$	200	300	400	5	800	1200	1600
$2\frac{3}{4}$	255	415	550	6	1150	1700	2300

WE MUST HAVE YOUR ENGINE NUMBER WHEN ORDERING PARTS

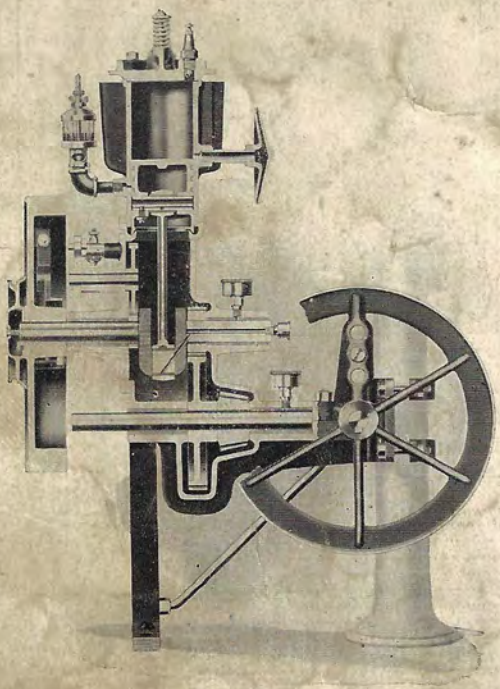

FIG. 12
Side Sectional View of Farm Pump Engine

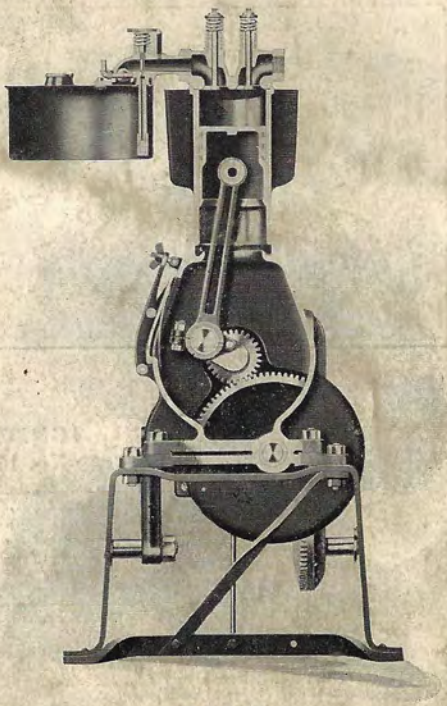

FIG. 13
Front Sectional View of Farm Pump Engine

Other Models of FULLER & JOHNSON Engines

Model "NB"

Gasoline Engines
Sizes 1½-2-3-4-6-8-10-12 H.P.
Stationary and Portable
For Full Information Ask For Bulletin 430

Model "K"

Throttling Governor Kerosene Engines
Sizes 3-5-7-9-12-15-20-25 H.P.
Stationary and Portable
For Full Information Ask For Catalog 22A

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