

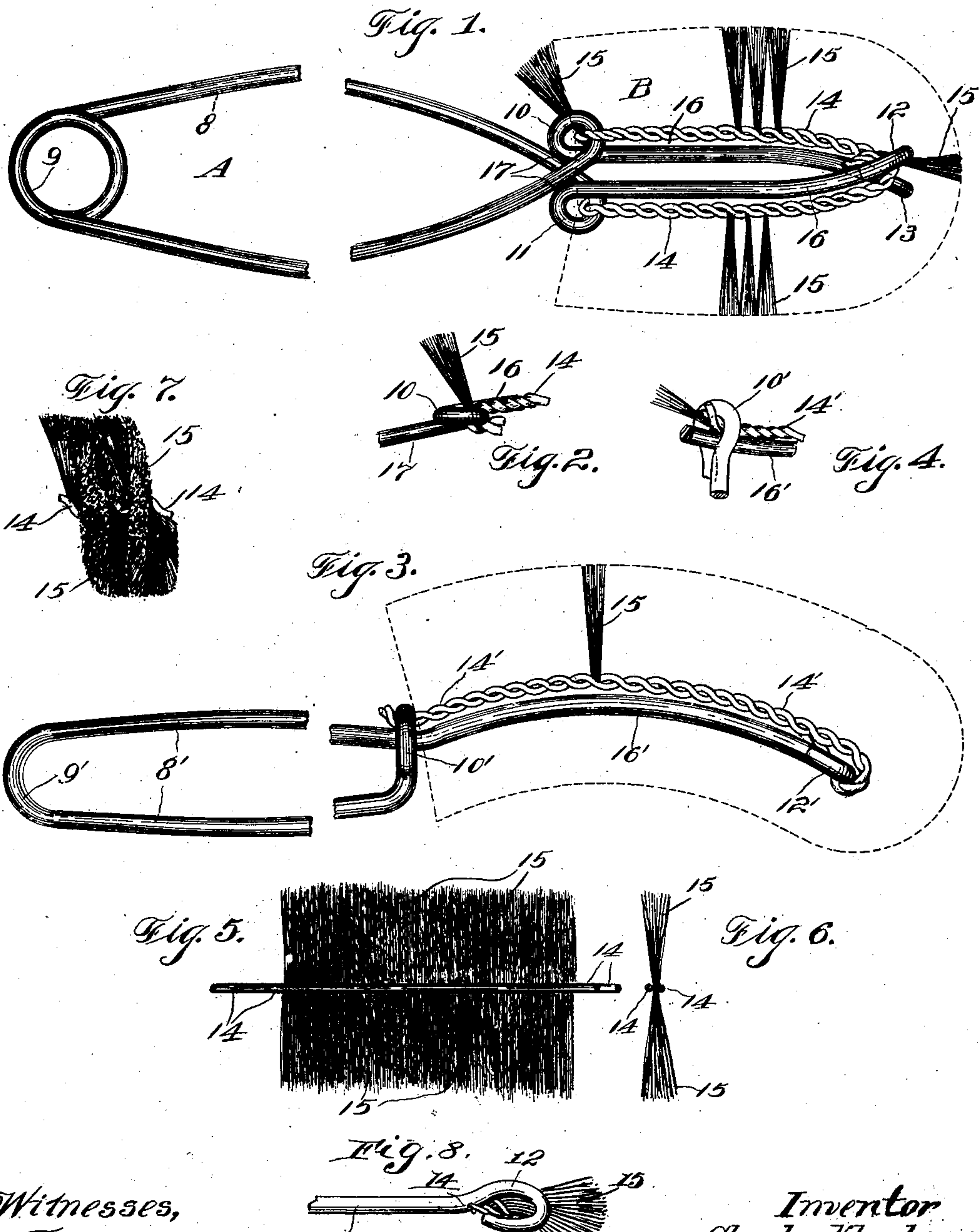
No. 705,534.

Patented July 22, 1902.

C. KLAUBERG.  
BRUSH.

(Application filed Aug. 21, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## BRUSH.

SPECIFICATION forming part of Letters Patent No. 705,534, dated July 22, 1902.

Application filed August 21, 1901. Serial No. 72,753. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES KLAUBERG, a citizen of the United States, residing in Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Brushes, of which the following is a specification.

This invention relates to brushes, and has for its object to provide a brush of strong construction and wherein there are but few parts.

A further object of the invention is to provide a brush having the bristles secured in a more or less flexible backing, said backing being reinforced and held by a peculiar extension of the handle portion of the brush.

A further object of the invention is to secure the bristle-holding portion so that end tufts may be provided at one or both ends of the brush.

A further object of the invention is to provide a device having a pair of brushes adapted to lie closely together for insertion within some object which it is desired to clean and capable of being separated after such insertion and to so organize the parts that the brushes will lie closely together, forming practically a single brush.

In carrying out my invention a brush may be employed made by bristles held in two wires twisted together and the brush proper secured to a wire handle by inserting the ends of the twisted wires into bights formed by the handle portion. If it is desired to have tufts at the farthest end of the brush, I so pass the wires into the bight or bights at that end that the bristles which are carried by such portion of the wires will extend therefrom, forming a tuft at the end of the brush for engagement with the bottom of the article on which it is to be used, and if it is desired to provide tufts at the upper end or the end toward the handle that may also be accomplished in the same manner.

In Figure 1 of the drawings my invention is shown as applied to a form of brush, which may be the preferred form, if desired, parts being shown as broken away and a portion in diagram. Fig. 2 is a view at right angles to Fig. 1, showing one of the securing-bights. Fig. 3 shows a modification, the view being similar to Fig. 1. Fig. 4 is a perspective of

the securing-bight shown in Fig. 3. Fig. 5 is a side view; Fig. 6, an end view of a pair of wires with bristles in position preparatory to the twisting of the wires. Fig. 7 is a perspective of a portion of the same after the wires have been twisted, and Fig. 8 is a view of one of the end bights as viewed from the top of Fig. 1.

Similar characters of reference designate corresponding parts in the various figures.

To a suitable handle (designated in a general way by A) is applied a brush (designated in a general way by B.) In the present instance, referring to Figs. 1 and 2, the handle 8 is shown as comprising a wire bent upon itself at 9 and forming a spring and also bent upon itself at 10 11 and 12 13 to form bights for the insertion of the twisted wires 14, carrying suitable bristles 15. If it is desired to have tufts or end brushes at the farthest end of the brush, the wires 14 where so passed into the bights 12 13 will carry the secured ends of the bristles through such bights, but the free ends of the bristles will remain upon the outside, thus causing such bristles to form stiff and compact tufts, which will when the brushes are pressed together by the tension of the spring make such end of the brush practically an entirety as to bristles, and when the brushes are expanded, as in a tumbler or bottle, the end tufts will be effective to enter into the corners and crevices and cleanse the same. If it is desired to have end tufts at the upper or handle end of the brushes, they may be provided in a similar manner, the bights 10 11 serving to hold such tufts, which would have a somewhat upward projection and would be effective to enter the upper corners of the object being cleansed.

The portions 16 16 of the handle between the bights are shown as somewhat curved and the ends of the portions forming the bights 12 13 as overlapping, portions of both lying side by side, and the portions forming the bights 10 11 as respectively resting against the portions 17 17 of the handle portion. By the last-mentioned portions resting on the handle portions as they do a very strong or active spring may be employed to compress the brushes together. By this construction the pressure or force will be taken up at the



back ends of the brush, thus making a strong connection between them, which, cooperating with the overlapping of the end portions of the brush members, produces a very compact and strong brush when the two brush members are in a closed position.

In Figs. 3 and 4 a slight modification has been shown wherein but a single brush member is employed, the handle portion 8' being bent upon itself at 9' and one member thereof embracing the other and the end of the twisted wires 14' by a bight 10'. The handle portion has an extension 16', which may be curved, as shown, if desired, the end of which may terminate in a bight 12', traversed by the wires in the opposite direction from that shown in Fig. 1, the same producing end tufts. If desired, tufts may be provided at the other or handle end by having the bight 10' embrace the wire back of where the bristles end, so as to firmly embrace the bristles, as shown in Fig. 4, producing the same result as that produced in the other brush.

The invention is designed for use in cleaning the interior of various objects—such as lamp-chimneys, bottles, drinking-glasses, and the like—and in the form shown in Fig. 1 the brushes are capable of being spread to engage diametrically opposite sides of the object being cleansed. The form shown in Fig. 3, wherein there is but a single brush, is efficient for use in many applications, whether for the inside or outside of objects.

Although I have shown the bristles as being held in twisted wires, yet any other suitable or convenient means may be employed.

Having described my invention, I claim—

1. In a brush, the combination of a wire bristle-retaining member; and a wire handle bent upon itself and extending along said member to reinforce the same.

2. In a brush, the combination of a bristle-retaining member; bristles retained thereby; and a handle having a part extending along said member to reinforce the same and having a bight for the securement of bristles retained by the bristle-retaining member.

3. A brush comprising a bristle-retaining member constructed of wires twisted together, and a spring-handle formed with bights a suitable distance apart, said handle having a portion extending alongside said member to reinforce the same, and said member being

secured in place by having the ends thereof bent or turned into the bights.

4. A brush comprising a pair of twisted wires; bristles held therebetween; a wire handle having extensions; and two bights; said extension serving to shape and reinforce said twisted wires, and said bights to retain same.

5. A brush comprising a pair of twisted wires; bristles held therebetween; a wire handle reinforcing said wires; and bights in the end of said handle securing said wires and effective to embrace some of the bristles and form an end tuft.

6. In a brush, the combination of a wire bent to form a handle, and having rigid extensions, said extensions being constructed with bights a suitable distance apart, bristle-carrying members alongside the extensions having their ends bent or passed into said bights, bristles secured to said members throughout their length, and also to the bent portions thereof passing into the bights, said bights thereby embracing the end bristles and maintaining them in tufts.

7. In a brush, the combination of a wire handle having a spring at one end, and oppositely-disposed brushes on the other end; and reinforcing extensions on said handle effective to maintain and reinforce said brush portions, said extensions commencing in bights, each of which is effective to contact with the opposite side of the handle.

8. In a brush, the combination of a wire handle having a spring at one end, and oppositely-disposed brushes secured to the other end; reinforcing extensions on said handle effective to maintain and reinforce said brush portions, said extensions commencing in bights, each of which is effective to contact with the opposite side of the handle; and bights at the free ends effective to overlap.

9. In a brush, the combination of a wire handle having a spring at one end, and brushes secured to the other end; and reinforcing extensions on said handle effective to maintain and reinforce said brush portions, said extensions having bights at the free ends thereof effective to overlap under the influence of the spring.

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