

E. McDERMOTT.

Pump.

No. 165,244.

Patented July 6, 1875.

Fig 1

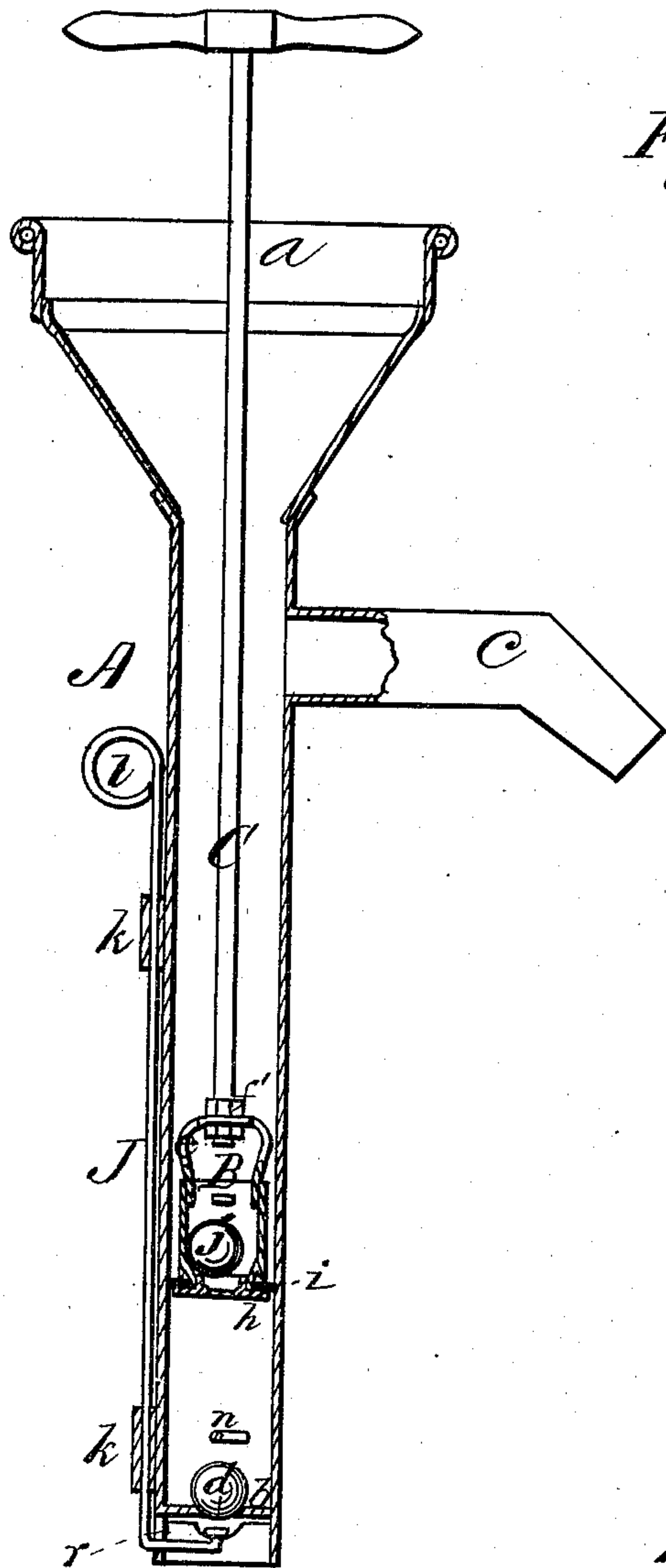
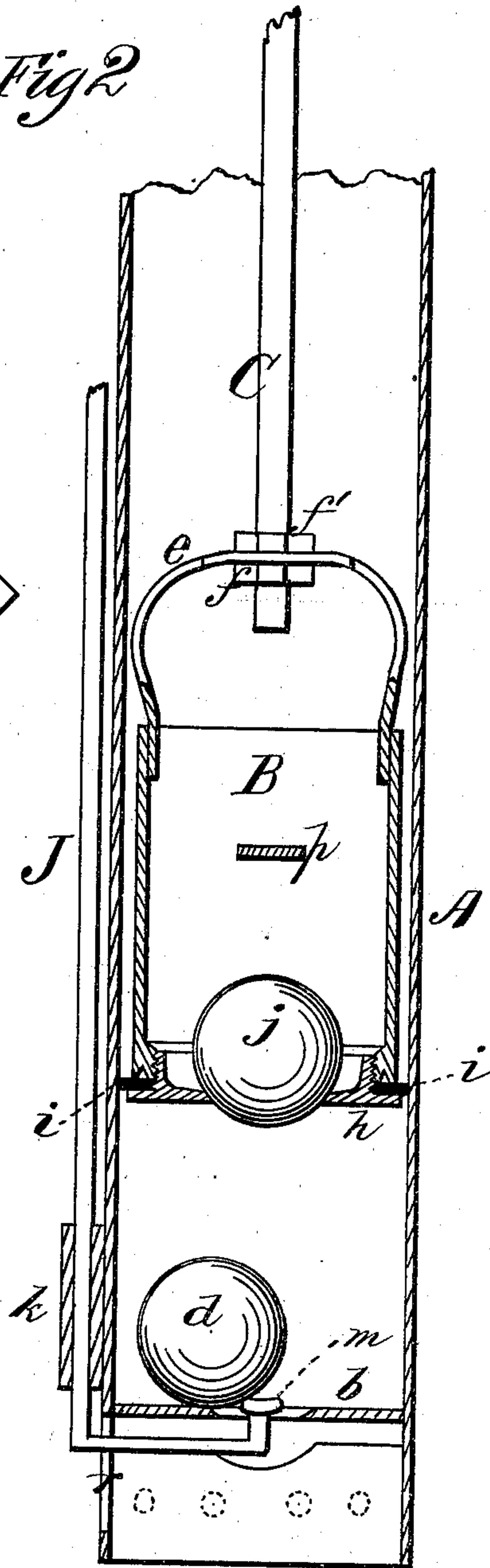


Fig 2



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **165,244**, dated July 6, 1875; application filed May 8, 1875.

*To all whom it may concern:*

Be it known that I, EDWARD McDERMOTT, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and valuable Improvement in 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.

Figures 1 and 2 of the drawings are representations of vertical central sections of my pump.

This invention has relation to improvements in pumps which are especially designed for transferring liquids from one vessel to another.

The object of the invention is mainly to devise a means whereby the lower valve of a pump may be raised for the purpose of emptying the pump-tube, thus causing the contents remaining therein to fall back into the cask, as will be hereinafter more fully explained.

In the annexed drawings, A designates the pump-tube of an ordinary transferring-pump, commonly used on board of vessels, and in shops for raising liquids out of a cask into a smaller vessel, in connection with which I propose to illustrate my invention. Pump-tube A has at its upper end the usual well-known swell *a* and an eduction-spout, *c*. It has also a valve-seat, *b*, at its lower extremity, which is closed by a globe, *d*, accurately closing a circular opening in the said seat. B represents a plunger of cylindrical form, the same being of slightly less diameter than tube A, which is provided with a bail, *e*, to which is detachably secured, by means of nuts *f f'*, an actuating-rod, C, to which is rigidly secured a cross-handle, D. The lower end of this plunger is female screw-threaded, for the purpose of allowing a valve-seat, *h*, to be secured thereto, a rubber packing-ring, *i*, being previously interposed between them, as shown in Fig. 2, the said ring being of sufficient dimensions for accurately closing the joint of the plunger and pump-tube. Within the cylindrical portion of plunger B a globe, *j*, accurately closing the opening in valve-seat *h*, is arranged, and confined by means of a rod, *p*, extending across the pump-tube. This

globe, like that closing the opening in the lower end of the tube, performs precisely the same functions as the ordinary flap-valve, and when the plunger-rod is actuated, the lower end of the pump-tube being immersed in a liquid, the said liquid will be raised and discharged through spout *c*.

In all transferring-pumps heretofore used it has been necessary to dislodge the lower valve from its seat by the finger, in order to allow the liquid inclosed in the pump-tube between it and the plunger to flow out. By this means frequent waste and an annoying soiling of the hands were incurred, creating considerable loss of time and money. With a view to remedying this defect, I use a suitable rod, J, which is guided in staples *k* on the outside of tube A, so as to have endwise movement with relation thereto. This rod is provided with an operating ring-handle, *l*, and its lower bent end passes through a slot, *r*, cut in the pipe-tube below valve-seat *b*, to a point directly under globe-valve *d*, where it is upturned and provided with a concave cap or head, *m*. When the operation of pumping has ceased, plunger B is thrust down until its globe-valve *j* is raised off its seat by a transverse bar, *n*, which also serves to prevent globe-valve *d* from undue displacement. Rod J is then drawn upward, causing valve *d* to be raised off its seat, allowing the liquid contained in the pump-tube to flow back into the cask.

While intending to apply my invention principally in connection with transferring-pumps, I do not propose to confine its use to them alone, the device hereinbefore described being equally as efficient with any other description of pumps, and with all descriptions of valves.

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

In combination with the rod J, and the two valves *d j*, the rod *n*, substantially as and for the purposes described.

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

EDWARD McDERMOTT.

Witnesses:

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H. G. O. MORRISON.