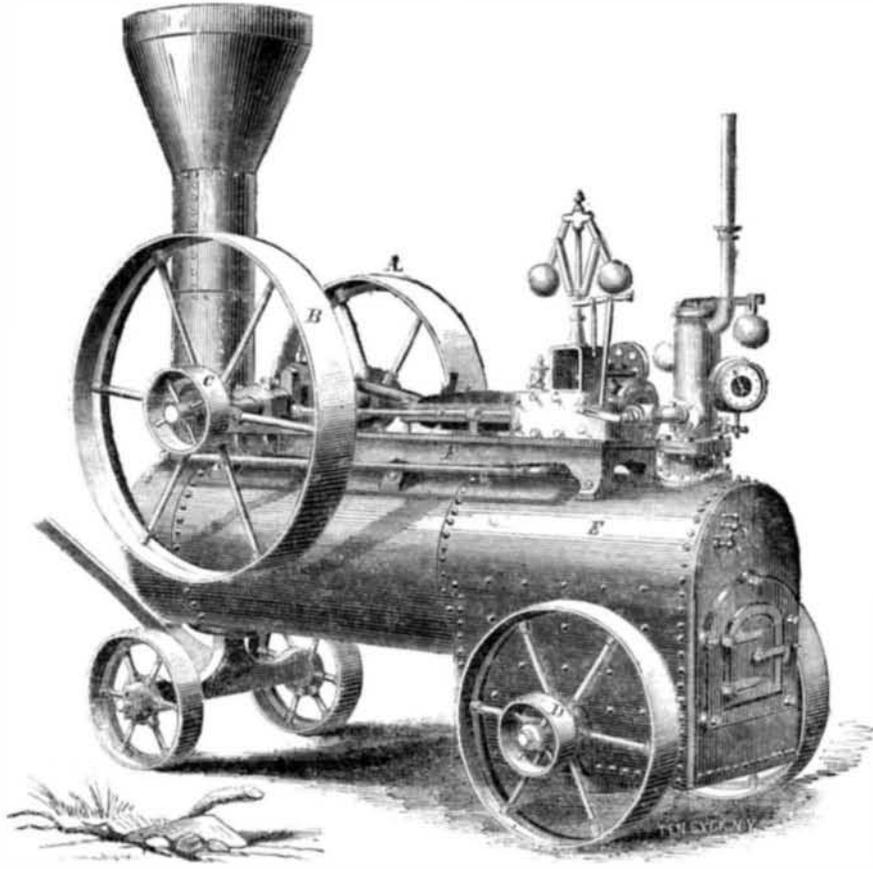


A GOOD PORTABLE ENGINE.

There is but little novelty in any of the individual parts of the engine which we here illustrate, and we present it merely as an excellent combination of known devices for the production of a compact, efficient, and cheap portable engine, it being a subject on which we have inquiries by nearly every mail, for information.

It has a locomotive boiler, E, furnished with 3-inch tubes, which are made so large to adapt them to burning pine-wood, which is generally used at the South. The bed-plate, F, is bolted upon the boiler, and sustains the cylinder and shaft. The shaft carries two driving wheels, one of which, B, is larger than the other, A, for convenience of applying the power to various machines which may require to run with different velocities. The



IMPROVED PORTABLE ENGINE.

pulley, C, on the end of the shaft is intended to be connected by a belt with the pulley, D, on the end of one axle, and thus to propel the carriage by the power of the engine.

The following are some of the advantages claimed by the manufacturers of this engine:—

“The good performance of an engine depends in a great measure on the accuracy of its workmanship and stability or rigidity of the framework; should the former be of the best possible description, however, a want of the latter will soon cause a binding or strain on certain important points, whence necessarily results increased friction, a rapid wearing away of the parts, disarrangement in the adjustments with the resulting thumps or shocks indicative of injury to the engine, and an increased consumption of fuel.

“Portable steam-engines, made after the usual plan of bolting the different parts to the boiler, are peculiarly liable to the foregoing difficulties, resulting from a want of entire stability in the arrangements arising from the unequal expansions and contractions of the various parts attached to the boiler. To remedy such defects has been the object in the construction of an improved portable engine as represented in the drawing, where the whole of its parts are attached to a rigid bed-plate of cast-iron as in stationary engines, which bed-plate is firmly secured to the boiler; thus to great compactness and completeness of engine is joined beauty of appearance, and complete independence of the unequal expansion in the boiler. It can be easily detached from the boiler, and thus converted into a stationary engine if required; it also permits the renewal or repairs of the boiler without any disarrangement to the machinery. The engine is entirely complete in itself, having a cylinder with its

connections, crank shaft of wrought iron, with two pulleys of different diameters of improved construction, having wrought iron arms, force pump, safety valve, steam gage, heater, governor, &c. The boiler is of the most approved pattern, with 3-inch tubes for burning resinous wood or coal, and is mounted on very strong and broad truck wheels, which enables it to be moved with great ease and safety from place to place.”

The above engine is manufactured at the Washington Iron Works Company, Newburgh, N. Y., where orders can be filled for any part of the country at short notice.

NOVEL CANAL BOAT PROPELLER.

The steam canal boat *Paddock*, propelled by a 10-horse power engine, and consuming 1½ tons of coal per 24 hours, has lately arrived at this city in eight days run-

ning time from Buffalo, with a cargo. Her propelling apparatus is of novel character, consisting of side-wheels so made as to fold up flat against the sides of the boat when passing through the gates. The folding is accomplished by means of sliding heads, which withdraw into the engine room, but are shoved out and locked, giving stability to the wheel when expanded. The paddles are made of boiler iron, hinged between two rims, the inner one being attached to the shaft, and the outer one to the sliding head. We are informed that J. W. Harris, of Durhamville, Oneida county, N. Y., is the inventor of the improvement, and that its practical working upon the canals has proved entirely successful.

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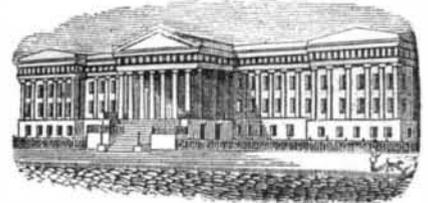
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A pamphlet of information concerning the proper course to be pursued in obtaining Patents through our Agency, the requirements of the Patent Office, &c., may be had gratis upon application at the Principal Office or either of the Branches. We also furnish a Circular of information about Foreign Patents.

The annexed letters from the last two Commissioners of Patents we commend to the perusal of all persons interested in obtaining Patents:—

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CHAS. MASON.

Immediately after the appointment of Mr. Holt to the office of Postmaster-General of the United States, he addressed to us the subjoined very gratifying testimonial:—

Messrs. **MUNN & Co.**:—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I doubt not, justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements. Very respectfully,

Your obedient servant, **J. HOLT.**

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