

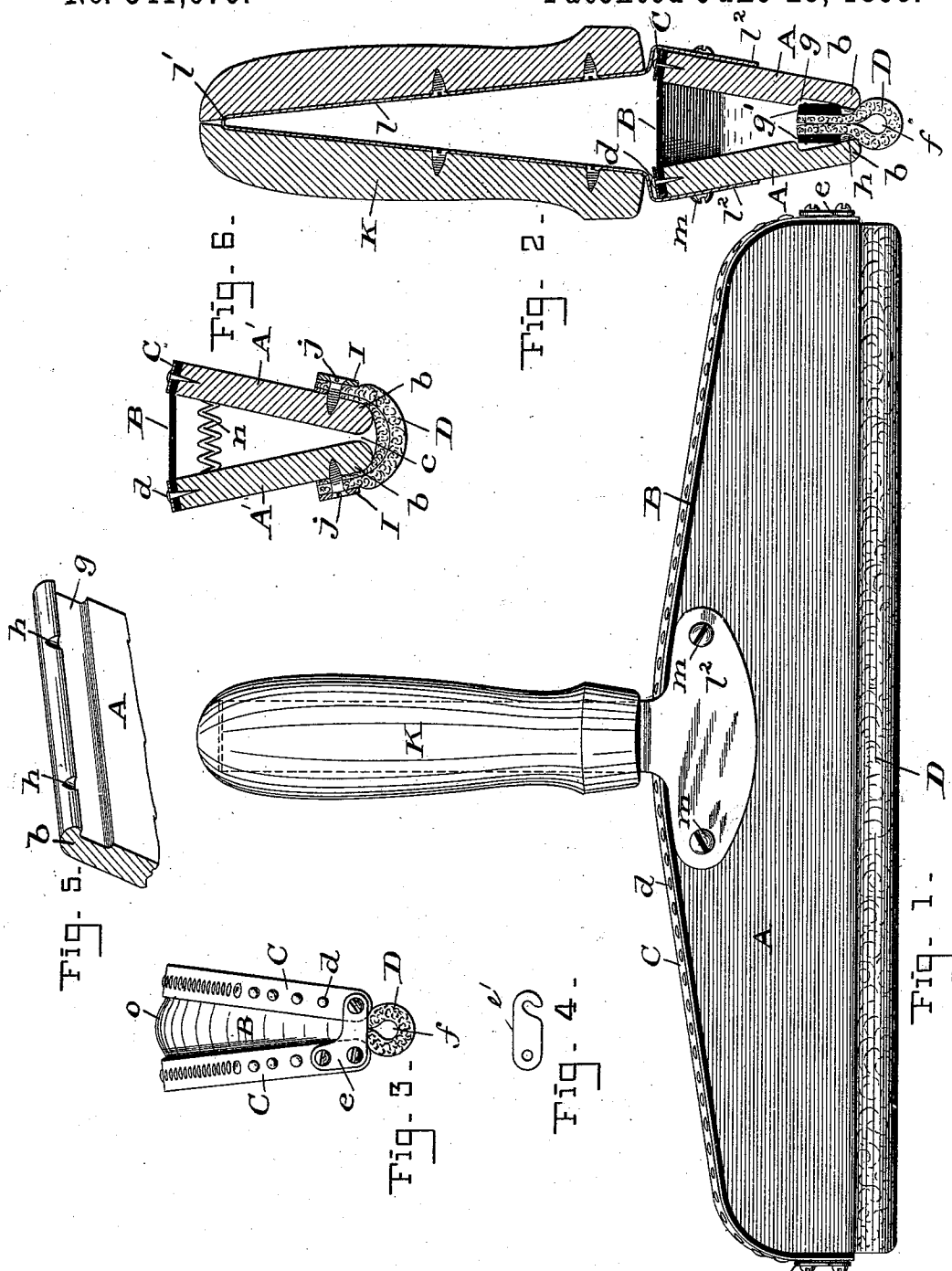
(No Model.)

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BRUSH FOR APPLYING SENSITIZING SOLUTIONS.

No. 541,670.

Patented June 25, 1895.



Witnesses

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BRUSH FOR APPLYING SENSITIZING SOLUTIONS.

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To all whom it may concern:

Be it known that I, EDWARD A. OSSE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Brushes for Applying Sensitizing Solutions, of which the following is a specification.

This invention relates to an improved brush for applying sensitizing solutions to paper or fabrics; and the objects of the invention are, first, to provide means which will enable the work to be done without liability of the salts and acids contained in the different solutions employed in sensitizing coming in contact with the hands of the operator, as is the case when using an ordinary sponge; second, to insure an even and uniform spreading of the solution, and, third, to provide for increasing or diminishing the flow of the fluid and for drawing up any excess or surplus of fluid that may be on the paper surface by suction, somewhat on the principle of soaking with a sponge or blotting paper.

In the preferred form of brushes the solution is controlled either for feeding to the paper or withdrawing from the paper, by the manipulation of a forked spring handle, or, when the handle is omitted, by compressing the two sides or relaxing the pressure on the sides of the brush-body. The solution is distributed upon the paper by a porous fabric spreader or smoother. In these brushes it is necessary that the porous spreader or smoother be frequently and thoroughly cleansed and in consequence of deterioration and wear it has to be renewed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the improved brush with handle. Fig. 2 is a cross-section taken through the center of the brush and handle. Fig. 3 is an end view of the brush without handle. Fig. 4 is a view of a modified hinge-link connection. Fig. 5 is a bottom edge view of part of one side of the brush, showing the notches. Fig. 6 is a cross-section of the brush without the handle, showing the porous distributor applied in a modified form.

The holder or body of the brush consists of two sides, A, A, which are of some suitable stiff or inflexible material as wood, metal or

gutta percha. In cross-section the body is nearly V-shaped and at the bottom or narrowest part the lower edges, *b*, are separated and form a longitudinal slot, *c*, and the sides diverge or spread apart as they extend up. These sides, A, are united by a suitable elastic or flexible material, B, such as rubber or leather which extends all along the edges of the ends and top and may be secured by cement or by screws or tacks, making an air-tight joint. In the present instance, a thin metallic strip, C, is held by tacks, *d*, as shown. At each end the two sides, A, are jointed at their lower edges by a plate, *e*, Fig. 3, or a modified plate link *e'*, Fig. 4. These plates (whichever form is used) keep the two sides, A, in proper relative position and allow said sides to have a hinged or jointed movement.

The porous distributor, D, in Figs. 1, 2 and 3, comprises a piece of felt or other fabric folded to form a loop, *f*, and the two edges inserted into the longitudinal slot, *c*, and filling or closing said slot. The inner surface of each side, A, has a longitudinal groove, *g*, see Fig. 2, and at short intervals are notches, *h*. Two strips or beads, *g'*, are secured lengthwise of the porous distributor so as to make on opposite sides thereof a beaded edge which fits into the said longitudinal groove, *g*, on the side. These strips or beads, *g'*, serve to retain the porous distributor in the slot, while the loop part, *f*, projects therefrom. This part is flexible and serves as the brush sweep. The porous distributor, D', may be made to encircle the bottom edges and cover the longitudinal slot, as in Fig. 5. In this case clamp pieces, I, are secured to the sides by screws or tacks, *j*.

The handle, K, comprises a forked flat spring, *l*, folded at, *l'*, and the ends, *l''*, secured, respectively, to each side of the body or holder, A, by means of screws, *m*, solder, or the like, as the case may require. For greater convenience suitably shaped grasping pieces, K, are secured to the springs, *l*, and thereby form a handle. This spring also tends to keep the two sides, A, apart, though the elastic strip, B, also answers this purpose alone. Instead of the spring described, a coil spring, *n*, see Fig. 6, between the sides, A, would answer the same purpose. By the construction of the holder composed of the two longi-

tudinal sides, A, elastic strip, B, and joint plates, the capacity for compression and expansion is very evident. The flexible or elastic strip, B, may be made to bend or fold inward or outward of the sides, A, (see the bulge, *o*, in Fig. 3) on these sides being compressed.

The operation of the brush is as follows: The flexible spreader or distributor, D, is dipped in the sensitizing solution or other fluid, and the space or chamber in the holder is charged by first compressing the handle, K, or the sides, A, and then relaxing the pressure which causes an inward suction of the fluid through the spreader. The brush being charged, the distributor, D, is drawn over the surface of the paper or fabric to be sensitized. By compressing the handle, K, or the sides, A, the solution is fed to the paper which thereby is quickly coated. When too much of the sensitizing fluid has been expressed and there is a surplus amount on the surface of the coated paper or fabric, which on drying would disfigure the sheet by showing blotches, the brush being now partly compressed, by drawing it evenly over the surcharged sheet and at the same time gradually relaxing the pressure on the handle, K, or sides, A, the suction thus produced will take up all this surplus fluid, leaving an evenly coated surface.

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

35 1. A sensitizing brush consisting of a holder

having two stiff or inflexible parallel sides whose lower edges are separated to form a slot a strip of elastic or flexible material uniting the ends and tops of said sides—leaving the tops of the stiff sides compressible toward each other; and a porous fabric distributor closing the said slot and projecting therefrom. 40

2. A sensitizing brush consisting of a holder having two stiff or inflexible longitudinal sides whose lower edges are separated to form a slot; a joint plate at each end jointing the two sides at their lower edges where the slot is formed; a strip of elastic or flexible material uniting the ends and tops of said sides—leaving the sides compressible toward each other; and a porous fabric distributor, D, closing the said slot and projecting therefrom. 45

3. A sensitizing brush consisting of a holder having two longitudinal sides whose lower edges are separated to form a slot; a strip of elastic or flexible material uniting the ends and tops of said sides—leaving the sides compressible toward each other; a porous fabric distributor, D, closing the said slot and projecting therefrom; and a two-part handle each part of which is attached to one of the sides. 55

In testimony whereof I affix my signature in the presence of two witnesses. 60

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Witnesses:

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