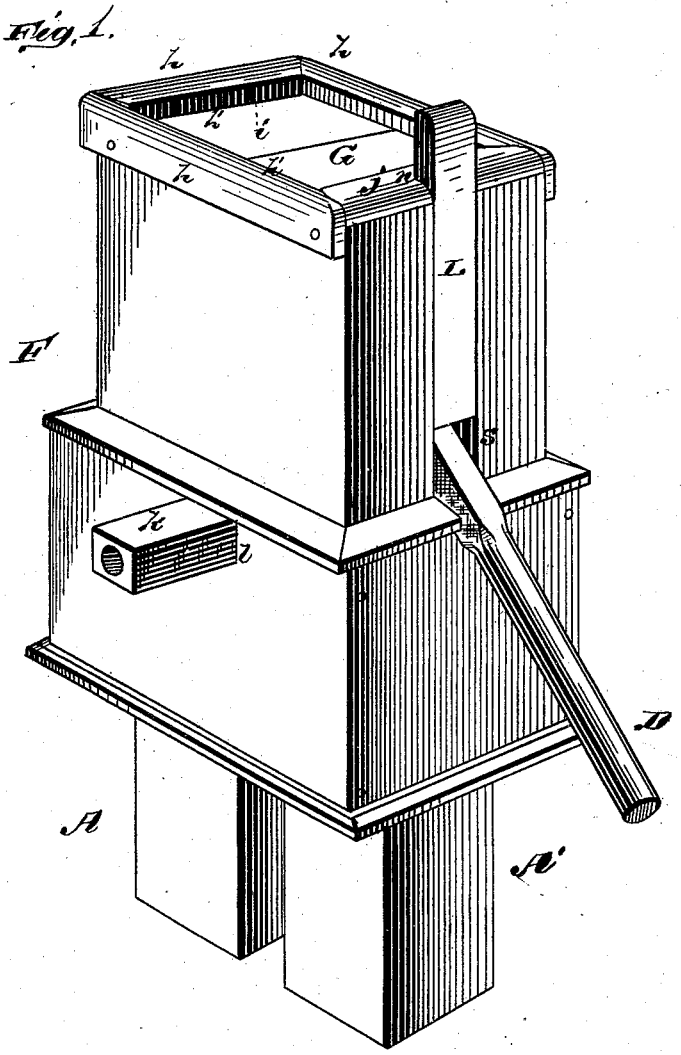
2 Sheets—Sheet 1.

S. PETERSON.

Pump.

No. 209,510. **Patented Oct. 29, 1878.**

Fig. 1.



WITNESSES

E. H. Bates

F. J. Masi.

INVENTOR

Swan Peterson,

by E. W. Anderson.

ATTORNEY

2 Sheets—Sheet 2.

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Pump.

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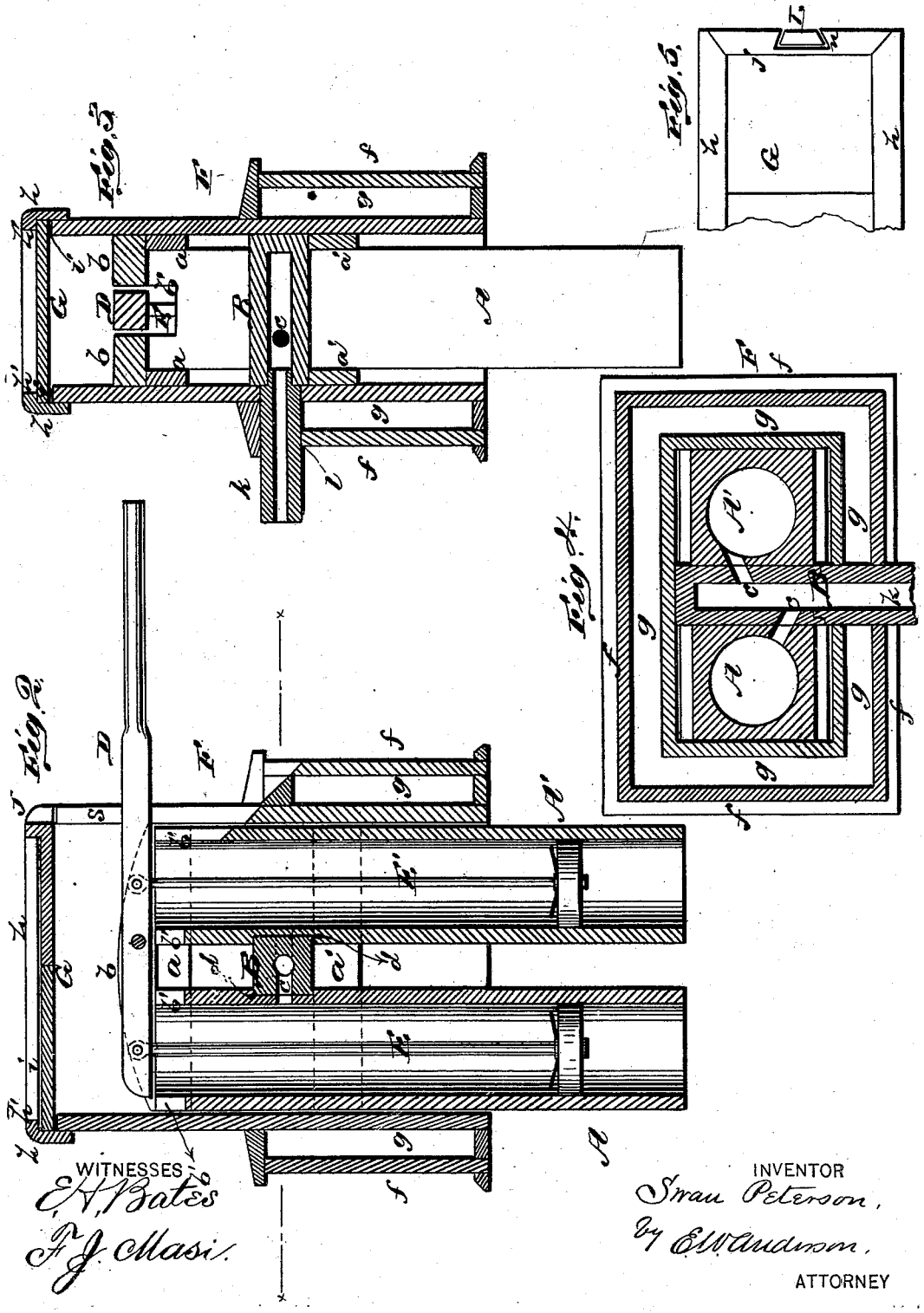

WITNESSES:
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F. J. Masi.

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UNITED STATES PATENT OFFICE.

SWAN PETERSON, OF KNOXVILLE, ILLINOIS.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **209,510**, dated October 29, 1878; application filed September 28, 1878.

To all whom it may concern:

Be it known that I, SWAN PETERSON, of Knoxville, in the county of Knox and State of Illinois, have invented a new and valuable Improvement in Double-Action Pumps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my double pump. Figs. 2 and 3 are vertical central sections of the same. Fig. 4 is a horizontal sectional view, and Fig. 5 is a detail view.

This invention has relation to improvements in double pumps for raising water from wells, cisterns, or other reservoirs; and the nature of the invention consists in combining, with the pump-stocks of a double pump mechanism and a lever having its fulcrum between said stocks, piston-rods suspended from the said lever at each side of its fulcrum, the piston at the weight end of the said lever being heavier than that nearest the power end of the same, as will be hereinafter more fully set forth.

In the accompanying drawings, the letters A A′ designate two pump-stocks, arranged several inches apart, and rigidly connected together by the cleats or battens *a a′* and by the rounded cappings *b*. Between the stocks A A′ is a discharge-pipe, B, the bore of which is sufficiently large to carry off the water supplied by both barrels or stocks, and which is provided with openings *c* in its sides, registering with similar openings in the side of the pump-stocks, the said openings being oblique or out of line with each other to obviate the interference of the current from one stock with that from the other. Usually the discharge-pipe B is received in notches or recesses *d* cut in the sides of the stocks opposite each other, in order that the bore of the said pipe may be made large enough to carry off all the water, and yet not unduly increase the bulk of the pumps. At the top of each of the stocks is cut a vertical slot, *b′*, the same being in continuation of the space between the caps *b*, in which a vertically-vibrating lever-handle, D, works, having its fulcrum in the caps *b* nearest the stock A′. This lever carries at each side of its fulcrum the piston-rods of the pumps. These rods, lettered E E′, work the former in the barrel A and the latter in the barrel A′, rod E being pivoted or suspended from the weight end of the lever D and rod E′ from a point on the said lever between its fulcrum and power end.

As shown in Fig. 2, rod E′ is nearer the fulcrum of the lever than rod E, and the former is considerably heavier than the latter, by which means the rod E, in a measure, overbalances the rod E′, and the labor or effort of operating the lever is equalized instead of being most severe when the said lever is raised and the plunger in the stock A′ ascends.

This double pump is inclosed in a casing, F, having at its lower part the spaced double walls *f* and in between an air-chamber, *g*. This latter extends up beyond the discharge-pipe B of the pump—that is, above the level of the standing water in the pump—and effectually prevents it from freezing. The upper edge of this casing is provided on three of its walls with a molding-strip, *h*, provided with an overhanging ledge, *h′*, that forms with the upper edge a slideway, *i*, in which the parts of the lid G, usually two in number, are successively passed. The outer section of this lid has a molding, *j*, which, with the molding-strip *h*, causes the top of the casing to present a symmetrical appearance.

The handle D projects through and works in a vertical slot, *s*, cut in the casing-wall, and water is conducted through the casing by means of a spout, *k*, extending through an opening, *l*, in its side, and engaging the open end of pipe B. The vertical edges of the slot *s* are oppositely beveled, the space between being thus made of the form of a dovetail, and in this space is passed from above a dovetail strip, L, that fits snugly against the lever D, and completely shuts in the pump mechanism. This shutter-strip engages a dovetail notch, *n*, in the molding-strip *j* of the lid-section, and thus locks it to the casing, it being impossible to remove the lid without first drawing out the slide.

The rods E E′ each carry on their lower ends a plunger having a valve opening upward, and

the supply pipe or pipes extending down into the well have also a valve opening upward.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the pump-stocks A A′ and a lever having its fulcrum between said stocks, of piston-rods suspended from the said lever at each side of its fulcrum, the rod at the weight end of the lever being heavier and farther from the fulcrum than the one nearest the power end of the same, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SWAN PETERSON.

Witnesses:

EDGAR CODDING,

EDWARD WEST.