

(No Model.)

J. F. BOWDITCH.
BRUSH.

No. 334,336.

Patented Jan. 12, 1886.

Fig. 1.

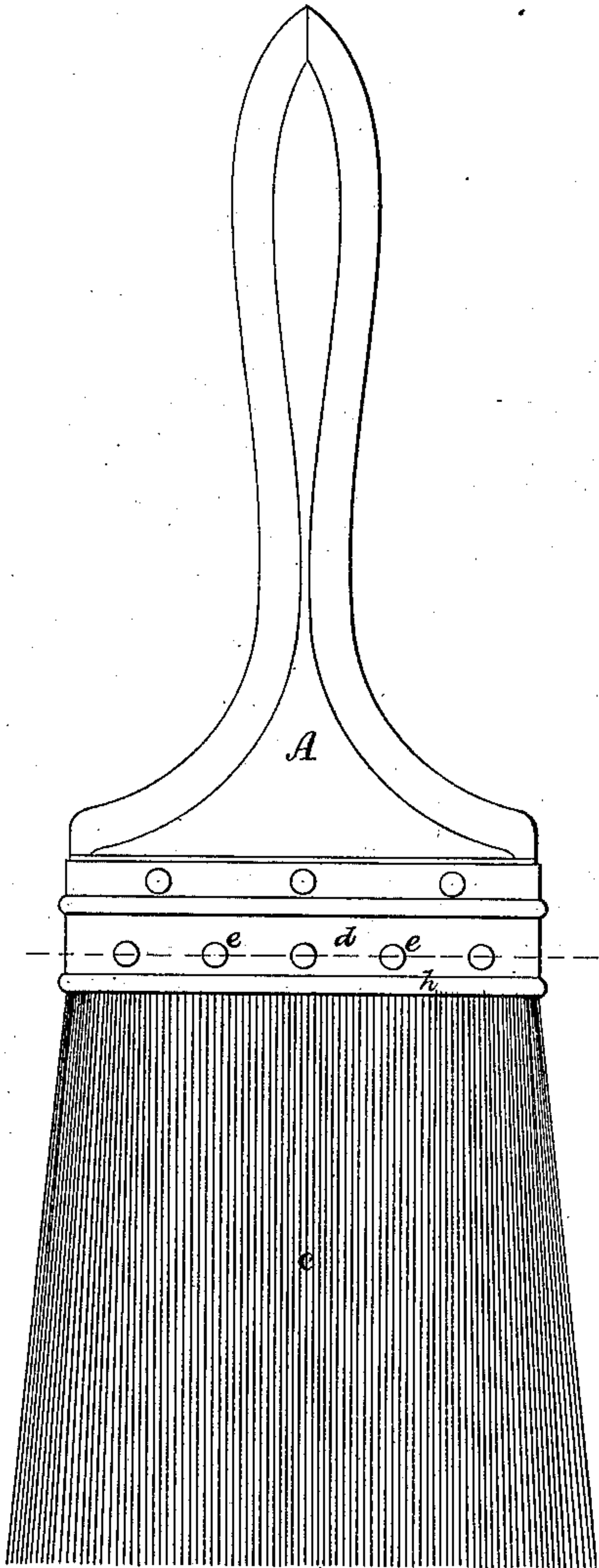


Fig. 3.

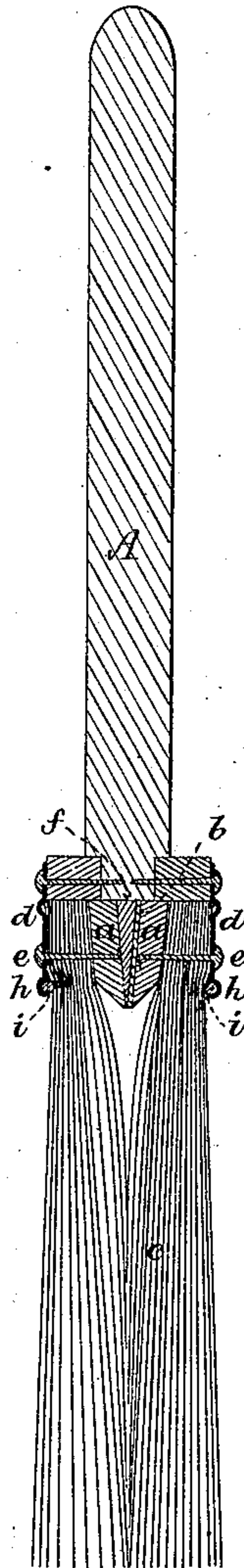
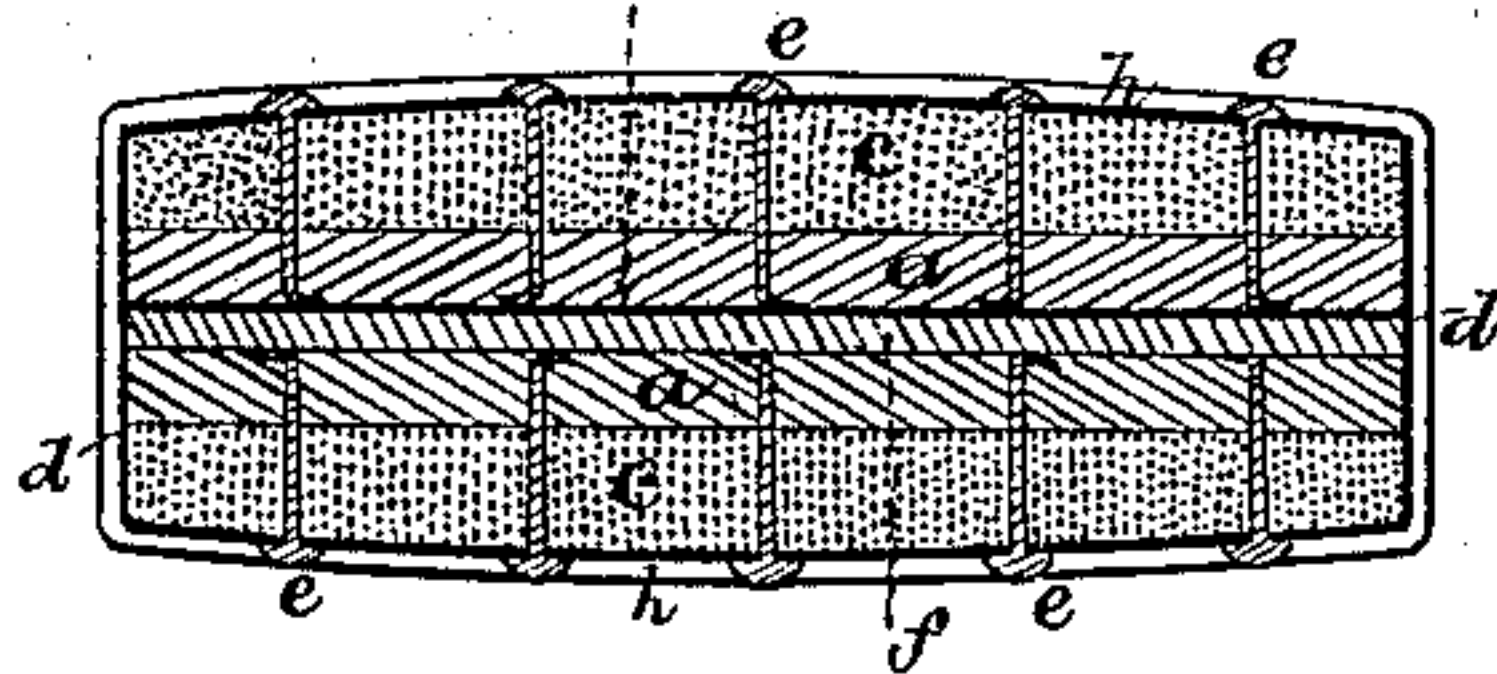


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN FRANCIS BOWDITCH, OF REVERE, MASSACHUSETTS.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 334,336, dated January 12, 1886.

Application filed February 20, 1885. Serial No. 156,543. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANCIS BOWDITCH, of Revere, in the county of Suffolk, in the Commonwealth of Massachusetts, have
5 invented a new and useful Improvement in Brushes; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

10 Figure is a front view, Fig. 2 a horizontal section, and Fig. 3 a transverse and longitudinal section, of a brush provided with my invention, the nature of which is defined in the claims hereinafter presented.

15 In constructing the said brush I first insert between the strips or pieces of wood *a a* a metallic plate, and place the three in the middle of the upper part of a mass of bristles, *c*, encompassed by a ferrule or hoop, *d*, to project
20 somewhat above such mass, as represented. This ferrule I have channeled or grooved on each of its opposite sides at the lower part thereof and on the inner surface of such, as shown at *h*, the channel being to receive with-
25 in it and to hold in place a piece of round wire, *i*, to extend from end to end of the ferrule and to bear against the next adjacent side of the mass of bristles. Next, I drive nails *e* through opposite sides of the ferrule, the mass
30 *c* of bristles, and the strips *a a*, and against the metallic plate *b*, so as to cause such nails by such plate to be clinched at their points upon the pieces *a a*. Having done this, I insert the
35 pieces of wire *i* in the channels *h h*, and also insert a wedge, *f*, between the metallic plate *b* and one of or each of the pieces *a*, and drive in such wedge or wedges, so as to spread the
40 pieces *a a* and the mass of bristles apart within the ferrule, in which case the said mass will also be forced laterally against the two pieces of wire. Prior, however, to inserting the bristles within the ferrule, the mass at its upper
45 part is to be dipped in a suitable liquid cement, to cause it to subsequently adhere to the inner surface of the ferrule and the outer surfaces of the pieces *a a*, and also to cause the bristles of the mass where within the ferrule to adhere to each other. Next, the base part of
50 the handle *A* is to be inserted within the upper part of the ferrule, so as to cover the heads of the bristles and the upper edges of the plate

b, the wedge *f*, and the pieces *a a*, cement, if necessary, being first applied to the base of the handle or part to enter the ferrule. Nails are next to be driven through the ferrule into
55 the base part of the handle, in order to confine the handle to the ferrule. In some cases, before driving the wedge *f* between the strips *a a*, I remove from them the metallic strip *b*; but, generally speaking, I prefer to allow it
60 to remain in its place between such strips, for after having driven the wedge between the metallic plate *b* and one of the strips *a* the nails generally have to be driven farther in, for, owing to the compression of the bristles
65 in the ferrule, such nails become started somewhat back or loosened in the ferrule.

I am aware that it is not new to form in a tapering or wedge-shaped head of a brush a
70 recess to receive, temporarily, a metallic or clinching plate, and to have such head and plate inserted within a mass of bristles encompassed by a ferrule, and also to have nails driven through the opposite sides of such ferrule into and through the mass of bristles, and
75 into the head and against the metallic plate, whereby by such plate the points of the nails become clinched, all being as represented in the United States Patent No. 207,786, dated
80 September 3, 1878, and granted to John L. Whiting. Although such a mode of making a brush in some respects is analogous to mine, it differs in others essentially therefrom, as I do not form in the brush-head a recess to re-
85 ceive the clinching-plate; but I use two separate strips of wood and place the plate between them, and the whole within the mass of bristles and the ferrule encompassing such, and after having driven through the ferrule, the bristles, and the two strips, and against
90 the clinching-plate the nails for securing together the said ferrule, bristles, and strips, I employ a wedge or wedges to force apart the two strips. In some cases I have this wedge or wedges attached to and to project directly
95 from or to be in one piece with the handle; but it is preferable to have them in separate pieces.

I claim—

1. The combination of the ferrule *d*, the mass
100 *c* of bristles extending within it, and the two strips *a a*, inserted in the said ferrule and mass

and connected thereto by nails *ee*, driven into them and the two strips, and clinched by a metallic plate, *b*, placed between such strips, with a wedge, *f*, driven between such strips, 5 so as to force them asunder within the mass of bristles and tighten it in the ferrule.

2. The combination of the ferrule having channels and wires therein in the lower parts of its sides, as described, the mass of bristles 10 extending within it, and the two strips *aa*, inserted in the said ferrule and mass and connected by nails driven into them and the two strips, and clinched by a metallic plate placed between the latter with a wedge, *f*, 15 driven between such strips, so as to force them asunder and the bristles against the sides of

the ferrule and the wires placed therein, all being substantially as set forth.

3. The combination of the handle placed and fixed in the upper part of the ferrule, with such 20 ferrule and its mass of bristles, and with the two strips *aa* and the wedge inserted between them, such strips, ferrule, and mass being connected by nails extending into them and clinched against a metallic plate placed be- 25 tween the strips, all being substantially as represented.

JOHN FRANCIS BOWDITCH.

Witnesses:

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