April 26, 1932. D. McDONALD 1,855,250

OIL MOP

Filed Aug. 25, 1930

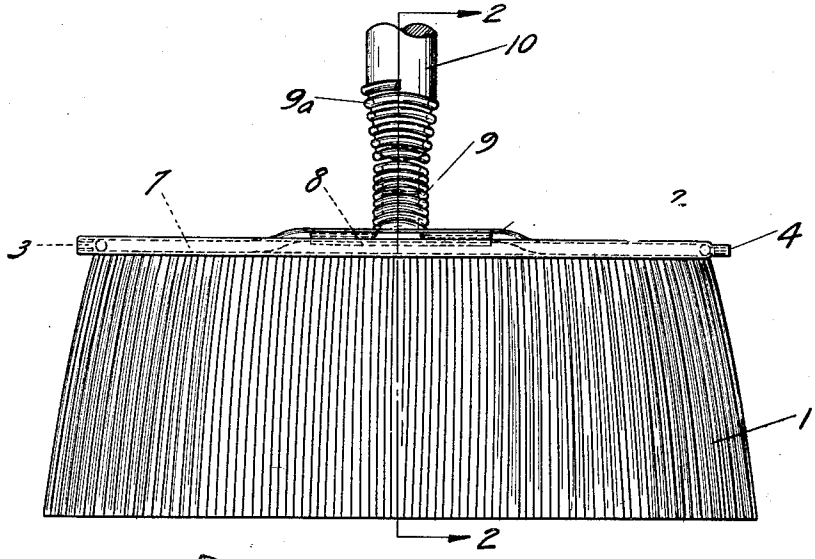


FIG-1

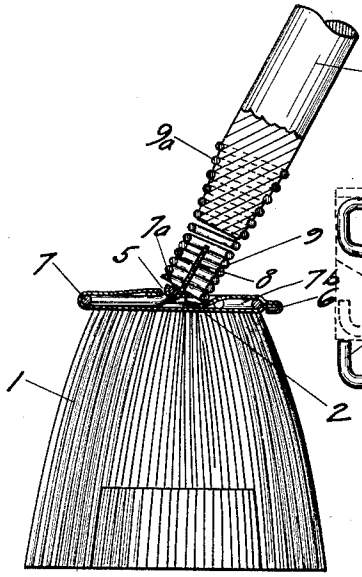


FIG-2

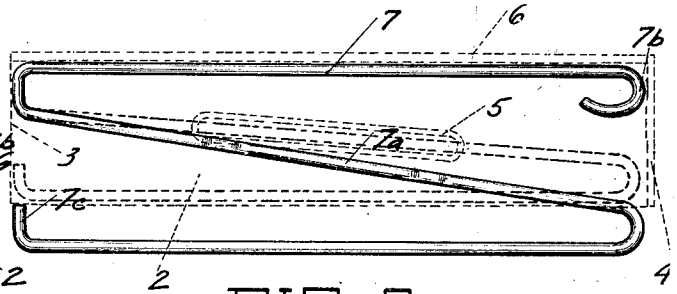


FIG-3

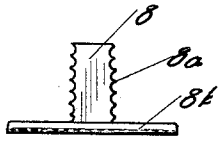


FIG-4

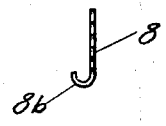


FIG-5

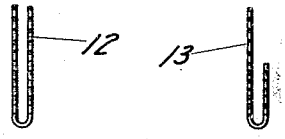


FIG-6 FIG-7

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UNITED STATES PATENT OFFICE

DONALD McDONALD, OF DAVENPORT, IOWA

OIL MOP

Application filed August 25, 1930. Serial No. 477,636.

My invention relates to improvements in dustless or so-called oil mops with which a heavy head of fabric moistened with oil is used to wipe up the dust on floors, etc.

The objects of my invention are

1. To provide improved means for forming the mop-head and for attaching the mop-head to the handle;

2. To provide means by which the attachments securing the head to the handle may be adjusted so as to secure same either rigidly or flexibly as desired.

I attain these objects by the means illustrated in the accompanying drawings, in which,—

Figure 1 is a front elevation of a mop-head showing the mop stick broken away;

Figure 2 is a vertical section on the line 2—2 of Figure 1;

Figure 3 is a plan view of the spring head expanded and shows in dotted lines the spring head contracted substantially as when contained within the canvas envelope, which is also shown in dotted lines;

Figure 4 is a detail of the spring head fastener plate;

Figure 5 is an end view of the spring head fastener plate;

Figures 6 and 7 are end views of an alternate form of fastener plate.

Similar numerals refer to similar parts throughout the several views.

My invention comprises an envelope or pocket, 2, which is composed of a folded strip of heavy canvas or other suitable material, having its side edges stitched together as at 6 and one end stitched as at 4 and the other end, 3, being left open for the insertion of the spring-head, 7.

The mop-head, 1, is preferably composed of a plurality of strands of roving or other suitable cords and may be of cotton wool or other desired material. This head, 1, is secured to the lower layer of the envelope, 2, by being stitched thereto or otherwise suitably secured thereto.

The spring-head is preferably formed of heavy spring wire, 7, bent substantially as shown in Figure 3, one end of the wire, 7*b*, being bent in rounded form so as to slip easily into the envelope, 2. The other end, 7*c*, is bent at right angles to the adjoining portions of the body and may act as a spacer.

I prefer to form the bends of my spring-head so that when inserted within the envelope, the middle portion of the body of the spring will lie substantially parallel to the two outer portions and the re-bent ends, 7*b* and 7*c*, will act as spacers and as thus formed, will tend to stiffen the head, or the spring may be made of sufficiently heavy material so that it will have sufficient stiffness when a little gap is left between the ends, 7*b* and 7*c*, and the opposed portions of the spring.

At 7*a*, the portion of the middle section of the spring is bent upwardly so as to protrude upwardly through a slit, 5, cut in the upper portion of the upper layer of the envelope, 2.

I attach my mop-head to the handle, 10, by uniting it to a coiled spring, 9, the upper end of which, 9*a*, is expanded in somewhat conical shape, the end of the handle being reduced and threaded so as to fit snugly in the conical end of the coiled spring. The lowest coil of the spring is preferably ground off so as to form a flat surface. A fastener or locking plate, 8, having threaded or indented edges, 8*a* corresponding to the interior of the lower portion of the coiled spring, is screwed into the lower end of the coiled spring 9. The coils of the lower end of the spring 9, may be pressed closely together as shown in Figure 2, and the threaded edges, 8*a*, constructed to correspond thereto, or more open coils may be used and the serrations be constructed to correspond.

At the lower end of the plate, 8, I form a greatly extended hook or trough-like projection, 8*b*, which is integral with the plate, 8, and has an opening corresponding to the diameter of the spring used in the spring-head, 7.

The plate, 8, with the hook portion, 8*b*, is preferably formed of spring steel to aid in gripping the spring, 7, firmly.

The plate, 8, and hook, 8*b*, may be made in the form shown in Figures 4 and 5, or the vertical portion, instead of being made single as in Figures 4 and 5, may be made double

as shown at 12 and 13 in Figures 6 and 7. The form shown in Figure 5 will be a little easier to attach to the spring-head, but the form shown in Figures 6 and 7, will give a little more rigid attachment.

The threading or indentations in the edges, 8*a*, should be made deep enough to secure a firm hold upon the interior of the spring, 9, and when so formed, the spring, 9, may be screwed down upon the plate, 8, until the flattened surface of the lowest coil of the spring, 9, bears against the extended portions of the hook, 8*b*, firmly enough to bind the head and handle firmly in the position shown in Figure 2.

When desired to allow a flexible connection between the handle and the head, the spring, 9, may be loosened slightly so as not to bear against the extended portion of the hook, 8*b*.

It frequently happens that the dust mops require washing. In such cases my mop can be readily disassembled by unscrewing the coiled spring, 9, from the plate, 8, withdrawing the hook, 8*b*, from the upraised portion, 7*a*, of the spring, 7, and then withdrawing the spring, 7, lengthwise from the open end, 3, of the envelope, 2. After washing the head, the mop can readily be reassembled and tightened as desired.

I claim:

1. A mop comprising a pocket of heavy fabric, a mop-head united to the lower layer of the pocket, a spring-head comprising a heavy spring wire rebent upon itself to form an intermediate member and two outer members, said intermediate member having an upwardly bent portion near the middle thereof, a slit in the upper layer of the pocket through which said upwardly bent portion may project, a coiled spring having a cylindrical lower portion, a locking plate comprising a body with edges threaded to correspond to the lower portion of the spring and with a hook formed integral therewith, and a handle united to the upper end of the coiled spring.

2. A mop comprising a pocket of heavy fabric, a mop-head united to the lower layer of the pocket, a spring-head comprising a heavy spring wire rebent upon itself to form an intermediate member and two outer members, said intermediate member having an upwardly bent portion near the middle thereof, a slit in the upper layer of the pocket through which said upwardly bent portion may project, a coiled spring having a cylindrical lower portion, a locking plate comprising a body with edges threaded to correspond to the lower portion of the spring and with a hook formed integral therewith, and a handle united to the upper end of the coiled spring, the lowermost coil of the spring being ground or flattened to a flat surface.

3. A mop comprising an envelop or pocket of heavy canvas or other suitable material and open at one end, a mop-head united to the lower layer of the envelop, a substantially N-shaped spring-head having an intermediate upwardly bent portion, said head being formed to fit tightly within the envelop and to exert a lateral spring pressure thereon, a slit or opening in the upper layer of the envelop corresponding in length to the upwardly bent portion of the head and through which said upwardly bent portion may project, a handle, and means attachable to the upwardly bent portion of the spring-head, for securing the spring-head to the handle.

4. A mop comprising an envelope or pocket of heavy canvas or other suitable material, a mop-head united to the lower layer of the envelop, a spring-head having parallel side members united at opposite ends by an intermediate member having an upwardly bent portion, said head being formed to fit tightly within the envelop and to exert a lateral spring pressure upon the sides of the pocket for the entire length thereof, a slit or opening in the upper layer of the envelop corresponding in length to the upwardly bent portion of the head and through which said upwardly bent portion may project, a handle, and detachable means for securing the spring-head to the handle.

5. A mop comprising a handle, a mop-head, a coiled spring having its upper end mounted upon one end of the handle, a spring-head removably attached to the mop-head, and a lock plate with edges threaded to correspond to the coils of the spring, adapted to screw into and out of the lower part of the coiled spring, said lock plate also having a hook formed integral therewith adapted to engage and secure the spring-head rigidly when the coiled spring is screwed tightly down upon the lock plate.

6. A mop comprising a handle, a mop-head, a coiled spring having its upper end mounted upon one end of the handle, a spring-head removably attached to the mop-head, and a lock plate with edges threaded to correspond to the coils of the spring, adapted to screw into and out of the lower part of the coiled spring, said lock plate also having an extended hook formed integral therewith adapted to engage and secure the spring-head rigidly when the coiled spring is screwed tightly down upon the lock plate.

In testimony whereof he affixes his signature.

DONALD McDONALD.