S. CRANE.
Brush.

No. 207,256. Patented Aug. 20, 1878.

Fig. 1.

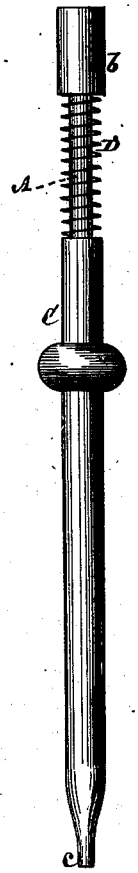


Fig. 2.

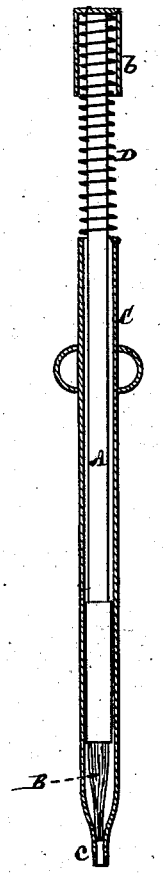


Fig. 3.

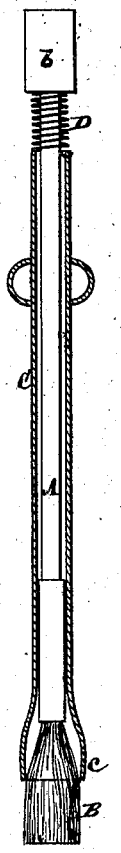
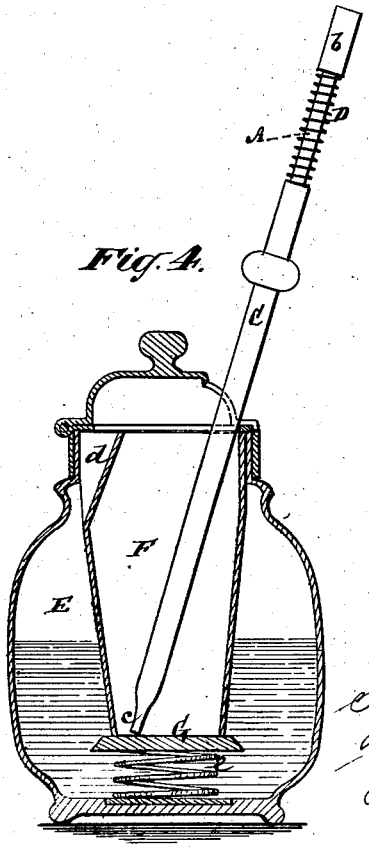


Fig. 4.



Witnesses
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Fred. Haynes

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UNITED STATES PATENT OFFICE.

SEYMOUR CRANE, OF DALTON, MASSACHUSETTS.

IMPROVEMENT IN BRUSHES.

Specification forming part of Letters Patent No. **207,256**, dated August 20, 1878; application filed May 22, 1878.

To all whom it may concern:

Be it known that I, SEYMOUR CRANE, of Dalton, in the county of Berkshire and State of Massachusetts, have invented a new and useful Improvement in Brushes for Mucilage, Varnish, and other Substances, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention consists in a brush composed of a stem with attached tuft, a sheath loosely inclosing the stem, and a spring applied to the stem and sheath to force the latter outward, whereby the tuft is brought within the sheath when the spring is released, and is projected beyond it when the spring is compressed.

A mucilage-brush thus constructed renders unnecessary any wiping of the brush on the mouth of the cup to clear it, and so avoids objectionable accumulation of gum around or about said mouth; likewise does away with irregular spreading of the bristles, and prevents the brush taking up any excess of mucilage.

These and other advantages not only pertain to the brush when used for mucilage, but also when used for varnish and various other substances.

Figure 1 represents a longitudinal exterior view of a brush constructed in accordance with my invention; and Figs. 2 and 3, longitudinal sections of the same in planes at right angles to each other, and showing, respectively, the tuft of the brush as drawn within the shield and as extended beyond it. Fig. 4 is a vertical section of a mucilage cup or bottle of peculiar construction, and in connection with which my improved brush can be used to great advantage.

The brush proper consists of a stem, A, which may be of wood, as usual, a tuft, B, of hair or bristles at one end of said stem, and a cap, *b*, at the head or other end thereof. C is a tubular metal or other sheath, arranged to freely inclose the stem for the greater portion of its length, and preferably made with a flattened outer extremity, *c*, to give a flattened or spread form to the tuft B, which, when requiring to be used, is projected through it, and to form a clearer to the tuft. D is a spring, attached at its one end to the inner extremity of the sheath, and to the cap *b* at its other end, or otherwise applied to the stem and sheath, to force the latter outward, or, in other words, to draw the tuft within the sheath, as shown in Figs. 1 and 2, but which spring, when compressed by the finger applied to the cap *b*, serves to project the tuft through and beyond the outer extremity *c* of the sheath, as shown in Fig. 3.

The mucilage cup or bottle which I prefer to use in connection with the brush, and which I propose to make the subject of a separate application for Letters Patent, mainly consists of an outer reservoir or chamber, E, and a well, F, to which the mucilage, that is supplied to the reservoir by a duct, *d*, is admitted in small quantities, as required, by bearing down with the outer extremity, *c*, of the sheath of the brush on a valvular bottom, G, to the well, closed by a spring, *e*.

Such a cup or bottle I prefer, inasmuch as it avoids smearing the brush-stem or its sheath with gum, as when dipping the brush into a full cup or bottle, as ordinarily constructed; but the brush may be used in connection with any mucilage cup or bottle.

After the well F has been charged with a working quantity of mucilage, as desired, the finger is applied to the cap *b* of the brush, to project the tuft B through the mouth of the outer extremity, *c*, of the sheath, to take up the requisite supply of mucilage from the well, should the mouth of the extremity *c* not contain sufficient mucilage to supply the tuft as it is projected through the sheath.

In using the brush, the finger is kept pressed on the cap *b* to keep the tuft B extended, as shown in Fig. 3; but after use, pressure is taken off said cap, which causes the spring D to draw the tuft up within the sheath again, and in doing so makes the sheath act as a clearer to the tuft. Furthermore, the sheath not only acts as a clearer of the tuft, but it keeps the latter in form and prevents all irregular straggling or spreading of the hairs or bristles; likewise prevents excess of gum being taken up by the brush, and operates as a regulator of the supply, thereby doing away with that objectionable accumulation of gum

about the mouth of the cup or bottle which is caused by wiping off on said mouth surplus gum taken up by the brush.

I claim—

A brush composed of a stem with attached tuft, a sheath loosely inclosing the stem, and receiving the tuft when not in use within it, and a spring applied to the stem and sheath, essentially as and for the purpose or purposes described.

SEYMOUR CRANE.

Witnesses:
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