J. HARTSHORN & D. H. CHAMBERLAIN.

FOUNTAIN MARKING BRUSH.

No. 12,309. Patented Jan. 30, 1855.

Fig. 1.

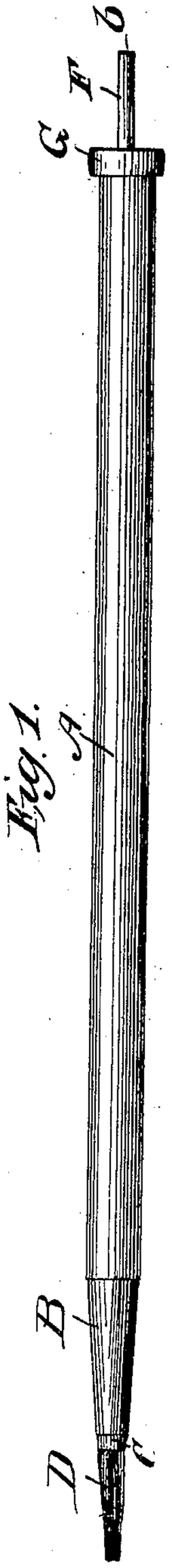
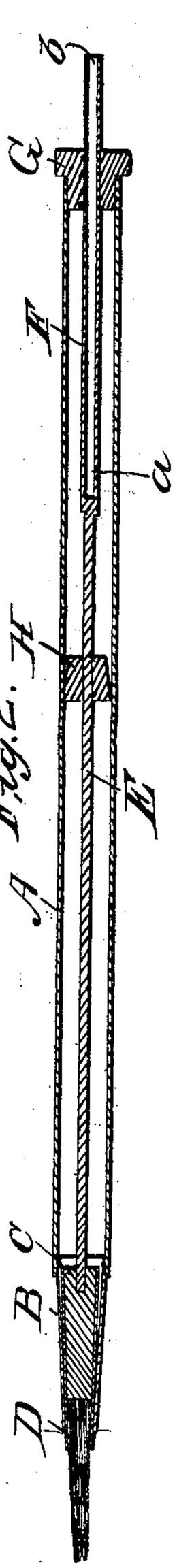


Fig. 2.



UNITED STATES PATENT OFFICE.

DEXTER H. CHAMBERLAIN AND JOHN HARTSHORN, OF BOSTON, MASSACHUSETTS.

FOUNTAIN-BRUSH.

Specification of Letters Patent No. 12,309, dated January 30, 1855.

To all whom it may concern:

Be it known that we, DEXTER H. CHAMBERLAIN and JOHN HARTSHORN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new or Improved Fountain Marking Brush or Implement; and we do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes a side elevation; Fig. 2, a central and longitudinal section of a fountain marking brush constructed on the principles of our invention.

A, in the said drawings represents a tubular handle or reservoir for containing the marking fluid or paint; the lower end of this tube being provided with a tapering frusto conical valve socket, B, which is intended to receive a tapering conical frustum valve, C, formed with respect to the socket, B, as seen in Fig. 2. To the lower or smaller end of the valve, C, a marking brush or implement, D, is affixed and made to project, while from the upper or other end of the said tapering frustum, a rod, E, is extended either entirely through, a tubular handle or partially through it and is affixed to a tube, F, said tube having its axis in line with that of the rod. This tube is caused or made to slide through and turn freely in a plug or stopper, G, inserted in the upper end of the handle. An opening is made through the tube near its lower end as seen at, *a*, while the outer or upper end of the tube is open as seen at, *b*.

Within the handle or reservoir, A, and sliding freely on the rod, E, is a float, H, made of cork or some other suitable material and so formed and adapted to the rod and the inner end of the tube, F, as to be capable of being slid directly over and so as to cover the opening, *a*, of tube, F. The tapering frusto conical valve, C, is made with its smaller diameter a very little less than that of the tubular socket, B, while its longer diameter is decreased in a greater proportion with respect to the longer diameter of the socket.

By taking hold of that part of the tube F, that extends out of said tube, A, the tapering valve C, may be drawn inward so as to open a passage between it and the socket in order that the fluid may flow down upon the outside of the brush, provided the reservoir, A, is supplied with such fluid. By means of said projecting part of said tube F, either a sliding or rotary motion or both may be imparted to the tapering valve so as to relieve it from such liquid matter as may at any time become dried or gummed upon it, and which would thereby have a tendency to arrest the free flowage of the marking fluid out of the fountain and upon the brush or marking implement.

Whenever, when the brush may be in operation, it may be desirable to increase the flowage of the marking fluid, it will only be necessary to bear the brush down upon a surface, (or that which is being marked) so as to force the valve inward a little or sufficiently to increase the flowage of marking fluid to the extent that may be required. Again whenever it may be desirable to supply the fountain with marking fluid, the brush end of it may be inserted in such fluid while the valve is drawn backward into its socket. Under these circumstances a person has only to apply his mouth to the outer end of the tube F, and exhaust said tube and the fountain of air; the external pressure of the atmosphere on the fluid will cause such fluid to rush up into the fountain, A, until the float, H, is elevated by it so as to close the opening, *a*, of the tube, the float serving to prevent any of the marking fluid from being drawn into the tube, F, and from thence into the person's mouth applied to said tube.

In most if not all fountain marking brushes heretofore constructed, it has been found very difficult if not impossible to maintain a free flowage of the marking liquid out of the fountain and upon the brush or marking implement. By our peculiar construction of the valve and socket thereof and connecting with such valve a rod, E, or rod and its tube, F, made to extend through and out of the fountain as above specified, we are enabled at any time whenever it may be necessary to rotate the valve in the socket and to slide it therein or to both rotate and slide it so as to remove from it any dried or thickened marking fluid which may be an obstruction to the free flowage through the valve opening.

By having the annular space, out of which the marking paint or fluid escapes from the fountain extending around the brush or so arranged with respect to it, that the fluid escaping may pass down on the outside of

the brush and inward toward its axis instead of passing first into the body of the brush and outward toward its outer surface, an important advantage is gained not only in the manner of applying the fluid to the brush, but in increasing the opening, so that very thick marking fluid may be used which could not be made to flow in a brush when introduced by a tube extending into the middle of the brush, and provided with a rod or pin valve.

We do not claim the combination of a fountain or reservoir with a brush or marking implement; nor do we claim a tapering valve applied to a long rod and working in a socket or tapering hole made through the bottom of a fountain pen holder, the long rod extending through the fountain thereof; nor do we claim a movable pin inserted in a conical tube extending into the body of a brush and arranged at the lower end of a fountain tube or reservoir, such pin in order to increase the flow of the marking fluid into the brush being raised by pressing the brush downward against an object, but

What we do claim is—

1. Arranging or applying the brush, D, the valve, C, its rod, E, and the socket tube, B, together as described so that not only shall the brush be fixed directly to the valve and be movable, backward and forward and around with and by it, but the socket be made to so encompass the valve and brush that the marking fluid may flow down around the external surface of the brush before penetrating into its exterior the same affording important advantages in cleansing the valve and maintaining the flow of marking liquid.

2. We do not claim the application of a piston to the reservoir so that by the movement of such piston, the reservoir may be filled with or emptied of marking fluid, but we claim so combining with the slide E, and the fountain A, a mouth tube, F, open at both ends, that such tube may not only serve to enable a person to supply the reservoir with paint or marking fluid in manner as described, but also to enable him to move longitudinally or rotate the rod, E, and its valve and brush.

3. And we claim the float, H, in combination with the opening at the inner end of the tube, F, and as arranged to move on the slide rod, E, and within the tube, A, and to operate therewith substantially in manner and for the purpose as stated.

In testimony whereof we have hereunto set our signatures this eighth day of November A. D. 1854.

DEXTER H. CHAMBERLAIN.
JOHN HARTSHORN.

Witnesses:
R. H. Eddy,
F. P. Hale, Jr.