July 4, 1939. J. H. FOLLEN 2,164,395

MOP HOLDER

Filed May 28, 1934

Fig. 1.

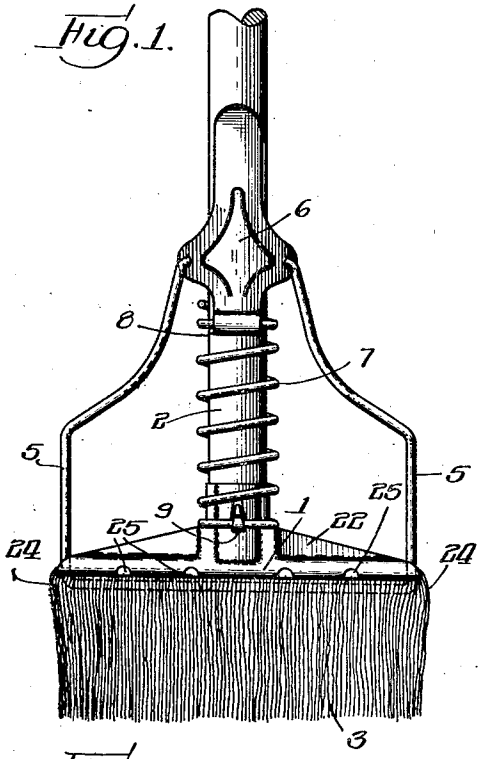


Fig. 2.

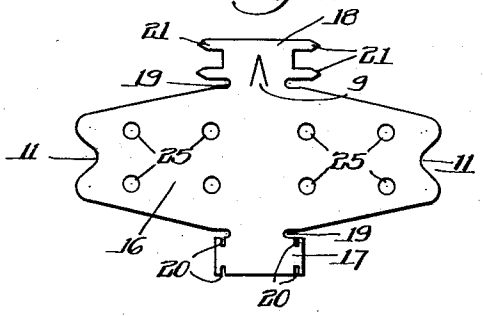


Fig. 3.

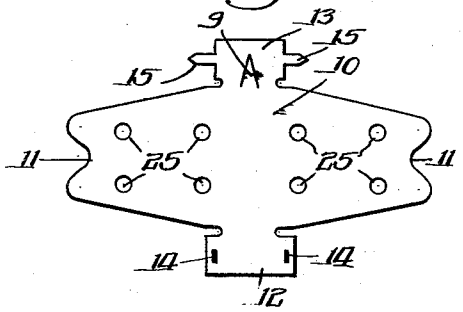


Fig. 4.

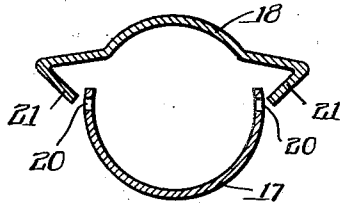


Fig. 5.

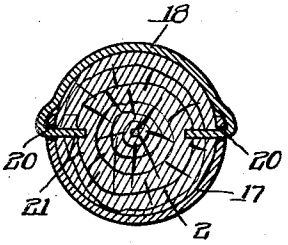


Fig. 7.

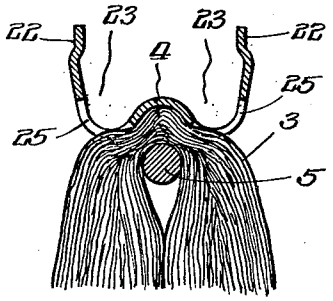
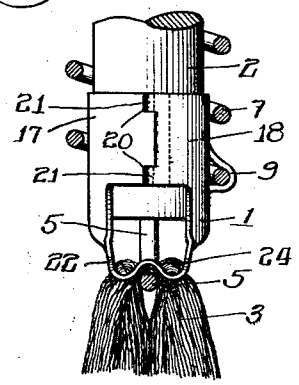


Fig. 6.



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MOP HOLDER

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Application May 28, 1934, Serial No. 727,854

2 Claims. (Cl. 15—152)

An object of the invention is in the provision of a mop head which is provided with a series of openings to prevent entrapping a quantity of water or other liquid in the head which is thereafter spilled in a place where it is not desired.

In the accompanying drawing which illustrates preferred embodiments of the inventions,

Fig. 1 is a side elevation of a mop constructed in accordance with the principles of this invention;

Fig. 2 shows a blank from which one of the preferred forms of head is made;

Fig. 3 illustrates a blank of a modified head;

Fig. 4 is a section showing the attachment parts of a head before they are applied to a stick;

Fig. 5 is a section showing the attachment of the head to a stick;

Fig. 6 is a side elevation illustrating the interlocking attachment of the head shown in Fig. 2;

Fig. 7 is a cross section of a mop head with side perforations.

Although this invention is particularly described as applied to a head for a mop, a similar interlocking attachment may be used for connecting the heads of other utensils at the end of a stick, such as rakes, hoes, and any other implement in which it is desired to securely attach a metal part to a wooden stick or handle.

The mere clinching of the edges of side member into a supporting stick or handle is not usually sufficient to hold a metal head securely to the stick. This is particularly true where the implement is subjected to severe and continuous pulling and torsional strain and it is more particularly true in the case of a mop or other implement which is alternately subjected to the action of water and in the air during its use, for the wood either shrinks and loosens or the clinched portions of the head work loose and allow an angular movement which soon destroys the value of the connection.

Another objection to a sheet metal mop head is that the fold forms a channel in which water or other liquid is trapped by the clamping wire and mop cloth at the ends of the channel so that the water generally spills on the floor or drains back into the upper part of the mop cloth after it has been wrung through a mop wringer to remove surplus liquid.

The present invention overcomes these objections by providing a plurality of points of attachment for the mop head spaced along the stick and interlocked not only between the sides but also clinched into the handle itself at spaced distances so that there is less tendency for the head to loosen even under great strain and it will be held tightly in place. Also by providing a number of drainage holes along the sides of the head at the bottom of the trough, water will drain therefrom even though the ends of the trough are plugged and the mop is raised vertically from the pail of water.

Referring now more particularly to the drawing, a mop head 1 is attached at the end of a handle or mop stick 2 and a mop cloth 3 is clinchingly held in a bottom groove 4 of the head by a clamping wire 5 of which the ends are engaged by an attaching lever 6. Interposed between the clamping lever and the head is an extended coil spring 7 surrounding this portion of the stick 2, one end of the spring being held in engagement with the lever 6 by an eyelet 8 through which it extends and the other end of the spring being held in connection with the head by a spring tongue 9 which is pressed out of the metal of the head and is clinched over the spring wire at this end. The location of the lever 6 and its attachment to the spring is such that when pressed downwardly against the handle 2 it draws the clamping wire 5 tightly within the groove 4 binding the mop cloth 3 therein and due to the action of the spring 7 it holds the mop cloth yieldingly therein and holds the lever 6 yieldingly against the stick 2 from which it can only be disengaged by manually raising the outer or handle end of the lever from the stick.

In Fig. 3 a blank 10 is shown having notches 11 at opposite ends for seating the ends of a clamping wire 5 in the groove 4 of the formed head and with opposite sides 12 and 13 connected to the main portion of the blank by reduced necks. One of the sides has perforations 14 and the other has corresponding projections 15 which may be pointed or sharpened if desired. In one of the sides is an angular cut forming a tongue 9 for engaging a tension wire 7.

In the blank 16 shown in Fig. 2 are sides 17 and 18 connected to the main body by reduced necks 19 and one of the sides has recesses 20 opening inwardly from the opposite ends thereof while the opposite side 18 has corresponding projections 21 corresponding with the recesses.

In both of these forms the heads are folded to form a bottom groove with upstanding portions 22 and with the sides extending close together but not interlocked, as shown in Fig. 4. A mop stick is then inserted in the somewhat circular opening thus made between the sides and the pointed extremities either 15 or 21 are clinched

into the wood by pressing them inwardly through the openings **14** or the recesses **20** as indicated in Fig. 5, thereby not only interlocking the side portions by the engagement of the recesses and projections but also positively clinching the projections into the wood itself. When the projections are spaced along the handle as shown in Fig. 6, a multiple attachment of the head is provided which positively locks it to the handle, reducing the possibility of its becoming loose and thereby increasing the wear and use of the device.

When the head is bent up to form the retaining groove **4** in the bottom and the sides are applied to a mop stick, an upwardly opening trough **23** is formed which would retain water if the ends of the trough were closed by means of the clamping wire **5** and any overlapping portions **24** of the mop cloth at the ends of the mop head as indicated in Fig. 1. To prevent the formation of such a pocket which holds considerable water if the mop is lifted vertically from a bucket of water, the sides of the head are provided with a number of openings **25** preferably located in the bends of the head so that they will be at the outer and lowermost positions forming unobstructed drainage holes to permit water to flow out over the top of the mop cloth as soon as the head leaves the water and before the cloth is wrung out or squeezed. Locating these holes **25** in the bend lines of the head makes it easier to fold the head and therefore less work and easier on the dies that do the work. These openings also are partially filled up by the fabric of the mop cloth and when the clamping wire **5** is drawn tightly the cloth is partially retained in place by the openings **25** preventing the cloth from pulling out from one side or the other, and thereby helping to retain it in place.

In the clinching attachment of the head to the stick it is also found that it is somewhat easier upon blanking dies to cut the recesses **20** rather than the openings **14** through the sides, there is less breakage of the dies, they are not so expensive to make, and they will last longer in use, all of which are material factors in stamping large numbers of parts.

It is obvious that other changes in the construction, combination and arrangement of the parts may be made without departing from the spirit and scope of the invention.

I claim:

1. In a mop holder, a sheet metal cross head having an upwardly facing socket portion adapted to receive a handle and having an integral foot portion extending transversely with respect to the socket portion, said foot portion having a downwardly facing groove adapted to receive a mop swab, and means adapted to cooperate with the handle and the cross head to secure the swab in said groove, said foot portion having an upwardly facing groove and said upwardly facing groove having spaced openings in the bottom thereof for draining water through said cross head, said openings extending into the wall of the downwardly facing groove to engage the mop swab and additionally confining it in position in the downwardly facing groove.

2. In a mop holder, a cross head having an upwardly opening socket portion adapted to receive a handle and a foot portion integral with and extending transversely with respect to the socket portion, said foot portion having a central, upwardly facing ridge forming a downwardly opening groove adapted to receive a mop swab, spaced apart, upwardly opening grooves having spaced perforations in the bottoms thereof, means including a bail wire extending longitudinally of downwardly opening groove and securing the swab to the cross head, the perforations in the bottoms of the upwardly opening grooves providing means for draining water from the cross head, and means adapted to cooperate with the bail wire in securing the swab to the cross head.

JAMES H. FOLLEN.