

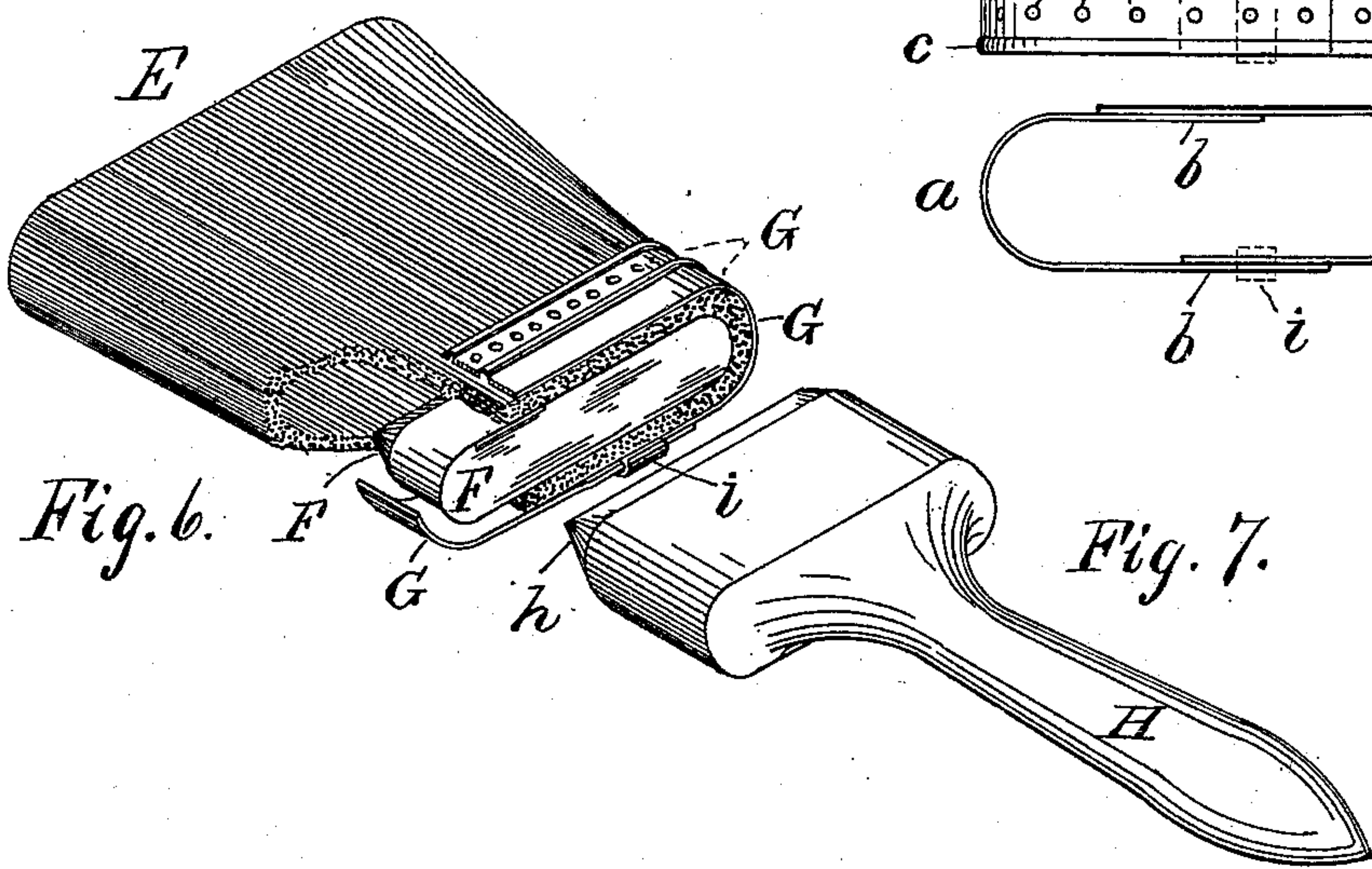
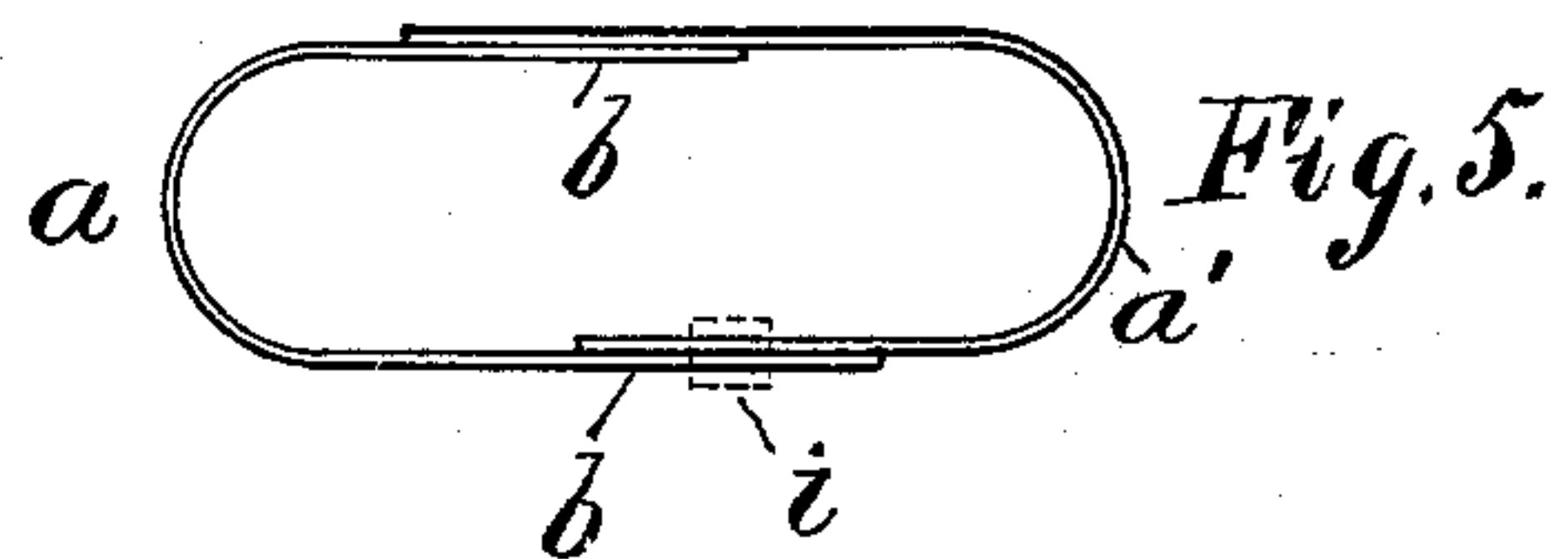
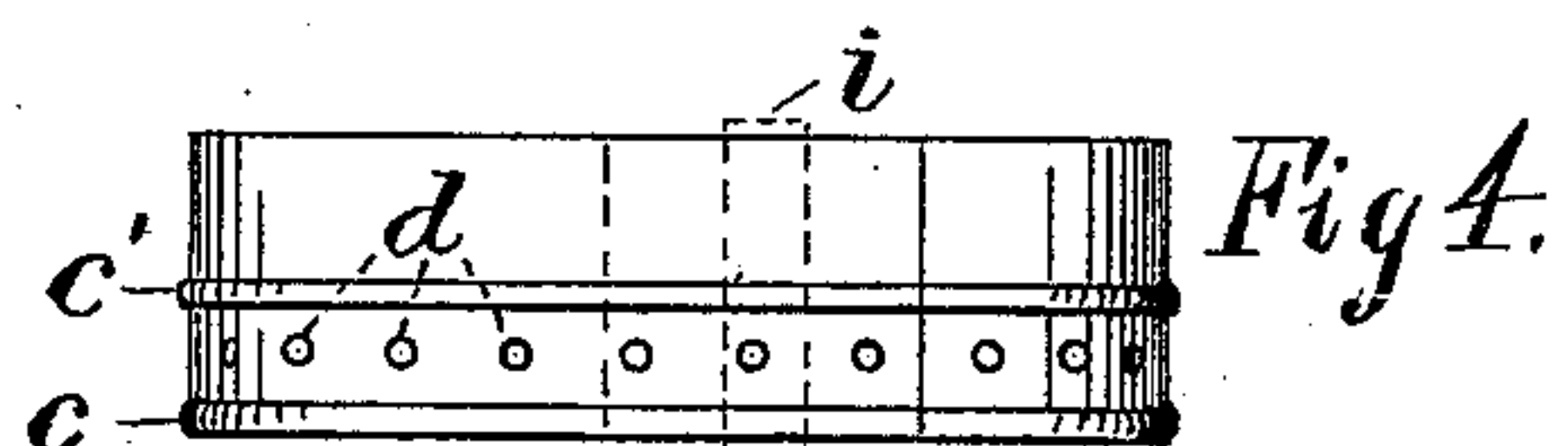
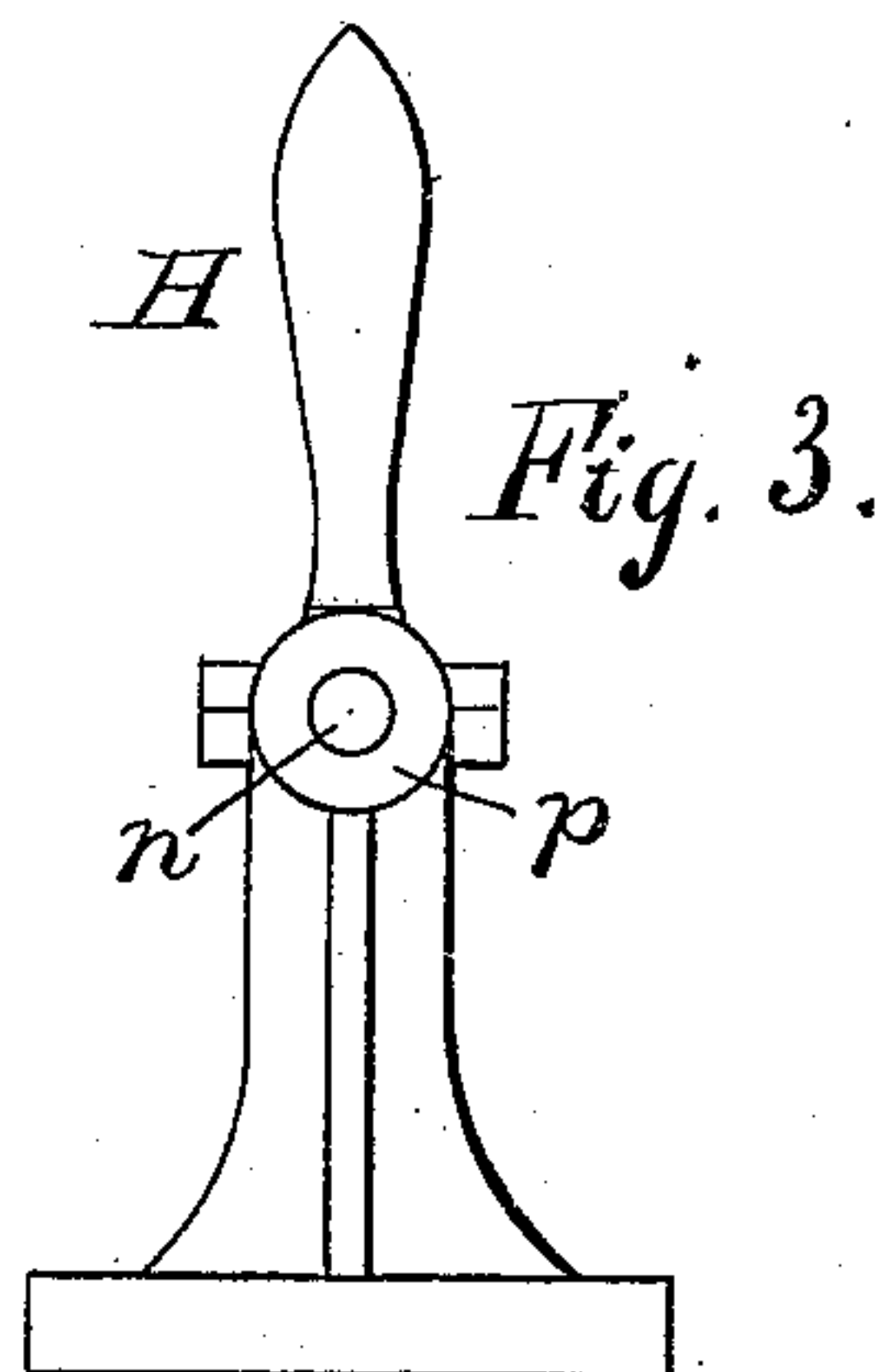
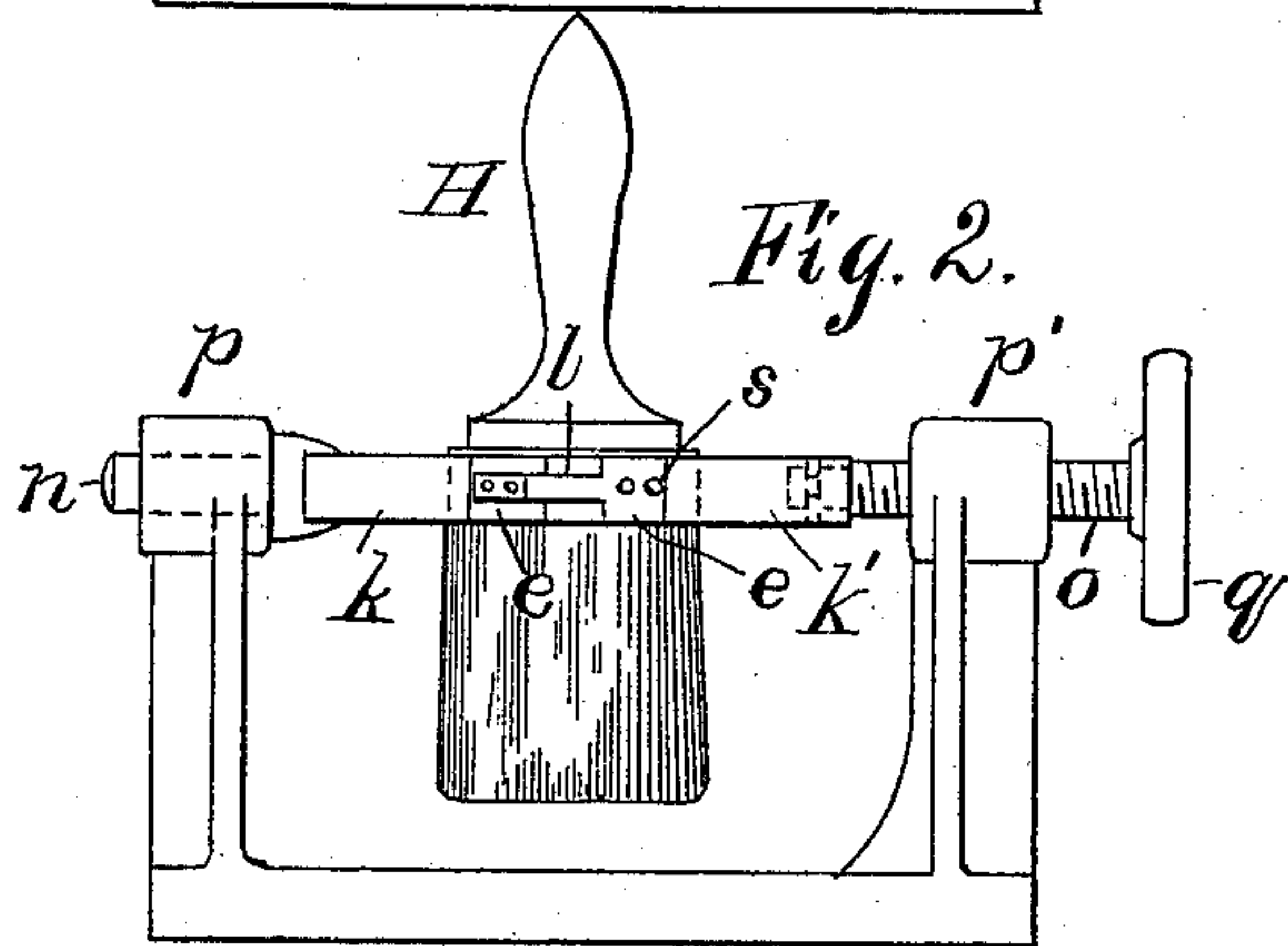
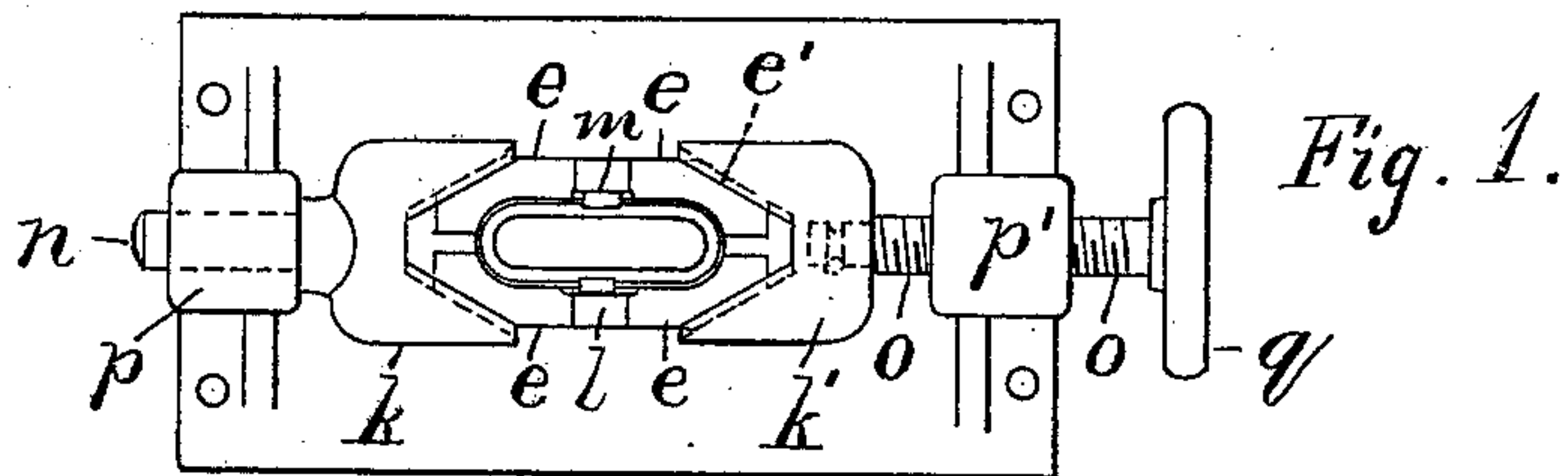
(No Model.)

S. A. VERBRYCK.

BRUSH BAND.

No. 370,717.

Patented Sept. 27, 1887.



Attest.
L. Lee.
Henry J. Theberath.

Inventor.
Samuel A. Verbyck,
per Crane & Miller, attys.

UNITED STATES PATENT OFFICE.

SAMUEL A. VERBRYCK, OF BELLEVILLE, NEW JERSEY, ASSIGNOR TO J. FINLEY SMITH, OF NEW YORK, N. Y.

BRUSH-BAND.

SPECIFICATION forming part of Letters Patent No. 370,717, dated September 27, 1887.

Application filed March 18, 1886. Serial No. 195,738. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. VERBRYCK, a citizen of the United States, residing in Belleville, Essex county, New Jersey, have invented certain new and useful Improvements in Brush-Bands, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 My invention consists in a collapsible sheet-metal band of particular construction for retaining the bristles upon flat brushes, the band being constructed in two parts, each formed with a loop to fit the edge of the brush, and
15 with two flat ends to extend along the sides of the brush, and adapted to overlap and to slide upon one another when compressed in the manner described herein, so that the overlapping ends may be secured together while
20 the brush and band are under compression.

Heretofore bands have been made in two parts; but such parts have not been made of similar form and adapted separately to fit the opposite edges of the brush and provided
25 with overlapped ends upon both the flat sides of the brush. Bands have also been made in one piece adapted to wind around the bristles, and to have their ends secured together by overlapping, and solid bands have been compressed
30 upon the brush to upset the edge of the band.

My invention does not, therefore, consist in forming a band merely with overlapping ends or in compressing it upon the brush, but in the formation of the band in two parts fitted separately to the edges of the brush, and adapted
35 for application to brushes of various widths, by reason of the flat overlapping ends which lie upon the flat sides of the brush, and are adapted to slide upon one another to any extent before fastening.

My construction is also especially adapted for compression simultaneously upon the edges and sides of the brush, as the separate loops at the opposite ends of the divided band
45 are not deformed by such pressure; but the contraction is effected chiefly by the sliding of the flat ends upon one another.

A special apparatus is illustrated in the drawings for applying pressure simultaneously to different sides of the band; but my
50 invention may be practiced by any other suitable

apparatus, and I have not claimed herein that which is shown in the drawings, as I have heretofore patented a suitable machine for such purpose on May 4, 1886, No. 341,189. 55

Figure 1 of the drawings shows a plan of the apparatus operating upon a brush, the upper part of the block being removed to avoid obscuring the band. Fig. 2 is a side elevation of the same parts. Fig. 3 is an end
60 view of the left-hand end of such apparatus. Fig. 4 is a side elevation, and Fig. 5 a plan, of a collapsible band made in two sections. Fig. 6 is a perspective view of the bristles and band applied to a plug, the bristles and
65 band being broken away at the nearer corner to expose the plug; and Fig. 7 is a perspective view of the brush-block adapted to drive out such plug and replace the same within the bristles before the band is secured thereto. 70

The band, as shown in Figs. 4 and 5, consists in two bent loops of sheet metal applied to the brush with their ends overlapped, and adapted to yield when compressed at different
75 points upon the brush, so that the overlapped ends may slide upon one another and be retained in such condition by inserting one or more nails into the block through the ends where thus lapped.

In the drawings the entire band is shown of
80 the oblong form required for a flat brush, and made in two parts, *a a'*, having curved loops, with overlapping ends *b* at the opposite flat sides thereof.

Corrugations *c c'* are formed around the
85 band longitudinally to stiffen and ornament the same, and a row of holes, *d*, is formed in the band between the corrugations to receive a series of nails for firmly securing the band to the block. The corrugations also serve to keep
90 the edges of the overlapping ends even with one another by guiding them during their application to the brush and compression thereon, and they also serve partially to hold the two parts of the band in place when handling them
95 together. As such a strip of sheet metal is quite flexible, it is obvious that when pressed against the ends and sides of a flat brush-block it would tend to clamp all the bristles equally upon the same, and that the tension induced
100 by such pressure would be permanently retained by securing the overlapping ends of the

band to one another and to the brush-block by inserting a nail through each of such ends into the block.

I find it convenient in practice to lay up the
5 bristles upon a plug, as at F in Fig. 6, the
bristles E being laid thereon and the band G
being applied over the same by first wrapping
a piece of smooth paper around the points of
such bristles and slipping the band over such
10 paper with its overlapping ends secured mov-
ably by a thin clip, *i*. Such clip is indicated
in dotted lines in Figs. 4 and 5, and at *i* upon
the lower side of the band in Fig. 6. The
bristles are then ready for application to the
15 block by the following process: The bristles are
grasped firmly by their points, and the brush-
block H, formed with a tapering point, as
shown at *h* in Fig. 7, is forced into the space
occupied by the plug, pushing the same far-
20 ther down between the bristles, whence it is
afterward easily removed. The band is then
subjected to pressure, by any suitable means,
upon its flat sides and rounded ends simulta-
neously, and the band pressed firmly upon the
25 bristles and the block, thus forcing the over-
lapping ends past one another to the utmost
extent. While thus held under compression,
the overlapping ends are nailed to the block
by inserting one or more nails through each,
30 and the pressure is then relaxed and the brush
removed from the compressing apparatus. The
same process may then be repeated upon
another brush, and the remainder of the nails
required to secure the band permanently to
35 the block through the bristles may be applied
at any convenient time.

The apparatus shown herein for compress-
ing the band consists in four jaws, *e*, formed
with inclined bases and fitted by dovetails *e'*
40 into tapering sockets *k k'*. The opposed jaws
at each flat side of the brush are fitted to-
gether with a slot and tongue, *l*, and the in-
terior of the four jaws is shaped to fit the ex-
terior of the band.

45 Notches *m* are formed in the jaws to avoid
the clips *i*, which, being of soft metal, may be
readily pulled off after the jaws have clamped
the band.

The socket *k* is mounted upon a pivot, *n*, in
50 a horizontal bearing, *p*, and the socket *k'* is
swiveled upon the point of the screw *o* in a
similar bearing, *p'*.

A hand-wheel, *q*, upon the end of the screw
furnishes the means of pressing the sockets to-
55 ward one another, and the inclined bearings

of the jaws in the sockets operate to compress
the band longitudinally and laterally at the
same time.

Holes *s* are formed at several points in the
jaws *e* to admit a nail, and the overlapping 60
ends of the band may thus be secured to one
another and to the block under compression in
the jaws.

The mounting of the sockets upon the pivot
n and screw *o* enables the operator to turn 65
either side of the brush uppermost, and thus
to apply a nail at the desired point through
either of the holes *s* by means of a small punch.

The bristles would of course be provided
with glue to secure them to the block before 70
the band is compressed upon them, and the
butts of the bristles would afterward be cov-
ered with cement or varnish, or finished in
any other desired manner.

I am aware of the state of the art shown in 75
United States Patents Nos. 171,406, 33,010,
230,277, 327,723, and in British Patents Nos.
638 of 1857 and 4,017 of 1877, and hereby dis-
claim the constructions shown therein, or any
construction merely involving the clamping 80
of a continuous band upon a brush. My in-
vention differs from any such constructions in
the use of a band constructed in two parts,
each of which has a curved loop and project-
ing ends adapted to lie upon the sides of a 85
flat brush and to be overlapped thereon and
nailed together and to the brush-block while
under pressure.

I also disclaim United States Patent No.
341,189, which I have assigned to other par- 90
ties.

Having thus set forth the nature of my in-
vention, what I claim herein is—

A collapsible sheet metal band for flat bris-
tle brushes, constructed of two similar parts of 95
sheet metal, each having a curved loop or bend
and straight ends adapted to overlap upon the
flat sides of the brush, and provided each with
two longitudinal corrugations having between
them an external recess, the band being pro- 100
vided with holes in said recess to receive nails,
as and for the purpose set forth.

In testimony whereof I have hereunto set my
hand in the presence of two subscribing wit-
nesses.

SAMUEL A. VERBRYCK.

Witnesses:

JELETT BENNETT,
THOS. S. CRANE.