

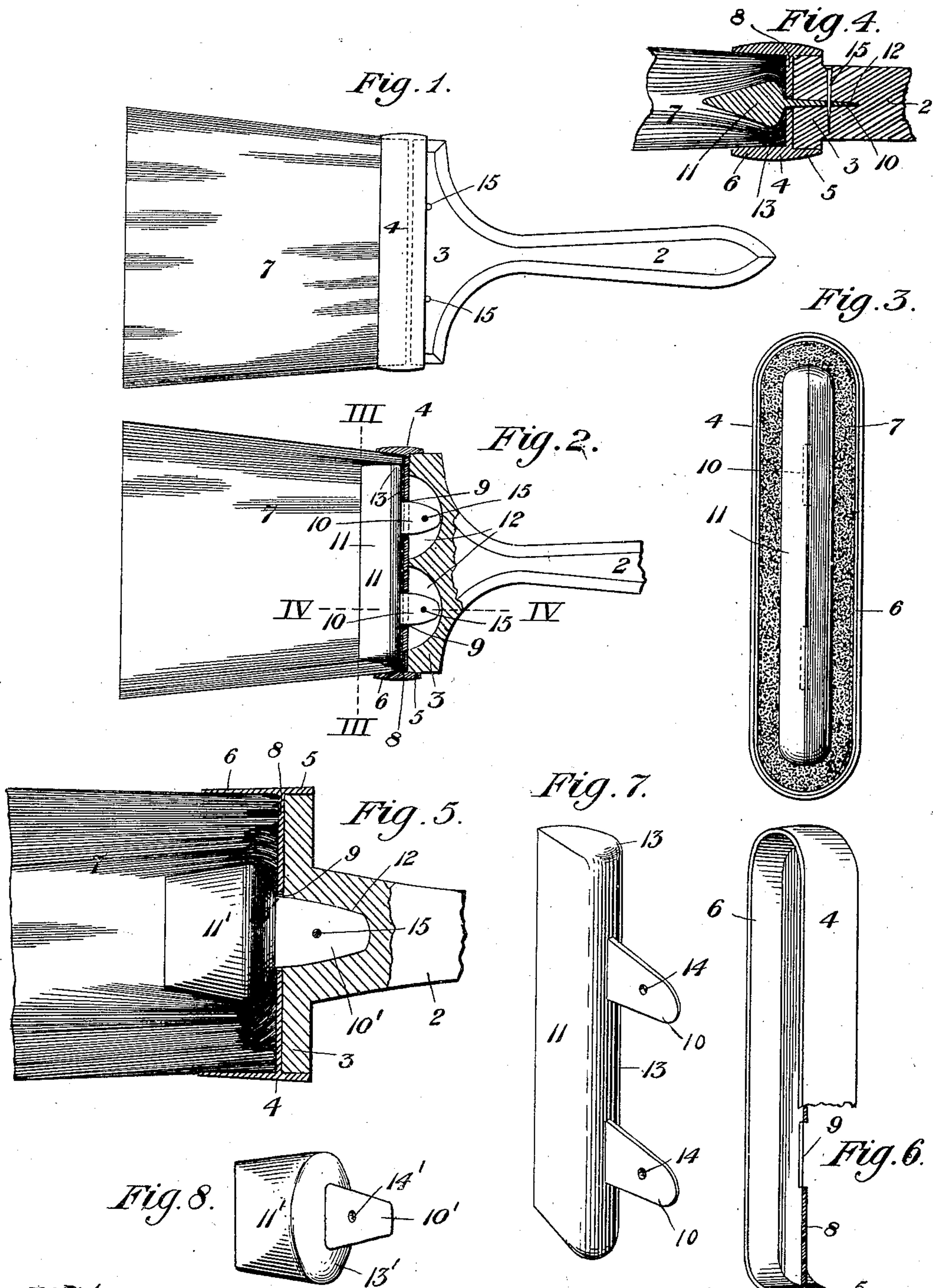
No. 683,007.

Patented Sept. 17, 1901.

W. S. WALKER.
BRUSH.

(Application filed Sept. 20, 1900.)

(No Model.)



Witnesses:

A. B. Elliott.

R. H. Jayman.

Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM S. WALKER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO HARRY C. BLETHROW, OF SAME PLACE, AND JOHN J. ENGEL, OF MOUNT OLIVER BOROUGH, PENNSYLVANIA.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 683,007, dated September 17, 1901.

Application filed September 20, 1900. Serial No. 30,573. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WALKER, a citizen of the United States of America, and a resident of Pittsburg, county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Brushes, of which the following is a specification, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved brush. Fig. 2 is a vertical sectional view thereof. Fig. 3 is an enlarged cross-sectional view on the line III III of Fig. 2. Fig. 4 is a longitudinal section on the line IV IV of Fig. 2. Fig. 5 is a longitudinal section of a slight modification. Fig. 6 is a perspective detail view, partly broken away, of the ferrule. Fig. 7 is a perspective view of one form of binding-wedge. Fig. 8 is a similar view showing a wedge for use with the modification shown in Fig. 5.

My invention relates to the manufacture of brushes; and it consists in the means for connecting and incorporating the bristles with the handle.

Referring to the drawings, 2 is the handle, which is widened at the brush end to any desired width, providing a base 3, to which the bristle-holding devices are attached.

4 is a metal ferrule made in the form of an inclosing band of a shape adapted to the design of the brush provided with a portion 5, adapted to embrace the base 3 of the handle, and a portion 6, adapted to embrace the bristles 7, the portions being separated by an intermediate integral diaphragm 8, extending across and connecting the sides of the ferrule. One or more narrow slots or openings 9 are made centrally of the diaphragm 8 to permit of the insertion of the tangs 10 of the binding-wedge 11, and the base 3 is likewise provided with suitable openings 12 for the reception of the tangs. The binding-wedge 11 is of a length adapted to the size of the brush, having its inner side and end corners 13 rounded, as shown, while the downwardly-extending portion tapers to a knife-edge. The tangs 10 are provided with holes 14 for securing nails or pins 15.

In assembling the parts the ferrule is first

placed on the base 3 of the handle, the portion 5 of the ferrule neatly inclosing the same. The bristles are then inserted in the portion 6 of the ferrule, resting on the diaphragm 8, which provides an undeviating level bearing for them, and thus insures regularity at their outer ends. The binding-wedge 11 is then inserted in the bristles and driven inwardly, the tangs 10 entering the openings 9 in the diaphragm 8, while the rounded corners 13 force the bristles outwardly at all points against the sides of the ferrule, the inner ends of the bristles adjacent to the corners 13 conforming to the curvature of said corners, and thus forming a bond. The wedge is driven into place under heavy pressure, upward of one thousand pounds being required, and thus when finally seated it bears outwardly against the bristles on all sides and binds them against the inner sides of the ferrule with great force, and the bristles are securely held against dislodgment.

It will be understood that according to the dimensions and contour of the brush there will be provided one or more slots in the diaphragm 8 and one or more tangs on the binding-wedge 11. In Figs. 5 and 8 is shown such a modification, the brush being of a smaller dimension—that is, less in width and requiring, therefore, the wedge 11' to have but one securing-tang 10', and consequently but one slot in the diaphragm of the ferrule. In all other respects the construction is the same as that shown in the other figures of the drawings, the wedge 11' having the rounded portions 13' and hole 14' corresponding to similar parts on the other figures.

The advantages of my invention will be appreciated by those skilled in the art.

The device is simple in construction and the parts easily and quickly assembled.

I am aware of the constructions shown in Patents No. 50,067 to Faught, No. 76,230 to Moore, and No. 576,075 to Walker. I make no claim, therefore, to such devices, but claim only that set forth in the following claims, which are limited to my particular construction.

I claim—

1. In a brush, the combination of a ferrule divided into handle and bristle receiving por-

tions by a diaphragm intermediate of the edges of the ferrule, said diaphragm being integral with and connecting the sides of the ferrule rigidly together and being provided
5 with a central slot, a handle in said handle-receiving portion of the ferrule, bristles in said bristle-receiving portion of the ferrule, a binding-wedge for clamping the bristles tightly against the sides of the ferrule, a tang
10 projecting from the upper edge of said wedge and extending through said slot in said diaphragm and into the handle, and devices for securing said tang to said handle.

2. In a brush, the combination of a ferrule
15 divided into handle and bristle receiving portions by a diaphragm intermediate of the edge of the ferrule, said diaphragm being integral with and connecting the sides of the ferrule rigidly together and being provided with a

central slot, a handle in said handle-receiving 20 portion of the ferrule, bristles in said bristle-receiving portion of the ferrule, a binding-wedge for clamping the bristles tightly against the sides of the ferrule having a body part with the portions thereof which contact with 25 and bind the bristles rounded in contour said body portion tapering downwardly from said rounded corners and upwardly therefrom to a tang projecting from the upper edge of said wedge and extending through said slot in said 30 diaphragm and into the handle, and devices for securing said tang to the handle.

Signed at Pittsburg this 15th day of August, 1900.

WILLIAM S. WALKER.

Witnesses:

CHAS. W. V. FEIGEL,
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