

No. 643,972.

Patented Feb. 20, 1900.

W. M. PAGE & C. S. EDMONDS.

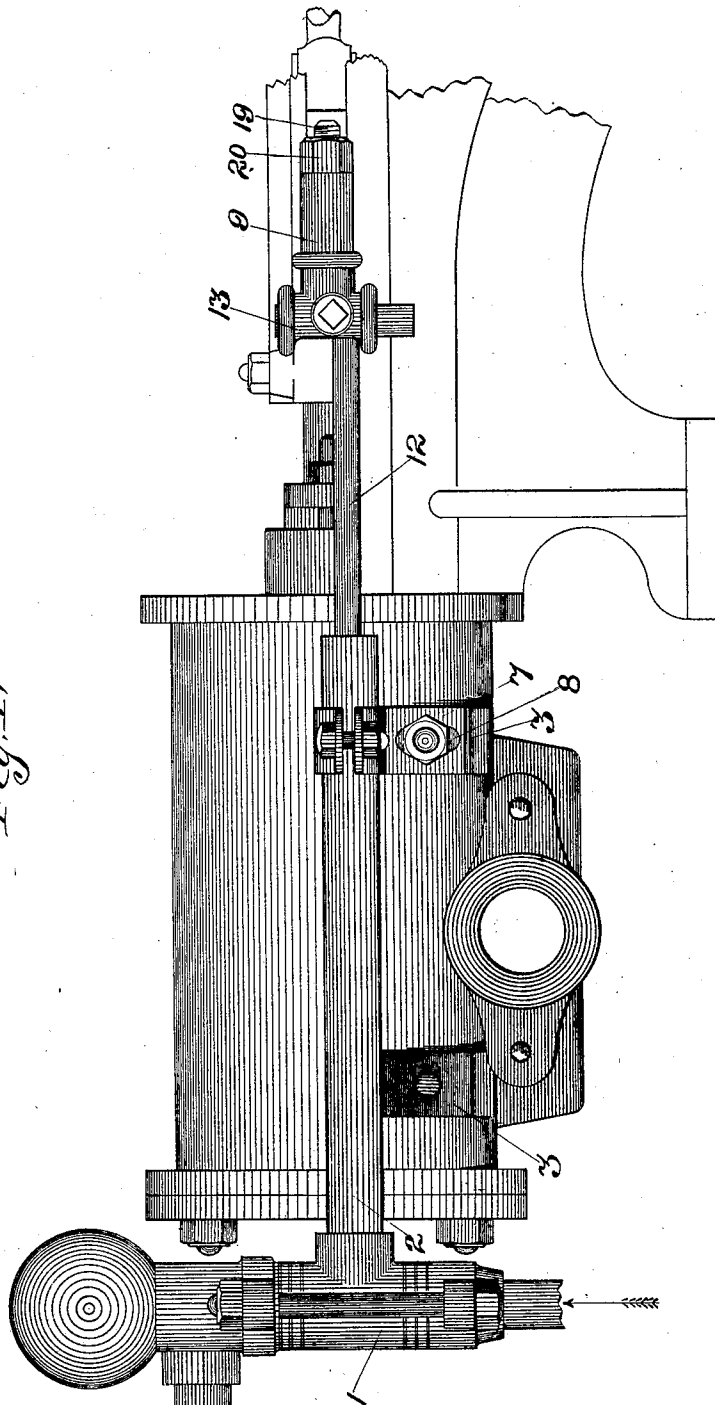
ADJUSTABLE PUMP.

(Application filed Mar. 31, 1899.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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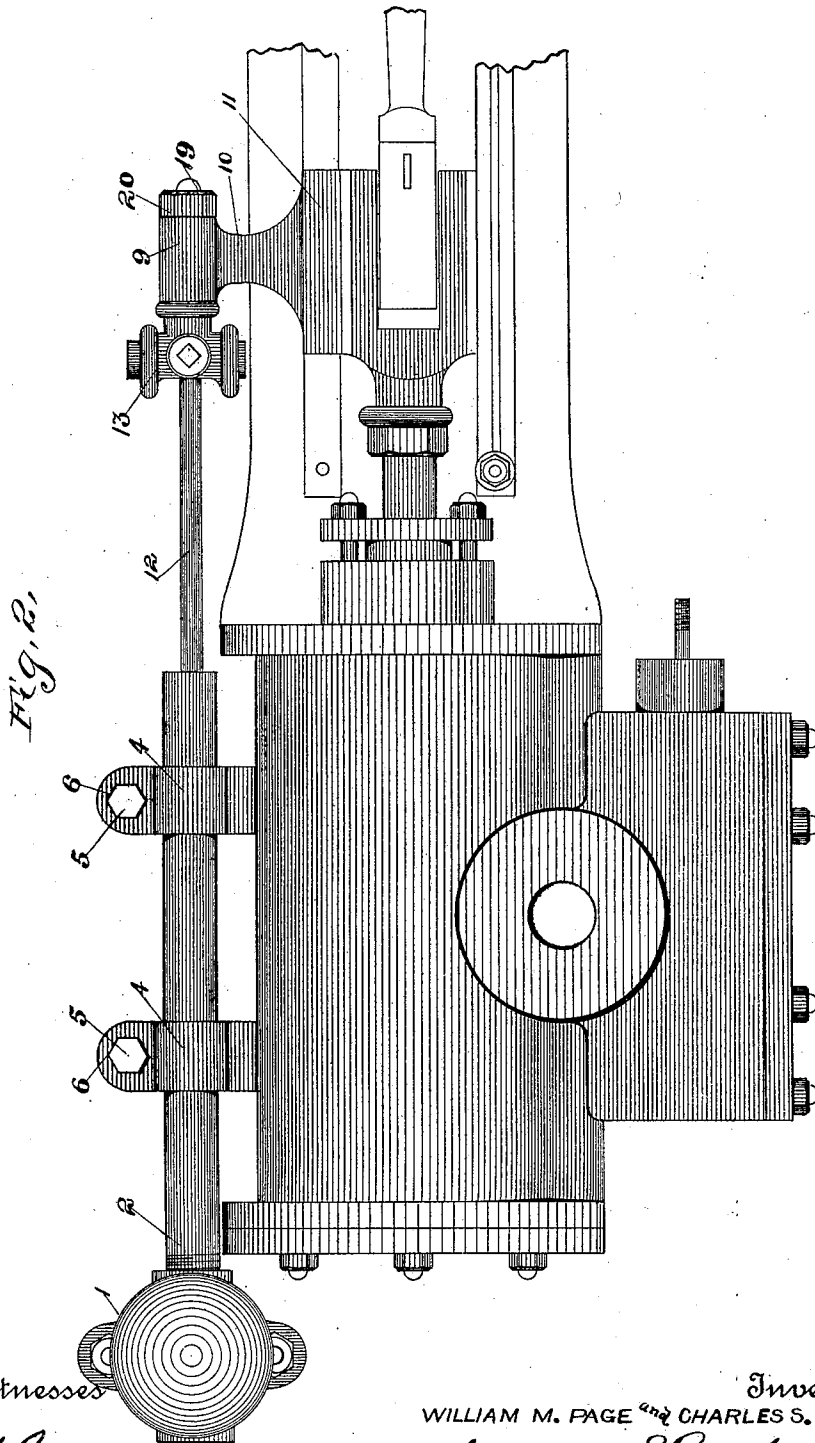
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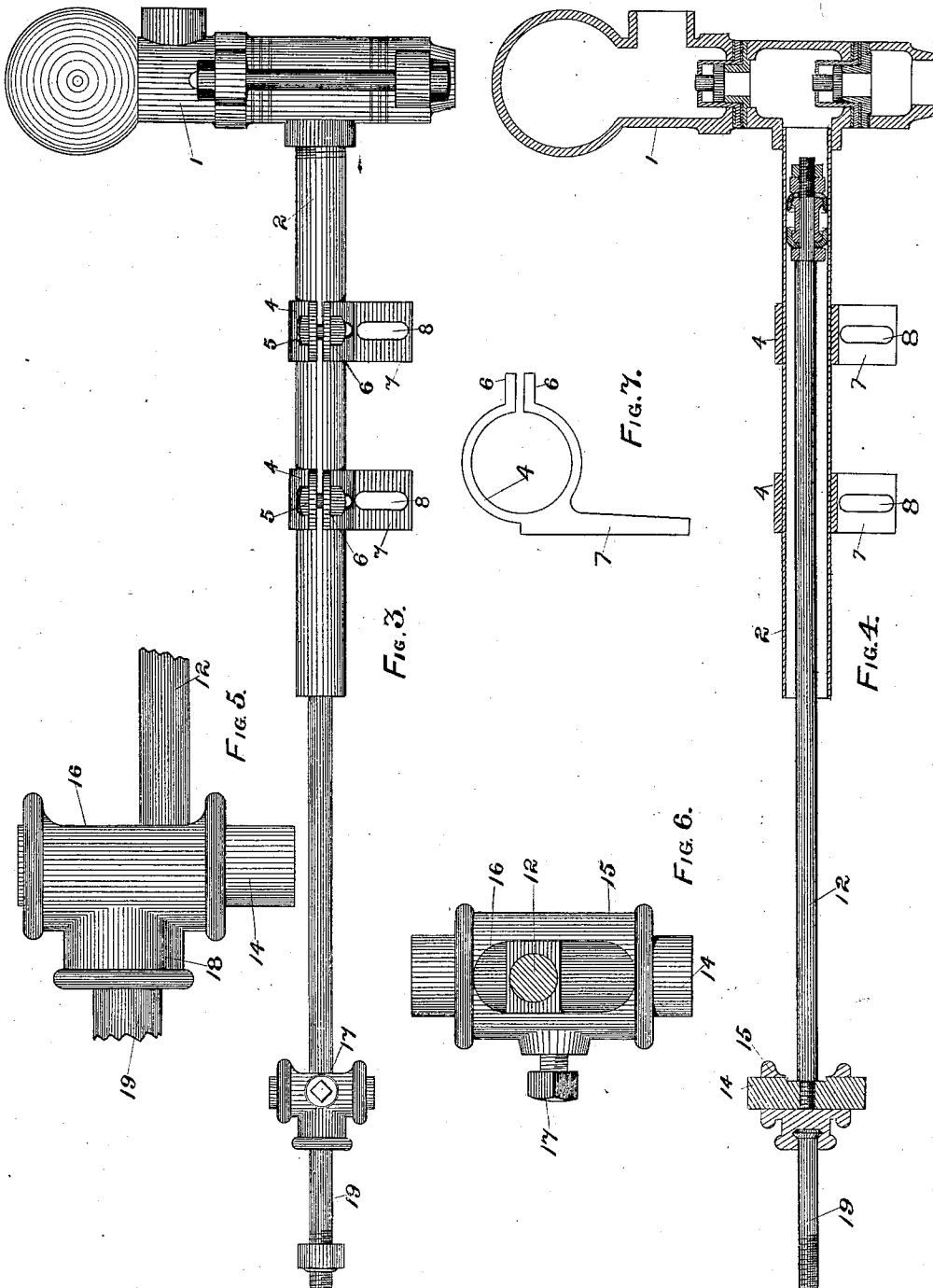
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UNITED STATES PATENT OFFICE.

WILLIAM M. PAGE AND CHARLES S. EDMONDS, OF MONTPELIER, INDIANA.

ADJUSTABLE PUMP.

SPECIFICATION forming part of Letters Patent No. 643,972, dated February 20, 1900.

Application filed March 31, 1899. Serial No. 711,306. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM M. PAGE and CHARLES S. EDMONDS, of Montpelier, in the county of Blackford and State of Indiana, have invented new and useful Improvements in Adjustable Pumps; and we do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in that class of pumps designed to be used in connection with steam-engines, the particular feature of which invention is the adjustability whereby a pump embodying our improvements is adapted to be easily attached to various designs and makes of engines.

Our device will be readily understood by a reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a steam-engine, showing our pump attached, one clamp being left off to show another part. Fig. 2 is a plan view of an engine, showing our pump attached. Fig. 3 is a side elevation of our pump. Fig. 4 is a vertical longitudinal section of same. Figs. 5, 6, and 7 are details.

The same figures of reference indicate identical parts throughout the several views.

In the construction of our pump a barrel 2 of pipe or tubing is substituted for the heavy cast barrel which has heretofore been commonly used in this class of pumps. In such cast pattern brackets or wings for attaching the pump to an engine have been cast or formed intact with the barrel, which construction renders said brackets wholly inadjustable and adapted only for the style of engine for which they are specially made.

As it is often necessary to replace pumps of this class by reason of wear and breakage, much delay has heretofore been caused in getting a pump of the peculiar construction necessary to fit the design of engine to which it is to be attached. To overcome these difficulties and to provide a pump that is universally adjustable and adapted to be attached to all designs of engines is the object of our invention.

The body 1 of our pump may be of any design in use in this class of pumps. The valves

may also be of any of the various patterns. Neither is any particular form of plunger necessary to the proper application or working of our adjustable features; but the form of plunger shown in Fig. 4 is the one preferred, and the same is particularly shown and described in a separate application for Letters Patent executed by us and bearing even date herewith.

In place of the usual form of cast barrel we preferably substitute a barrel of brass tubing 2 and screw the same into the body of the pump at the point where the barrel is commonly located.

For the purpose of attaching the pump to the engine at the bosses 3 (always provided but at various locations on different makes of engines) we provide a clamp-socket bracket 4, (shown in side elevation at Fig. 7,) the socket of which is adapted to fit closely over the barrel 2 of the pump and to be clamped securely thereon by means of a bolt 5, passing through the ears 6. A wing 7 is formed upon said bracket, having slots 8 therein, through which bolts may be introduced to secure said bracket to an engine at bosses 3. Said slots are elongated perpendicularly for the purposes of perpendicular adjustment. As will be readily seen, the brackets 4 may be readily reversed, so that wing 7 will project upward should the location of bosses 3 be such as to require it. The bracket 4 may also be located at any point throughout the length of the barrel 2, whereby any desired lateral adjustment may be obtained.

The adjustment hereinbefore mentioned is that which is made necessary to align as nearly as may be the center of the pump-barrel and the plunger-rod with the socket 9, formed upon an arm 10 of the cross-head 11 of an engine. The arm 10 and socket 9 are provided upon all engines for the purpose of receiving the plunger-rod 12 of a pump and through which medium the pump is operated. For the purpose of further facilitating the adjustment aforesaid, an adjusting-head 13 (shown in detail at Figs. 4, 5, and 6) is secured to the outer end of the pump plunger-rod 12, whereby further adjustment may be obtained.

Adjusting-head 13 is constructed as follows: A head 14 is slidingly mounted in sleeve 15, which sleeve 15 has in one side thereof a

longitudinal slot 16. Head 14 is drilled and tapped for the reception of the outer end of the plunger-rod 12, which rod 12 is correspondingly threaded to enter head 14, into which it is securely and firmly screwed. Rod 12 enters head 14 through slot 16, and as slot 16 is much longer than the diameter of rod 12 it is obvious that head 14 may have considerable longitudinal adjustment within sleeve 15. For the purpose of fastening head 14 at the desired point within sleeve 15 a set-screw 17 is provided, which passes through a boss in sleeve 15 and impinges against said head 14. Upon the side of the sleeve 15 opposite to slot 16 is formed a branch or boss 18, into which is rigidly secured a stem 19, adapted to enter socket 9 upon the cross-head of the engine and to be secured therein by a nut 20. As head 13 may be turned perpendicularly, as shown in Fig. 1, a perpendicular adjustment is allowed. As said head may be turned horizontally, as shown in Fig. 2, a horizontal adjustment is made possible, and as head 13 may be turned in any slanting or intermediate position to those shown it is obvious that the adjustment hereby obtainable is, together with that obtainable through brackets 4, universal to the requirements of any case. The plunger and method of packing the same, as shown in the drawings, we do not here describe, the same being the subject-matter of a separate application filed by us on the 22d day of March, 1899, Serial No. 710,130. Having thus described our device, what we claim as new, and desire to secure by Letters Patent, is—

1. In an adjustable pump for steam-engines, an adjusting plunger-rod head, provided with means for attaching same to the cross-head of a steam-engine and adapted to a universal adjustment within a plane perpendicular to the longitudinal dimension of said plunger-rod, substantially as and for the purpose specified.

2. In an adjustable pump for steam-engines, brackets adapted to be adjustably and reversibly attached to the barrel of a pump, in combination with an adjusting-head attached to the outer end of the pump-plunger, means adapting said adjusting-head to be attached to the cross-head of an engine, substantially as shown and described.

3. In an adjustable pump for steam-engines, the combination, with the barrel of a pump, of brackets adapted to receive said barrel, and be adjustable and reversible thereon, slots in the wings of said brackets, an adjusting-head attached to the plunger-rod of said pump, said adjusting-head consisting of a slotted sleeve, a head contained in said sleeve, a slot through the wall of said sleeve, a plunger-rod entering said head through said slot, means of adapting said sleeve to be attached to the cross-head of an engine, all constructed combined and operating substantially as shown and described.

Signed by us at Montpelier, Indiana, this 20th day of March, 1899.

WILLIAM M. PAGE.
CHARLES S. EDMONDS.

Witnesses:

S. E. DUNCAN,
A. M. BOWMAN.