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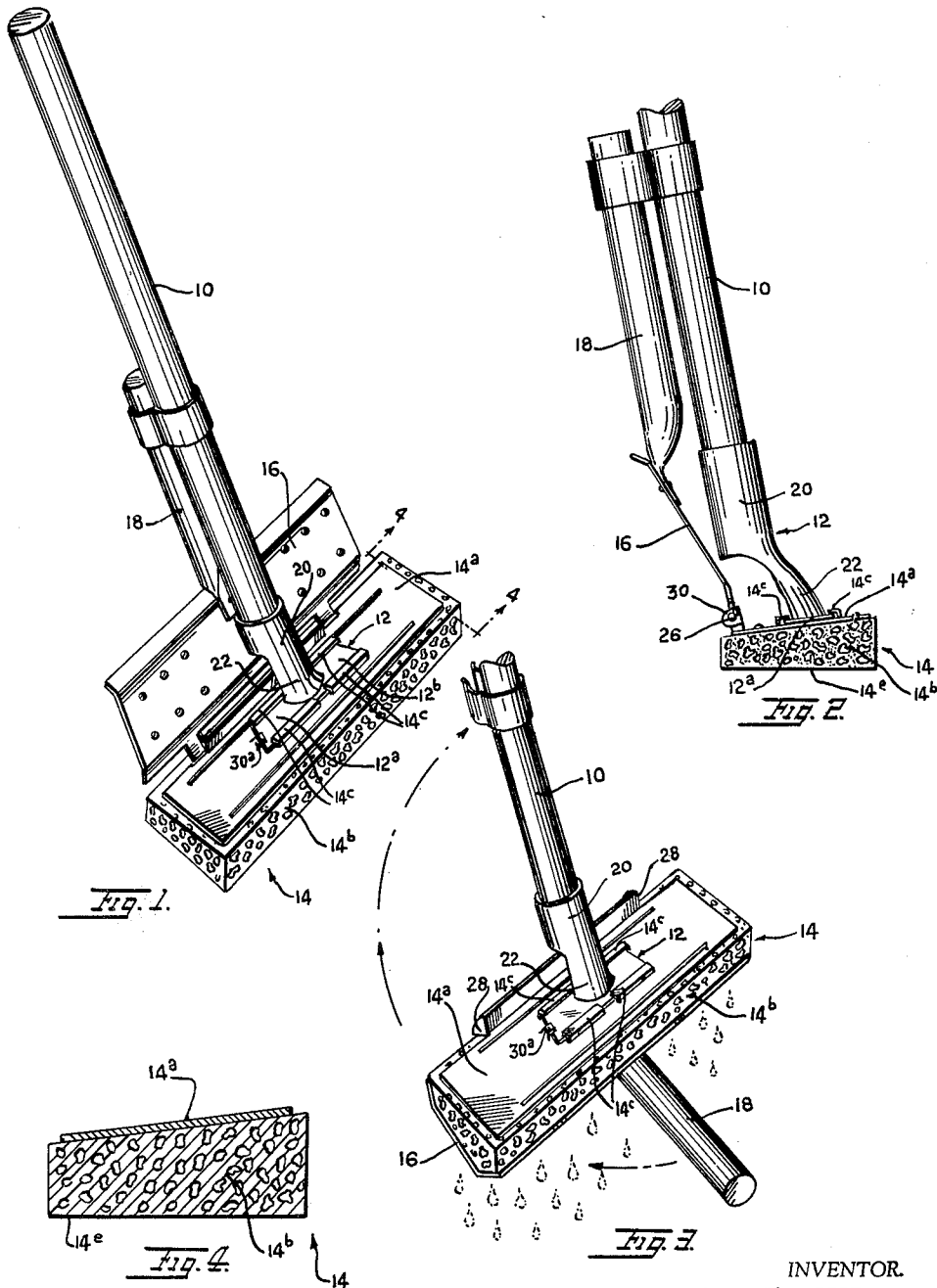
C. HEEPE

3,178,748

FLOOR MOP WITH WRINGER ATTACHMENT

Filed March 19, 1963

2 Sheets-Sheet 1



INVENTOR.  
CHARLES HEEPE

BY *Sam H. Hooe*  
ATTORNEY

April 20, 1965

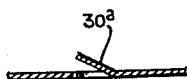
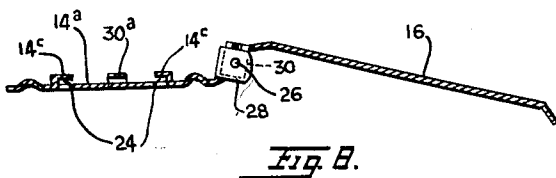
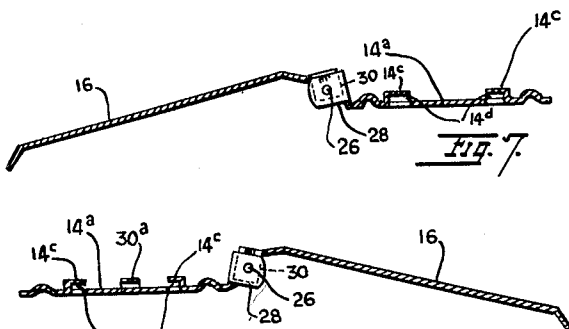
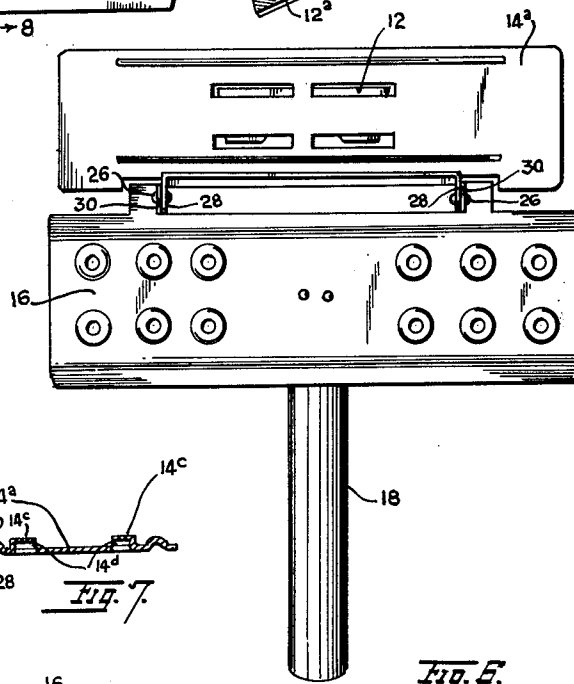
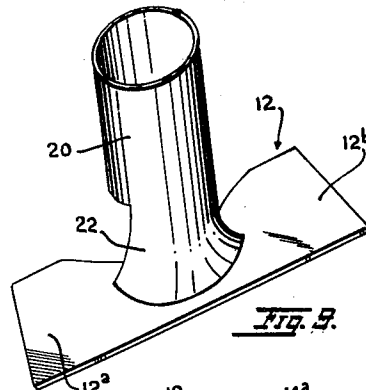
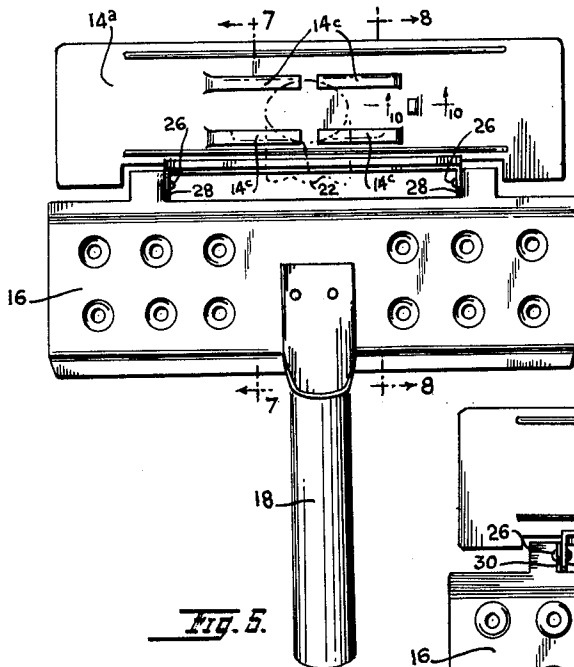
C. HEEPE

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FLOOR MOP WITH WRINGER ATTACHMENT

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2 Sheets-Sheet 2



INVENTOR  
CHARLES HEEPE

BY *Charles Heepe*  
ATTORNEY

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3,178,748

**FLOOR MOP WITH WRINGER ATTACHMENT**  
Charles Heepe, Brooklyn, N.Y., assignor to Ideal Rubber Products Co., Brooklyn, N.Y.  
Filed Mar. 19, 1963, Ser. No. 266,420  
3 Claims. (Cl. 15-244)

This invention relates to floor mops generally and to wringer type floor mops in particular. The invention is, however, equally applicable to other implements such as floor polishers, waxers, etc.

Basically, the invention comprises a floor mop or other implement having a cellulose sponge cleaning, polishing or waxing element or the like, and a pivotally mounted presser plate which is engageable with said cleaning element to squeeze it for the purpose of removing its liquid contents.

This type of floor mop is basically well-known and it is made in many forms and with many different features. However, in one respect, a packing, shipping and storing problem has not heretofore been solved. Reference is made to the packaging of floor mops in the most economical fashion, the problem being not only in the cost of the package material problem, but also in shipping and storing expenses. More specifically, the problem is volume, the larger the space which the package occupies, the greater is the cost of the packaging material and the greater is the expense of shipping and storing the package. Floor mops of the type under discussion being relatively inexpensive commodities, the cost and expense of packaging, shipping and storage are substantial pricing items to be considered.

Floor mops of the type under consideration are approximately eight inches across, reference being here made to the length or greatest dimension of the mop head. Since the handle is generally secured substantially at right angles to the mop head, intermediate its ends, this means that a container for a conventional mop would be at least eight inches in width and its length would exceed the combined length of the mop handle and mop head. The third dimension of the container would be approximately two and one-half inches and it will therefore be seen that the container would occupy a rather substantial space from the point of view of shipping and storing.

It is the object of this invention to provide a floor mop of the character described, wherein the handle is detachable from the mop head for packaging, shipping and storing purposes, and is readily attachable thereto for purposes of use. A package for a disassembled or unassembled floor mop of the character herein claimed would approximate two and one-half inches in width as compared with the eight inch width of the package for conventional floor mops.

The invention is illustrated in the accompanying drawing in which:

FIGURE 1 is a perspective view of a preferred embodiment of the invention.

FIGURE 2 is a side view thereof.

FIGURE 3 is a pictorial view showing the presser means in position for squeezing water out of the sponge.

FIGURE 4 is a cross-section taken on the line 4-4 of FIGURE 1.

FIGURE 5 is a partial top view of the preferred embodiment of the present invention depicting the backing element and the presser means.

FIGURE 6 is an underside view of the illustration of FIGURE 5.

FIGURE 7 is a cross-section taken on the line 7-7 of FIGURE 5.

FIGURE 8 is a cross-section taken on the line 8-8 of FIGURE 5.

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FIGURE 9 is a perspective view of the present invention depicting the mop head element thereof.

FIGURE 10 is a section on line 10-10 of FIGURE 5.

Referring now to the details of the invention as illustrated in the drawing, it will be observed that a floor mop embodying the features of this invention comprises a handle 10, a head piece 12, a cleaning implement or the like 14, a squeeze plate or wringer 16 and a handle 18 therefor.

Handle 10 is a conventional wooden stick, although it may be made of any other material. At its lower end it is encircled by and secured to a metal ferrule 20. It will be noticed that this metal ferrule is simply a metal strip which is curled around into cylindrical shape and pressed into tight frictional engagement with the wooden handle. This is a preferred method of attaching the ferrule to the handle but it will be understood that other means and methods may also be employed.

Projecting downwardly from the metal ferrule is a neck portion 22 which flares outwardly to form a pair of oppositely disposed flanges 12a and 12b, respectively. These flanges are integral with each other, with the narrow neck portion 22, and with the ferrule 20, all being stamped and formed out of the same piece of sheet metal. It will now be noted that the two flanges 12a and 12b and their connecting neck portion 22 constitute the mop head element 12 first above mentioned.

Cleaning element 14 may be of the refill variety. Essentially, it comprises a plate 14a and a cellulose sponge block 14b adhesively secured thereto. If desired, sponge block 14b may be provided with still another plate which would serve as the connecting means between the sponge block and plate 14a. This structure is illustrated in my co-pending patent application Serial No. 266,421, filed March 19, 1963, and entitled Floor Mop With Sponge-Type Refill Element.

It will now be observed that flanges 12a and 12b are the means for detachably securing handle 10 to the cleaning element 14 and, more particularly, to its plate 14a. Struck out of plate 14a are narrow elongated flanges 14c. In the preferred form of this invention there are two pairs of such flanges disposed opposite each other, each pair comprising two such flanges arranged in aligned, spaced relationship. Flanges 14c are open along their facing sides and at least one flange is closed at one end 14d thereof.

It will be evident that flanges 14c are offset from the upper face of plate 14a to form a pair of channels 24 which are adapted to receive flanges 12a and 12b of the head element 12 of the mop. In short, these flanges 12a and 12b are slidably mounted in channels 24, being longitudinally movable into and out of said channels. It will thus be apparent that the handle may be assembled with the cleaning element 14 by simply sliding mop head flange elements 12a and 12b into channels 24 formed between flanges 14c and plate 14a.

Ferrule 20 may be disposed at an angle other than 90 degrees with respect to the plane occupied by the flanges 12a and 12b. It will now be noted that cellulose sponge 14b is provided with a working surface 14e which is inclined with respect to mounting plate 14a. It is therefore possible to change the angle between the handle 10 and the working surface 14e of the cleaning element by simply reversing the position of flanges 12a and 12b in channels 24. Specifically, a 180 degree change in position of flanges 12a and 12b relative to channels 24 would radically change the angular relationship between handle 10 and the plane of the working surface 14e.

An important feature of the invention resides in the means for locking flange elements 12a and 12b in channels 24. At one end of each channel is end wall 14d. At the opposite end, between said channels, is a lug 30a

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struck out of plate 14a. It is so oriented that it permits flanges 12a and 12b to slip over it when entering channels 24 but once they are in said channels, lug 30 locks them in and prevents accidental dislodgment therefrom.

Presser plate 16 is pivotally secured to plate 14a by means of eyes or rivets 26. These eyes or rivets are attached to lugs 28 on mounting plate 14a and lugs 30 on presser plate 16. These lugs are struck out of their respective plates in a simple stamping and forming operation. It will be understood that in the operation of presser plate 16, handle 18 is held in the hand and the presser plate is swung into squeezing engagement with sponge 14b, said sponge being thereby squeezed between said presser plate 16 into mounting plate 14a. Following the squeezing or wringing operation, the presser plate is swung in the opposite direction until its handle 18 is brought into abutment with mop handle 10. Any suitable fastening means may be employed to attach the presser plate handle to the mop handle to keep the presser plate in retracted or inoperative position when the mop is used.

The foregoing is illustrative of a preferred form of this invention and it will be understood that modifications may be incorporated therein within the broad scope of the claims.

What is claimed is:

1. A floor mop of the character described, comprising a handle, a mop head secured to said handle and a cleaning element detachably secured to said mop head, said mop head comprising a flanged member and a ferrule, said flanged member and said ferrule being formed of a single integral metal stamping having a narrow neck portion which joins said flanged member to the ferrule, said ferrule encircling the lower end of the mop handle and being secured thereto, thereby securing said mop handle to said flanged member, and said cleaning element comprising a cellulose sponge block and a mounting plate therefor, said sponge block being adhesively secured to said mounting plate, said mounting plate having integrally formed channel members struck out therefrom, said channel elements being disposed within the peripheral border of said mounting plate and adapted to receive

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said flanged member, whereby said flanged member may be brought into engagement with said channel elements to detachably secure the mop handle and the cleaning element to each other.

2. A floor mop in accordance with claim 1, wherein two pairs of elongated flanges are struck out of said mounting plate to form said channel elements, each pair of flanges being longitudinally aligned in spaced parallel relation to the other pair of flanges, each pair of flanges being detached and spaced from the mounting plate along those side edges which face the other pair of flanges and being joined to the mounting plate along their opposite side edges.

3. A floor mop in accordance with claim 2, wherein one end of one flange of one pair of flanges is joined to the mounting plate, the corresponding end of the corresponding flange of the other pair of flanges being also joined to the mounting plate, said ends being located at one of the extreme ends of both pairs of flanges, all of the other ends of the several flanges being detached from the mounting plate, and a lug struck out of said mounting plate located at the other of the extreme ends of both pairs of flanges therebetween thereby preventing accidental dislodgement of said mop head from said channel members.

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CHARLES A. WILLMUTH, *Primary Examiner*.