

The World's First Light Steam Tractor

Condensing Type



The BRYAN is the World's First Light Steam Tractor



Bryan Light Steam Tractor and Truck Operating a Threshing Outfit.

No Coal or Water to Haul!

This picture will go on record as marking the beginning of a new era in power farming. Here, for the first time in history, a light steam tractor was used to operate a threshing outfit and a steam truck was used to haul the shocked grain.

No coal or water to haul—no deafening noise, no vibration. Dependable, steady power and economy. An ideal threshing combination. On many other occasions men have admitted, as they did on the job shown above, that the tractor that threshermen have always wanted is now available in the Bryan.

There can be no question about steam being the ideal power for belt work. For years practically all of the grain threshing of the world has been done with this power. Despite the fact that it is necessary to haul coal and water to the steam traction engine, practical men have preferred it to any other kind of power. The Bryan Light Steam Tractor has all the advantages of the steam traction engine in stored and steady power—dependable and flexible power with none of its disadvantages as regards fuel, water and weight.

The belt pulley on the Bryan Light Steam Tractor is located on the right side. It is driven direct from the engine through a spur gear mounted on the engine crankshaft. There is no frictional loss of power. At ordinary belt speed, the engine in the Bryan is turning over at the decidedly low speed of 220 r. p. m. This trac-

tor, like the steam traction engine, has stored power to take care of peak loads and to maintain constant speed.

Threshermen have always shown a marked preference for steam engines. One reason for that is the steady power output peculiar only to power plants of this type. A tractor, to do a good job of threshing, must maintain the rated speed of the threshing machine constantly. Any variation of speed lowers the capacity of the thresher at the cylinder and means a waste of grain throughout the entire process of threshing. The Bryan Light Steam Tractor, because of its stored, flexible power, can and does maintain constant speed in threshing work.

The only difference between the old type of steam traction engine and the Bryan Light Steam Tractor is that the latter is a modern machine built on a smaller scale but capable of doing more work per pound of weight. Steam is used expansively in the cylinders of the Bryan steam engine as in the traction engine and, consequently, the same steady power is available. The Bryan is a refinement—a light steam tractor that has been built to do more work for its size at less cost and with more convenience.

In every class of belt work this new tractor will serve better. Here, at last, is a small, compact steam tractor that will handle both heavy and light loads. It can be throttled down so that the belt pulley is barely moving or it can be opened up and deliver its rated power. It is flexible. On a heavy job or a light job the power is the same, to be used as the operator desires. It's good old steam power modernized.



SPECIFICATIONS

GENERAL

H. P. Rating	20 H. P. Steam
Normal Engine Speed	220 R. P. M.
Road Speed	Creeping to 5 M. P. H.
Total Tractor Length	11 ft. 8 in.
Total Tractor Width	6 ft. 5½ in.
Total Tractor Height	5 ft. 6 in.
Diameter of Rear Wheels	52 inches
Face of Rear Wheels	12 inches
Diameter of Front Wheels	32 inches
Face of Front Wheels	6 inches
Weight	5500 pounds
Ground Clearance	12 inches
Height of Drawbar from ground	14½ inches
Turning radius	15 feet
Regular Equipment	Angle iron Grouters, Tool Kit.
Special Equipment	Extension Rims; Special Lugs; Road Cleats; Special Grouters; Road-bands; Canopy; Condenser Screen; Umbrella Attachment; Canvas Covers; Headlight; Whistle; Rubber-tired Equipment.

ENGINE

Cylinders	Two, cast en bloc
Bore	4 inches
Stroke	5 inches
Double-acting.	
R. P. M.	220
Valves	Balanced Piston Type
Valve-gear	Stephenson Link
Crankshaft	Balanced drop forged and heat treated.
Connecting Rods	Chrome Nickel Steel Interchangeable.

LUBRICATION

Cylinders by force-feed with Madison-Kipp Lubrication. Rear axle and engine operating in oil bath.

PROTECTION AGAINST DUST.

Moving parts are all enclosed with dust-proof and oil tight housings.

GOVERNOR.

Pickering. Enclosed.

STEAM GENERATOR

Bryan Patented Water Tube. Non-explosive. Working pressure 600 pounds. Each tube and complete assembly tested to 1200 pounds hydrostatic pressure before leaving factory. Each tube removable independent of all others. Tubes are interchangeable. Tubes are flexible to accommodate expansion and contraction.

BEARINGS

Roller bearings for crankshaft and connecting rods. Special taper bearings for crosshead.

ECCENTRICS

One piece, keyed onto crankshaft.

BURNER

Vaporizing type. Automatic shut-off functions when pressure reaches 600 pounds.

FUEL AND FUEL SUPPLY SYSTEM

Any grade of kerosene or distillate. Capacity of fuel tank is 30 gallons.

PUMPS

Plunger type. Specially designed to successfully handle hot water against high pressure.

WATER LEVEL INDICATOR

Bryan, designed for safety and reliability.

CONDENSOR

G. & O. Tubular. Demountable.

WATER TANK CAPACITY

60 Gallons. Sufficient for one full day's operation, under average conditions.

BELT PULLEY

Diameter 24 inches. Face 6¾ inches. Belt Pulley is driven from jack-shaft mounted in roller and ball bearings. Pulley speed 300 R. P. M. at normal engine speed.

TRANSMISSION

Spur gears used thruout. All gears are machined and heat treated. Only 6 spur gears used in entire transmission. Splined shafts of high carbon steel, machined to precision limits and heat treated. Operate in heavy duty roller bearings. Entire transmission is absolutely dust-proof and operates in a bath of oil.

DIFFERENTIAL

Mounted centrally in ball bearings on real axle.

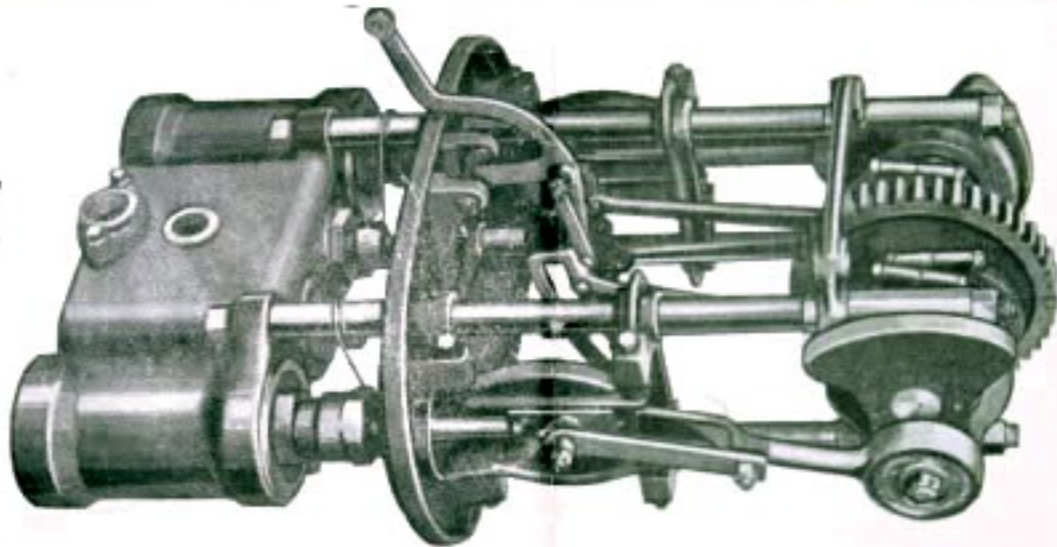
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*Built
to
Last a
Lifetime*

The BRYAN is the World's First Light Steam Tractor

Only 13
Slow-Moving
Wearing
Parts



Positive
Lubrication
Throughout

The Bryan Steam Engine