

(No Model.)

F. E. FROST.
MARKING INK FOUNTAIN.

No. 591,349.

Patented Oct. 5, 1897.

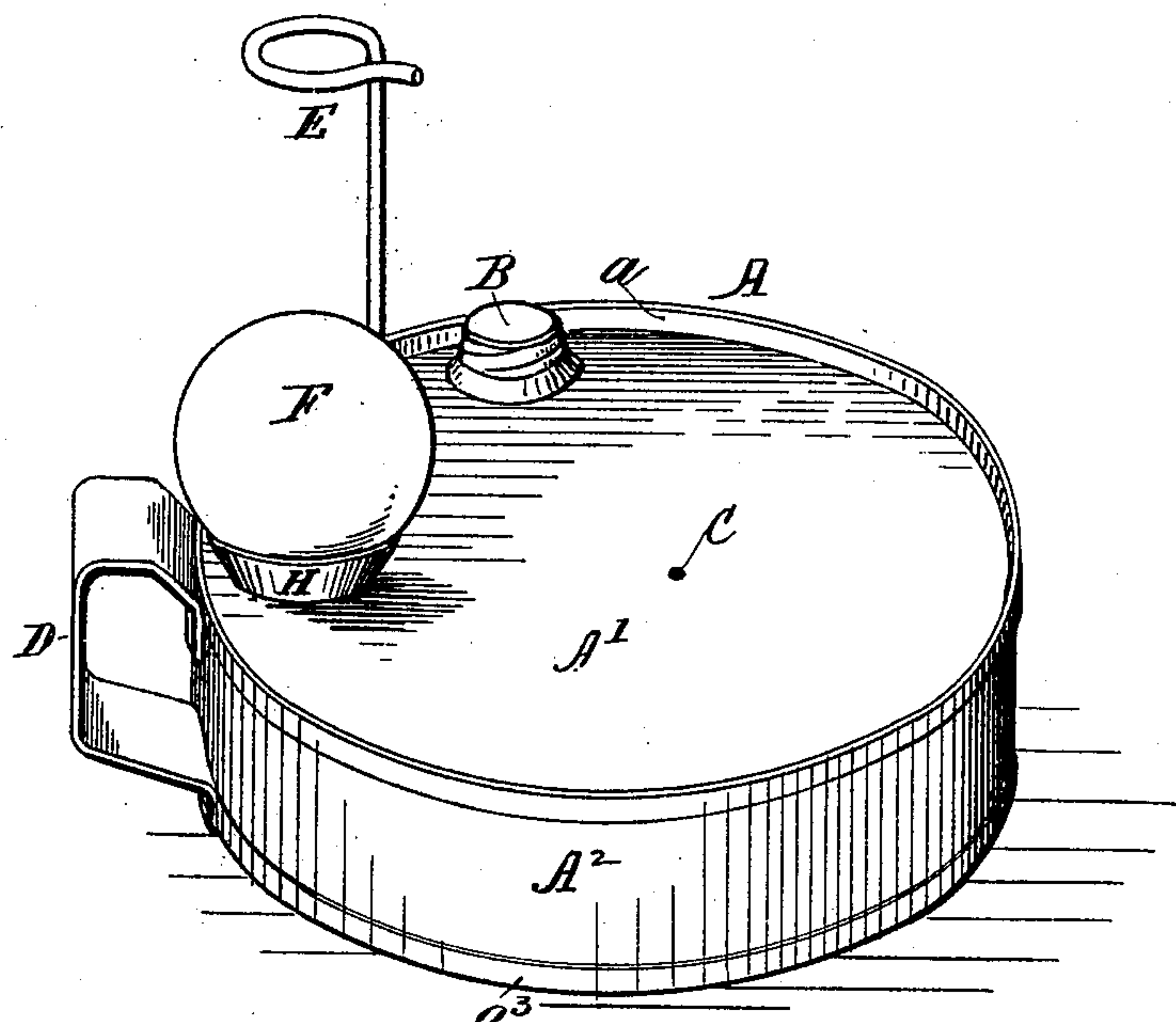


FIG. 1

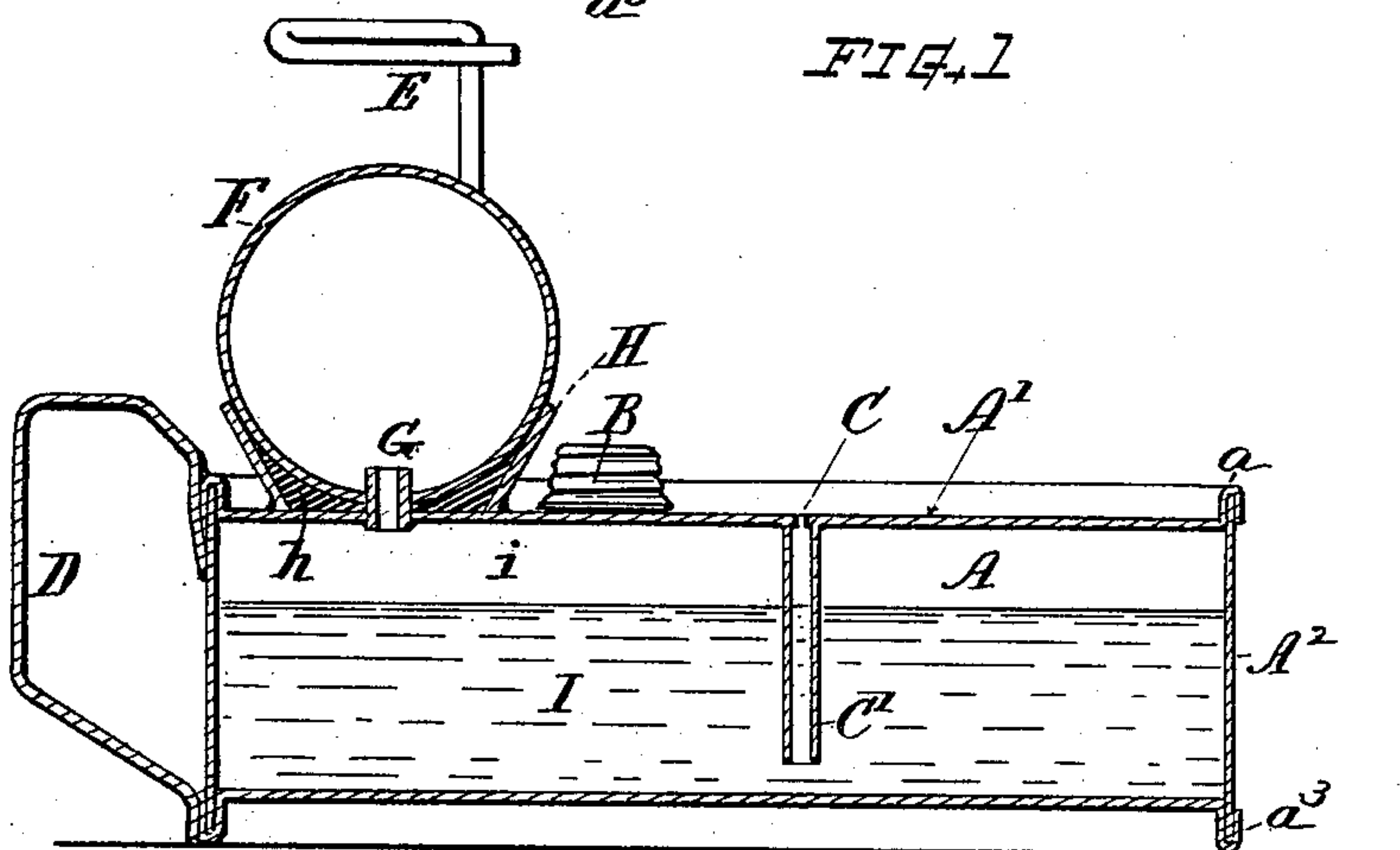


FIG. 2

Witnesses.

Ella P. Blenis.

Simon E. King

Inventor

Frederick E. Frost

By Chas. H. Burleigh
Attorney

UNITED STATES PATENT OFFICE.

FREDERICK E. FROST, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO
CHARLES M. FOWLER, OF SAME PLACE, AND FRANCIS D. GRISWOLD,
OF KEENE, NEW HAMPSHIRE.

MARKING-INK FOUNTAIN.

SPECIFICATION forming part of Letters Patent No. 591,349, dated October 5, 1897.

Application filed July 13, 1896. Serial No. 598,996. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK E. FROST, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Marking-Ink Fountains, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of this invention is to provide a marking or stencil ink fountain with a simple elastic ball, in combination with its palate-plate, whereby the air-pressure within the reservoir for feeding or ejecting the ink or color to the palate-surface can be induced in a simple and practically-convenient manner, as it may be required; also, to afford means for supporting and attaching a hollow elastic ball in combination with the metal can or fountain and connecting the same with the chamber, as more fully hereinafter described. These objects I attain by the utensil or apparatus shown in the drawings, wherein—

Figure 1 is a perspective view of my improved marking-ink fountain. Fig. 2 is a vertical section of the same.

In my improved fountain, A indicates the can or reservoir for containing the supply of stencil-ink or color liquid. Said can is of the usual cylindrical shape, formed of sheet metal and having a suitable handle D on the side thereof. The can has a flat palate-top A', upon which the ink or color is delivered for use from the interior of the reservoir through the small orifice C and internal depending tube C', as heretofore practiced. The top plate A' is preferably combined with the cylinder A² in such manner as to provide an upwardly-projecting rim α about the palate-surface. The bottom plate is also arranged so as to afford a downward rim α^3 about the base, which serves as a foot for the utensil.

The reservoir is provided with the usual opening and screw-cap B, to facilitate filling. Such cap is fitted to be air-tight when closed. The orifice C opens through the tube C',

which is tightly fixed to the plate at its top end.

E indicates a brush holder or support consisting of a wire bent in the form of a loop at its upper end and having its upright stem rigidly attached to the side of the reservoir.

F indicates a hollow elastic ball arranged at a convenient position upon the reservoir and communicating with the interior thereof by an air passage or tube G. Said ball, which is preferably an ordinary india-rubber ball about two inches, more or less, in diameter, is best supported by a rim or flange H, rigidly attached to the plate or metal of the reservoir and projecting therefrom sufficiently far to form a cup or seat for receiving the ball, and within which the ball is firmly secured by suitable cement *h* or equivalent fastening material that retains the base of the ball fixed in place, while leaving its upper portion exposed for flexure and reduction by applied pressure. The tube G passes through the substance of the ball and fits tightly in the metal plate of the reservoir. Said tube is best disposed at a position within the attached seat and gives free air-passage between the ball and reservoir-space. If the elastic ball becomes broken by use, it can be readily removed and a new one cemented into the seat-flange. The tube G may be threaded or soldered for retaining it in position.

In the operation when more ink or color is desired upon the stencil-brush or upon the palate-surface the operator presses upon the elastic ball F, causing inward flexure of its sack, thereby forcing the air from the interior of the ball through the pass G into the interior space *i* of the reservoir above the surface of the liquid I therein contained. This increases the internal pressure and causes the liquid to flow up the tube C' and out from the orifice C upon the palate-surface, or directly upon the brush if the latter is held over the orifice. The ink is then used from the palate-surface in the usual manner. When pressure is removed from the ball F, its resilient action causes it to immediately regain its spherical condition, thereby effecting a partial exhaustion of the air-space in the reservoir and sucking in through the tube C' suf-

efficient air to take the place of the liquid previously ejected.

The operation is very simple and convenient, and the improved utensil, while practically efficient and desirable, can be produced at comparatively small expense.

It will be understood that I do not broadly claim the invention in a marking-ink fountain of a flat palate-surface with the orifice and dependent tube for delivering ink to said surface, nor the dispensing of ink by action of air-pressure within the reservoir, as such features are well known in the art; but my invention has reference to the improved means for controlling the delivery and to the combinations of parts producing a marking-ink fountain of the peculiar construction defined.

I claim as my invention and desire to secure by Letters Patent—

1. In a marking-ink fountain, comprising a reservoir provided with the top or palate plate having the orifice and tube connected therewith for delivery of ink or color from the reservoir to the palate-surface; the combination of the projecting cup-flange attached to said top plate, the hollow elastic ball seated directly within said flange, a cement material attaching said ball to its seat and the short

30 tube within said seat passing from the interior of the ball to the interior of the fountain-reservoir, as set forth.

2. In a stencil or marking ink fountain the reservoir for containing the ink or color formed with its top plate or palate-surface sunk below the level of the top edge of the surrounding rim, and means, consisting of the closely-attached elastic ball supported thereon substantially as described, for controlling the delivery of ink from the reservoir to the palate-surface, as set forth. 40

3. A utensil for the purpose specified, comprising the cylindrical metal can having the handle D and recessed top and bottom, the flat top with the orifice C and depending tube C' connected therewith, the air-tight screw-cap B, the wire brush-supporter E fixed to the side of the can, the upward cup-flange H, the hollow rubber ball F seated within said flange, and the tube G communicating between the interiors of said ball and can, all substantially as shown and described. 45 50

Witness my hand this 11th day of July, A. D. 1896.

FREDERICK E. FROST.

Witnesses:

CHAS. H. BURLEIGH,
H. M. CALDWELL.