

(No Model.)

S. LA POINT.
PUMP.

No. 376,960.

Patented Jan. 24, 1888.

Fig. 1.

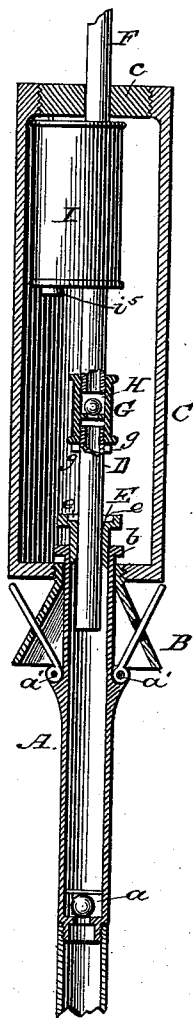


Fig. 3.

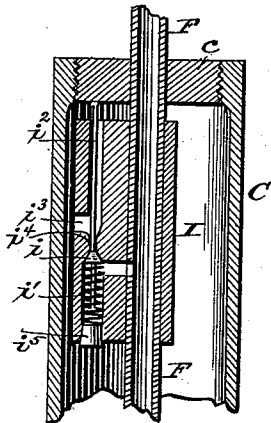
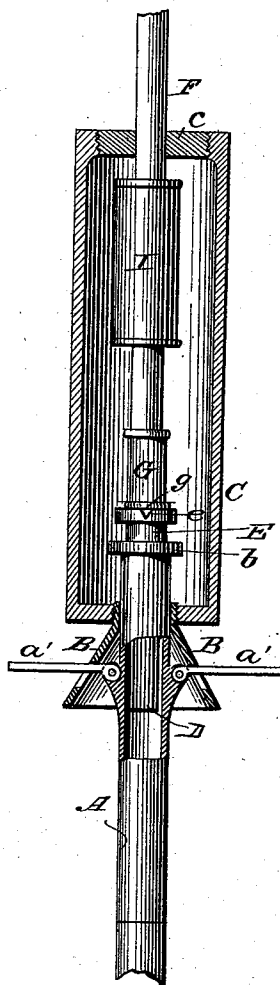


Fig. 2.



WITNESSES:

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STEPHEN LA POINT, OF DERRICK CITY, PENNSYLVANIA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 376,960, dated January 24, 1888.

Application filed April 12, 1887. Serial No. 234,539. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN LA POINT, of Derrick City, in the county of McKean and State of Pennsylvania, have invented a new and useful Improvement in Pumps, of which the following is a specification.

My invention relates to improvements in pumps, the object being to provide means for securing the pump in place and for preventing the oil or water from running down in the well and washing the sides thereof.

The invention consists of arms or spurs pivoted to the body portion of the pump, and adapted to be thrown out into engagement with the sides of the well to secure the pump in position, and at the same time afford ample room between the body portion and the sides of the well for the passage of gravel or sand, so that it will not stick to the said body portion.

It also consists in providing the pump-rod with a valve for allowing the water to be drawn out of the same when removing the pump from the well.

The invention further consists in the novel combinations and arrangements of parts, as hereinafter fully described, and pointed out in the claims.

Figure 1 is a vertical section of my improvement, showing the position the parts assume when raising the pump out of the well. Fig. 2 is a similar view showing the position the parts assume when in the well. Fig. 3 is a detail view, on an enlarged scale, of the casing and its valve attached to the pipe.

Similar letters of reference indicate corresponding parts in all the figures.

Referring to the drawings by letter, A represents the body portion of the pump, having its lower ends screw-threaded to permit the necessary length of pipe to be attached. In the lower end of the body portion a valve, *a*, is arranged, and to the upper end thereof a collar, *b*, is secured. To the body portion are pivoted a series of arms or spurs, *a'*, preferably four, which project through openings in a conical sleeve, B, fitting loosely on the said body portion. The upper end of the sleeve B is screw-threaded, and on it is screwed the casing C, having a bushing, *c*, in its upper end. The plunger D passes through the stuffing-box E in the upper end of the body por-

tion, and is connected to the pipe F by means of the coupling G. A valve, H, is arranged in the coupling G, and on the lower edge of the said coupling are formed the lugs or projections *g*, which are adapted to enter correspondingly-shaped recesses *e* on the upper face of stuffing-box E, to permit the stuffing-box to be screwed into position by means of the pipe F. To the upper part of the pipe F and within the casing C is secured a valve-casing, I.

In the casing I is arranged the valve *i*, which is forced to its seat by the spring *i'*, and is provided with the stem *i''*, which projects through the casing, as clearly shown in the drawings. The casing I is provided with an opening, *i'''*, communicating with the interior of the pipe F, and with the opening *i''''* above the valve-seat, opening into the casing C. After the valve and spring have been inserted in place the opening in the lower part of the casing I is closed by a plug, *i''''''*.

The operation is as follows: In inserting the pump in the well the casing and conical sleeve are elevated with respect to the body portion by means of the pipe F, so that the arms or spurs *a'* will not project beyond the said sleeve. After the pump has been lowered the spurs or arms on the body portion will be thrown outward into engagement with the sides of the well by the descent of the sleeve, and thereby firmly hold the pump in position.

To remove the pump, it will only be necessary to raise the casing and sleeve by means of the pipe F, when the spurs or arms *a'* will be drawn upward and disengaged from the sides of the well. At the same time that the pump is being raised from the well the valve-stem *i''* of the valve *i*, coming in contact with the upper end of the casing C, will open the said valve and allow the oil in the pipe F to flow therefrom through the casing I into the casing C, thereby saving the oil in the pipe and preventing it from running down the sides of the well and washing the same.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a pump, the combination of the body portion thereof, spurs or arms pivoted to said body portion, and a conical sleeve fitting loosely on the body portion and provided with

openings through which the spurs or arms project, substantially as herein shown and described.

2. In a pump, the combination, with a body
5 portion and arms or spurs pivoted thereto, of an apertured and conical sleeve fitting loosely on the body portion, a casing secured to the sleeve, and a pipe projecting through the casing, substantially as herein shown and de-
10 scribed.

3. In a pump, the combination, with a body portion and a stuffing-box in its upper end having recesses in its upper face, of a plunger, a pipe, and a coupling for connecting the
15 plunger and pipe, having lugs on its lower face adapted to engage the recesses of the stuffing-box, substantially as herein shown and described.

4. In a pump, the combination, with a hol-
20 low pump-rod and a casing surrounding the

same, of a valve-casing secured to the pump-rod and having a passage communicating with the bore of said rod, a valve normally closing said passage, but clearing the passage in the upward movement of the rod, substantially 25 as set forth.

5. In a pump, the combination, with a stationary casing and a pipe adapted to be connected to the plunger, of a valve-casing secured to the pipe within the stationary casing 30 and communicating with the said pipe, and a spring-actuated valve in the casing provided with a stem projecting through the said casing, substantially as herein shown and described.

STEPHEN LA POINT.

Witnesses:

L. DICKINSON,
THOS. POWERS.