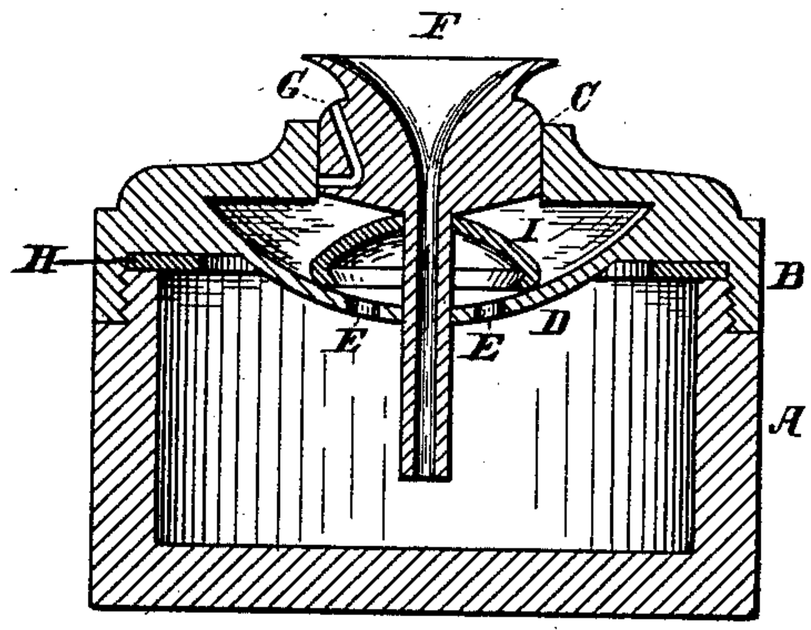
(No Model.)

# F. GUINTER.

## FOUNTAIN INKSTAND.

No. 428,753. Patented May 27, 1890.




Witnesses.
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# UNITED STATES PATENT OFFICE.

FERDINAND GUINTER, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF TO GEORGE PELLINGER AND CHARLES TRAXLER, BOTH OF SAME PLACE.

## FOUNTAIN-INKSTAND.

SPECIFICATION forming part of Letters Patent No. 428,753, dated May 27, 1890.

Application filed February 28, 1890. Serial No. 342,058. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND GUINTER, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Improvement in Fountain-Inkstands, of which the following is a specification.

My invention has relation to improvements in that class of fountain-inkstands in which the ink is contained in an air-tight cistern, through the top of which is inserted a vertically-sliding tube with a funnel-shaped top, having its lower end submerged in the ink, and by the depression of which the air in the cistern will be compressed and force the ink through the tube into its top.

The objects of my invention are to provide a new and improved inkstand of the class specified, that shall be simple in construction, practical in operation, that may be filled without the removal of any part, and the parts of which may be readily separated and replaced for cleaning or other purpose.

To this end my invention consists in the peculiar construction and combination of parts hereinafter described, and then specifically pointed out in the claims, reference being had to the accompanying drawing, forming a part of this specification.

The accompanying drawing represents a vertical central section of my improved fountain-inkstand, and as all parts are circular in horizontal section and concentric about a common center detail views have not been thought necessary.

The lower part or cistern A is of glass or porcelain, terminating in a reduced externally-screw-threaded top. On this is fitted an internally-screw-threaded cap B, preferably of hard rubber, having in the center a circular orifice C, and depending from its lower face and integral therewith a central diaphragm in form of a hollow spherical sector D, having a central orifice for a tube, hereinafter mentioned, and a series of smaller orifices E disposed about said central orifice, leaving a chamber between the diaphragm and cap, as shown. A tight joint is secured between the cistern A and cap B by an annular gasket or packing-ring H. A tube F, having a funnel-shaped opening at the top, an enlarged upper part to fit the orifice C in the cap, and a smaller part to fit the opening in the diaphragm, is inserted in these openings, the lower end of which tube reaches nearly to the bottom of the cistern A. Interposed between the large part of the tube F and the diaphragm D and closely fitting its smaller part is a diaphragm I, of soft rubber, in form of an inverted hollow spherical sector, whose outer edges rest on the upper face of the diaphragm D outside of the orifices E.

In operation the cistern A is filled with ink through the tube F by raising the tube until the diaphragm I, which adheres to it, is lifted from the diaphragm D, thereby permitting the air displaced by the ink to escape through the orifice E, and thence between the orifice C and larger part of the tube F, the joint between which is not air-tight. Sufficient ink should be placed in the cistern to submerge the lower end of the tube F when at its greatest normal height. The tube F is then permitted to descend to the position shown in the drawing, where it is retained by the elasticity of the diaphragm I, whose lower edge forms an air-tight joint with the diaphragm D. By depressing the tube F by the pen or otherwise the diaphragm I is flattened, thereby forcing air into the cistern and causing the ink to rise and fill the funnel-shaped top of the tube.

To permit the escape of air from the chamber between the cap and diaphragm D as the tube F is depressed, a small air-duct G is made in the larger part of said tube from near the bottom of its larger part to the top, so arranged that by a slight depression of the tube it will form a connection between the interior of the chamber and the outer air.

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

1. In an inkstand of the kind designated, the combination, with a diaphragm constituting a cover for said cistern, having an opening for the ink tube and perforations disposed about said opening, of a depressible tube arranged to pass through said opening and enter said cistern, and an elastic diaphragm

to inclose said tube and encounter said perforated diaphragm outside of its perforations, substantially as shown and described, and for the purpose stated.

2. The combination, with the cistern A and its cap B, bearing the perforated diaphragm D, of the vertically-moving tube F and the elastic diaphragm I, arranged to inclose the tube F and meet the diaphragm D outside of its perforations, substantially as shown and described, and for the purpose specified.

3. The combination, with the cistern A, cap B, and diaphragms D and I, of the tube F, arranged to slide in openings in the cap B and diaphragm D and bearing an air-duct G, substantially as shown and described.

4. The combination, with the ink-well and the rigid diaphragm perforated centrally for the ink-tube, and with holes disposed about said central orifice, of the ink-tube arranged to pass through said central orifice, and an inverted cup-shaped elastic diaphragm which fits said ink-tube and meets the rigid diaphragm outside its perforations, substantially as shown and described.

In testimony that I claim the above I hereunto set my hand.

FERDINAND GUINTER.

In presence of—
C. E. HUMPHREY,
C. P. HUMPHREY.