Nov. 22, 1949 D. L. RODGERS 2,489,158

DUST MOP HAVING CLAMPING CHANNELS FOR HOLDING MOP CLOTH TUFTS OF VARIED LENGTHS

Filed Feb. 26, 1946

Fig. 3

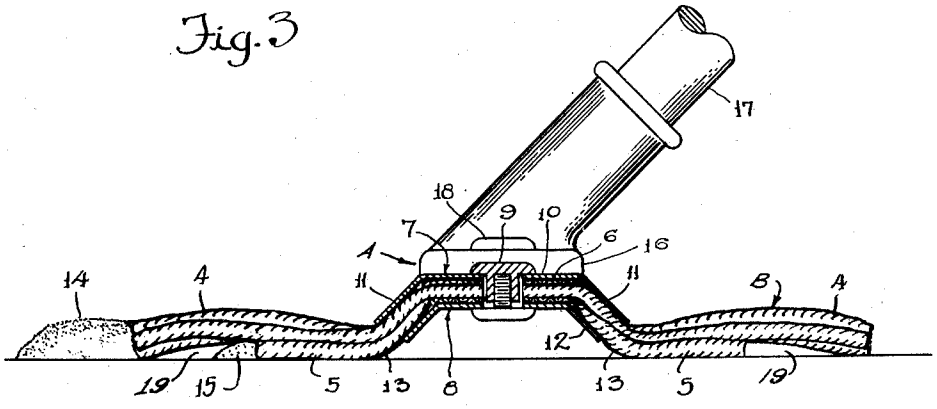


Fig. 1

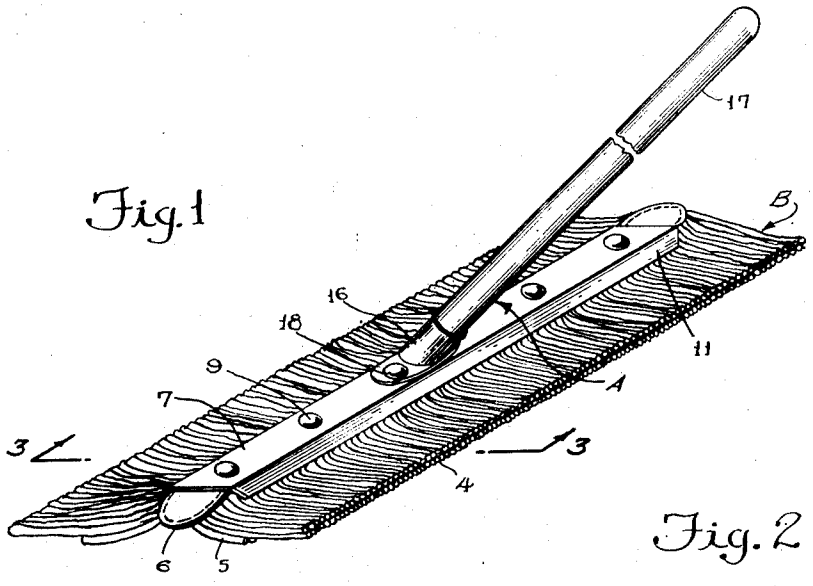
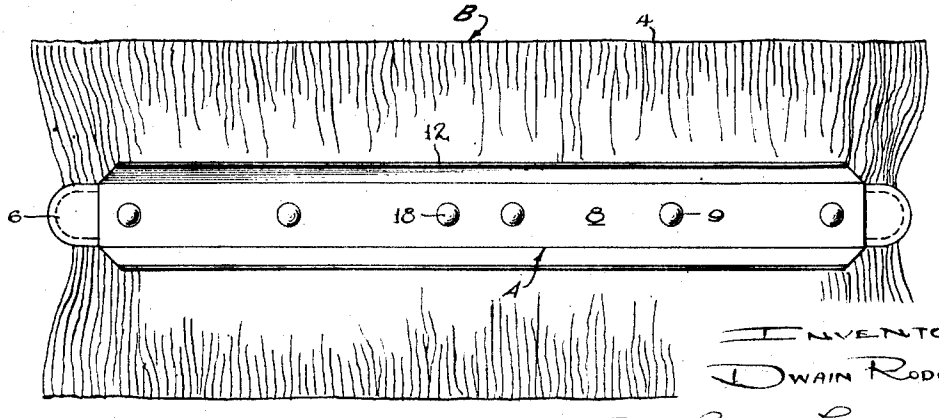


Fig. 2



INVENTOR
DWAIN RODGERS

By Lyman & Latta
Attorney

Patented Nov. 22, 1949 2,489,158

UNITED STATES PATENT OFFICE

2,489,158

DUST MOP HAVING CLAMPING CHANNELS FOR HOLDING MOP CLOTH TUFTS OF VARIED LENGTHS

Dwain L. Rodgers, Los Angeles, Calif.

Application February 26, 1946, Serial No. 650,214

2 Claims. (Cl. 15—147)

1

This invention relates to dust mops and has its general object to provide a dust mop having improved sweeping characteristics.

Conventional dust mops employ sweeping heads embodying many rows of tufts and having considerable fullness in their floor-engaging areas. In using such a dust mop, many of the tufts become doubled beneath the head, permitting the head to ride over some of the dirt. An important object of my invention is to provide a mop having a head so constructed as to push the dirt ahead of it and to largely prevent the dirt from working under it.

An ever-important aim in any cleaning device is to achieve minimum height in the cleaning head, in order that the head may pass under and clear low members of furniture, etc. With this general object in view, the invention contemplates a dust mop having less over-all height than any previous mop of otherwise comparable characteristics.

Another object is to provide a dust mop that is of maximum simplicity and is quite inexpensive to manufacture.

Other objects of the invention will become apparent in the ensuing specifications and appended drawings, in which:

Fig. 1 is a perspective view of a mop embodying the invention;

Fig. 2 is a bottom plan view of the mop; and

Fig. 3 is a transverse sectional view of the mop, taken on the line 3—3 of Fig. 1.

As an example of one form in which the invention may be embodied, I have shown in the drawing a dust mop embodying a holder A and a mop cloth B which is carried by the holder A. The mop cloth B comprises a plurality of tufts 4 and 5 sewed between a pair of tapes backing 6.

The holder A comprises a pair of clamping jaws 7 and 8, between which the head B is clamped. The jaw 7 comprises a channel of formed sheet material, preferably metal, having a web portion 10 and side flanges 11 that are bent downwardly therefrom at obtuse angles. The jaw 8 is also preferably a channel, having flanges 12 substantially paralleling the flanges 11, although this jaw may also be simply a flat strip. Securing bolts 9 are extended through the jaws 7 and 8 and the head B, and are drawn tight so as to bend downwardly the intermediate regions of the tufts 4 and 5. Thus there is interposed substantially the thickness of the tufts between the lower edges of the jaws 7 and 8, causing the mop to ride on the tufts. At the same time, the tufts are directed outwardly from the holder by

2

the flanges 11 and 12 so as to lie flatly against the floor without becoming doubled under the head.

The tufts 4 are arranged in an upper layer extending the full width of the mop cloth. The tufts 5 are arranged in a lower layer terminating considerably short of the ends of the tufts 4. In the sweeping operation, the majority of the dirt will be engaged by the ends of the tufts 4 and pushed ahead of the mop in a pile as indicated at 14. Any dirt that may pass the ends of the tufts 4 will be picked up by the ends of the tufts 5, as at 15.

The jaws 7 and 8 are attached to a socket 16 in which is secured a handle 17. The socket and handle are set at an angle of approximately 45 degrees with reference to the web 10, so that the mop head may be positioned substantially parallel to the floor when the handle is held by a person of normal height. The socket is detachably secured to the jaws, as by bolts 18, in order to permit the handle to be reversed when it is desired to reverse the sweeping side of the mop head.

In the use of the mop, mop cloth is placed on the floor with the tufts lying substantially flatly against the floor as in Fig. 3. Due to the manner in which the tufts are held by the jaws 7 and 8, and the fact that there are only a few layers of tufts in the mop cloth, it is only necessary to lift the mop off the floor a short distance (e. g. six inches) and then move it sharply downwardly into contact with the floor, in order to effect the spreading of the tufts into flat contact with the floor. This is an important characteristic, since it would be impracticable to have to smooth out the tufts with the hands each time the mop is placed on the floor after having been lifted from the floor, and the high sweeping efficiency of the mop is greatly dependent upon the maintenance of all tufts properly spread out, with no doubling of the tufts back beneath the head of the mop.

The ends of the mop cloth B extend beyond the ends of the holder A, to prevent damage to furniture, baseboards, etc. that would result from contact of the ends of the holder thereagainst.

The mop is extremely light when constructed from sheet Duralumin, and yet is very sturdy. Tests show that it will stand a greater amount of abuse than mops made of wood.

The jaw 8 is sufficiently narrower than the jaw 7 to provide spaces between the flanges 11 and 12 just sufficient to permit the tufts 4 and 5 to pass therethrough under compression.

In order to secure the beneficial results of the invention, the tufts should be arranged in not more than four layers.

The tufts 4, where they pass over the ends of the tufts 5, will be spaced above the floor to provide the pockets 19 in which the ends of the tufts 5 may be operative to engage any loose dirt passed by the ends of the tufts 4.

I claim as my invention:

1. In a dry mop, a holder comprising a pair of channels of substantially rigid sheet material each having a web portion and a pair of flanges that diverge downwardly and subted an angle in the neighborhood of 90 degrees in the position of use of the mop, a handle, means securing said channels to said handle with the handle inclined at an acute angle to said webs, the flanges of one channel being spaced from the corresponding flanges of the other channel, and a mop cloth engaged between said channels, said mop cloth comprising tufts having free ends, said tufts being engaged between said flanges and thereby directed downwardly and outwardly in generally opposite directions so as to be maintained in a generally spread condition during application of the mop to a floor surface and during sweeping, said tufts comprising a lower layer of tufts and an upper layer of tufts longer than the tufts of said lower layer, said upper tufts having end portions projecting beyond the ends of said lower tufts and of such length and form retaining stiffness as to bridge substantial spaces between the ends of said lower tufts and said floor surface, whereby to define dirt catching pockets having substantially vertical walls defined by the ends of said lower tufts, said free ends operating to gather dirt particles when moving end forwardly and largely preventing the dirt particles from passing beneath the mop.

2. In a dry mop, a holder comprising a pair of channels of substantially rigid sheet material each having a web portion and a pair of flanges that diverge downwardly and subtend an angle

in the neighborhood of 90 degrees in the position of use of the mop, a handle, means securing said channels to said handle with the handle inclined at an acute angle to said webs, the flanges of one channel being spaced from the corresponding flanges of the other channel, and a mop cloth engaged between said channels, said mop cloth comprising tufts having free ends, said tufts being engaged between said flanges and thereby directed downwardly and outwardly in generally opposite directions so as to be maintained in a generally spread condition during application of the mop to a floor surface, and during sweeping, with said free ends operating to gather dirt particles when moving end-forwardly and largely preventing the dirt particles from passing beneath the mop, the flanges of said upper channel overhanging the flanges of the lower channel to an extent such that the vertical distance between the planes of the longitudinal edges of said flanges is less than the thickness of said mop cloth between said flanges, whereby the mop will ride upon the portions of the tufts projecting from between said flanges.

DWAIN L. RODGERS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
151,404	Knapp	May 26, 1874
335,005	Wilson	Jan. 26, 1886
1,310,910	Hodschar	July 22, 1919
1,535,946	Rawalt	Apr. 28, 1925
1,576,203	Maeda	Mar. 9, 1926
1,701,686	Maeda	Feb. 12, 1929
1,792,589	Johnson	Feb. 17, 1931
1,806,402	Lorang	May 19, 1931
2,196,365	Schulman	Apr. 9, 1940
2,295,914	Rasic	Sept. 15, 1942