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C. S. BRITTON

2,009,473

CONNECTION

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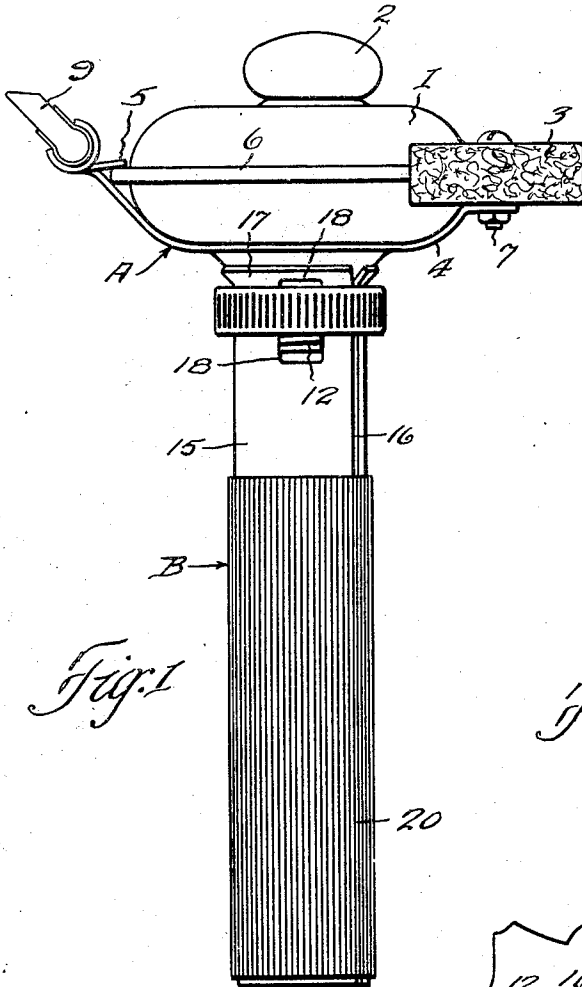


Fig. 1

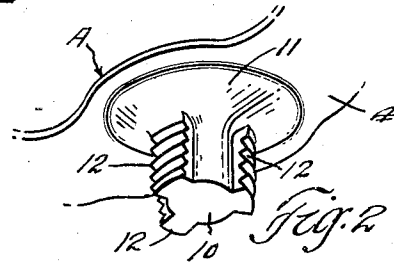


Fig. 2

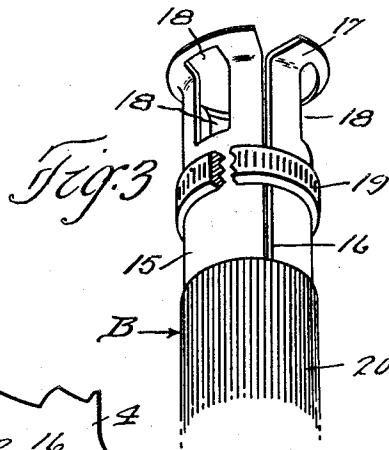


Fig. 3

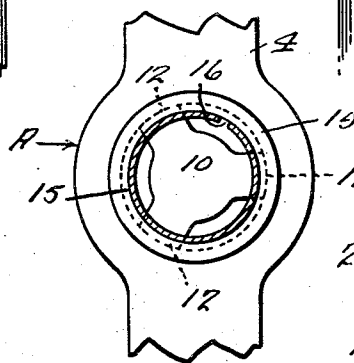


Fig. 4

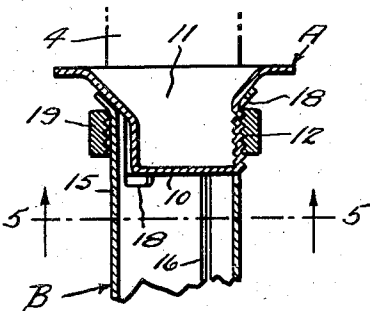


Fig. 5

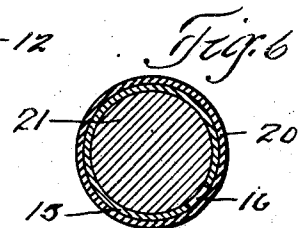


Fig. 6

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## UNITED STATES PATENT OFFICE

2,009,473

## CONNECTION

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3 Claims. (Cl. 306—21)

This invention pertains to means for attaching one member to another, as the handle of a window cleaning implement to the body thereof. It was in connection with a device of this kind that the invention had its conception, and I have chosen to illustrate it in such association for the purpose of the present disclosure. In fact, in its more limited aspect, the invention may be said to consist of an improved handle construction for such devices as that referred to.

The particular window cleaner, in the construction of which the inventive thought originated, comprises a relatively flat body of substantial length and width, and a handle disposed at right angles to the plane of the body. Thus assembled or constructed, the implement cannot be boxed or packed to advantage nor stored in compact space. By making the handle detachable, however, these difficulties are overcome.

It is the primary purpose of my invention to provide simple and inexpensive but thoroughly effective means for attaching one member to another in an especially facile manner and with a strong and durable joint, but which can be easily manipulated to disconnect the members, if desired.

Another object of the invention is to provide a handle construction in which a socket member is formed of sheet metal with a longitudinal slit along one side so as to be capable of expanding more or less to fit handle extensions or poles of different diameters, and which is covered by an elastic grip that adjusts itself to the variable diameter of said socket member.

Other objects and advantages will appear as I proceed to describe the invention in detail by reference to the accompanying drawing in which Fig. 1 is an elevational view of a window cleaning element incorporating the invention; Figs. 2 and 3 are perspective views of the entering and receiving parts, respectively, of my improved attaching means or connection; Fig. 4 is a sectional detail of the attaching means or connection; Fig. 5 is a section on the line 5—5 of Fig. 4, looking in the direction of the arrows, and Fig. 6 is a section through the handle applied to a handle extension or pole.

In the drawing, the two members that are connected together by my improved attaching means are designated generally by the reference characters A and B. In the present instance, said members consist of the body and handle, respectively, of a window cleaning implement similar to that which constitutes the subject matter of Patent No. 1,795,249, dated March 3, 1931. The body

includes a font or reservoir 1, having a filling opening closed by a stopper 2, and along one edge of the font or reservoir is a pad or the like 3. A part of the pad is exposed to the interior of the font or reservoir so as to be moistened by liquid contained therein. A handle support 4 is attached, at one side, to the font or reservoir 1 by having prongs 5 engaged over a peripheral seam 6 of the vessel, and, at the opposite side, by bolts 7 that extend through a part of the support, through the pad, and through opposed flanges between which the pad is clamped. A squeegee 9 is carried by the handle support beyond that side of the font or reservoir opposite the pad 3. The support 4 is preferably constructed of sheet metal, and carried by it, and preferably formed integral with it, is a boss 10 whose inner flared end 11 merges into the support 4. The boss 10 is provided with circumferentially spaced threaded segments 12.

The handle proper, which is the principal constituent of the member B, is designated 15, and the same is preferably constructed of a piece of sheet metal, formed into a cylinder of suitable length and diameter that is split longitudinally at 16 and flared at one end, as shown at 17, to fit the tapered end 11 of the boss 10 when the latter is inserted into the handle, the handle having slots 18 for the passage of the threaded segments 12 of the boss. The diameter of the circle on which the threaded segments 12 are described is sufficiently greater than the external diameter of the handle 15 to expose the threads through the slots 18 for cooperation with an internally threaded ring or nut 19 that encircles the handle and is confined between the flared end 17 thereof and the adjacent end of an elastic sleeve that encases the major portion of the handle and provides a suitable hand grip designated 20.

The boss 10 is the entering part, and the slotted and flared end of the handle is the receiving part of my improved attaching means, and, in connecting said parts, the former is inserted into the latter so that the threaded segments 12 protrude through the slots 18, after which the ring nut 19 is screwed onto the threaded faces of the segments and turned to draw the parts together with the tapered inner end of the boss 10 clamped firmly against the flared end 17 of the handle, the nut engaging said flared end when the parts are in this condition.

When using the implement illustrated in Fig. 1 for cleaning surfaces within convenient arm's reach, the grip 20 of the handle is grasped directly by the hand; but for cleaning surfaces at a

greater distance, a handle extension or pole is adapted to have an end, preferably tapered, inserted within the socket provided by the hollow handle 15, the handle being permitted to expand, by virtue of the slit 16, to accommodate the ends of extensions or poles of different diameters. The grip 20, being of rubber or other elastic material, readily adjusts itself to the variable diameter of the handle. Fig. 6 shows the handle 15 as though expanded over the end portion 22 of a handle extension or pole, and the elastic grip 20 as if it were correspondingly stretched.

Having thus described my invention, what I claim is:

1. In combination, an entering part consisting of a boss having circumferentially spaced threaded segments, the inner end of the boss being tapered, a receiving part consisting of a sheet metal cylinder having its end flared for engagement with the tapered end of the boss and being slotted for the accommodation of the threaded segments, the threaded portions of said segments being exposed through said slots when the entering part is inserted into the receiving part, a nut encircling the receiving part for cooperation with the threads of the segments, and a member encircling the receiving part and between which and the flared end of the latter part said nut is confined.

2. In combination, an entering part consisting

of a boss having circumferentially spaced threaded segments, the inner end of the boss being tapered, a receiving part consisting of a sheet metal cylinder having its end flared for engagement with the tapered end of the boss and being slotted for the accommodation of the threaded segments, the threaded portions of said segments being exposed through said slots when the entering part is inserted into the receiving part, a nut encircling the receiving part for cooperation with the threads of the segments, and an elastic sleeve encasing the receiving part, said sleeve being in spaced relation to the tapered end of said part and between which and the said tapered end the aforesaid nut is confined.

3. In combination, an entering part consisting of a boss having circumferentially spaced threaded segments, the inner end of the boss being tapered, a receiving part consisting of a longitudinally split sheet metal cylinder having its end flared for engagement with the tapered end of the boss and being slotted for the accommodation of the threaded segments, the threaded portions of said segments being exposed through said slots when the entering part is inserted into the receiving part, a nut encircling the receiving part for cooperation with the threads of the segments, and an elastic sleeve encircling the receiving part.

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