

No. 828,043.

PATENTED AUG. 7, 1906.

J. MUIRHEAD.

INK WELL.

APPLICATION FILED JULY 22, 1905.

Fig. 1.

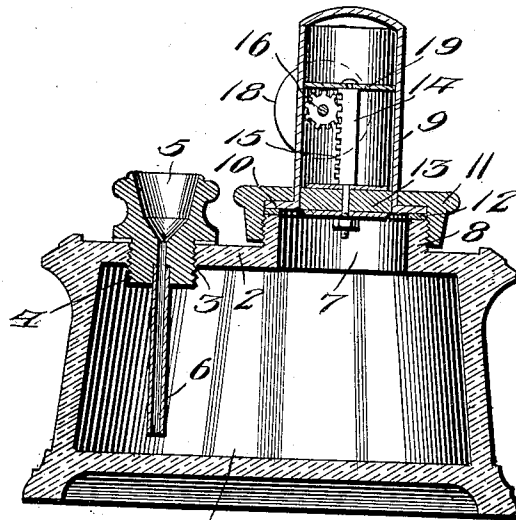
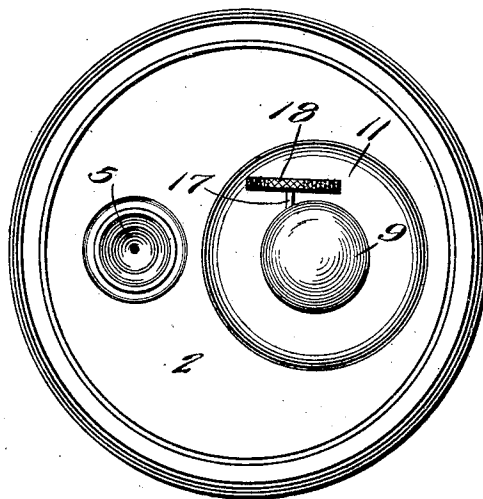


Fig. 2.



Witnesses
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JOHN MUIRHEAD, OF EAST OAKLAND, CALIFORNIA, ASSIGNOR OF ONE-THIRD TO GEORGE M. BAILEY, OF PROVIDENCE, RHODE ISLAND.

INK-WELL.

No. 828,043.

Specification of Letters Patent.

Patented Aug. 7, 1906.

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To all whom it may concern:

Be it known that I, JOHN MUIRHEAD, a subject of the King of Great Britain, residing at East Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Ink-Wells, of which the following is a specification.

This invention relates to ink-wells of the type embodying a feed-tube, and has for its objects to produce a comparatively simple inexpensive device of this character in which the ink may be readily and positively fed through said tube as required, one wherein the feed may be positively controlled, and one in which the ink may be drawn from the feed-tube when the well is not in use.

A further object of the invention is to provide a simple ink-feeding member or plunger which may be readily and securely applied to the ink-well and one wherein said plunger may be conveniently operated for feeding the ink to or withdrawing it from the feed-tube.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a vertical section centrally through an ink-well embodying the invention. Fig. 2 is a top plan view of the same.

Referring to the drawings, 1 designates the ink well or vessel, composed of glass or other suitable material and having in its top wall 2 an internally-threaded opening 3, in which is tapped the threaded shank 4 of an ink-cup 5, provided with a depending flexible feed tube or duct 6.

Formed in the wall 2 at a point adjacent the opening 3 is a second opening 7, surrounded by an upstanding externally-threaded marginal flange 8, there being disposed above the opening 7 a vertically-arranged tubular casing 9, closed at its upper end and having its lower end opened for communication with the well 1 through the medium of the opening 7, said casing 9, which constitutes an air cylinder or chamber, having formed at its lower end a horizontally-extending flange 10, designed to seat upon the upper edge of flange 8, on which is threaded a coupling member or nut 11, engaged with the flange 10 for securing the casing 9 to the ink-well, there being arranged between the

flanges 8 and 10 a rubber or other suitable packing-gasket 12. Disposed for reciprocation in the cylinder or chamber 9 is a piston-head 13, connected to the lower end of an operating element or bar 14, having at one edge rack-teeth 15, designed for engagement by a pinion 16, fixed on a horizontal actuating member or shaft 17, journaled in the casing 9 and equipped with a knurled finger-piece or head 18, there being fixed on the upper end of the bar or element 14 and above the pinion 16 a head or disk 19, fitted air-tight within the casing 9.

In practice the well is filled through the opening 7 by unscrewing the coupling member 12 and removing casing 9 and its attendant parts, after which the casing is replaced, as seen in Fig. 1, and the cup 5 and its tube or duct 6 being in position the ink may be readily fed therethrough by manipulating shaft 17 and its pinion to feed the piston-head 13 downward, this action serving to compress the air and force the ink through the tube 6 into the cup 5.

When the well is not in use, the ink may be drawn from the cup 5 by reversing the movement of the shaft 17, thereby moving the piston-head 13 upward through the medium of rack 14 and pinion 16, as will be readily understood. It is apparent that under this arrangement the feed may be readily and positively controlled and the cup 5 charged or exhausted, as circumstances require, and, furthermore, the disk 19 serves to guide the piston in its movements and also through contact with the upper wall of the cylinder to limit the upward movement of the piston.

From the foregoing it is apparent that I produce a simple device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

An ink-well having an ink-cup, a duct carried by the cup and extending into the well, the latter being provided with an opening having an upstanding, externally-threaded marginal flange, a cylinder having an open lower end provided with an outturned flange seated on the upstanding flange, a coupling-

nut tapped onto the latter flange in engagement with the cylinder-flange for securing the cylinder in place, a piston movable in the cylinder and having a stem provided with 5 rack-teeth, an operating-shaft journaled for rotation in the cylinder and carrying a pinion in mesh with said teeth, a head fixed upon one end of the shaft for engagement to operate the latter, and a bearing-disk fixed

upon the stem of the piston for guiding the same in its movements.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN MUIRHEAD.

Witnesses:

C. T. JOHNS,
EMALENE B. WELLS.