Jan. 15, 1957 J. KALINOWSKI 2,777,149

HANDLE SOCKET AND MOP HEAD FOR FLOOR AND WALL MOPS

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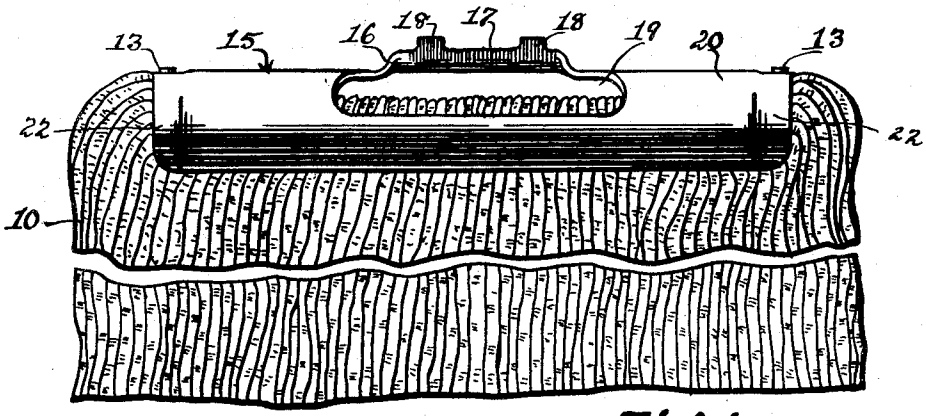


Fig. 1.

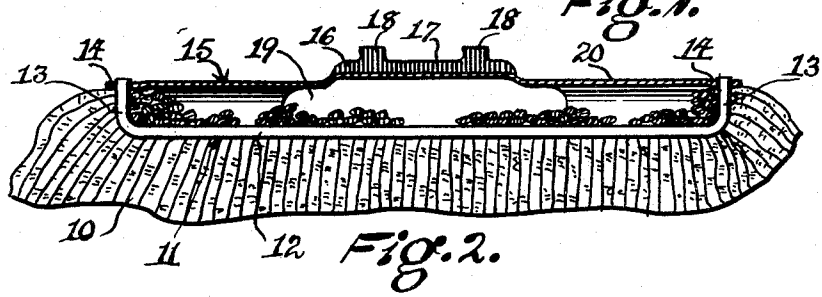


Fig. 2.

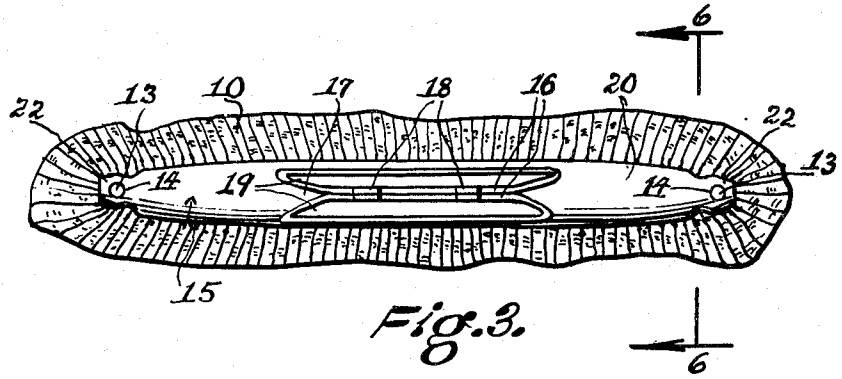


Fig. 3.

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HANDLE SOCKET AND MOP HEAD FOR FLOOR AND WALL MOPS

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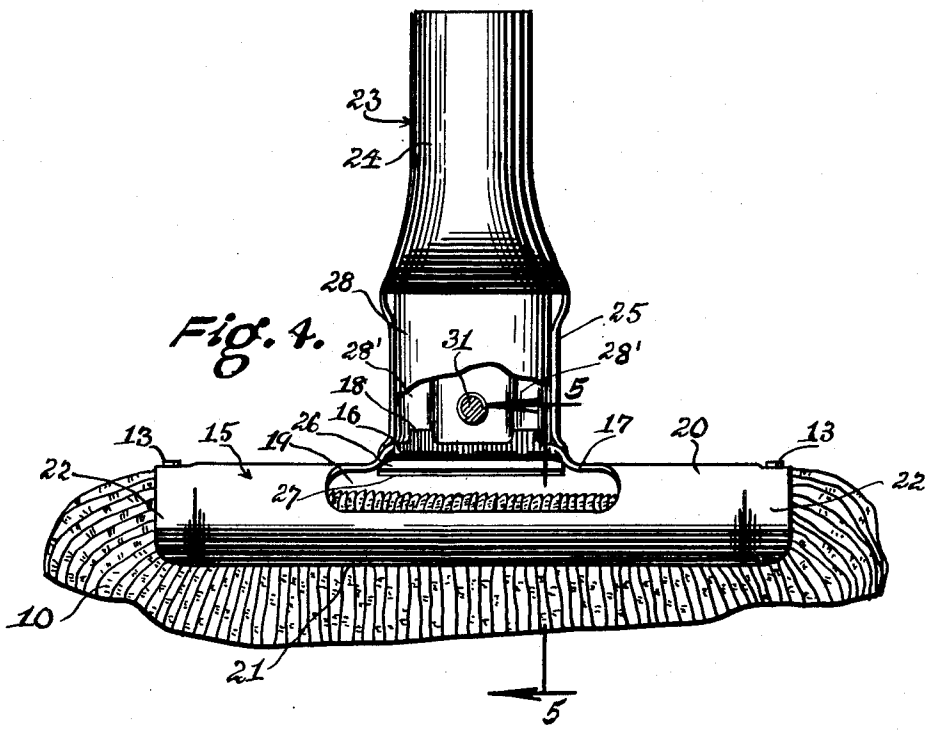


Fig. 4.

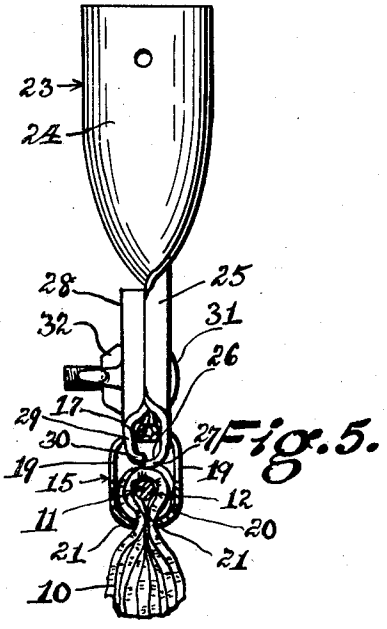


Fig. 5.

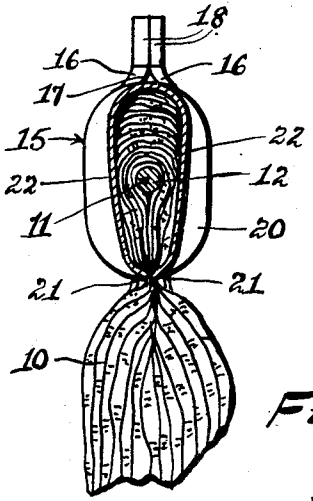


Fig 6

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HANDLE SOCKET AND MOP HEAD FOR FLOOR AND WALL MOPS

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Application November 18, 1954, Serial No. 469,581

1 Claim. (Cl. 15—229)

My invention relates to a new and useful handle socket attachment for floor and wall mops and has for one of its objects to provide an article of the character mentioned which is inexpensive in the cost of manufacture, strong and durable and capable of being readily and easily assembled on a bunch of mop material to provide a connecting means for the socket of a handle.

Another object of the invention is to provide a handle socket attachment for mops fashioned, principally, from sheet material by a stamping and forming process.

A further object of this invention is to provide a bendable clamping body having sections partially severed therefrom and bent outwardly and forwardly into complementary relation to form a bridge element with fingers projecting therefrom functioning to prevent relative oscillating movements between the socket attachment and a handle socket temporarily connected thereto.

A still further object of the present invention is to construct the handle socket attachment including the one-piece body element in combination with a wire hanger of broad U-shape functioning to hold strands of mop material in position within the attachment body said hanger having side arms which position portions of the mop material at the ends of said body element.

With the above and other objects in view this invention consists of the details of construction and combination of elements hereinafter set forth and then designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same I will describe its construction in detail referring by numerals to the accompanying drawings forming a part hereof, in which:

Fig. 1 is a side elevation of a mop showing a handle socket attachment assembled thereon, a portion of the mop material being broken out for purposes of illustration.

Fig. 2 is a vertical longitudinal section of Fig. 1 with portions of the mop material broken away.

Fig. 3 is a top plan or edge view of Fig. 1.

Fig. 4 is a fragmentary side view of the mop with a handle socket connected to the socket attachment, a portion of one of the handle socket jaws broken away to show the relation of the bridge and fingers to the handle socket.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is an enlarged section of the mop head and socket attachment on the line 6—6 of Fig. 3.

In carrying out my invention as herein embodied 10 represents the mop material, generally strands of nylon covered cellulose absorbent substance, cotton, wool or appropriate substitutes therefor. The mop material 10 is folded over the broad U-shaped wire hanger 11, Figs. 2, 5 and 6, including the reach bar portion 12 and the right angle arms 13 at the ends of said reach bar.

The ends of the arms 13 of the hanger 11 are received in corresponding holes 14, Figs. 2 and 3 in the ridge of the head plate 15 at opposite ends of the latter. This

head plate, preferably, is made of stiff bendable sheet metal having opposed sections 16 partially cut therefrom, as through the use of a punch and die, on opposite sides of the longitudinal center of said plate and bent outward and back against each other whereby said sections form a bridge 17 on the longitudinal center or ridge of the head plate and said bridge has a pair of outwardly and upwardly projecting fingers 18 appropriately spaced apart axially of the head plate for a purpose to be described below. The formation of the sections 16 produces apertures 19 that may be of different configuration and of larger areas than said sections but together said apertures provide an entrance opening accessible from both sides of the head plate for the jaws of a handle socket to be inserted beneath the bridge.

The balance of said head plate 15 is bent or formed into a split substantially tubular body element 20 having somewhat flattened sides to embrace the bight of the mop material and the hanger on which said mop material is assembled and the edges of said body, produced by the split, projecting abruptly inwardly to constitute lips 21 which pinch and compress the mop material under the reach bar portion 12 of the hanger 11 (in accordance with the showing in Figs. 1 and 2) to secure the head plate and said mop material together and in surrounding relation to said hanger. In addition the ends of both sides of the head plate body are squeezed towards one another as indicated at 22, Figs. 3 and 6, to further bind the mop material to the hanger particularly the arms 13 thereof.

At the beginning of the assembly the head plate body 20 is open, that is, the lips 21 are separated a sufficient distance to permit the bight portion of the mop material and the enclosed hanger to be inserted into said body with the hanger arms 13 projected through the holes 14. After the parts are properly positioned the split edges or lips 21 are pressed towards each other by appropriate pressure applying means to firmly grip said mop material and the hanger within the head plate body. Also the ends of the head plate body are then squeezed or deformed to firmly engage said ends with the mop material in the region of the hanger arms whereby portions of said mop material will be permanently positioned to project from the ends of the head plate 15. Finally the ends of the arms 13 which may be protruding above said head plate are cut off leaving the arm terminals substantially flush with the ridge of the head plate as shown particularly in Figs. 1 and 2. The assembly is now complete and the mop is ready to receive a handle socket and a handle for manipulation of said mop in the usual ways.

For purposes of illustration I have shown a conventional attachable handle socket 23, Figs. 4 and 5, comprising a socket element 24 with a stationary jaw 25 formed therewith having a transverse channel 26 contiguous the lip 27 and a pair of spaced longitudinal channels 28', Fig. 4, communicating with said transverse channel 26. Cooperating with the stationary jaw is a complementary movable jaw 28 also having a transverse channel 29 contiguous the inturned lip 30. Both jaws have inturned side flanges and the movable jaw is narrower than the stationary jaw so as to fit inside of the latter. A screw 31 is projected through holes in both jaws with the screw head in engagement with the outer surface of one jaw and a thumb nut 32, Fig. 5, has threaded engagement with the screw and contacts the outer surface of the other jaw to draw the two jaws towards one another for clamping engagement with the bridge and its components.

To mount the handle socket structure, which usually has a handle (not shown) fastened therein, the thumb nut 32 is retracted to permit the opening of the jaws a sufficient distance for the insertion of the bridge 17 and its

components. The bridge proper registers with the transverse channels in both jaws and the fingers **18** register with the longitudinal channels in the relatively stationary jaw **25**. As the thumb nut is screwed inwardly the jaws will be drawn into clamping engagement with said bridge to hold the handle socket firmly on the head plate handle socket attachment of this invention. Particular attention is called to the fact that the fingers **18** extend radially from the axis of the bridge proper and partially into said longitudinal channels **28'** and thereby function to prevent rotation of the handle socket and the attachment relative to each other wherefore the mop is rigidly maintained in proper relation to a handle in the socket structure.

It should be apparent from the above that I have provided an exceedingly simple arrangement of handle socket attachment for mops which is relatively inexpensive to manufacture, strong and durable and one to which the socket element may be easily and readily attached.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the scope of the appended claim without departing from the spirit of my invention.

Having described my invention what I claim as new and useful is:

In a mop, a broad U-shaped hanger including a reach bar and right angle arms, mop material folded over said hanger and forming a bight along the reach bar and arms thereof, a head plate consisting of a split substantially tubular body having flattened sides and forming a ridge opposite the split, said body receiving the bight of the mop material and the hanger with the arms of the latter projecting through holes in the ridge portion of said body and said bight and hanger securely clamped by the edges of said body, sections of the body partially severed therefrom on opposite sides of the ridge midway the ends thereof and turned outwardly and in face to face contact, the severed sections forming a lateral opening through the body, a bridge produced by said severed sections, and a pair of spaced fingers projecting outwardly from the outer edge of said bridge, in combination with an elongated handle socket including a pair of jaws cooperating to form an open-ended channel extending transversely of the longitudinal axis of the socket receiving the bridge, one of said jaws having spaced channels extending substantially parallel to the longitudinal axis of the socket and communicating with the transverse channel and receiving the fingers projecting from the bridge, the jaws having lips at the open end of the transverse channel entering the opening in the head plate body inwardly of the bridge, and means drawing the jaws toward one another.

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