

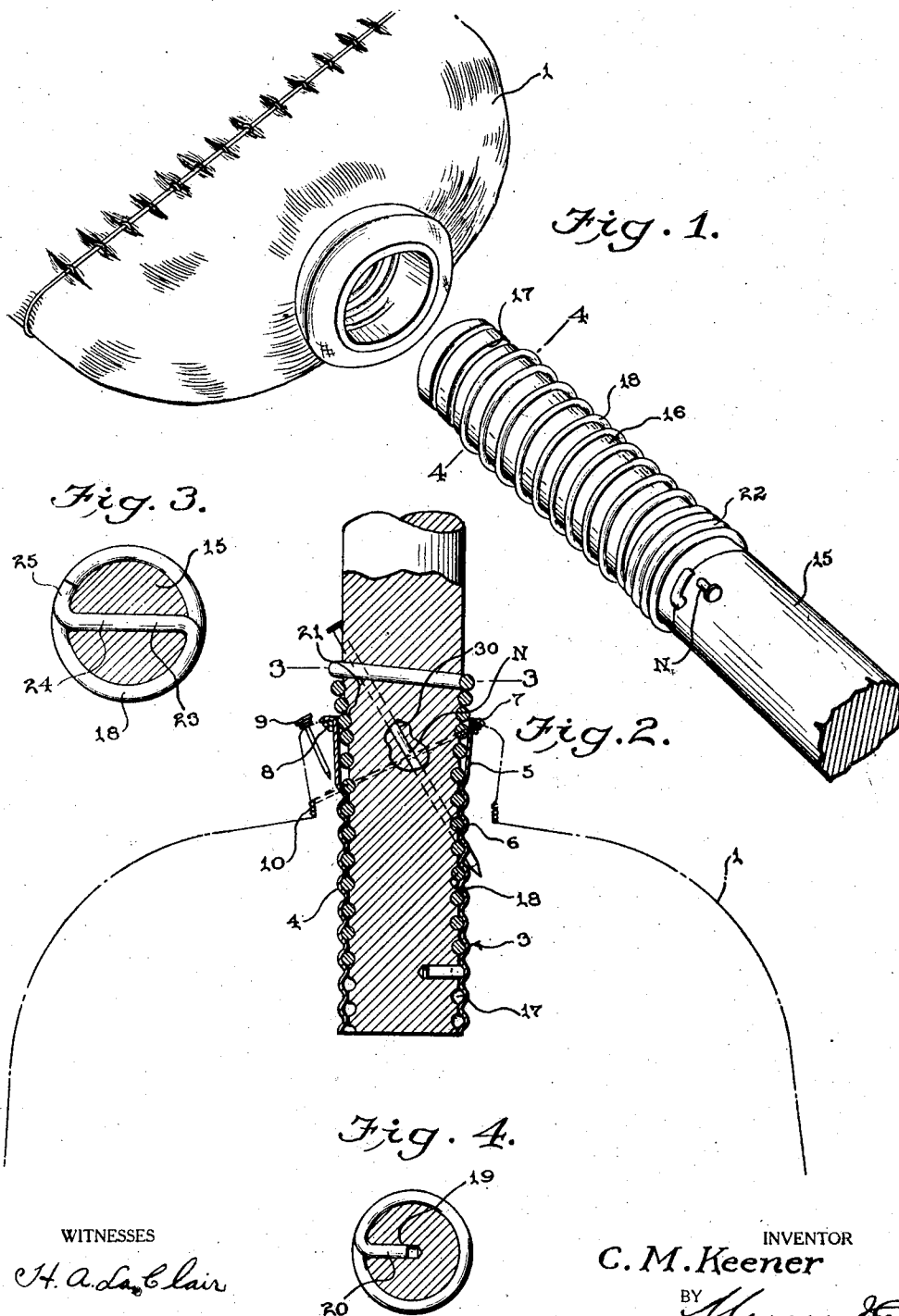
Oct. 11, 1927.

**1,645,490**

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## DETACHABLE FASTENING FOR HANDLES

Filed Nov. 14, 1925



## UNITED STATES PATENT OFFICE.

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## DETACHABLE FASTENING FOR HANDLES.

Application filed November 14, 1925. Serial No. 69,089.

This invention relates in general to detachable fastening devices for securing handles of brooms, mop heads and the like.

The object of the invention is to provide a fastening device of this character which is of simple and durable construction and comparatively inexpensive to manufacture, which may be easily manipulated to rigidly and securely connect the handle to the broom or mop head while permitting ready disassociation of these parts when desired. The advantage of this arrangement resides in the fact that the handles may be used over and over with various kinds or with new broom or mop heads.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claim, reference being had to the accompanying drawings forming a part of this specification, and in which:

Figure 1 is a fragmentary perspective view showing a detachable fastening embodying the present invention,

Figure 2 is a sectional view of the socket of the broom head and of the portion of the handle that co-acts with the socket,

Figure 3 is a sectional view on the line 3-3 of Figure 2, and

Figure 4 is a sectional view on the line 4-4 of Figure 1.

Referring to the drawings the numeral 1 designates a broom head having a metal socket 3 embedded therein. The metal socket 3 includes a cylindrical body 4 formed with a slightly enlarged entering section 5 inwardly of which the body 4 has a thread 6. Around the margin of the entering section 5 a bead 7 is formed and partially encircles a portion of a wire 8 which extends around the bead and has one end fastened, as at 9, to the broom head and the other end wrapped around the broom head, as at 10. The advantage of this arrangement for securing the socket in position in the broom head resides in the fact that it is not necessary to have any obstructions whatsoever in the interior of the socket. Of course, if nails, screws, or the like were employed as has been the practice heretofore then the heads of such fastening elements would lie within the socket and present an obstruction interfering with the fastening action.

A handle is designated generally at 15 and has one end 16 adapted and equipped to co-act with the socket 3. The end 16 is slightly reduced with respect to the main portion of the handle and is formed with a spiral groove 17 in which a wire 18 is wound and secured, the wire 18 being of such a size as to project beyond the periphery of the reduced end of the handle, as shown in Figures 1 and 2 of the drawings, whereby to provide a spiral rib or thread which co-acts with the thread 6 of the socket.

One end of the wire 18 is fastened to the reduced end 16 by forming a transverse or radial opening 19 in the reduced end of the handle and forming a radial extremity 20 on one end of the wire, such radial extremity being snugly fitted in the opening 19.

At the juncture of the reduced end 16 of the main portion of the handle 15 the periphery of the handle inclines outwardly, as indicated at 21, and on this inclined portion 21 the convolutions of the wire 18 are brought close together to provide an annular wedge-like stop shoulder 22. Beyond the shoulder 22 the wire is formed with an angular portion 23 snugly fitting in a diametrical opening 24 in the handle 15. The angular portion 23 terminates in an end portion 25 which is bent over snugly against the periphery of the main portion of the handle. It may be desirable to secure the handle in the socket during the entire life of the broom head and this may be done by driving the nail through the slanting opening 30 provided in the handle 15 until the nail penetrates the metal socket 3, the head of the nail being accessible may be readily engaged with the claw of a hammer and withdrawn when it is desired to disconnect the handle from the broom. Of course, under some circumstances the nail will be entirely omitted and at such time a securing action will be had by virtue of the inter-engagement of the rib provided by the wire 18 and the threads of the metal socket. The wedge-like stop shoulder 22 may be readily bound in the entering section 5 by turning the handle tightly up in its socket. This tends to prevent accidental rotation of the handle relative to the broom head and thus imparts to the device all of the advantages of the broom and handle as well as the advantages of a detachable broom and handle assembly. The handle is rigidly and secure-

ly connected to the broom head or the like and it may be readily changed to a different type of head or to a new head. One of the important features of the invention resides  
5 in the provision of a groove 17 in the handle to partially receive the spiral wire 18. This, together with the novel means provided for fastening the ends of the wire contributes largely to the efficacy of the fastening action.

10 I claim:

A detachable fastening securing a handle to a head comprising a metal socket, means for securing the metal in the head, said metal socket having an entering section and a  
15 cylindrical threaded section, said handle

having a spiral groove in its periphery, the convolutions of which are spaced, a spiral wire wound in the groove of the handle, the convolutions of the main portion of the wire being seated in the groove and spaced  
20 from each other and projecting beyond the handle to provide a thread engageable with the thread of the socket, said wire having a relatively small number of its convolutions lying in engagement with each other to pro-  
25 vide an annular tapered stop shoulder co-operable with the entering section of the socket.

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