

(No Model.)

T. J. SAYRE.
WELL PUMP.

No. 471,829.

Patented Mar. 29, 1892.

FIG. 3.

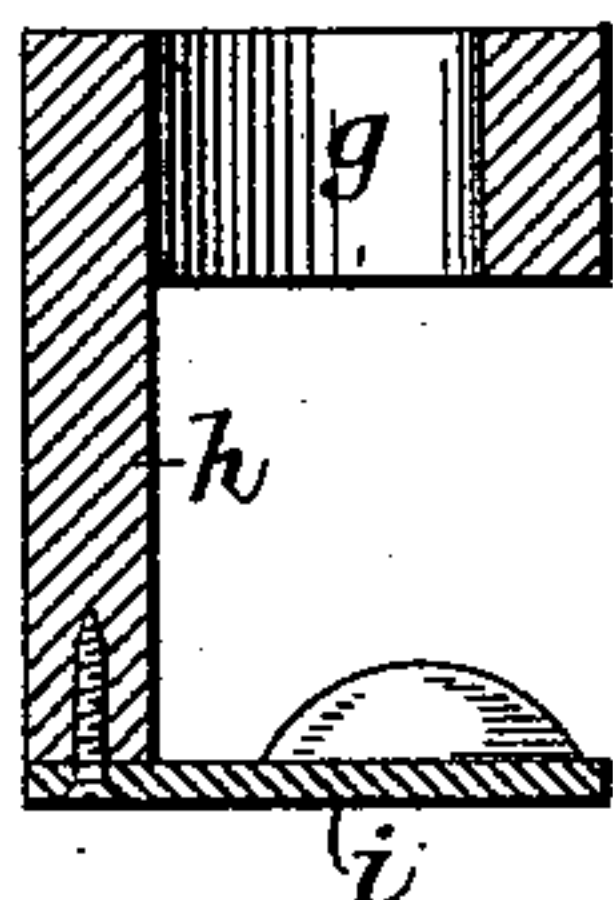


FIG. 2.

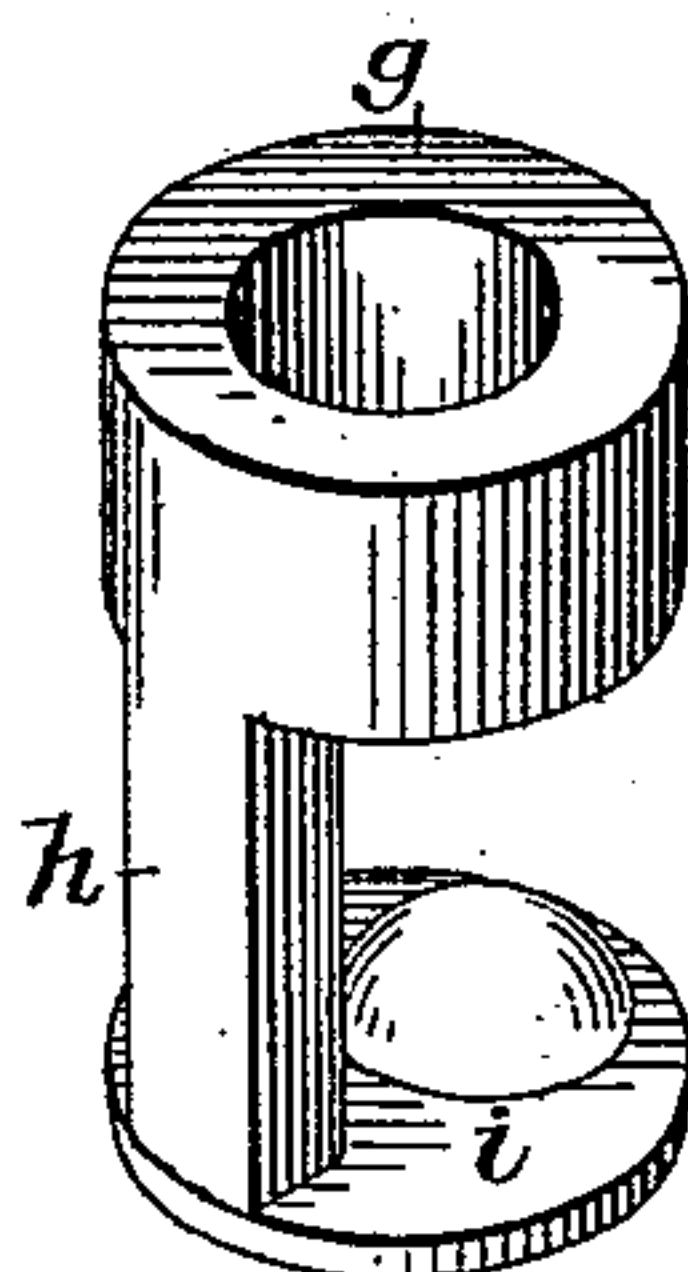
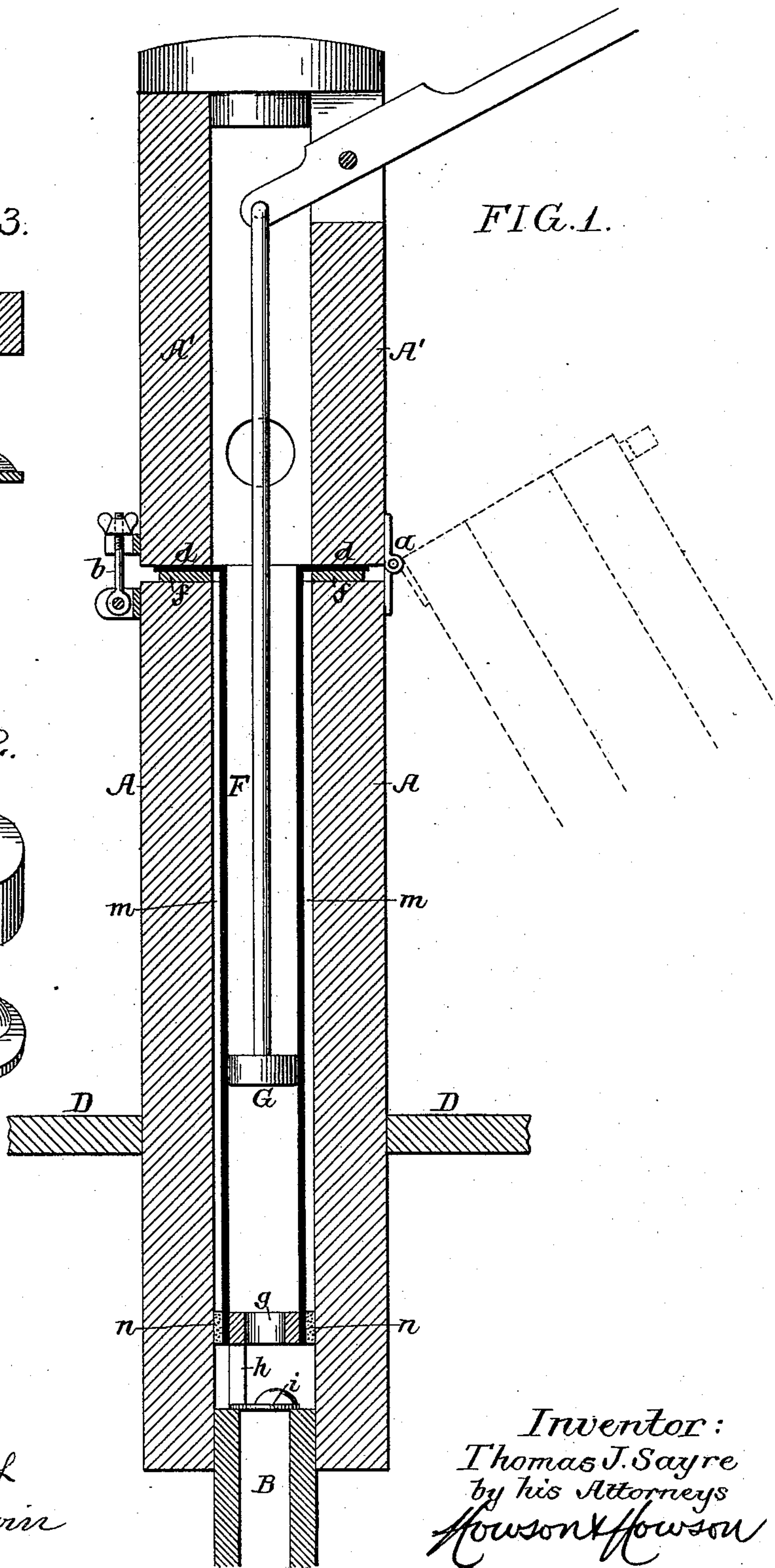


FIG. 1.



Witnesses.
Alex. Barkoff
Fred H. Goodwin

Inventor:
Thomas J. Sayre
by his Attorneys
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UNITED STATES PATENT OFFICE.

THOMAS J. SAYRE, OF CAPE MAY, NEW JERSEY.

WELL-PUMP.

SPECIFICATION forming part of Letters Patent No. 471,829, dated March 29, 1892.

Application filed September 3, 1891. Serial No. 404,596. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. SAYRE, a citizen of the United States, and a resident of Cape May city, Cape May county, New Jersey, have invented certain Improvements in Well-Pumps, of which the following is a specification.

The object of my invention is to so construct an ordinary well-pump as to prevent freezing of the same in cold weather and to permit of the ready insertion or removal of the valve or of that portion of the pump-barrel in which the plunger works without disturbing the main stock or barrel of the pump and without detaching the same from the well-curb or platform. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a well-pump constructed in accordance with my invention. Fig. 2 is a perspective view, on a larger scale, of the valve structure detached from the pump; and Fig. 3 is a sectional view of said valve structure.

In Fig. 1, A represents the main stock or barrel of the pump, which is mounted, as usual, upon the upper end of the well-tube B and projects above the well-curb or platform D to the desired height. The pump stock or barrel is, however, composed of two parts, the upper part A' being separate from the lower part but hinged thereto by means of one or more hinges *a*, the parts being retained in their normal position by means of any suitable form of fastening *b*.

Between the upper and lower portions of the pump stock or barrel is clamped the flange *d* of a metal tube F, which is somewhat less in external diameter than the internal diameter of the lower portion of the pump-stock A, suitable packing *f* being interposed beneath this flange *d*, so as to insure a tight joint.

Fitting within the lower end of the internal or supplementary barrel F of the pump is a ring *g*, which has at one side a depending leg *h*, and to the bottom of the latter is hung a weighted valve *i*, which finds its seat upon the upper end of the well-tube B, the weighted ring *g* and its depending leg *h* serving to main-

tain the valve *i* firmly in contact with the upper end of the tube.

The plunger G works in the internal or supplementary barrel F of the pump, so that the space *m* intervening between the internal barrel and the main barrel or stock A serves to contain water or air, which in a measure isolates the internal barrel F and prevents or retards the freezing of the pump in cold weather.

In order to form a dead-air space between the inner and outer barrels of the pump, the internal barrel F is provided at the bottom with a washer *n*, fitting snugly to both the inner and outer barrels, so as to prevent the access of either air or water to the space *m* above said packing.

In case of any accident to the valve *i* the latter can be readily withdrawn on first withdrawing the plunger G, a suitable hooked rod engaging with the ring *g* in order to lift the same from the barrel F, and for convenience the upper portion A' of the pump-barrel may be thrown back on its hinges during the removal of the valve. When the upper portion is thus thrown back, the entire inner barrel F can be removed for purpose of inspection or repairs and can be as readily reinserted, when desired.

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

1. The combination of the two-part stock or barrel of the pump hinged together and provided with means for clamping them in position, the internal barrel having at its upper end a flange clamped between the two parts of the main barrel and forming a space between the inner and outer barrels, and a valve at the lower end of the inner barrel, substantially as specified.

2. The within-described detachable valve structure for well-pumps, the same consisting of a ring or band having a depending leg at one side and a weighted valve hung to the lower end of said depending leg, substantially as specified.

3. The combination of the well-tube, the two-part stock or barrel of the pump, the internal barrel having a flange clamped between the two parts of the stock and forming a space

between the inner and outer barrels, and a detachable valve consisting of a ring adapted to the lower end of the internal barrel and having a depending leg, to the lower end of
5 which is secured a weighted valve, substantially as specified.

4. The combination of the two-part stock hinged together and provided with means for clamping them in position, the internal barrel having at the top a flange clamped between
10 the two parts of the barrel, and a packing-

washer at the lower end, so as to form a dead-air space between the two barrels, and a valve at the lower end of the internal barrel, substantially as specified. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOS. J. SAYRE.

Witnesses:

JAMES M. E. HILDRETH,
A. B. MILLER.