EDWARD GRASER.

Pump.

No. 124,434. Patented March 12, 1872.

Fig. 1.

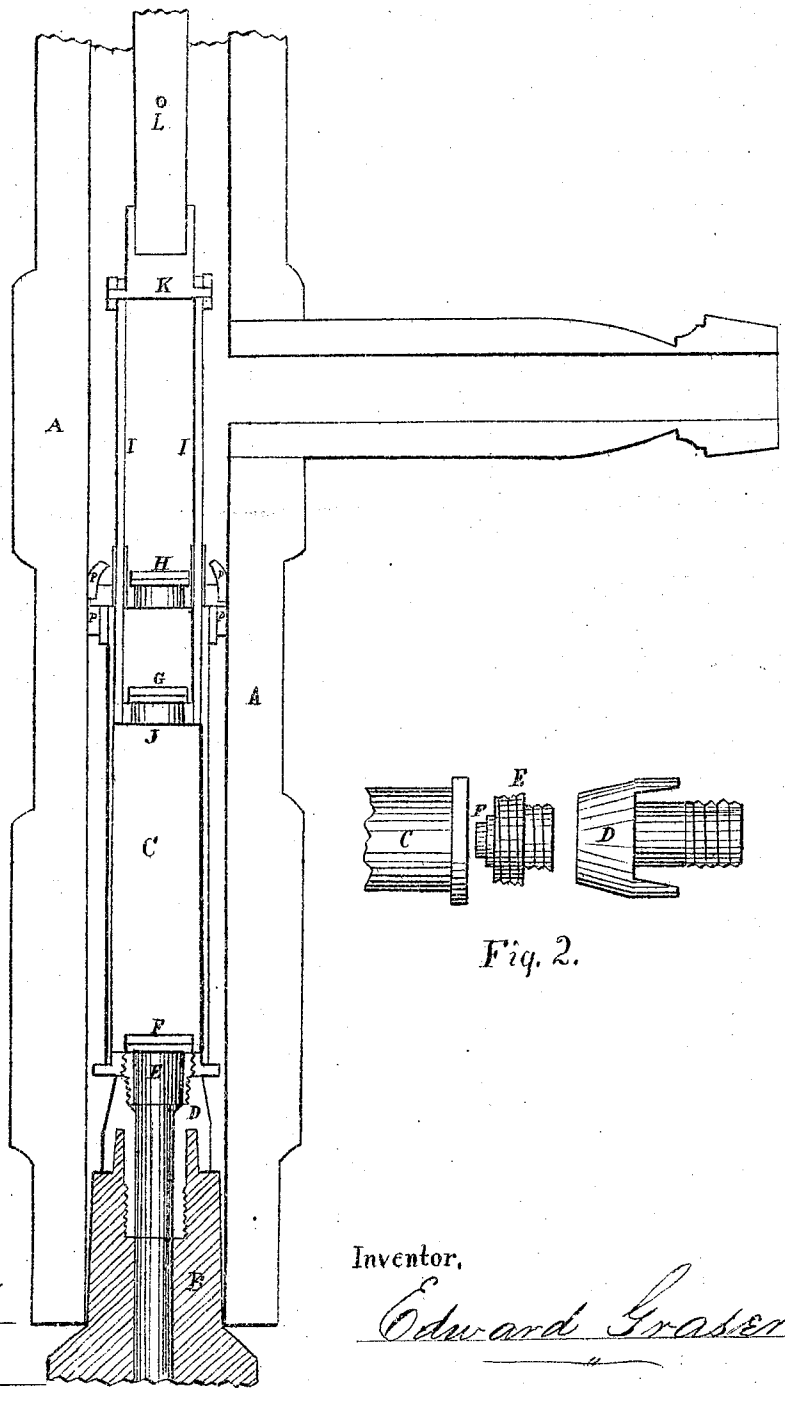

Fig. 2.

Attest,

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UNITED STATES PATENT OFFICE.

EDWARD GRASER, OF UNION CITY, PENNSYLVANIA.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 124,434, dated March 12, 1872.

To all whom it may concern:

Be it known that I, EDWARD GRASER, of Union city, in the county of Erie and State of Pennsylvania, have invented a new Improvement in Pumps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and letters of reference marked thereon.

The object of my invention is to provide a pump from which the lower valve may be removed without taking up the pump, and also to provide a more superior pump.

The following is a description of the accompanying drawing: Figure 1 is a vertical sectional view of a pump, showing my device therein. Fig. 2 is a portion of my invention detached from the pump.

My device consists of the following parts, as shown by the letters of reference: A is the pump-log, and B the lower section of log. C is the pumping-cylinder, which is composed of zinc or other sheet metal, and its ends are of cast metal. In construction or appearance it is not unlike an ordinary steam-engine cylinder. Its upper end is provided with packing, O P. It is provided with a piston, J, and piston-rods, I I, which are attached at K by a pivot-bolt to the plunger-rod L. In the upper end of the cylinder is a valve, N, and the piston J is provided with a valve, G. Into the lower end is screwed the valve-nut E, on which is the valve F. The valve-nut E, as shown in Fig. 2 more fully, is provided with different-sized screws, the larger of which fits in the end of the cylinder C, and the smaller reaches below, as a male screw, and enters the female screw in D, which is a metallic tip on the lower log B. As the valve-nut is attached to the cylinder, the valve F is brought inside of the same. So it will be seen that all the valves are within or attached to the cylinder C. The operation of pumping, when the cylinder is attached to the tip D, is the same as in an ordinary pump, the only difference being that the valve H divides the "lift."

When, by accident or wear, any derangement of the lower valve F occurs, the manner of removing the same is as follows: The handle of the pump is removed from its fulcrum, or detached from the plunger L. This allows the plunger to be revolved; this, as there are two piston-rods I I, which give a purchase sufficient, revolves the cylinder C, which will unscrew the valve-nut E from the tip D. When this is done, the cylinder can at once be removed from the pump, and the valve-nut E can be unscrewed from the cylinder and the valve be repaired. When the cylinder is to be replaced in the pump, it is lowered to position, and a few turns screws it fast to the tip D, and it is ready for operation.

What I claim as my invention and desire to secure by Letters Patent, is as follows:

The cylinder C, constructed as described, and provided with the valve-nut E and tip D, in combination with the piston J and plunger-rod L, substantially as shown and described.

EDWARD GRASER.

Witnesses:

JNO. K. HULLOCK,

A. B. FORCE.