April 7, 1959 E. E. SHELBY 2,880,442

HOLDER FOR STRIP MATERIAL

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Fig. 1

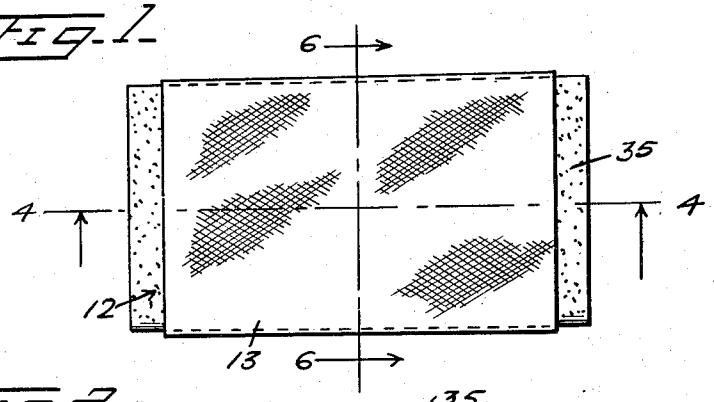



Fig. 2

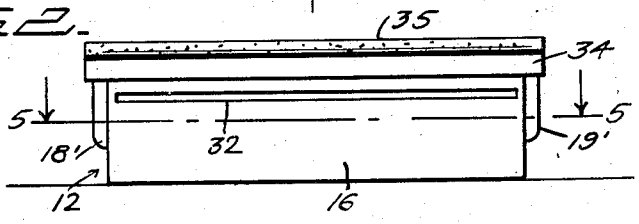



Fig. 3

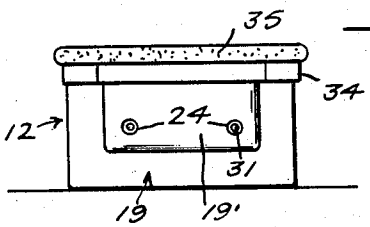



Fig. 7

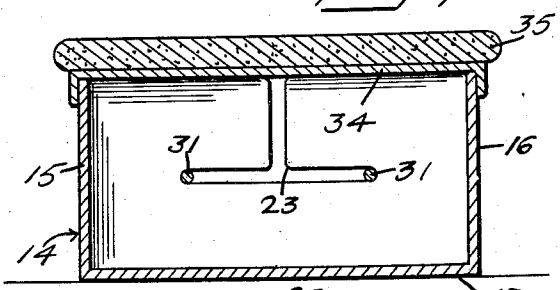



Fig. 9

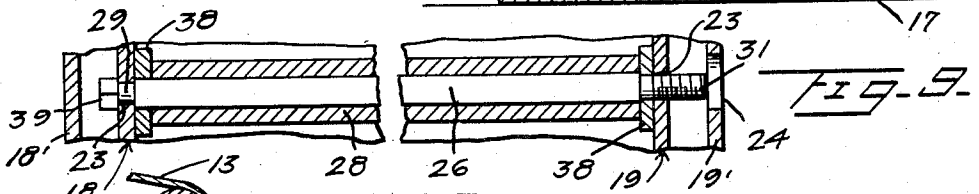



Fig. 10

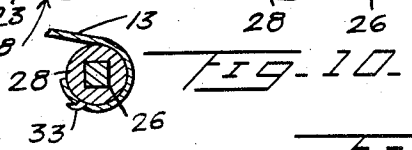



Fig. 11

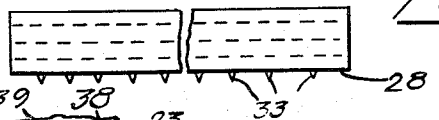
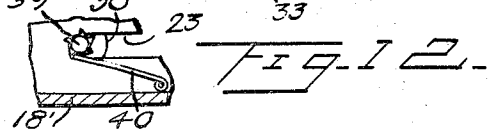



Fig. 12




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Fig. 4.

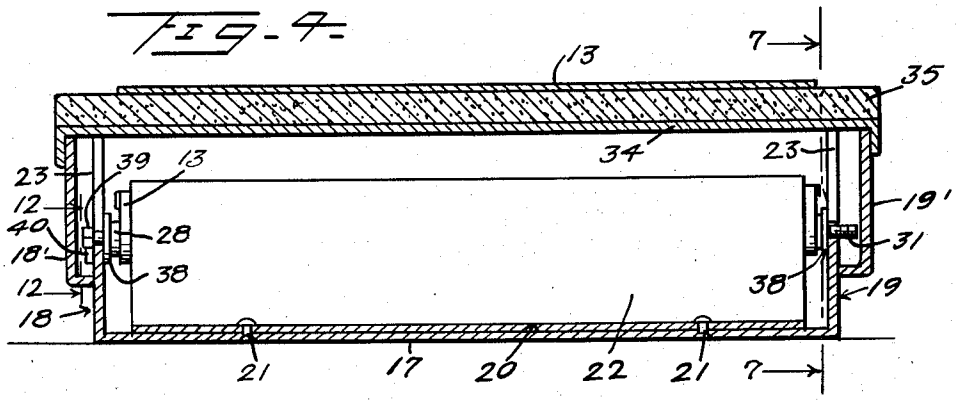
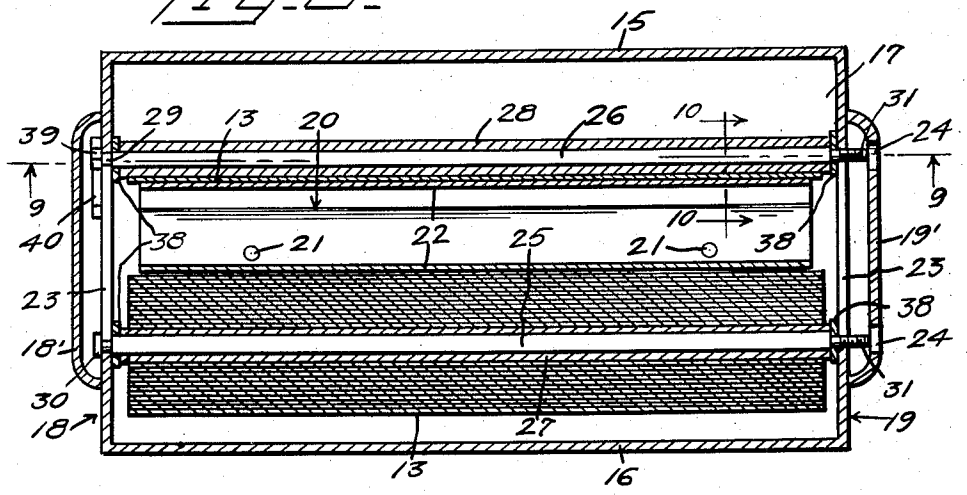



Fig. 5.



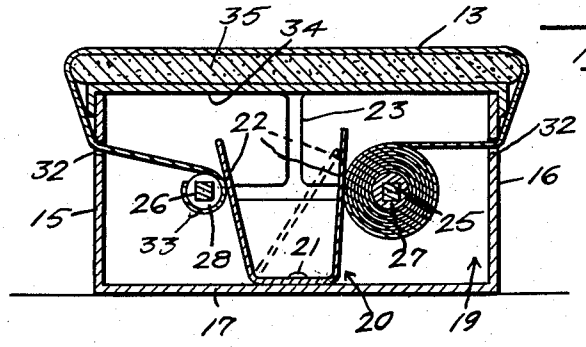
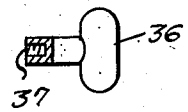




Fig. 6.

Fig. 8.




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2,880,442

# HOLDER FOR STRIP MATERIAL

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Application January 24, 1958, Serial No. 710,978

4 Claims. (Cl. 15—231)

This invention relates to a novel holder for flexible strip material used to wipe, scrape or apply a substance to a surface to be treated, and has for its primary object to provide a holder having means manually operable for moving different portions of the flexible strip into an exposed position for use to replace another worn or soiled part of the strip.

Another object of the invention is to provide a holder having novel means for supporting a flexible strip and for movement of the strip across an exterior part of the holder for positioning successive parts of the strip in an exposed position for use.

A further object of the invention is to provide a holder and feeder for strip material having novel means for maintaining an exposed part of the strip taut while in an operative position for use.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a plan view looking toward the surface engaging side of the implement;

Figure 2 is a side elevational view thereof;

Figure 3 is an end elevational view looking toward one end of the implement, from right to left of Figures 1 and 2;

Figure 4 is an enlarged longitudinal vertical sectional view, taken substantially along a plane as indicated by the line 4—4 of Figure 1;

Figure 5 is an enlarged horizontal sectional view, taken substantially along a plane as indicated by the line 5—5 of Figure 2;

Figure 6 is an enlarged cross sectional view taken substantially along a plane as indicated by the line 6—6 of Figure 1;

Figure 7 is a cross sectional view taken substantially along a plane as indicated by the line 7—7 of Figure 4;

Figure 8 is a plan view, partly in section of one element of the implement;

Figure 9 is an enlarged fragmentary longitudinal sectional view, taken substantially along a plane as indicated by the line 9—9 of Figure 5;

Figure 10 is an enlarged detailed cross sectional view, taken substantially along a plane as indicated by the line 10—10 of Figure 5;

Figure 11 is an enlarged fragmentary elevational view of one part of the implement, and

Figure 12 is an enlarged fragmentary vertical sectional view taken substantially along a plane as indicated by the line 12—12 of Figure 4.

Referring more specifically to the drawings, the holder for strip material in its entirety is designated generally 12 and includes an elongated strip 13 of a flexible material a part of which is supported in an exposed position and the remainder of which is contained within the holder. The strip 13 may be cloth and may be saturated with oil or other substance, in which case the holder may



form a cleaner and applicator such as a blackboard eraser or may constitute the head of an oil mop; or the strip 13 may be sandpaper or other abrading substance, in which case the holder portion constitutes a block for supporting the sandpaper.

The holder 12 includes a box shaped structure 14 which is elongated and which has side walls 15 and 16, a bottom 17 and end walls 18 and 19. An elongated channel shaped member 20 of a resilient material such as spring metal is secured as by suitable fastenings 21 to the inner side of the bottom 17 and extends substantially from end-to-end thereof and is disposed approximately midway between the side walls 15 and 16. The channel member 20 has spaced upwardly extending spring legs 22 which are normally spring biased outwardly relative to one another toward their upper edges.

The end walls 18 and 19 are each provided with an inverted T-shaped slot 23 the vertical leg of which opens outwardly of the upper edge of said wall. The walls 18 and 19 are each provided with an outwardly bulged portion which is preferably formed integral with the wall and which overlies the slot 23 thereof and which is connected at its bottom and ends only to the wall, as seen in Figures 4 and 5. The outwardly bulged portion 18' of the wall 18 may be solid while the outwardly bulged portion 19' of the wall 19 is provided with openings 24 which align with the ends of the horizontal portion of the slot 23 of the wall 19, as seen in Figure 5.

The holder 12 includes two corresponding spindles 25 and 26 each of which is of a length slightly less than the spacing between the end walls 18 and 19. The spindles 25 and 26 are noncircular in cross section, as seen in Figure 6, and sleeves 27 and 28, having noncircular bores snugly engaging the spindles 24 and 26, respectively, are slidably but nonrotatably mounted thereon. Each spindle 25 and 26 has a restricted stem 29 projecting from one end thereof. The stem 29 of the spindle 25 preferably terminates in a head 30 and the stem 29 of the spindle 26 preferably terminates in a small ratchet wheel 39, as best seen in Figure 12. The opposite end of each spindle is provided with a threaded stem 31. The stems 29 and 31 are disposed beyond the ends of the sleeves 27 and 28.

As seen in Figures 2 and 6, the side walls 15 and 16 are provided with slots 32 extending substantially from end-to-end thereof, which are disposed above the bottom portion of the slots 23 and beneath and spaced from the upper edges of said walls 15 and 16.

The elongated flexible strip 13 is wound on the sleeve 27 which is in turn mounted on the spindle 25, after which the spring legs 22 are sprung toward the side wall 15 to clear the vertical portions of the slots 23, so that the stems 29 and 31 may be inserted downwardly through said vertical slot portions 23 and thence along the horizontal bottom slot portions toward the side wall 16, as seen in Figures 5 and 6. The outer end of the strip 13 is then extended outwardly from the top of the roll through the slot 32 of the wall 16. With the spring legs 22 flexed against the roll strip 13, the other spindle 26 containing the sleeve 28 is inserted downwardly through the slots 23 and laterally along the lower portions of said slots toward the wall 15. The free end of the strip 13 after passing loosely over the open top of the box structure 14 is inserted inwardly through the slot 32 of the wall 15 and around the inner side of the sleeve 28. Said sleeve 28 contains prongs 33, as best seen in Figures 10 and 11, for detachably anchoring the free end of the strip 13 to the sleeve 28.

As seen in Figures 4 and 5, the stems 29 engage the slot 23 of the wall 18 and the head 30 and ratchet wheel 39 are disposed between the slotted portion of said wall and its outer portion 18'. The threaded stems 31 engage the

slot 23 of the wall 19 and the outer ends thereof terminate inwardly with respect to the wall portion 19'. Said threaded stems 31 are maintained in alignment with the openings 24 by the spring legs 22, as seen in Figure 6, and said spring legs are disposed between the spindles 25 and 26 and bear against the outer convolutions of the ends of the strip 13 which are wound on the sleeves 27 and 28.

The part of the strip 13 passing over the open top of the box structure 14 is left slack so that the flanged cover 34 of the holder 12 can be inserted between said open top of the box structure and the portion of the strip 13 disposed thereabove. The cover 34 is sized to snugly engage over and close the open top of the box structure 14, as seen in Figures 4 and 6, and is provided on its outer side with a relatively thick pad 35 over which the exposed part of the strip 13 extends. A key 36, as seen in Figure 8, has a socket 37 provided with a left-hand thread which is inserted inwardly through the opening 24 which aligns with the spindle 26 so that the key can be threadedly connected to the stem 31 of said spindle 26 for turning said spindle and the sleeve 28 in a clockwise direction, as seen in Figure 6, for winding the free end of the strip 13 thereon to tension said strip across the pad 35. The key 36 can then be removed by rotating it in the opposite direction. A spring pawl 40, as best seen in Figure 12, is supported by the wall 18, between said wall and the bulged portion 18', and has a free end engaging the teeth of the ratchet wheel 39 to permit said ratchet wheel and the spindle 26 to be rotated only in a direction for winding the strip 13 on the sleeve 28, and to prevent the spindle from turning in the opposite direction when the key is unscrewed from the stem end 31 of the spindle 26.

Washers 38 may be mounted on the stems 29 and 31 to engage between the ends of the spindles 25 and 26 and their sleeves 27 and 28 and the end walls 18 and 19.

If the holder 12 and strip 13 constitute an oil eraser for blackboards or an oil mop head, the pad 35 will preferably be relatively soft. If the holder 12 and strip 13 constitute a hand sander the pad 35 may be relatively hard.

After the portion of the strip 13, which is disposed over the pad 35, has become soiled, worn or otherwise unusable, the key 36 is re-engaged with the stem 31 of the spindle 26 for turning said spindle and the sleeve 28 to wind the strip 13 thereon and to exert a pull on the portion of the strip extending through the slot 32 of the wall 16 for turning the spindle 24 and sleeve 27 for unwinding the strip 13 therefrom. It will be obvious that the



spring legs 22 will readjust themselves to the changes in diameter of the wound ends of the strip 13 for maintaining proper tension on both of said wound ends.

Various modifications and changes are contemplated and may be resorted to, without departing from the function or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A holder for strip material comprising an elongated open top box having end walls each provided with an inverted T-shaped slot, said slots opening outwardly of upper edges of said end walls, spindles having stem portions projecting from the ends thereof, said stem portions being journaled in transversely spaced closed ends of said slots for rotatably mounting the spindles within said box in spaced apart substantially parallel relation to one another, sleeves nonrotatably mounted on said spindles, a flexible strip having end portions connected to and wound on said sleeves, said box having side walls provided with slots through which portions of said flexible strip extend and are movable, a flanged cover detachably mounted on and closing the open top of said box, and said strip having an exposed portion extending transversely across and supported by said cover.

2. A holder for strip material as in claim 1, said cover including a pad disposed on the outer side thereof and on which said last mentioned portion of the strip bears.

3. A holder for strip material as in claim 1, an elongated spring member disposed between said sleeves and extending longitudinally of the box, said box having a bottom to which a part of the spring is anchored, said spring having upwardly diverging legs yieldably bearing against the wound end portions of the strip and occupying the space of the box disposed between said wound end portions.

4. A holder for strip material as in claim 3, said spring legs maintaining the spindle stems yieldably in engagement with said closed ends of said slots.


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