

HENRY EPPING.

Improvement in Steam-Pumps.

No. 126,536.

Patented May 7, 1872.

Fig. 1

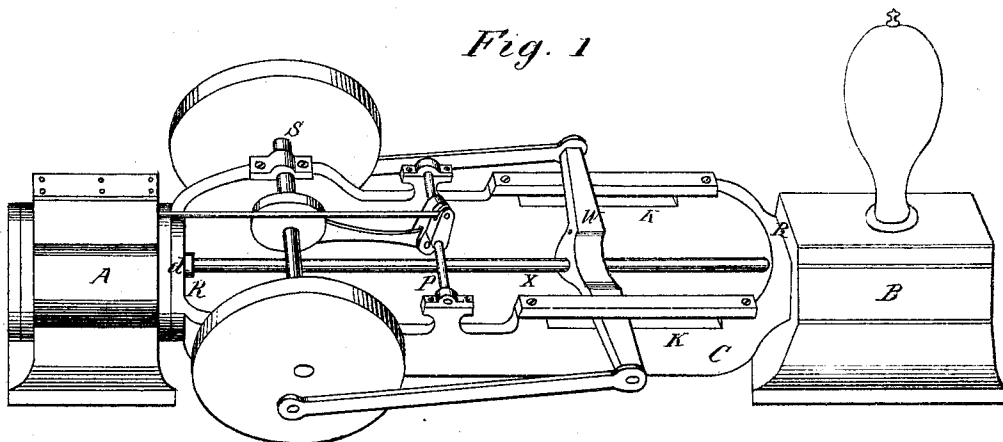


Fig. 2

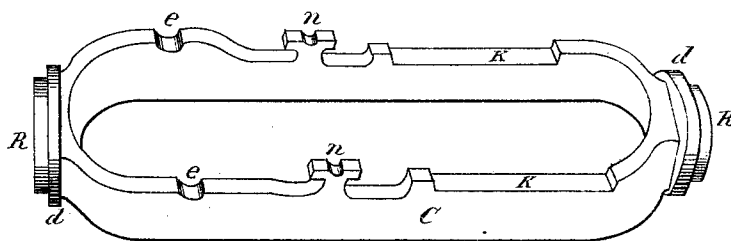
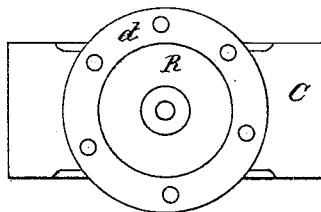


Fig. 3



Witnesses

Nicholas Winter

Samuel T. Alexander

Inventor

Henry Epping

per his Attorney

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UNITED STATES PATENT OFFICE.

HENRY EPPING, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND NICHOLAS WINTER, OF SAME PLACE.

IMPROVEMENT IN STEAM-PUMPS.

Specification forming part of Letters Patent No. 126,536, dated May 7, 1872.

SPECIFICATION.

I, HENRY EPPING, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain Improvements in the Construction of Steam-Pumps and the like, of which the following is a specification:

Nature and Objects of the Invention.

This invention relates to an improvement in the construction of that class of steam-pumps wherein is used a "frame" between the steam-cylinder and pump-barrel, for the purpose of connecting the two. My invention is designed to facilitate and cheapen the manufacture of such pumps; and to this end I construct the frame with the inner heads of the steam-cylinder and pump-barrel attached, and place on the frame, between said heads, the rock-shaft stand bearings for the fly-wheel and cross-head slides, by which arrangement of parts the pump is more compact, works steadier, and is less liable to disarrangement than when the several bearings are placed at the extreme ends of the cylinders.

Description of the Accompanying Drawing.

Figure 1 represents a perspective view of my improved steam-pumping apparatus. Fig. 2 represents a perspective view of the intermediate oblong connecting-frame detached. Fig. 3 represents an end view of said frame.

General Description.

To construct a pump I make the steam-cylinder A and pump-barrel B in any of the well-known ways, and provide each with requisite passages and valves, induction and eduction ports and pipes—in short, with all the usual appliances and appendages incident to such apparatus; but in order to carry out the object of my invention, the oblong intermediate connecting-frame C, with its bearings *e e* for the fly-wheel shaft S, and bearings *n n* for the rock-shaft P, slide-bearings K K for the cross-head W, and with a circular head, R, on its opposite ends, of a size requisite to fit, the one the end of the steam-cylinder, and the other the pump-barrel, and each provided with a flange,

d, to secure the same in place, is constructed in one piece, as represented in Fig. 2, by casting the same in a properly-formed mold in the usual way of making such castings, and of which no description is herein deemed necessary; the object being to avoid the numerous fittings that would otherwise be required if made in several pieces or in any other form.

When the steam-cylinder A and pump-barrel B are "bored out" and their ends "faced off," the frame C is to be suspended longitudinally in a lathe, and a hole for the piston-rod drilled through the center of both ends. The heads R are then to be turned to fit, the one the bore of the steam-cylinder, and the other the pump-barrel, and corresponding holes drilled through their several flanges, so that when the parts are brought together, as shown in Fig. 1, they may be united in a most substantial manner by means of screw-bolts passing through both.

This construction, combination, and arrangement of the parts specified brings and secures the pump-barrel always on a perfect straight and axial line with the bore of the steam-cylinder, and is easier fitted, and less liable to become deranged than when united in any other way.

This construction of the oblong connecting-frame C enables me to place the fly-wheel shaft S, rock-shaft P, and their respective bearings *e* and *n*, together with the slide-bearings K K of the cross-head W, in a horizontal plane above the axial line of the piston-rod X, by simply depressing the central portion of the cross-head W at that point where the piston-rod X, passes through it, by which arrangement all the operating parts of the apparatus between the pump B and steam-cylinder A are brought above the frame C, and are thereby more easily got at for repairs or other purposes.

I may here state that although this apparatus is intended for forcing or pumping liquids, yet such is its construction that it may be applied with equal facility to the blowing or forcing atmospheric air or gases under pressure.

Claim.

Having briefly described my invention, I claim—

The oblong frame C, having at each end a flanged head, R, and with intermediate bearings *e* and *n* for the fly-wheel shaft S and rock-shaft P, and slides K K for the cross-

head W, constructed, arranged, and combined with a steam-cylinder, A, and pump-barrel B, in the manner shown and set forth.

HENRY EPPING.

Witnesses:

NICKOLAUS WINTER,
SAMUEL T. ALEXANDER.