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ROOFER'S MOP

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Fig. 1.

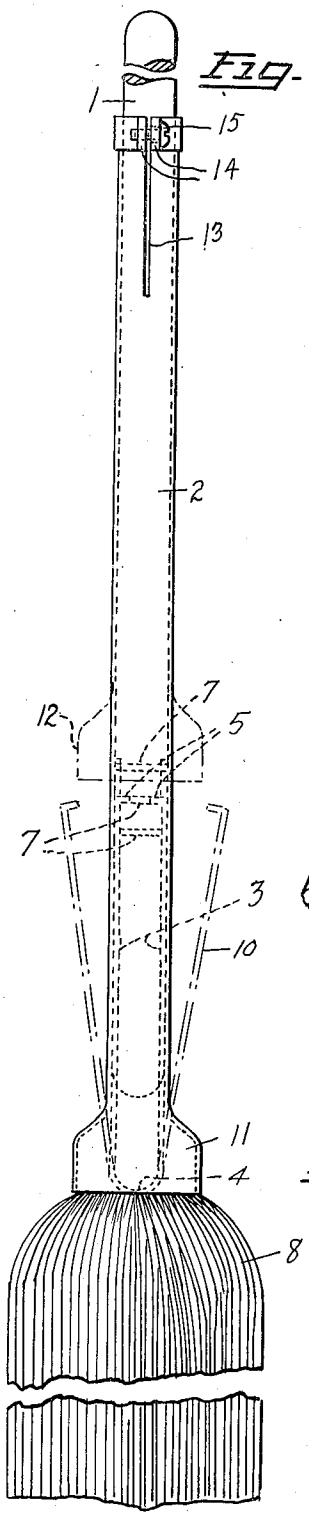


Fig. 2.

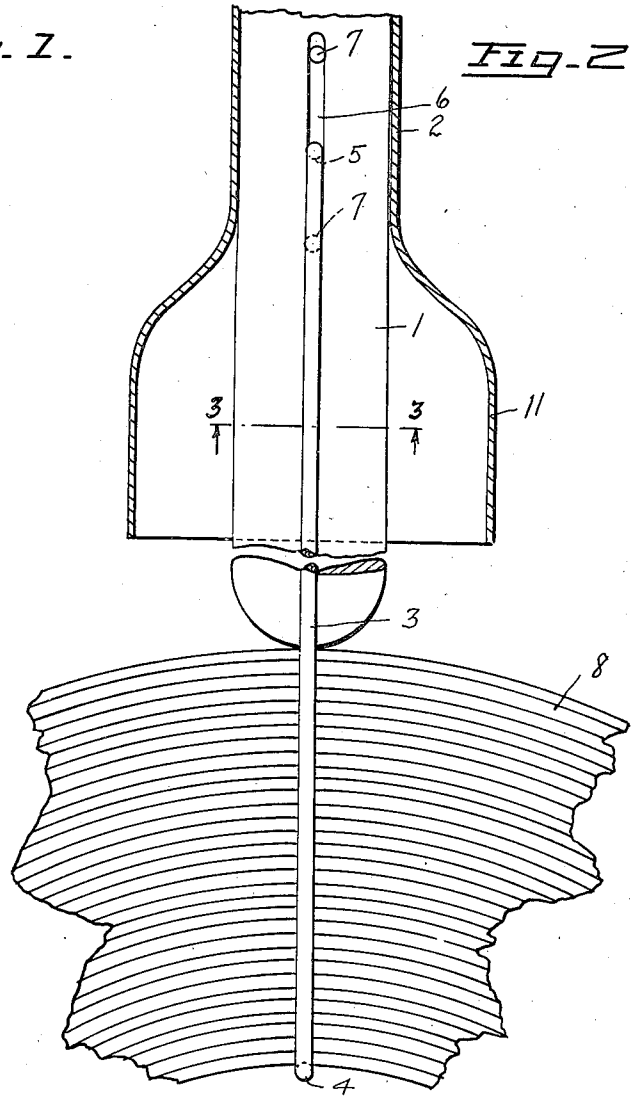
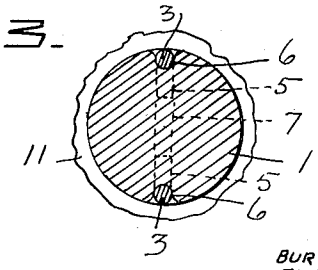


Fig. 3.



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ROOFER'S MOP

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2 Claims. (Cl. 15—229)

This invention relates to a roofer's mop of the type used for applying and for spreading hot tar on roofs.

Heretofore mops of this type have been produced, the structure of the different mops being similar in certain respects, such as in the employment of a straight wooden stick that serves as a handle and as a support for the mop head. A metal tube is ordinarily secured to the outer end of the mop stick and the mop head that is of cotton cords or yarn is secured to a projecting end of the tube. The purpose of the tube is to prevent burning or charring of the outer end of the mop stick by the hot tar when the mop head is dipped into such tar. In most of these prior structures the mop yarn is secured by a wire to the metal tube, and not to the stick. Considerable difficulty is encountered in tightly securing the yarn to the tube, particularly where the mop head is relatively large. Also the tubes must be perforated for the wires with the result that the hot tar gets between the mop head and the stick and the stick is not only charred or burned, but this tar makes it difficult to remove the mop-head-securing wire for replacing a mop head.

Attempts to overcome these objections have resulted in making up special mop heads provided with a metal eye or hook for engagement with a hook secured to the end of the mop stick. A metal sleeve reciprocable on the mop stick is then forced against the mop head to hold the latter rigid and to prevent burning of the end of the stick. These attempts have been fairly satisfactory, but have precluded the individual operator from making up his own mop head from conventional lengths of yarn to suit himself. Also the conventional structures have not entirely stopped burning of the stick and do not provide the strength desired, or the economy in manufacture that is a quite important consideration.

The principal object of this invention is to provide a structure that overcomes the above mentioned objections, and which mop is very easily manipulated for replacing the mop head. Also there is no need in my structure for providing specially made up mop heads with eyes or hooks secured thereto, or for tightening or bending wires in order to secure the mop head in place for use.

Another object of my invention is the provision of a mop that is economical to make and to use. The economical use resides in the fact that the only part that requires replacement in use is the mop yarn. There are no wires, metal bands, or the like, that require replacement.

Other objects and advantages will appear in the specification and drawing.

In the drawing,

Fig. 1 is an elevational view of an assembled mop ready for use, the stick and head being broken in length to accommodate the view to the sheet.

Fig. 2 is an enlarged, fragmentary view of the mop-head-securing means separated from the mop head, the view being partially in section and partially in elevation and with the mop at right angles to the position of the mop in Fig. 1.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

In detail, the mop stick 1, which is of wood and straight, is provided with a cylindrical, tubular sleeve 2 that is reciprocable on the outer end portion thereof. Sleeve 2 is of metal and is adapted to fit the stick 1 rather closely, but not so close as to prevent relatively easy sliding of the tube on the stick. The end of the stick opposite said outer end portion thereof is exposed and provides a handle for holding by the operator. Ordinarily this exposed portion of the stick may be from about two to three times the length of tube 2 or about three feet, although it may be longer or shorter according to the requirements of the job to be done.

The mop head is preferably formed from lengths of conventional mop yarn, such as in the form of cotton cord, string, etc., and which lengths are secured to the stick by means of a U-shaped holder of relatively heavy spring wire providing legs 3 and a closed end portion 4. The portions of said legs at their free ends are bent toward each other for forming laterally extending projections 5.

The outer end portion of the stick 1 is formed on two of its opposite sides with a pair of grooves 6 that extend longitudinally of the stick. The depth of each of these grooves is about equal to the diameter of the wire forming the legs 3 of the holder. Opening into these grooves at the ends of the latter nearest the handle portion of the stick are recesses for receiving the projections 5 when the legs 3 are in said grooves. These recesses may be in the form of through openings 7 extending through the stick at right angles to its longitudinal axis and at spaced points longitudinally of the stick so as to permit the projections 5 to be held at different distances from the outer end of the stick.

The legs 3 of the mop-head-holder are of uniform length and said length is such that the end portion 4 of the holder will extend transversely

across the outer end of stick 1, and spaced therefrom when the projections 5 are in any one of the several holes 7. Between said outer end of the stick and end portion 4 of the holder extend the lengths of mop yarn 8. Said end portion 4 extends across said lengths midway between the ends of the latter. For a heavy mop head in which a considerable movement of yarn is used the projections 5 may be in the recesses or ends of hole 7 that are nearest the outer end of the mop stick. For a light mop head, the projections 5 may be in the hole 7 most remote from the outer end of the handle. For a medium mop head, the said projections may be in the hole 7 that is between the above mentioned holes.

It is thus seen that the operator may make up a mop head to suit his desires, using similar lengths of mop yarn, or a combination of different lengths, and any desired amount of yarn.

The wire mop head holder is preferably formed so that the legs 3 thereof will tend to spring apart as indicated at 10 in Fig. 1 in dot-dash lines, unless held substantially parallel in grooves 6. This facilitates the replacement of burned or worn out mop heads.

In securing the holder and a mop head thereon to the stick 1, the legs 3 of the holder are placed in grooves 6 with projections 5 on said legs in the recesses or hole 7 that will bring the head nearest to the outer end of stick 1. The tube 2 is slipped toward the handle portion of stick 1 so as to uncover the grooves and holes 7 in order to make this operation possible. After the legs 3 are in grooves 6 as above explained, the sleeve 2 is moved axially of stick 1 toward the mop head until the legs 3 are enclosed therein, thus holding said legs in the grooves 6 and also holding the projections 5 in the desired hole 7.

The outer end of sleeve 2 is preferably bell-shaped as indicated at 11, so that the yarn that extends between the outer end of stick 1 and the end portion 4 of the holder will be enclosed therein. The free, annular edge of the bell shaped part 11 will very tightly engage the yarn and the portion of the yarn within said bell-shaped part will be so compacted as to preclude the hot tar in which the mop head is dipped from passing to stick 1. When the bell-shaped part 1 of the sleeve encloses that portion of the mop head above described the outer end of stick 1 is within the sleeve 2 and as the sides of said sleeve and said part 11 thereof are imperforate, it is seen that no hot tar can reach the outer end of the stick 1 to char or burn the latter. When the sleeve 2 is retracted from the mop head to release the legs 3, the bell-shaped part 11 will, of course, move with the sleeve to the position 12 indicated in dot-dash line in Fig. 1.

In order to secure the sleeve 2 and its bell-shaped end 11 in the operative position shown in Fig. 1, the sleeve is preferably formed with a slot 13 extending longitudinally thereof from the end edge of the sleeve that is remote from the mop head. This slot extends toward the part 11 only a small distance sufficient to enable drawing the edges of the slot at the end edge of the tube toward each other a sufficient distance to enable a tight gripping of the stick by the tube adjacent its said end edge. Opposed ears 14 rigid with said sleeve are provided at opposite sides of said slot 13 at the open end of the latter, and a screw 15 may extend through an aperture in one of said ears into threaded engagement with a threaded aperture in the other ear for drawing the edges of the slot toward each other and consequent gripping of the stick.

The tube 2 with its bell-shaped end 11, when in the position indicated in Fig. 1, functions to hold the mop head rigid relative to the stick 1 and centered on the axis of the latter. Also the stick is thoroughly protected from the hot tar into which the head may be dipped, even though the mop is dipped into the tar so far that the tar covers the bell-shaped part 11 and part of the sleeve 2.

The replacement of a burned or worn out mop head merely requires loosening screw and slipping of the tube 2 and part 11 on stick 1 until said part 11 reaches position 12. The holder and mop head then automatically will fall from the stick. As legs 3 of the holder spring apart when released, the old mop head is easily cut from the holder, or slipped off the latter and a new head can be readily placed on the holder. In some instances several holders are made up by an operator in advance to enable quick replacement of a mop head without waiting for the old one to cool, and in other instances the operator may have different sizes of mop heads made up for work in different places on a job. The changing from one mop head to another is very easy and quickly done by virtue of the structure herein described.

The extreme rigidity and tightness with which the mop head can be held by the sleeve 2 and its part 11 is largely dependent upon the capacity of the wire holder to hold onto the mop stick when the part 11 of sleeve 2 is forced against the mop head. The degree to which the said part can be forced against the mop head determines the effectiveness of the seal that the compacted yarn provides in the part 11 for preventing passage of hot tar to the handle. By applicant's structure, it will be seen that where the wire of the mop head holder is fairly heavy, as is the case here, the part 11 can be driven against the mop head with great force without loosening the hold of the holder on the stick. Thus no delicacy need be observed by the operator in tightening the sleeve and part 11 against the mop head, and a tight seal can be insured always, as well as a rigid mop head.

Having described the invention, we claim:

1. A roofer's mop comprising a straight stick providing a handle and an outer end at opposite ends thereof respectively, a tubular imperforate sleeve reciprocable on said stick, a U-shaped yarn holder, the legs of which extend along opposite sides of said stick with the closed end of said holder extending across said outer end of said stick, a quantity of mop yarn positioned between said closed end of said holder and said outer end of said stick, said sleeve enclosing the outer end portion of said stick including said legs for holding the latter against said stick, said sleeve being formed with a bell-shaped end portion coaxial therewith and having parallel sides and axially facing free end edges, the said free end edges of said end portion being in tight engagement with said yarn, the part of said yarn that is between said closed end of said holder and said outer end of said stick being tightly packed within said bell-shaped portion, outwardly opening recesses formed in the sides of said stick, projections on said legs extending into said recesses, said sleeve being slidable on said stick toward the handle end thereof in direction away from said mop for uncovering said holder and said part of said yarn

and means on said sleeve for releasably securing said sleeve against so sliding on said stick.

2. A roofer's mop comprising a straight stick providing a handle and an outer end at opposite ends thereof respectively, a U-shaped yarn holder the legs of which extend along opposite sides of said stick with the closed end of said holder extending across said outer end of said stick, a mop body of lengths of mop yarn extending between said closed end of said holder and said outer end of said stick, a tubular sleeve reciprocable on said stick and enclosing from about a quarter to about a third of the length of said stick from said outer end of the latter whereby the end thereof adjacent the handle end of the stick will be relatively cool and free from hot roofing material in which the mop yarn is adapted to be dipped, said sleeve being integrally formed with a substantially cylindrical enlargement projecting from said outer end of said stick and tightly enclosing the part of said mop yarn that is between said closed end of said holder and said outer end of said stick, said sleeve and its enlargement being movable on said stick toward the handle end for uncovering said holder and said part of said mop yarn, means including said sleeve for releasably securing said holder to said stick, said sleeve and said enlargement thereon being imperforate, and means at the end of said sleeve that is adjacent said handle for releasably securing said sleeve to said stick against movement thereon.

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