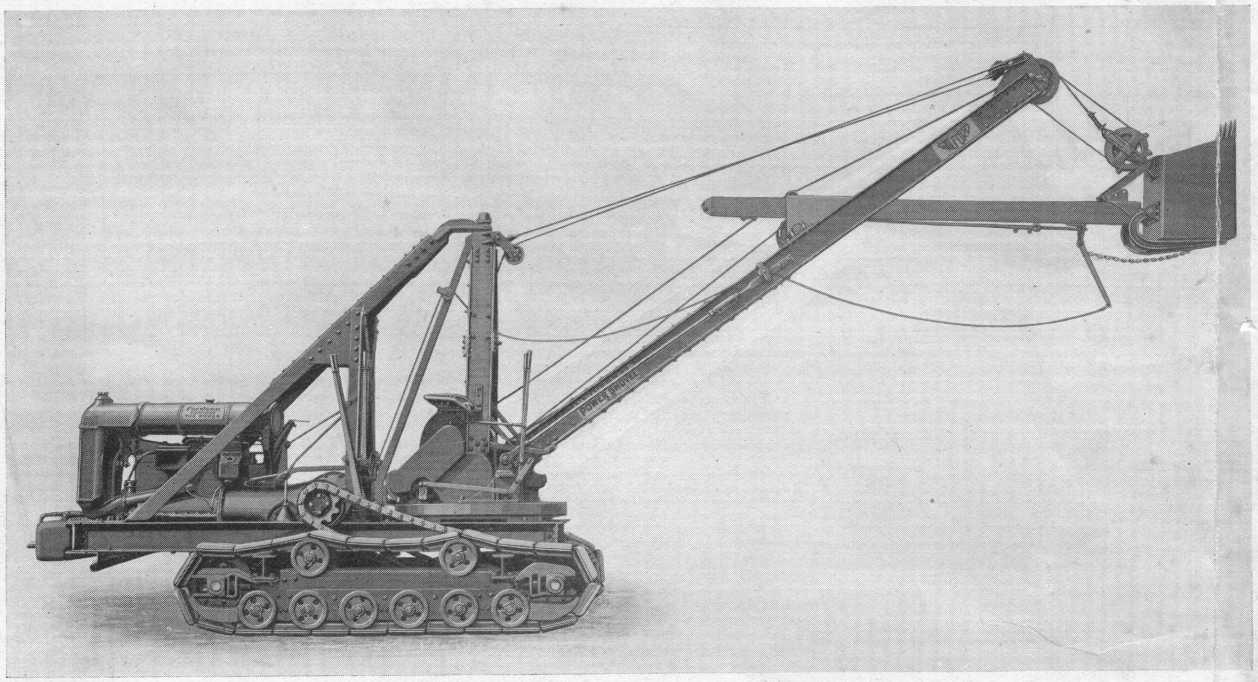
Power Shovel, Clamshell, Crane and Trench Hoe



Specifications—Wilford Model B

Power—Fordson Tractor, equipped with governor.

Lubrication—Alemite.

Fuel—Any good grade of gasoline.

Traction—Crawler type track of rugged construction.

Weight—Approximately 7¾ tons.

Dipper—Welded plate construction with 4 manganese teeth; one-quarter yard capacity, water level measure.

Boom—Two 7″ channels, 15 ft. long built together; raised and lowered by self-locking worm and worm gear, which hold boom at any desired angle.

Dipper Handle—Channel construction; two 5″ members, 10 ft. long; dipper handle socket is electric steel casting, with adjustable dipper braces to change rake of dipper.

Mast—Channel construction with two 7″ members, fastening at lower end to turn table casting and upper end supporting mast head casting.

Turn Table—One electric steel casting on which all machinery and bearings are mounted. Two-thirds circle swing.

Crowding Device—Operated by Ford one-ton truck worm gear; reversed by two friction bevel pinions; crowding drum is mounted on worm gear shaft; no shipper shaft pinions, gears, or brakes are used with this arrangement; the usual dipper handle racking is also eliminated; a single cable operates the dipper handle up or down, independent of the hoist.

Bearings—All shafts running 100 R. P. M. or more have Timken roller bearings that can be adjusted for wear and end play; all other bearings of highest grade babbitt or bronze bushings.

Gears—All gears are drop forged from special analysis high carbon steel, machine cut teeth, double heat treated and bores ground after heat treatment.

Shafting—All shafting, pins, etc., are made of special analysis high carbon steel.

Clutches—Special disc type of our own design. Lined with special molded lining, unaffected by weather conditions. Require but little adjustment. No relining for one year under normal conditions.

Digging Capacity—Normal digging capacity approximately five (5) dips per minute.

Lifting Capacity—Used as a crane the Wilford will lift easily the loads shown on chart on page 6.

Control—Hoist, crowd and swing are operated by three hand levers, and one foot pedal operates complete digging control. Traveling is controlled from operator's seat.

GENERAL DIMENSIONS

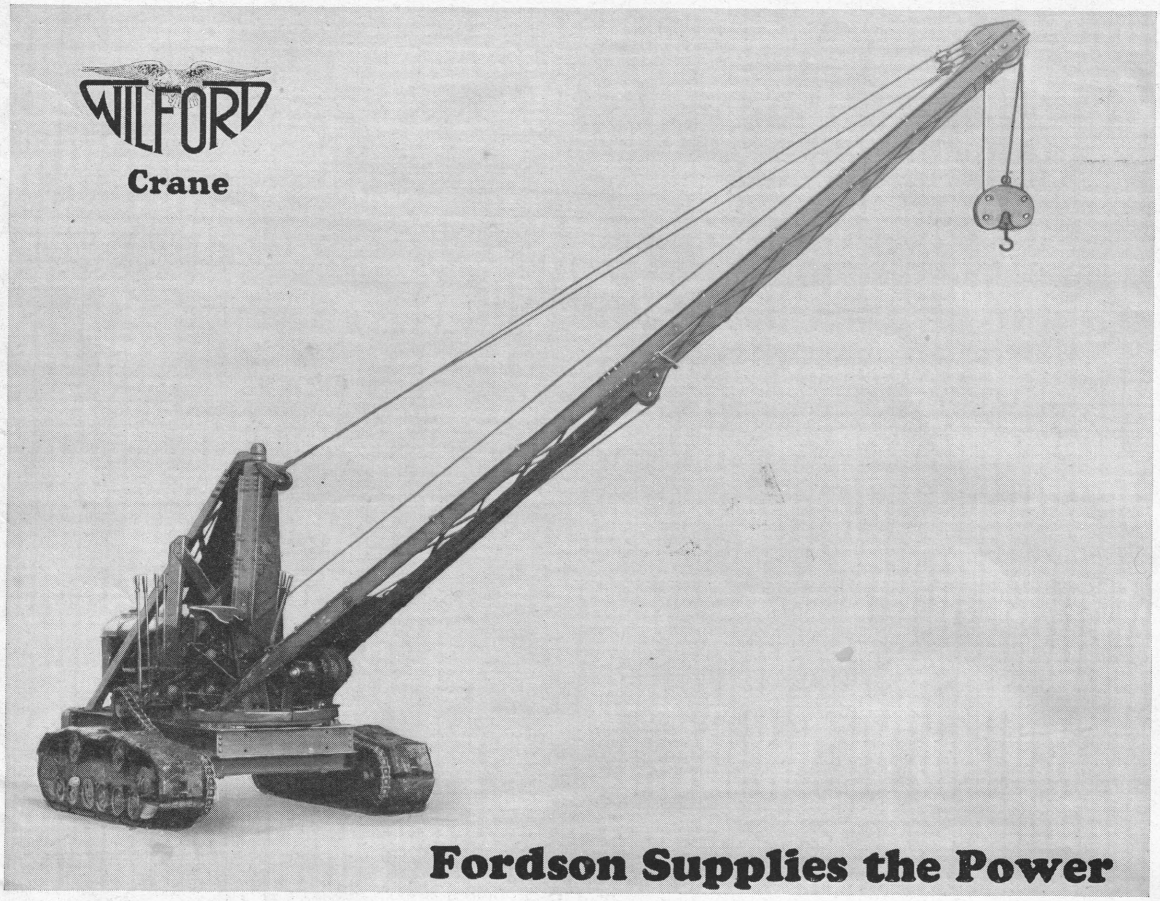
Length of tracks	9′5¼″
Width over all of track	7′1″
Length of boom	15′0″
Length of dipper handle	10′0″
Height from ground to top of mast head	9′7″
15′6″ Dumping Radius, 13′0″ Height of Dump, at 45° angle	Refer to chart on page 14

The Wilford Power Shovel is quickly converted into the other units shown on the following pages by the use of interchangeable booms

UNIVERSAL POWER SHOVEL CO.

WILLIAM FORD, PRES.

Detroit



Crane and clamshell attachments consist of extra booms, all drive and controlling mechanisms, cables, and miscellaneous parts. To convert shovel into crane, remove boom, dipper and dipper stick and apply boom. Write for information on power lift boom, and see special ordering chart.

Wilford's Economies Are Creating New Standards of Performance

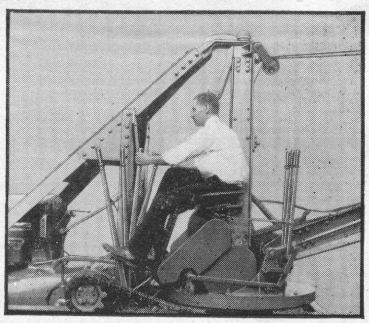
THE Wilford Power Shovel was designed to accomplish certain definite things. It was believed that a small power shovel would fill a long-felt need by making possible the economies of power shovel operation on the smaller excavating jobs. That its market has developed to the point where it is replacing larger units is due to the performance made possible by improvements in design—improvements determined after a close study of the machine in actual operation, in many lines of work over a period of years.

The first Wilfords were equipped with a 13-foot boom and 8-foot dipper stick. It was found that the Fordson Tractor furnished sufficient power, however, to permit the use of a 15-foot boom and 10-foot dipper stick as standard equipment. On some special installations longer booms are proving very satisfactory.

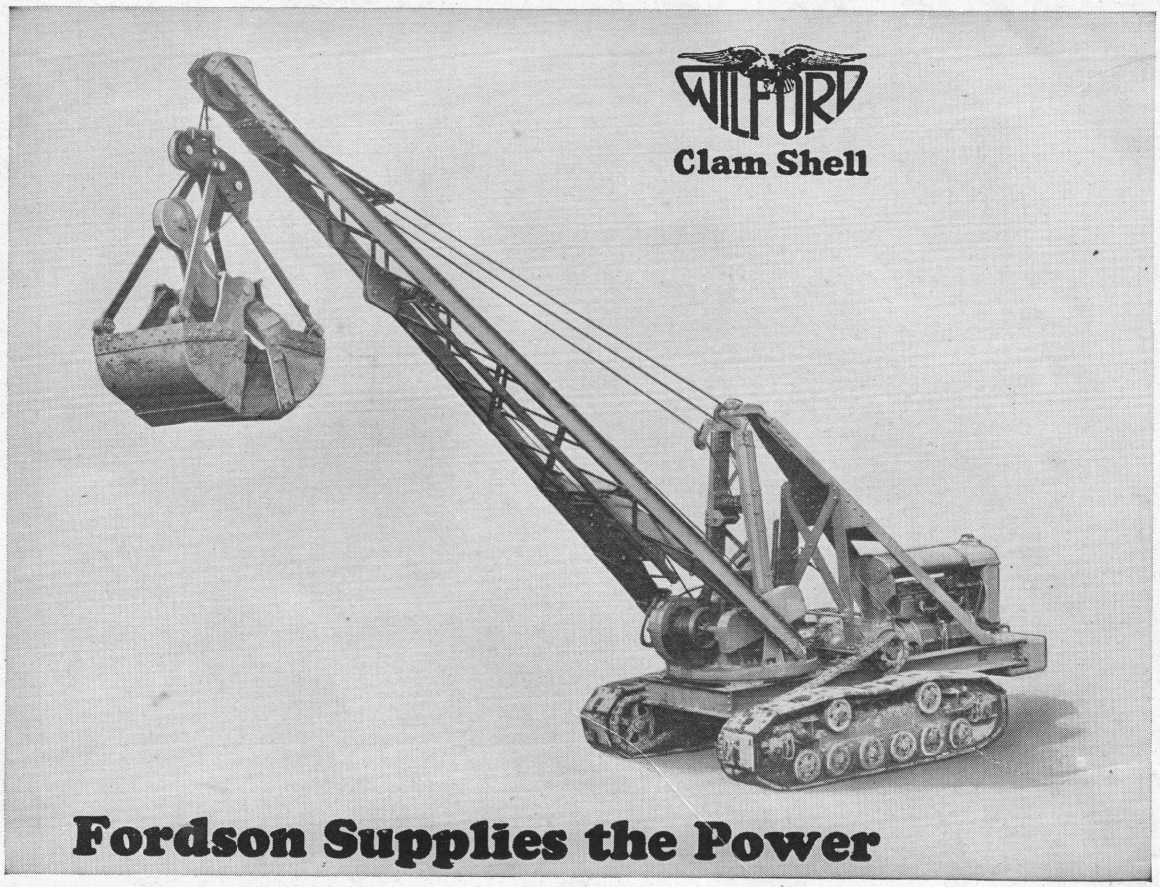
There has been constant improvement in Wilford design, where actual operating experience showed the possibility of bettering the product. Even so, the older shovels are delivering satisfactory performance and earning money for their owners.

The Wilford of today is offered as a time-tested unit, capable of holding up under severe operating conditions. Large dipper capacity is more than offset by speed and mobility.

This is made possible by truly one-man operation, the operator working

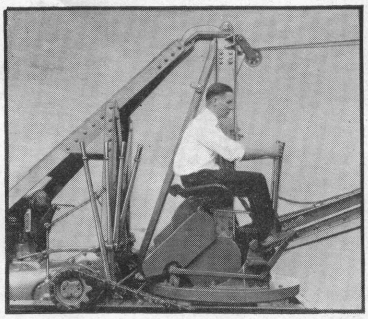


Operator in Moving Position



An extra drum is included for the clam shell. To convert shovel into clamshell, remove boom, dipper, dipper stock and crowd cables and apply boom and extra drum which is included for the clamsheil. Both clamshell and crane booms are interchangeable with shovel booms. See special ordering chart.

from a single, reversible seat. When facing the power plant, as shown in the illustration on page two, he is in position to move the shovel. Controls are conveniently located, and the Wilford will travel at from two and one-half to three miles an hour on its own power. To change from the moving to the digging position requires but a moment. The operator swings around in his seat and is ready to start.



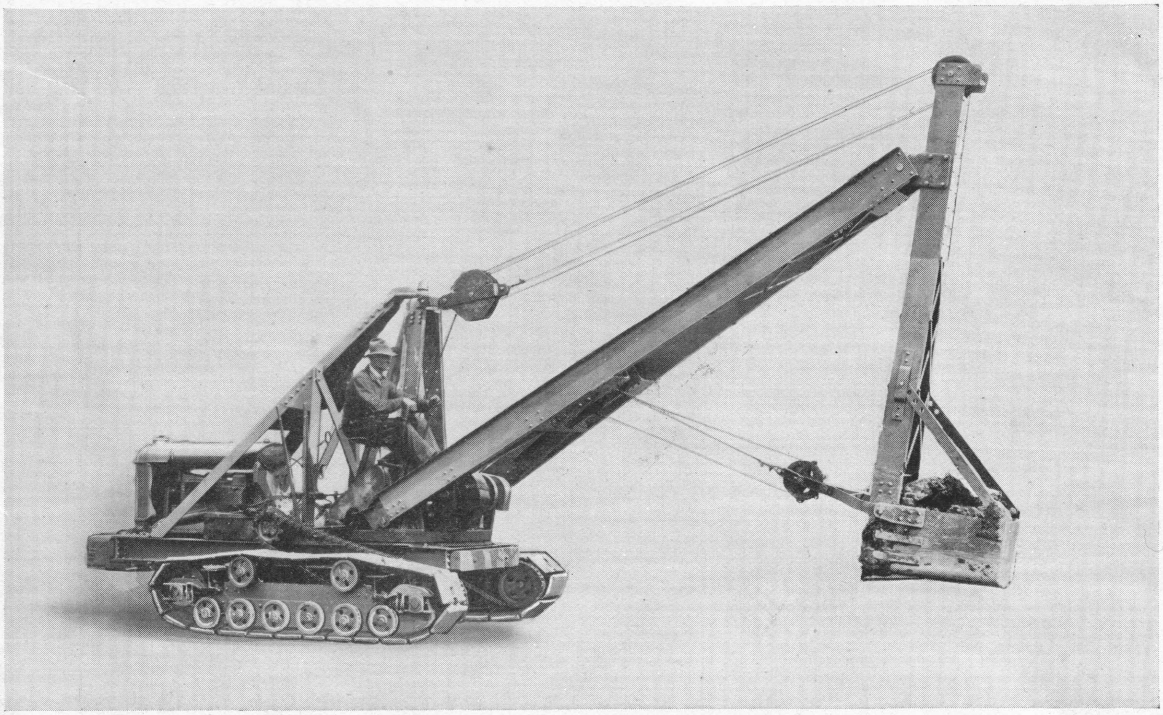
Operator in Digging Position

But the Wilford offers yet another advantage that puts it in a class by itself.

It is backed by a sales and service organization that covers the entire United States and Canada. Forty-five distributors, working with more than nine thousand Ford dealers, insure universal clamshell, backfiller or crane service. No matter where a Wilford shovel may be operating, the local Ford dealer can furnish or secure replacement parts quickly.

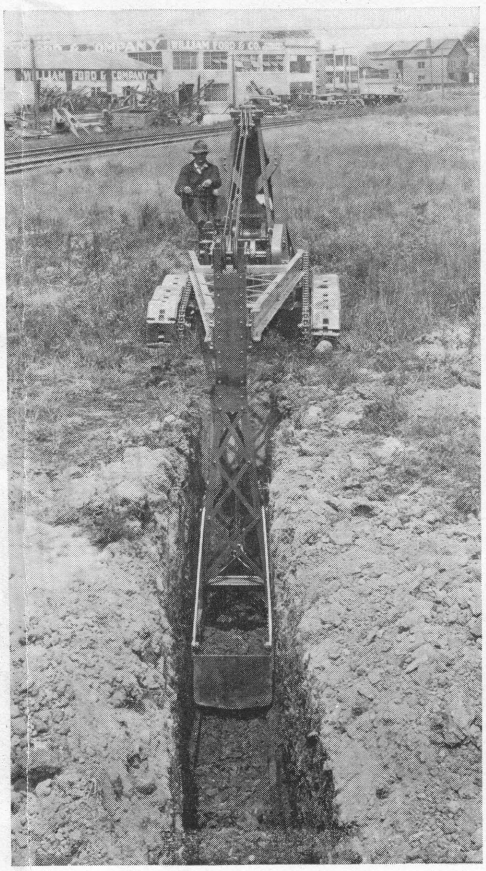
The Wilford is versatile, rugged, well engineered and well built. Although small in dipper size it is larger in its capacity for hard work, and this, with the low first cost, low operating costs and slow depreciation is showing operating economies that mean greatly increased profits for Wilford operators.

We realize, however, that to secure the greatest economies for any particular type of work, the greatest care should be used in selecting just the right combinations of boom, dipper stick and dipper. Wilford engineers will gladly assist you in solving your problems in the most efficient manner. The information given on page 6 will be of real assistance, but for additional data on specific jobs we shall be pleased to supply technical material and make recommendations based on sound engineering experience.



The Wilford Hoe

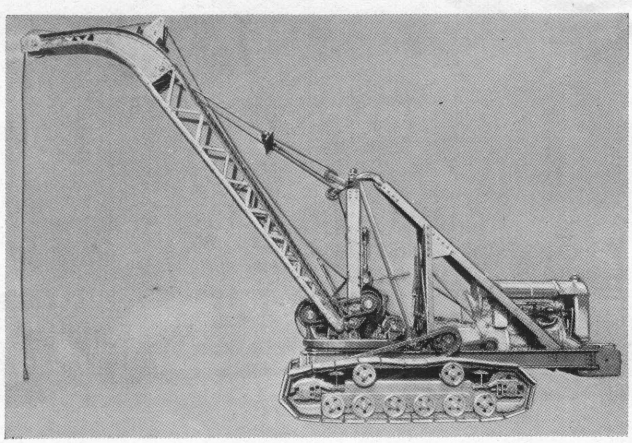
The Wilford Shovel is quickly converted to Trench Hoe through an interchangeable boom. This hoe digs a trench fourteen feet deep and a minimum of two and one-half feet wide. It is speedy in operation and is capable of turning out a lot of work.



Trench Hoe and Goose Neck Crane make complete line

The economies of Wilford operation are available for all types of excavating and material handling through the addition of the Trench Hoe and the Goose Neck Crane. All are interchangeable. All may be operated by one man from a single seat.

Wilford performance and the universal service of our distributors and dealers have made Wilford popular from coast to coast.

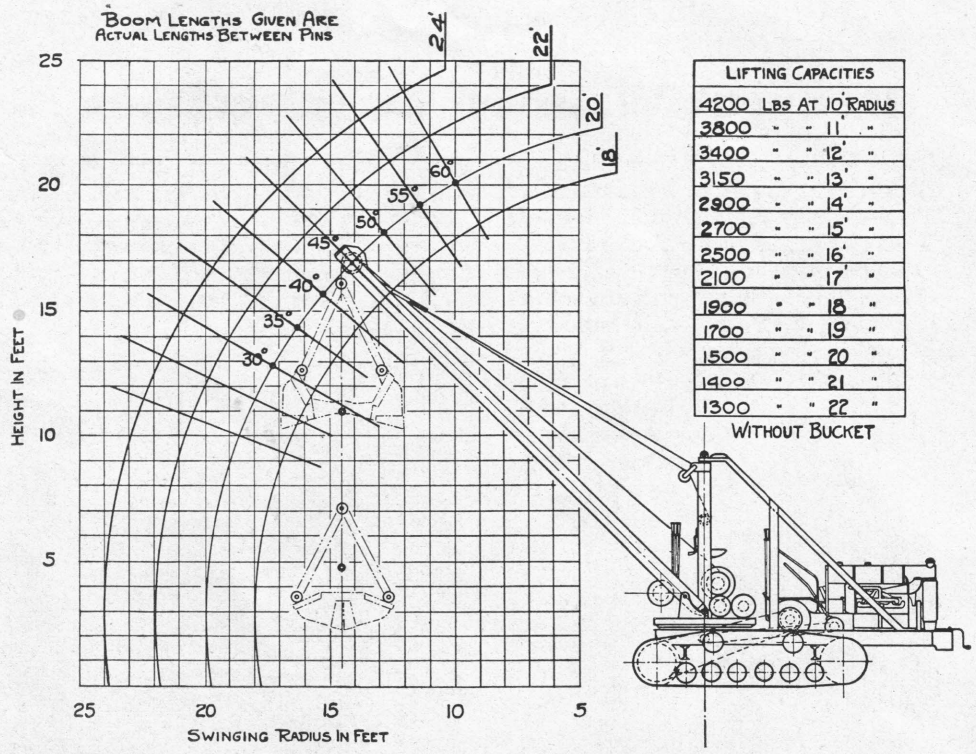


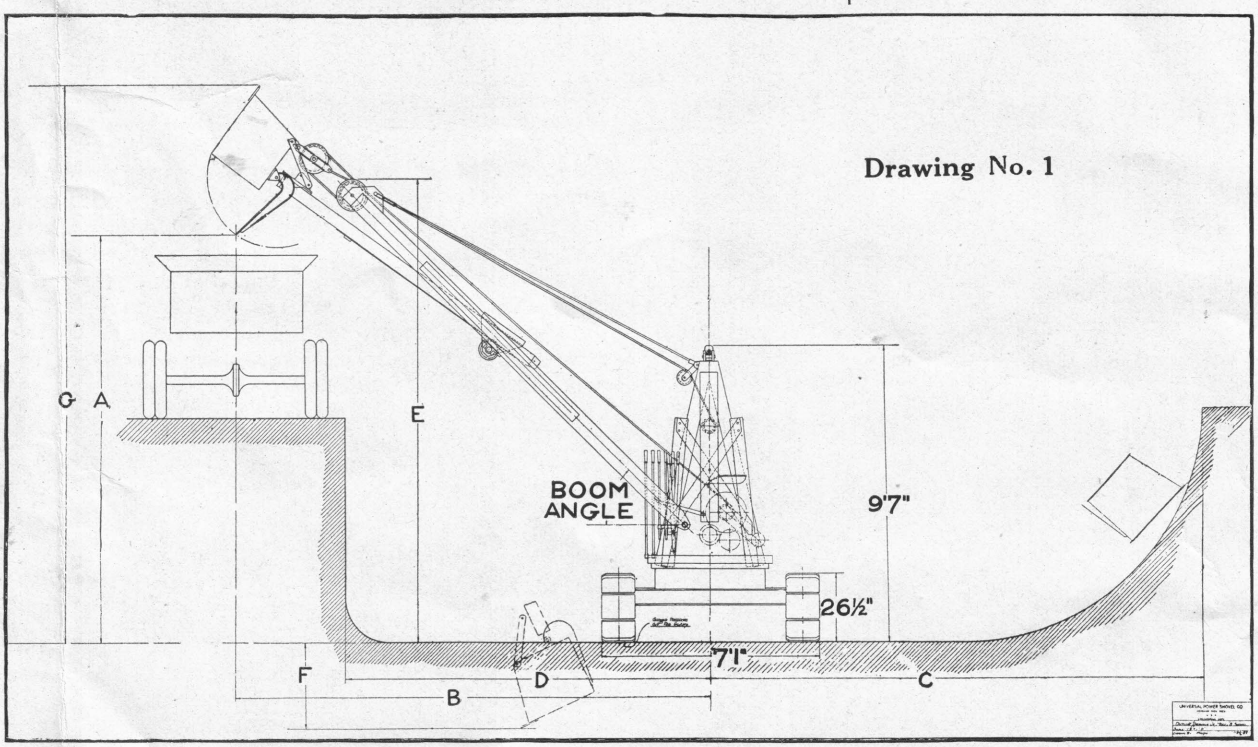
Wilford, with Dragline

This shows an installation with 24-foot boom and dragline bucket No. S-72, particularly adapted to trench or pipeline digging or cleaning canals, ditches, etc.

Wilford, with Back-filler

This installation of back-filler board and 24-foot boom will handle from 500 to 700 yards of material per day. It is possible to cast the board from six to eight feet beyond the end of boom.



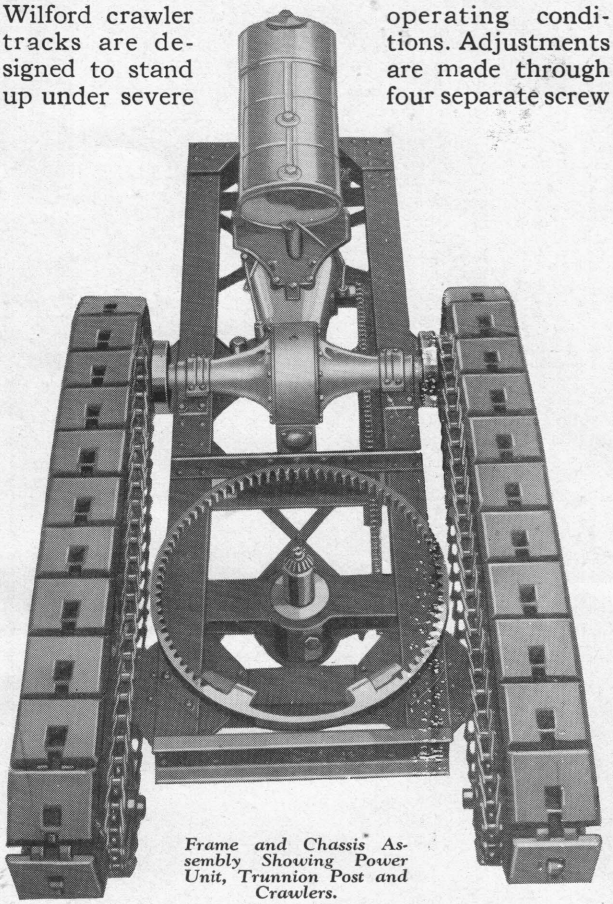


Operating Specification Chart, Wilford Model-B

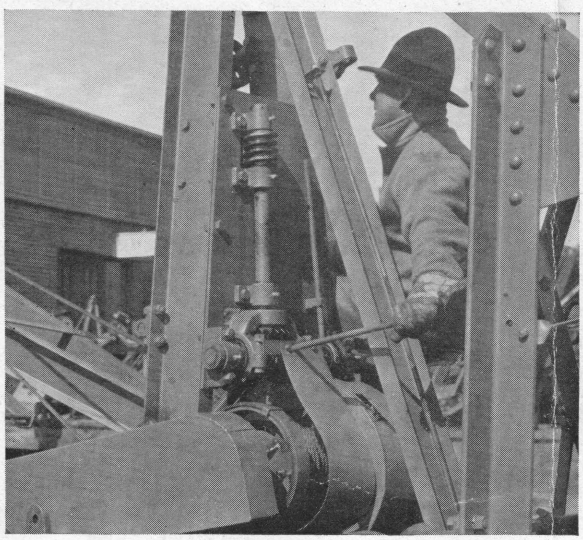
Boom Angle		35°	40°	45°	50°	55°
Maximum Dumping Height	A	10′- 7″	11′-11″	13′- 0″	13′-11″	15′- 0″
Maximum Dumping Radius	B	17′- 0″	16′- 2″	15′- 6″	14′- 2″	12′- 5″
Maximum Digging Radius	C	19′- 6″	19′- 1″	18′- 9″	18′- 1″	17′- 6″
Center Line to Bank	D	13′- 2″	12′- 7″	11′-11″	10′- 7″	8′- 8″
Clearance Height of Boom	E	13′- 0″	14′- 1″	15′- 0″	15′-11″	16′- 9″
Digging Depth Below Bottom of Track	F	3′- 2″	2′- 7″	2′- 0″	1′- 5″	0′- 8″
Maximum Dipper Height	G	15′- 6″	16′-10″	18′- 0″	19′- 2″	20′- 3″

General Wilford Construction

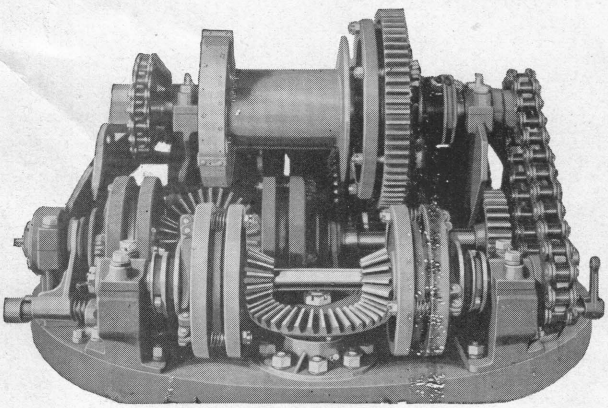
IN designing the Wilford, much consideration was given to simplicity and the elimination of unnecessary parts in the frame assembly, for one frame not only acts as chassis frame, but takes all operating loads as well, instead of requiring a sub-frame for this work. The frame and cross members are of the heaviest eight inch "I" beam construction, hot riveted, making, with the circle gear and Fordson motor, one substantial, integral assembly. Wilford crawler tracks are designed to stand up under severe operating conditions. Adjustments are made through four separate screw worms at the front end. Side plates prevent rocks and lumps from interfering with crawler operation. The crawler design throws a load of but 6½ lbs. per square inch on the ground, which shovel engineers consider low. Steering controls are operated through a special, patented rear axle differential.



Frame and Chassis Assembly Showing Power Unit, Trunnion Post and Crawlers.

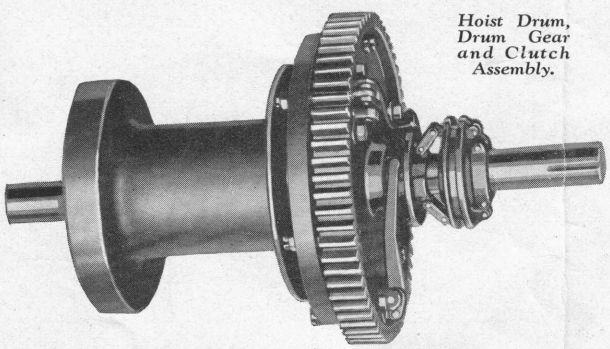


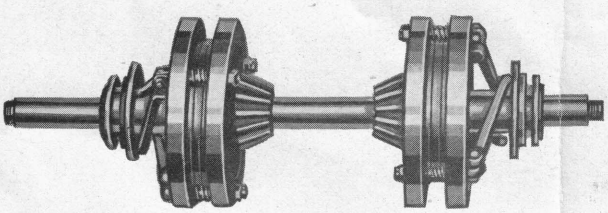
The power boom hoist shown above has recently been perfected, and is used as standard equipment on crane, clamshell, dragline, and backfiller. This hoist is driven through a worm gear, controlled by a bevel gear differential. The hoist includes two levers, the first of which engages the boom hoist differential mechanism. A short throw of the second lever to the right or left automatically raises or lowers the boom. It is self-locking in any position.



Turntable, with Swing Clutches, Crowd Clutches and Hoist Drum.

Hoist Drum, Drum Gear and Clutch Assembly.





Reversible Swing Disc Clutches (Crowd Clutches are of Similar Design).

Hundreds of Wilfords, from coast to coast, are saving money in many kinds of business