March 4, 1969 M. J. FUERST 3,430,284

ATTACHMENT MEANS FOR WIPE SHEET MATERIAL

Filed July 24, 1967 Sheet 1 of 2

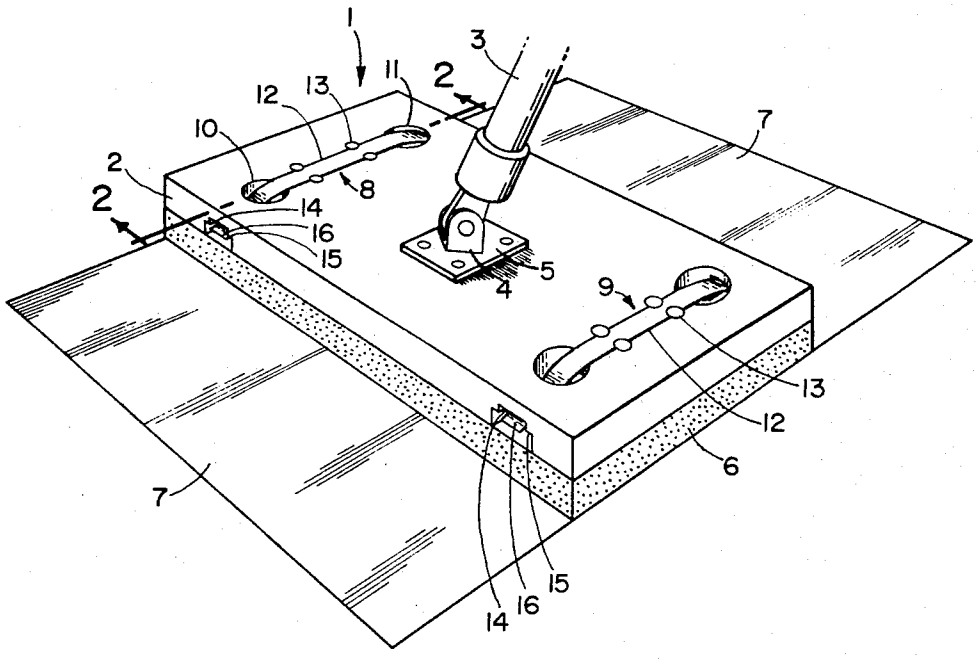


FIG. 1

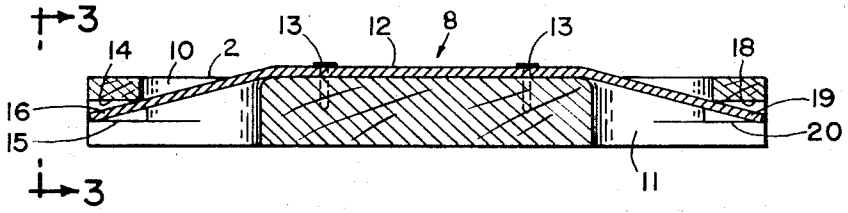


FIG. 2

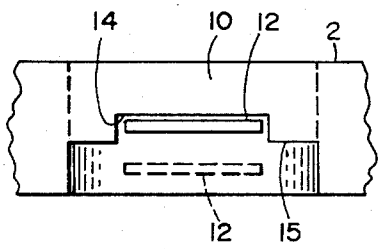


FIG. 3

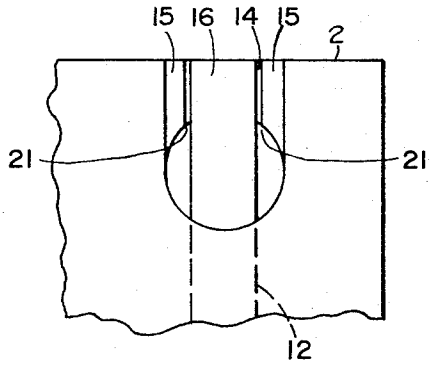


FIG. 4

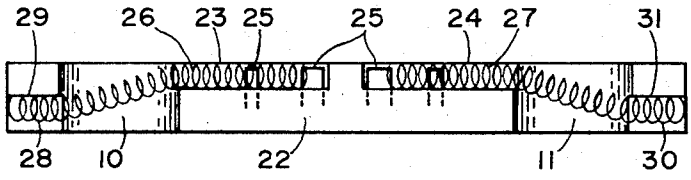


FIG. 5

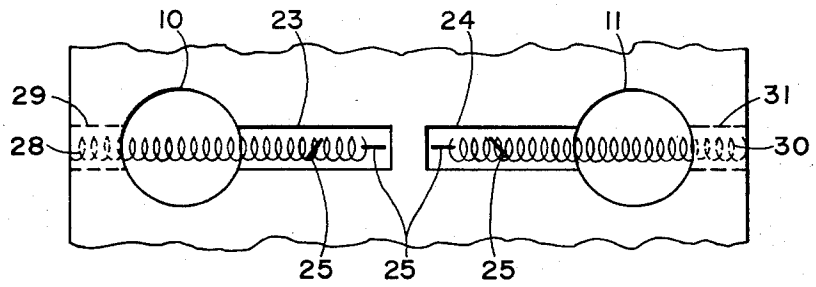


FIG. 6

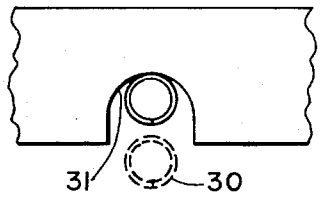


FIG. 7

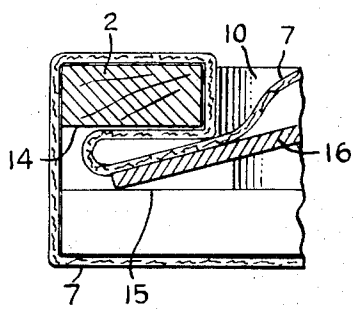


FIG. 8

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ATTACHMENT MEANS FOR WIPE SHEET MATERIAL

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Int. Cl. A47l 13/46

ABSTRACT OF THE DISCLOSURE

A mop having a replaceable wiper which is releasably secured to the mophead by strips of resilient material carried by the mophead. The strips are biased against their own resiliency to effect retention of a wipe between the strips and the mophead. Means are provided to permit easy finger pressure biasing of the strips.

FIELD OF THE INVENTION

This present invention relates to an improved dust mop having a removable, disposable duster formed of paper, rags or the like. More particularly, the present invention is concerned with such a device having novel attaching means for securing the duster to a mop head.

BACKGROUND OF THE INVENTION

Commonly in the dusting art those devices which do have disposable dust cloths and the like involve either bulky mechanism for the retention of the duster or mechanism which penetrates the dusting cloth or tissue and thus frequently causes tearing of the duster. A primary purpose of this invention is to provide a novel structural arrangement of considerable simplicity and which is effective to retain a wiping cloth on a mop head without the use of devices which protrude materially from the mop head or which so engage the dust cloth that tearing may occur. An important object of the invention is to so provide the retaining means for the duster that, in use, the duster tends to be tightened and drawn to a snug position on the mop head.

The invention will be more fully understood by reference to the following detailed descriptions and accompanying drawings wherein:

FIG. 1 is a view in perspective of a mop head in accordance with my invention illustrating a removable duster opened out but ready for attachment on a base carrying a sponge rubber cushion;

FIG. 2 is a sectional view along line 2—2 of FIG. 1 with the duster and cushion removed;

FIG. 3 is a fragmentary view looking generally in the direction of line 3—3 of FIG. 2;

FIG. 4 is a fragmentary and bottom view of the base;

FIG. 5 is a view of a further embodiment of the invention;

FIG. 6 is a plan view taken of the arrangement of FIG. 5;

FIG. 7 is a view of the right hand end of FIG. 6; and

FIG. 8 is a fragmentary view illustrating the wiping cloth retained on the mop head.

Referring to the drawings more particularly, the numeral 1 generally designates the mop and the numeral 2 indicates the elongated, substantially planar mop head base. Handle 3 is fixed to a swivel 4 and retained on the mop head base through the medium of a rigid plate 5. The base suitably includes on its under side a layer of sponge rubber 6. As shown in FIG. 1, a wipe 7 is arranged to be folded on and applied to the mop head. For the purpose of attaching the wipe 7 to the mop head base 2 the latter has disposed at opposite ends thereof securing means indicated generally at 8 and 9. The securing means each involves means for retaining the wipe forwardly and rearwardly on the mop head. In the drawings both the means 8 and 9 for retaining the wipe 7 are similar and, accordingly, only means 8 will be described in detail.

Means 8 comprises a pair of aperture means, a forward aperture 10 and a rearward aperture 11 in spaced apart relation, and each aperture extends completely through the mop head 2. A single flat ribbon spring component 12 is retained on the mop head base by retaining means 13 in the form of brads (FIG. 2). The base 2 is cut out from the bottom upwardly (FIG. 3) to provide a seat 14 and shoulders 15 bounding the seat. The seat communicates with aperture 10. A free end 16 (FIG. 2) of the spring steel strip 12 extends downwardly through the opening 10 and is biased by its own resiliency into contact with the seat 14. The seat 14 suitably is positioned very closely adjacent the top surface of the mop head base 2 so that large deformation of the spring or strip is not necessary to effect seating of the strip. The shoulders at 15 provide a cut-out zone which is of sufficient width to accommodate a normal human thumb or finger and permits easy positioning of the wiper without catching of the finger by the strip action.

The aperture 11 has associated with it a similar seat 18 for receipt of free strip end 19 of strip 12; shoulders 20 serve the same purpose as shoulders 15.

In the embodiment shown in FIGS. 1–4 inclusive, the wiper 7 is simply pushed down into the apertures having the strip ends positioned therethrough and the wiper is tucked between seat 14 and the free strip end; specifically, the wiper extends downwardly in the aperture to the free end of the strip associated with the aperture and is biased into contact with the seat. Additionally, the wiper tends to encompass the corners 21 (FIG. 4) and to be retained thereby when a pull is exerted on the wiper in use. It is to be noted that when the mop is moved in such a direction that the aperture 10 is leading, the wiper retained in aperture 10 will tend to be tightened by the movement. Similarly, in a reverse direction of movement, the wipe will tend to be tightened in the securing means at aperture 11. Accordingly, the wipe is maintained suitably taut at all times in use by the clamping device.

The strip 12 of FIGS 1–4 inclusive, as may be clearly seen from FIG. 3, is a relatively narrow thin band and is biased by its own inherent resiliency to the seat at the strip free end. The strip, being flexible, may be urged against its own inherent resiliency to effect release of the strip from the seat. Such action also occurs to a limited degree in positioning the wiper. Commonly, when a single flat strip is employed as illustrated in FIGS. 1–4, the strip is first mounted on one seat and through one aperture and passed across the base to the other aperture and seat.

There is shown in FIGS 5–7 inclusive in fragmentary views a further embodiment of the invention wherein the strip is easily compressible on its longitudinal axis and readily passed from the seat through the opening to the upper surface, or vice versa, when such is desired. Thus, in FIG. 5 the base illustrated at 22 has therein elongated slots 23, 24 in which there is retained by staples 25 lengths of coil springs 26, 27. Coil spring 26 has a free end which passes downwardly through the aperture 10 to the seat 29 and is retained by the seat 29 which, like the structures of FIGS. 1–4, acts much like a keeper. Similarly, spring 27 is retained at its free end 30 by seat 31.

Referring to FIGS. 3 and 7, it will be noted that, as illustrated by the dotted lines, each strip is vertically deflectible to accept the wipe. The wipe 7, when employed with any of the embodiments, may leave the mop ends exposed as in FIG. 1; frequently, however, the mop end will desirably be covered by the wiper, it being simply necessary to extend the wipe for this purpose.

As many apparently widely different embodiments of this invention may be made without departing from the spirit and scope thereof, it is to be understood that I do not limit myself to the specific embodiments thereof except as defined in the appended claims.

I claim:

1. In combination in a mop structure, a wiper base having aperture means therethrough including a pair of spaced apart apertures, a spring component in the form of a strip of resilient material and having oppositely disposed free ends of a width to project through said apertures, retaining means securing the strip to one side of the base in position to provide that said free ends of the strip may project through said apertures, a seat recessed in the base bordering and communicating with each said aperture on the side of the base remote from the retaining means and extending away from the aperture and retaining means and each seat positioned to receive a free end of the said strip to thereby serve as a keeper, each said free end of said strip being flexible in one direction against the inherent resiliency of the strip to effect release of the strip from a seat and being biased by the resiliency of the spring in the opposite direction to urge the free end to the seat.

2. The combination according to claim 1 in which the strip of spring component is a relatively long, narrow compressible coil of wire.

3. The combination according to claim 1 in which the seat recessed in the base is bounded laterally by shoulders, said shoulders extending lengthwise of and in vertical relation to the seat.

4. The combination according to claim 2 and in which the base has a comfortable wiper element wrapped therearound for effecting dusting, the said base having at opposite ends thereof a pair of said apertures extending therethrough in spaced apart relation forwardly and rearwardly on the base, a single spring strip component projecting through each pair of apertures and being retained intermediate the length thereof by the retaining means, the apertures of each pair having the seats thereof extending to a base edge, and said wiper element extending downwardly in each aperture to the free end of the strip associated with the aperture and biased into contact with a seat whereby the wiper is retained on the base.

5. The combination according to claim 4 in which each seat has shoulder means disposed in vertical relation to the seat and the wiper is retained against movement in the direction by contact with the shoulder edges.

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