

T. DOWLING. Pumps.

No. 150,544.

Patented May 5, 1874.

Fig. 1.

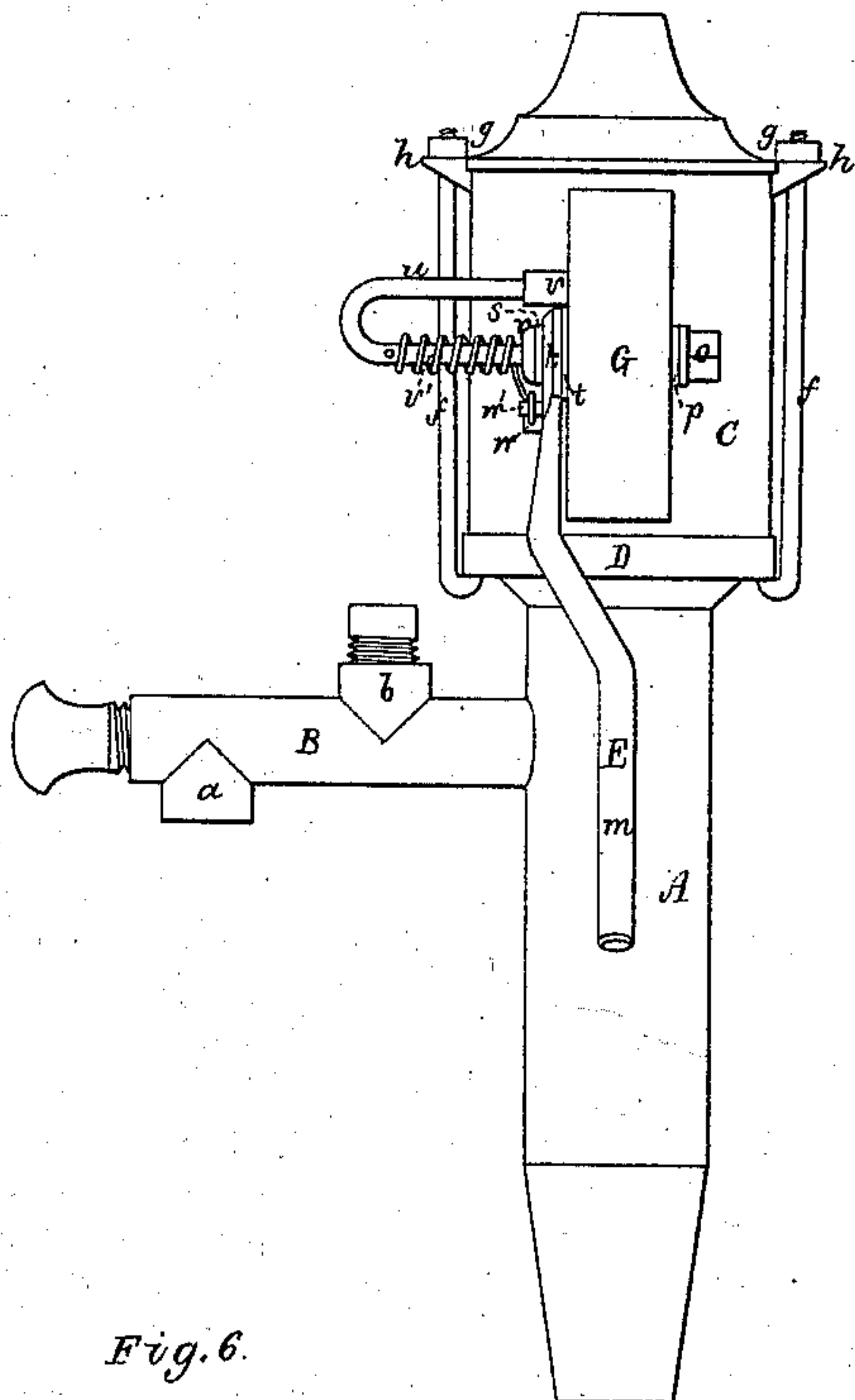


Fig. 3.

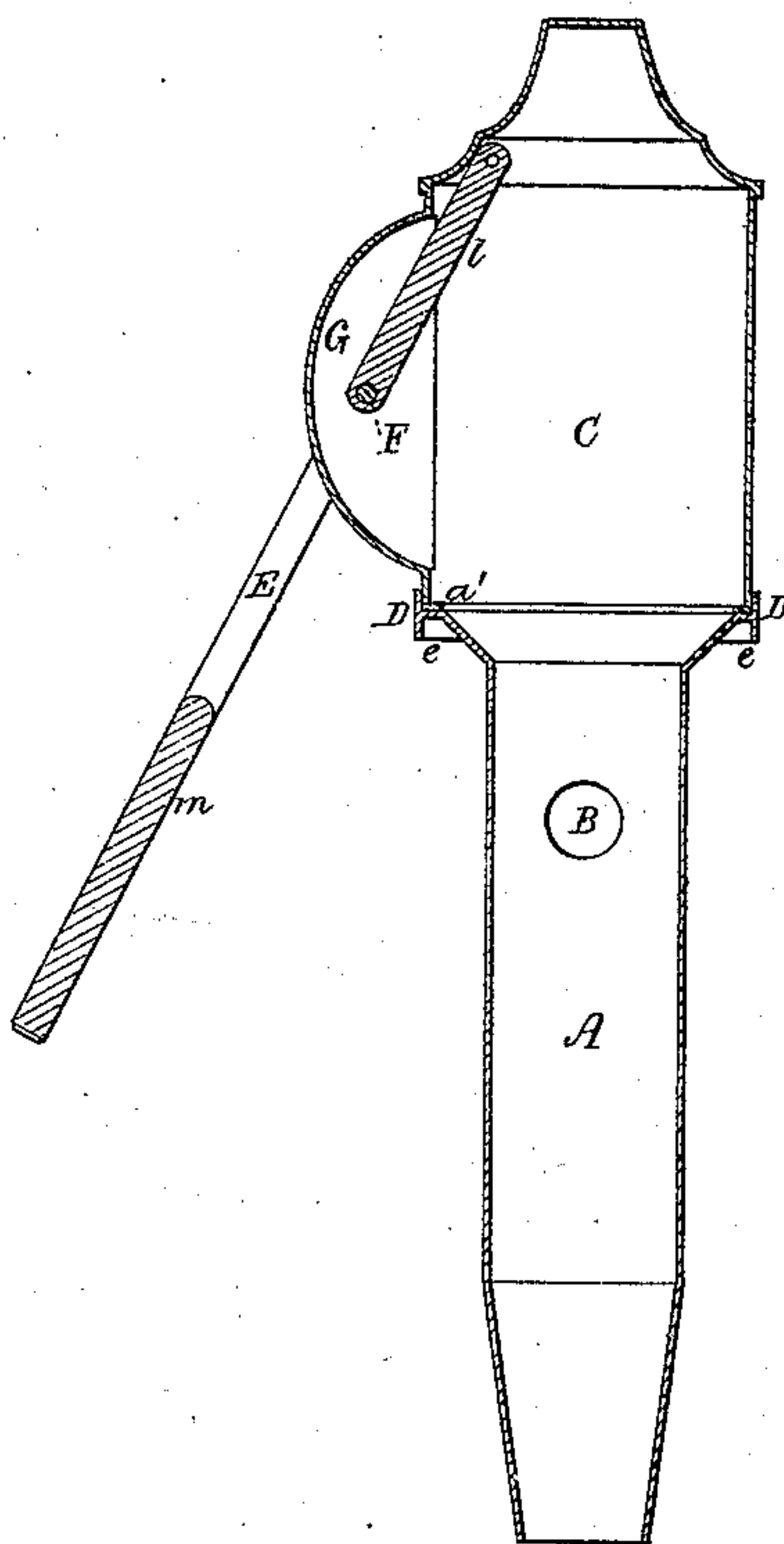


Fig. 6.

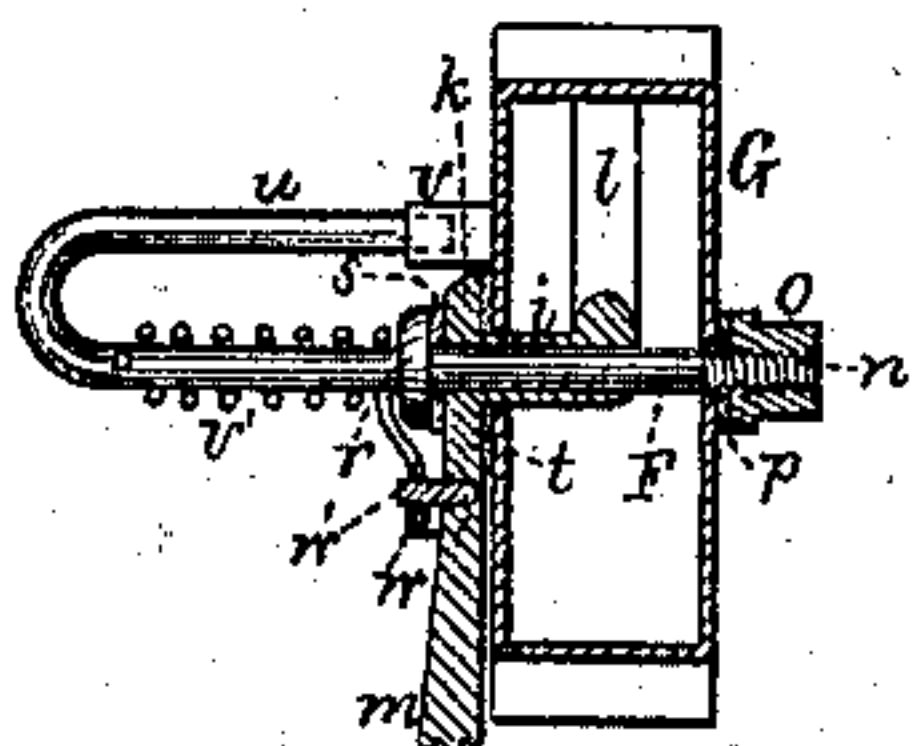


Fig. 2.

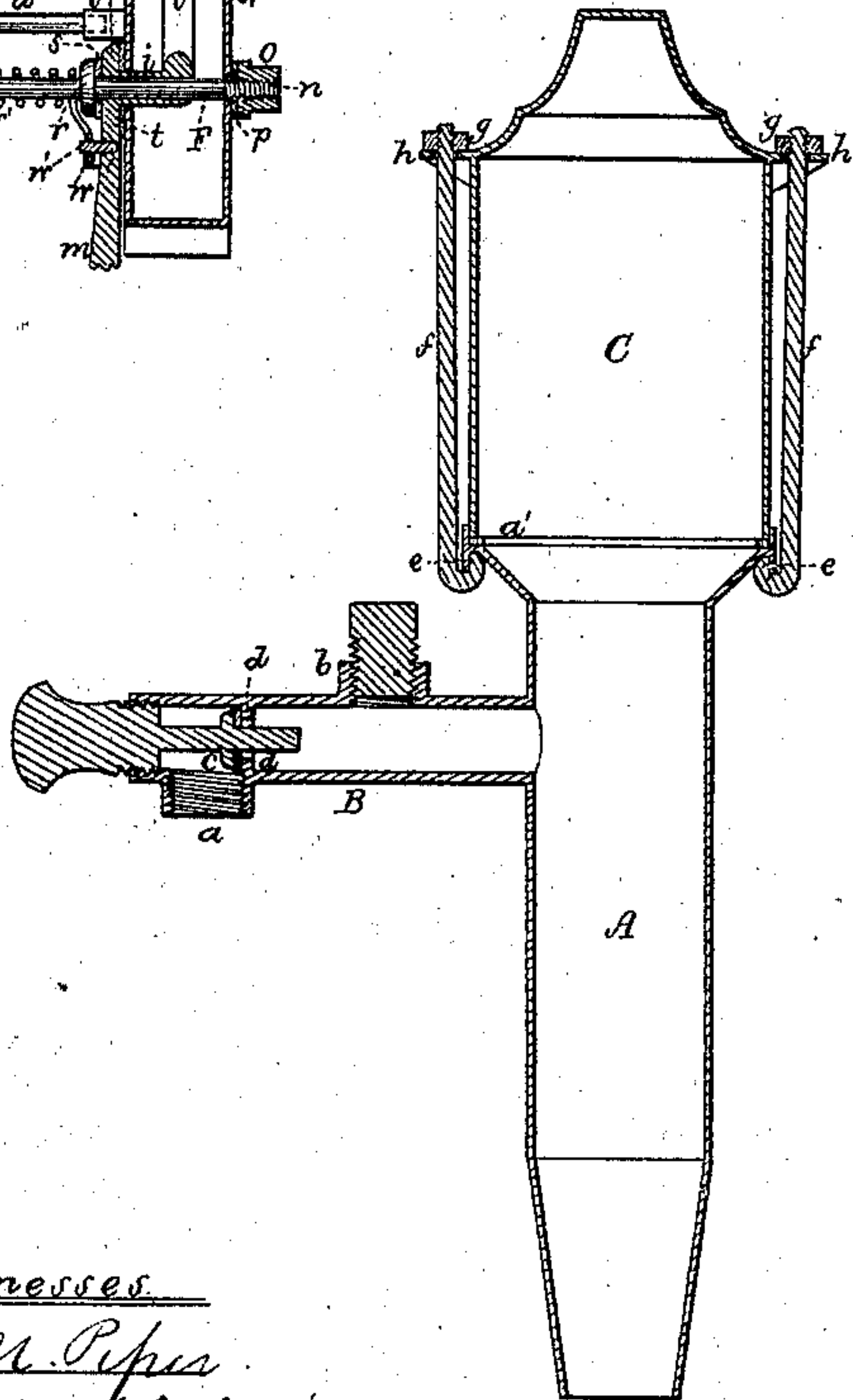


Fig. 4.

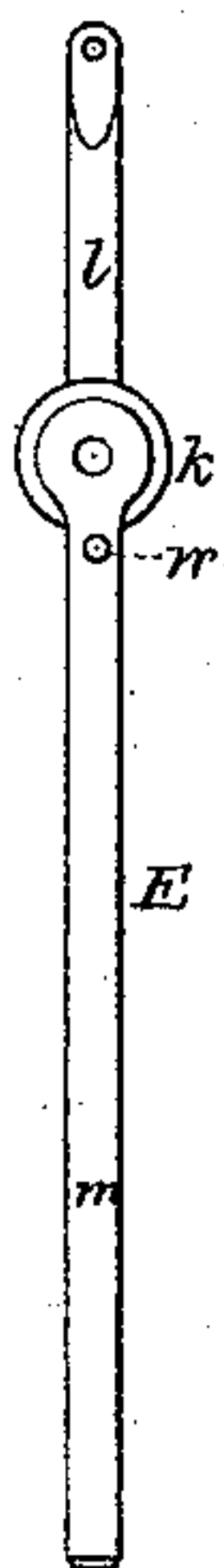
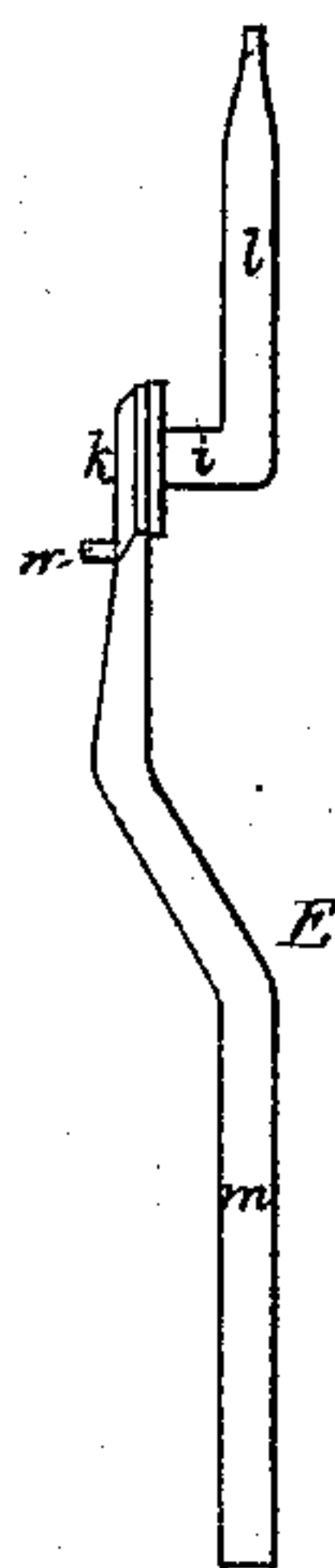


Fig. 5.



Witnesses

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R. H. Day

UNITED STATES PATENT OFFICE.

THOMAS DOWLING, OF GLOUCESTER, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND ISRAEL C. MAYO, OF SAME PLACE.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **150,544**, dated May 5, 1874; application filed April 10, 1874.

To all whom it may concern:

Be it known that I, THOMAS DOWLING, of Gloucester, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Pumps; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation; Fig. 2, a longitudinal and vertical section taken through the educt. Fig. 3 is a vertical and transverse section taken on a plane at right angles with the plane of section of Fig. 2.

In such drawings, A denotes the pump-barrel, provided with a nose or pipe, B. This nose has two mouths of discharge leading out of it, as shown at *a* and *b*. It is also provided with a valve, *c*, whose stem screws into the end of the nose, so as to force the valve on or off a seat, *d*, in rear of the outer discharge *a*. The valve is to prevent, at times, when necessary, flowage through the nose *a*, and to cause the liquid elevated by the pump to be forced out of the nose *b* or up through a pipe leading therefrom. Over the barrel A is a rotary air chamber or vessel, C, which is inserted in a socketed head, D, fixed on the top of the pump-barrel, and formed as shown, especially with a circular lip, *e*, extending down from it, as represented. The head D contains an annulus or packing, *a'*, upon which the lower edge of the air-chamber rests, and against which it is forced by hooked screw-rods *f f* and nuts *g g*. These rods hook upon the lip *e*, and extend up through ears *h h* projecting from the air-chamber, the whole being so as to enable the air-chamber to be turned around upon its seat and clamped thereto, in order to adjust the pump-handle in any desirable position relatively to the educt, as occasion may require. The said handle, shown at E and formed as represented in top view in Fig. 4, and in side view in Fig. 5, (viz., with a tubular shaft, *i*, a head, *k*, and arms *l m*, one arm being projected from the head and the other from the shaft, all as shown) turns upon a spindle, F, extended through the parallel sides of a hollow projection, G, of the air-chamber. At one end the spindle is provided with a screw, *n*, to receive a nut, *o*, which

screws against a leather washer, *p*, arranged on the spindle, as shown.

Fig. 6 is a section taken through the spindle and parts connected therewith.

The spindle is provided with a shoulder, *r*, between which and the handle is a leather washer, *s*, there being also another leather washer, *t*, between the head *k* and the side of the extension G. On screwing up the nut *o* the spindle will be drawn inward and the washers will be constructed so as to make tight joints at the junction of the handle with the extension G of the air-vessel or chamber. Furthermore, the spindle is bent or formed with a leg, *u*, to extend into either of two socketed studs, *v w*, projected from the side of the extension G, one being above and the other below the spindle. A helical spring, *v'*, wound around the spindle and having one end fixed thereto and the other to the handle or a stud, *w'*, extending therefrom, serves to force downward the longer arm of the handle and aid the handle in lifting the piston. This piston, not shown in the drawings, is to be like that of a common lifting-pump—that is, it is to be perforated vertically and provided with one or more valves to open upward, there being below it, in the barrel, a valve or valves to open upward. By turning the spindle around and setting it in one or the other of the socketed studs, we can take up or let out the spring so as to vary its pressure, and set the spindle so that the wear of the handle upon it may not be all on one side of it.

The peculiar construction of the pump-handle enables it to be readily inserted in or withdrawn from the extension G, or the hole in one side thereof, as occasion may require.

In the said pump, I claim as my invention—

1. The pump-barrel A, provided with the socketed head D and the lip *e* thereto, in combination with the rotary air-chamber C, and the hooked screw-rods *f f*, and their nuts *g g*, and the handle E connected with the air-chamber, all being arranged and applied substantially as set forth.

2. The pump-handle E, composed of the tubular shaft *i*, the head *k*, and the two arms *l m*, arranged as described.

3. The spindle F, with its shoulder *r*, and leg

u, and screw *n*, and nut *o*, in combination with the handle E, as described, and with the socketed studs *v w* projected from the air-chamber extension G, as set forth.

4. The spring *v'*, combined with the pump-handle E and its supporting-spindle F, the leg *u* and socketed studs *v w*, all being ar-

ranged together and with the air-vessel extension G, substantially as specified.

THOMAS DOWLING.

Witnesses:

R. H. EDDY,
J. R. SNOW.