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IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 52,446, dated February 6, 1866.

To all whom it may concern:

Be it known that I, KEARAN REED, of the city and county and State of New York, have invented certain new and useful Improvements in the Manufacture of Pumps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical longitudinal section, showing the interior construction of said improvements. Fig. 2 is an end elevation of a pump constructed upon my plan, showing the pump-rods connected to the pumping-beam; and Fig. 3, a top view of such a pump with the beam and connecting-rods left off.

This invention consists in a novel method of constructing a pump, by which greater facility is afforded for taking it apart to repair it and great compactness and efficiency are united in one pump.

The following description of my invention will enable any one skilled in the arts to which it appertains to make and use the same.

In manufacturing pumps upon my plan, I first construct a chest or chamber, A, of the general form and proportion shown on the drawings, or it may be made of such other form and proportion as will meet the taste or judgment of the constructing engineer. Under the bottom of this chamber I make the receiving-channel and nozzle B C, the channel being represented by B and the nozzle by C. Upon the bottom of said chests I construct seats for the pump-cylinders by making circular flanges *a a* large enough to receive the bottom flanges of the cylinders. These seats are arranged in the chest, as indicated in the drawings, and through their respective centers holes are cut, over which receiving-valves D D are placed, as shown in the drawings. These valves, consisting of the ordinary flap variety, are cut out of leather and fitted with metal plates in the usual way. They are made large enough in diameter to fit the seats of the pump-cylinder under which they are placed, and by which they are secured when said cylinders are adjusted for use. Upon the upper end of each of said cylinders, and on the outside thereof, there are three lugs or bosses, *b b*,

made to form bearings for a corresponding number of set-screws, *c c*, which are made to pass through an internal flange, *d*, formed around the upper edge of the chest A. By means of these set-screws the pump-cylinders and receiving-valves are both secured in their places.

Having thus constructed, adjusted, and secured the chest-cylinders and receiving-valves, I proceed to construct the pump-cover, which is shown in the drawings by E, and which in one piece comprises at once a cover for the pump-chamber, a support for the beam F, and an air-chamber (shown by H) which reaches down between the cylinders in the manner shown. Now this cover forms a tight joint on the chest A and is secured by four set-screws or bolts, two of which are shown by *f f*, so that to expose the entire interior of the pump it is only necessary to take out these four screws and lift off the cover, which carries with it the pump-buckets, connections and all, by which the operator gains access to any and every part of the pump, and by simply loosening the set-screws *c* the cylinders and lower valves may be removed, thus disuniting in a very brief space of time all the various parts of the pump, and thus affording the greatest possible facility for cleaning, repairing, and readjusting.

It will be seen that there is nothing new in the principle of this pump; that the invention consists of an improvement in the method of manufacturing the pump, increasing its simplicity and compactness without in any way impairing its efficiency.

What I claim, therefore, as my invention, and desire to secure by Letters Patent, is—

A new article of manufacture consisting of a pump comprising the water-chamber A A, as shown, the two pump-cylinders K K, secured and arranged within said chamber, as shown, and the air-chamber H, made, arranged, and secured over said water-chamber and said pump-cylinders, as shown and described.

KEARAN REED.

Witnesses:

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