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O. M. GIERSSING & J. HEERFORDT.
INKSTAND.

APPLICATION FILED AUG. 24, 1907.

Fig. 1.

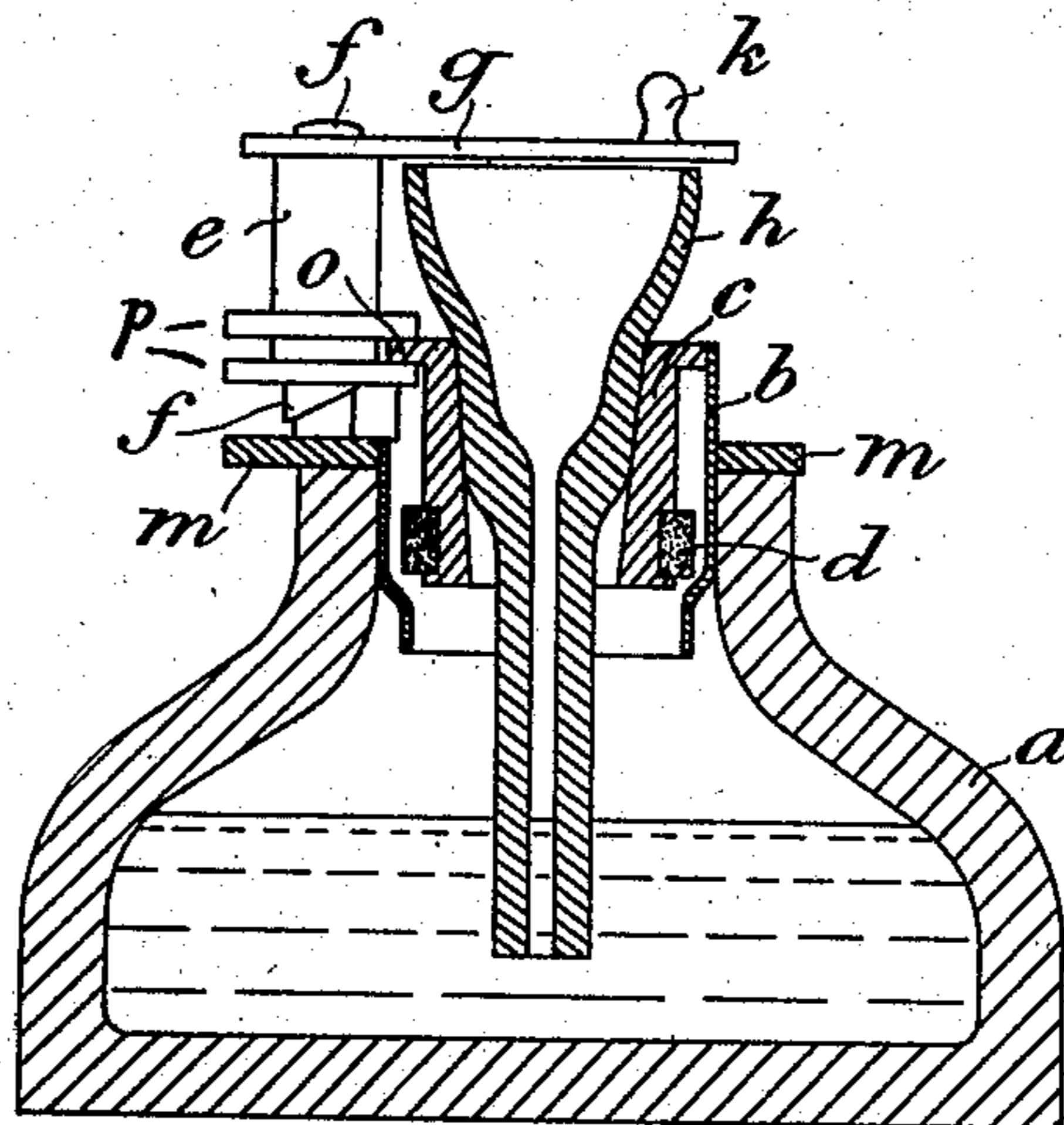
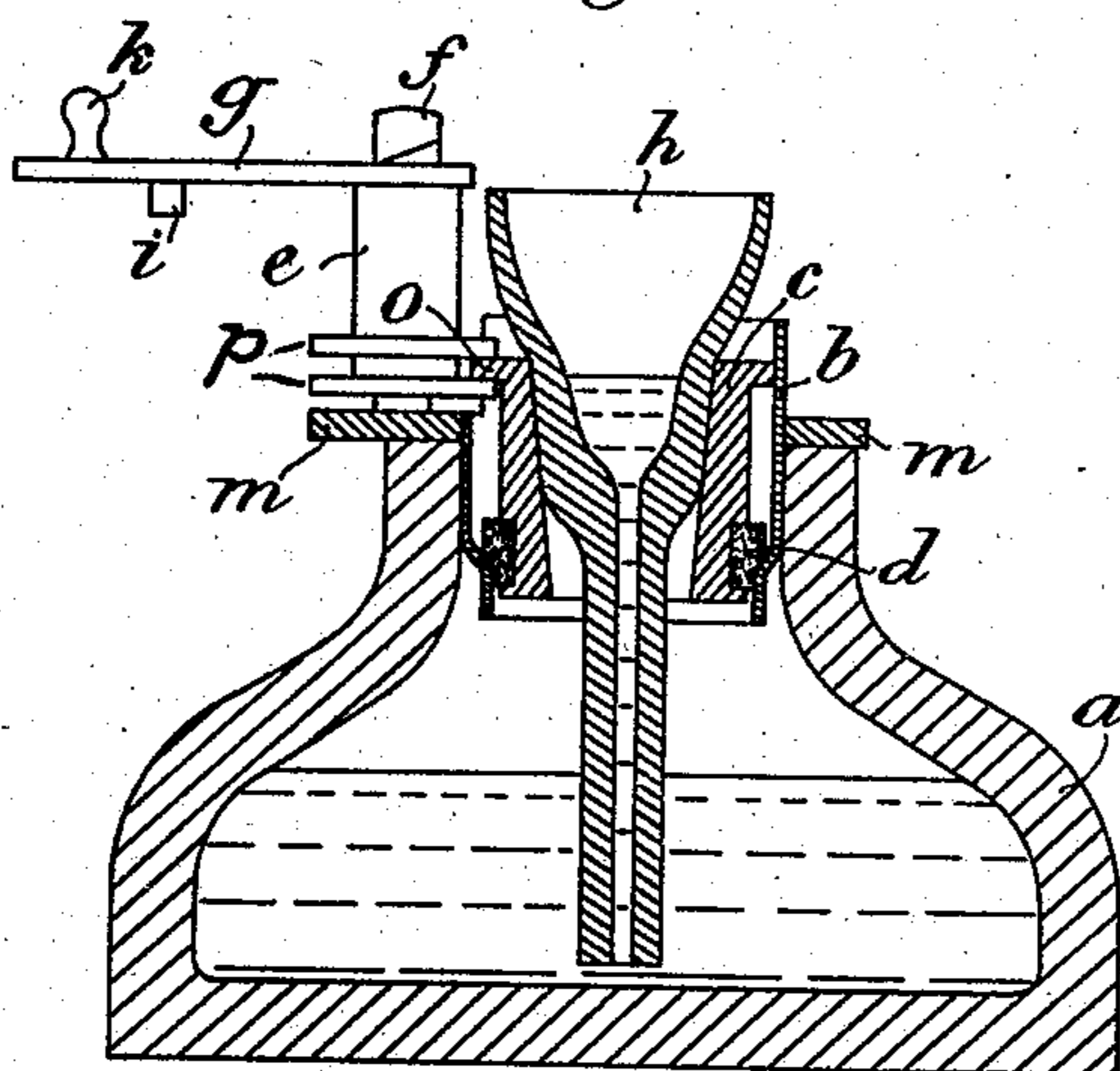


Fig. 2.



WITNESSES

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INKSTAND.

No. 894,793.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, OVE MALLING GIERSTING, civil engineer, and JOHANNES HEERFORDT, bank clerk, subjects of Denmark, residing at St. Pederstraede No. 26 and Vodroffsvej No. 24^A, respectively, Copenhagen, Denmark, have invented new and useful Improvements in Inkstands, of which the following is a specification.

Our invention relates to inkstands of the kind in which the level of the ink in the dipping-funnel can be varied as desired by increasing or decreasing the air-pressure inside the inkstand.

According to our said invention the variation in the air-pressure is effected by a piston fitted around the dipping-funnel, and capable of moving air-tight within a sleeve fitted into the neck of the ink recipient, the piston being connected to the cover of the dipping-funnel in such a manner that it is automatically lowered on the cover being opened, and automatically raised when the cover is closed. The inkstand is further fitted with arrangements by which the air-pressure inside the recipient, and consequently the level of the ink in the dipping-funnel can be varied as desired, as well as with arrangements for preventing the ink from rising too far into the funnel owing to the influence of temperature on the air inclosed within the ink recipient.

In the accompanying drawing: Figure 1 is a vertical section of an inkstand constructed according to our invention, the cover being shown closed, and Fig. 2 is a similar view of the inkstand showing the cover open.

a is the ink recipient, *b* the sleeve fitted air-tight into its neck, the outer surface of which has a collar *m* resting on the upper edge of the recipient.

c is the piston fitted into the sleeve *b* and capable of moving vertically therein; the piston *c* is provided with a packing *d* of india-rubber, leather or other suitable material. The inside diameter of the sleeve *b* is somewhat reduced at its lower end and the part leading from the upper or larger portion to the lower or reduced portion is located immediately below the packing *d* when the piston *c* is in the position shown in Fig. 1. The packing does not then fit air-tight, but when lowered it is pressed into the lower or reduced portion of the sleeve *b* so that the piston *c* fits air-tight therein.

On the collar *m* of the sleeve *b* is secured a quick thread screw *f* on which a nut *e* can

turn. This nut is at its lower end provided with projecting collars *p* passing through a slit in the sleeve *b* and engaging a collar *o* fitted on the upper end of the piston *c* in such a manner that the piston *c* is caused to follow the vertical movement of the nut *e*. On the top of the nut *e* is fixed a plate *g* which serves as a cover and can be turned round away from the dipping-funnel *h* fitted air-tight, but removably, in the piston *c*. The lower side of the plate *g* may be provided with a stud *i* which by coming against the funnel *h* limits the movement of the cover round the screw *f*. The top of the cover is moreover provided with an operating stud or knob *k*.

The operation is as follows: When the inkstand is closed, as in Fig. 1, the ink is at the same level in the recipient and in the dipping-funnel, because the air above the ink in the recipient is in communication with the atmosphere, the packing *d* being now raised into the upper or larger part of the sleeve *b* and consequently not fitting air-tight. When the cover is turned aside it descends together with the piston *c*, the packing *d* and the dipping funnel *h*, the cover turning on the screw *f*. The packing *d* is thereby first pressed down into the reduced part of the sleeve *b* where it fits airtight, and upon further turning of the cover, the packing is pressed deeper down into the reduced part of the sleeve *b* whereby the air above the ink is compressed, and the ink is forced into the dipping-funnel. The level of the ink in the dipping-funnel can thus be adjusted to any desired height by more or less turning the cover. When it is required to fill the inkstand, the cover is turned aside and the funnel *h* removed, when ink can be poured into the recipient through the uncovered mouth. The funnel nearly reaches to the bottom of the recipient, so that the ink can be almost entirely consumed. Every time the cover is opened, fresh ink is forced into the funnel.

In the form of construction shown, the packing *d* does not fit air-tight when in its upper position, this provision being adopted to meet changes of temperature of the air. When there is only a little ink, and consequently much air, in the recipient and the air, for example, during night time, becomes much cooler, it may happen, if the packing *d* always fits air-tight, that the inkstand will suck in air which, when the temperature becomes higher, will expand and force the

ink too high up into the funnel, eventually causing it to overflow.

The construction hereinbefore described and illustrated can obviously be modified in detail without departing from our invention, for example, instead of a laterally movable cover, any other form of cover can be used, provided only that it is connected to the piston surrounding the funnel in such a manner that the said piston is lowered when the cover is opened, and raised when the cover is closed, so as to cause an increase or a reduction of the pressure to which the air inside the recipient above is subjected.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:

1. An inkwell comprising an ink reservoir, a dip funnel extending into the same, a piston sleeve opening into said reservoir and a piston working in said sleeve to compress the air in said reservoir and thus force the ink up in the dip funnel when said piston is moved in one direction and to relieve such pressure and open the reservoir to atmospheric pressure when moved in the other direction, in combination with a rotatable cover having a threaded sleeve, a screw carried by said reservoir on which said sleeve is mounted, and an operative connection between said sleeve and piston whereby the latter is operated upon the rotation of the cover, substantially as described.

2. An inkwell comprising an ink reservoir, a movable dip funnel extending into the same, a piston sleeve surrounding said funnel, a piston carrying said funnel and working in said sleeve to compress the air in said reservoir and thus force the ink up in the dip funnel when said piston is moved in one direction and to relieve such pressure and open the reservoir to atmospheric pressure when moved in the other direction, in combination with a cover for said dip funnel, and means in connection therewith to actuate said piston.

3. An inkwell comprising an ink reservoir, a dipping funnel extending into the same, a piston sleeve surrounding the same and opening into said reservoir, a piston working in said sleeve to compress the air in said reser-

voir and thus force the ink up in the dip funnel when said piston is moved in one direction and to relieve such pressure when moved in the other direction, in combination with a cover for said dip funnel operatively connected to said piston to actuate the latter in one direction when said cover is opened and in the opposite direction when said cover is closed.

4. An inkwell comprising an ink reservoir, a dipping funnel extending into the same, a piston sleeve surrounding the same and opening into said reservoir, a piston working in said sleeve to compress the air in said reservoir and thus force the ink up in the dip funnel when said piston is moved in one direction and to relieve such pressure and open the reservoir to atmospheric pressure when moved in the other direction, in combination with a cover for said dipping funnel operatively connected to said piston to actuate the latter in one direction when said cover is opened and in the opposite direction when said cover is closed.

5. An inkwell comprising an ink reservoir, a dipping funnel extending into the same, a piston sleeve having a constricted lower end surrounding said funnel and a piston adapted to work in said sleeve and to extend into said constricted end thereof to compress the air in the reservoir and to reestablish atmospheric pressure in said reservoir when raised out of said end, substantially as described.

6. An inkwell comprising an ink reservoir, a dipping funnel extending into said reservoir, a piston sleeve having a constricted lower end surrounding said funnel, a piston carrying said dipping funnel and working within said sleeve, in combination with a cover for said funnel and an operative connection between said cover and piston whereby the latter is depressed when the cover is opened and raised when said cover is closed, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

OVE MALLING GIERSING.
JOHANNES HEERFORDT.

Witnesses:

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P. PÉISNARG.