March 27, 1956 W. C. HARRIS 2,739,333

HOUSEHOLD APPLIANCE FOR TREATING FLOORS

Filed July 6, 1950 3 Sheets-Sheet 1

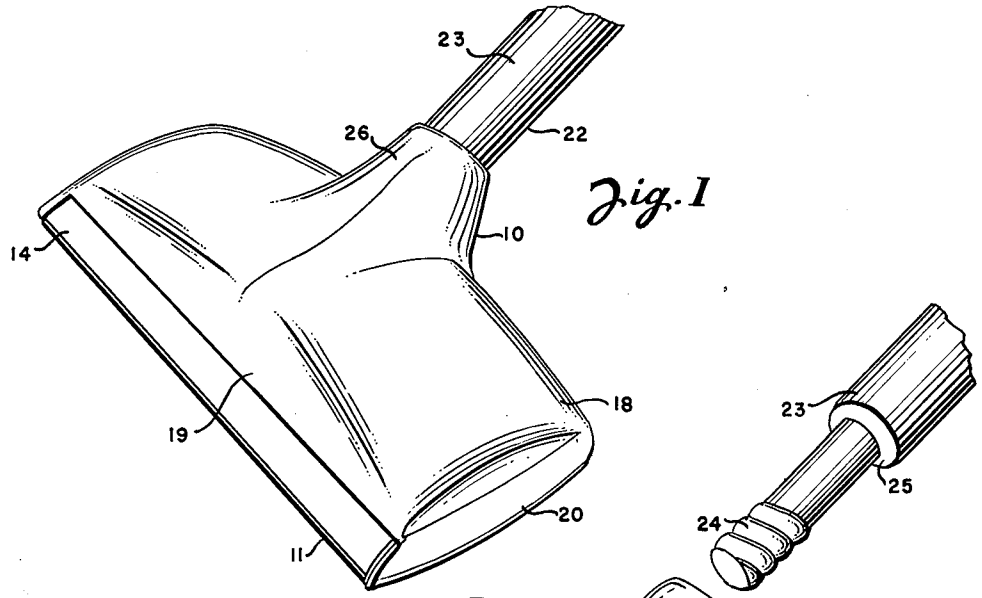


Fig. 1

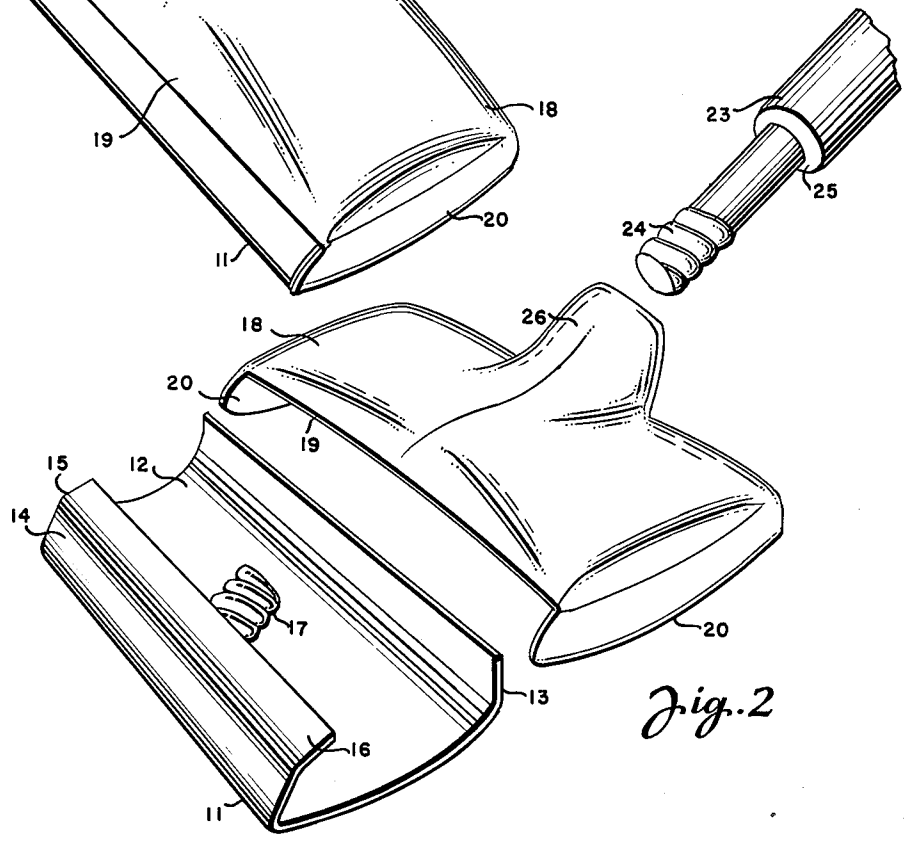


Fig. 2

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HOUSEHOLD APPLIANCE FOR TREATING FLOORS

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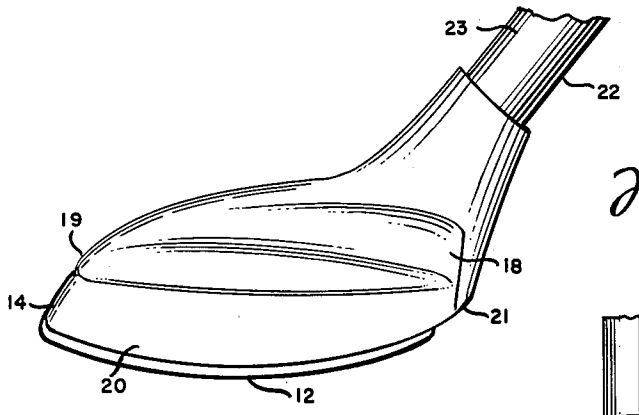


Fig. 3

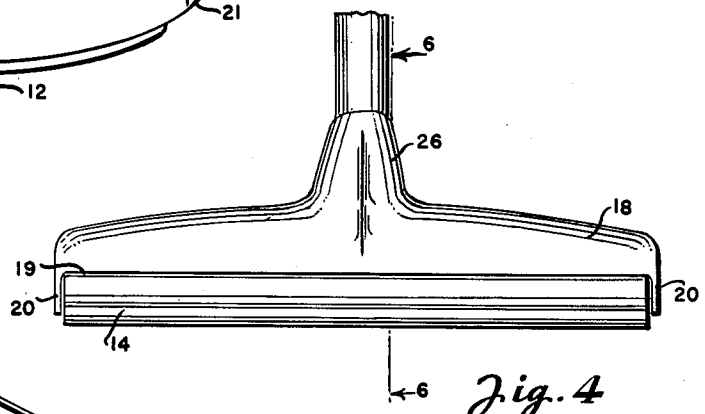


Fig. 4

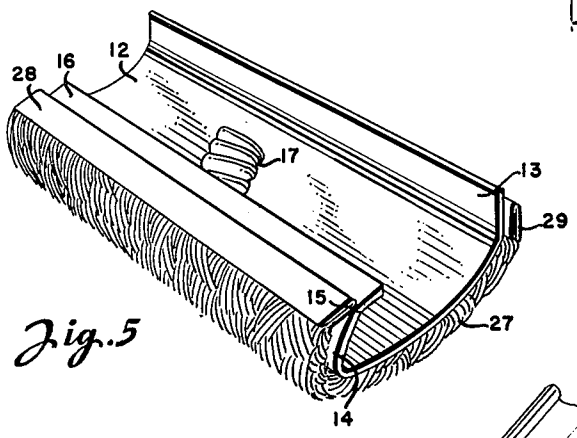


Fig. 5

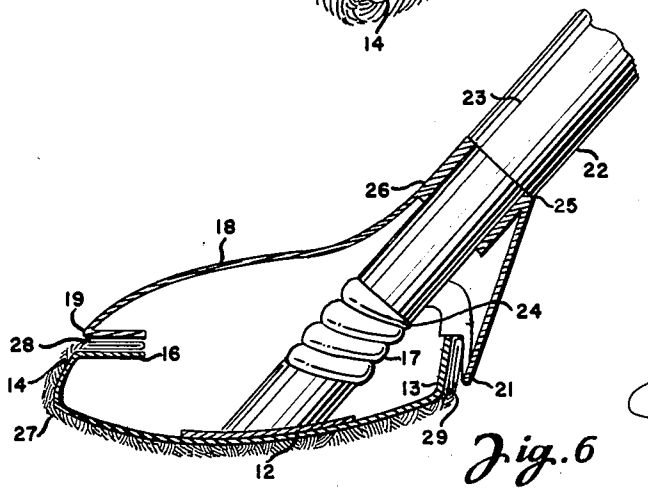


Fig. 6

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HOUSEHOLD APPLIANCE FOR TREATING FLOORS

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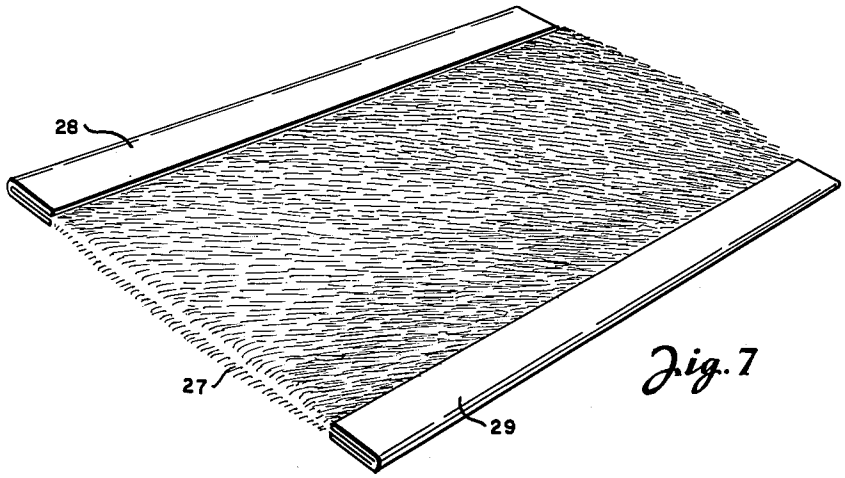


Fig. 7

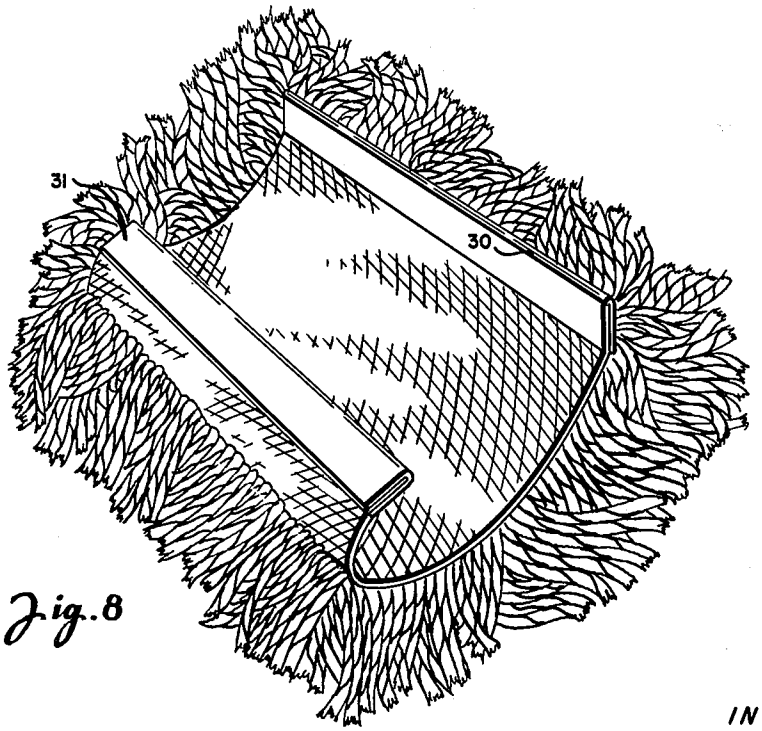


Fig. 8

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2,739,333

HOUSEHOLD APPLIANCE FOR TREATING FLOORS

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Application July 6, 1950, Serial No. 172,211

1 Claim. (Cl. 15—231)

This invention relates to a household appliance to be used in the maintenance of floors and the like. More explicitly, the invention pertains to a manually-operated appliance adapted to hold interchangeably a variety of work elements, each of which performs a different function upon the surface treated.

The primary object of the invention is to provide a simple and inexpensive, yet durable and unique, household appliance to be used in the maintenance of floors. A further object is to provide a device of this character to which a variety of work elements may be readily and interchangeably attached.

A further object is to provide a device of this character which, although light and easily manipulated, is capable of holding any one of a number of work elements tautly and offers means by which the intended function of each work element may be fully utilized.

Another object is to provide a device of this character comprising three basic members: a retainer to which a work element may be attached; a cover member, fitting over the retainer and aiding in holding the work element about such retainer through pressure-transfer therewith; and a handle which, through attachment, exacts the pressure-transfer relationship between the two former members. Other objects will be apparent from the following specification.

In the drawings:

Fig. 1 is a perspective view of the assembled appliance.

Fig. 2 is a perspective view of the appliance disassembled into its three major components.

Fig. 3 is a side elevational view of the assembled appliance.

Fig. 4 is a front elevational view of the assembled appliance.

Fig. 5 is a perspective view of the retainer member, illustrating the manner in which a work element is extended about the retainer.

Fig. 6 is a sectional side elevational view, taken along line 6—6 of Fig. 4, showing the assembled appliance with a typical work element attached thereto.

Fig. 7 is a perspective view of a work element which is readily received by the appliance and shown in Fig. 5.

Fig. 8 is a perspective view of another type of work element which is readily received by the appliance.

Referring to the drawings and especially Figures 1 and 2, the numeral **10** designates an appliance having three elements. The lower member, or retainer **11**, constructed of metal or plastic, comprises an elongated plate **12** which has been bent transversely of its direction of elongation in concavo-convex form on an arc of large radius. The longitudinal margins of the retainer **11** terminate in flanges **13** and **14**. As can be seen in Fig. 6, at bend **15**, flange **14** is bent inwardly toward flange **13** to form a horizontal plane **16**. Affixed to plate **12**, substantially in the center of the top is a raised handle socket **17**.

The cover member **18** fits oxer the retainer **11**, the front edge **19** extending to the bend **15** thereby covering the horizontal plane **16** from view, and walls **20** have their

lower extremity fashioned in such a manner as to substantially coincide with the concavo-convex formation of plate **12**. After being set in place, the cover **18** completely envelopes the flange **13** since the rear face **21** extends along the outside to a point at substantially the juncture of the flange **13** and plate **12**.

A handle **22** is provided with an extended gripping portion **23**, and a threaded porton **24**. The threaded portion **24** has a diameter substantially less than that of the extended gripping portion, thereby providing a pressure shoulder **25** at the point at which the two elements (**23** and **24**) meet.

After the cover **18** is placed upon and aligned with the retainer, the handle **22** is inserted in a hollow boss **26** provided in the cover **18**, the shoulder **25** contacting the uppermost part of the boss. The socket **17** forms an attaching means and is positioned in such a manner that the threaded portion **24** will immediately find it after having been moved through the boss. Turning of the handle **22** affixes the threaded portion securely in the socket and brings the front edge **19** down with pressure upon the horizontal plane **16**. Likewise, the rear face **21** is caused to bear pressure against the entire longitudinal exterior of the flange **13**.

In order to attach a working member such as the pad **27** shown in Figures 5 and 7, the contact pressure as between the members **19** and **16** and **21** and **13** is released by turning the handle slightly to the left without completely disengaging the handle from socket **17**. The shoulder **25** is thereby raised off the top of the boss **26** thereupon releasing the pressure contact points from conformity. The cover **18**, now being slightly released from the retainer **11**, and yet not disengaged from it, allows void spaces between the pressure contacts **19** and **16** and **21** and **13**. Thereupon a working member such as the steel wool pad **27** which embodies two longitudinal finished margins **28** and **29**, which are substantially the same length as the retainer **11**, is attached to the appliance. This is accomplished by inserting the finished margin **28** between the front edge **19** of the cover and the horizontal plane **16**, and inserting the finished margin **29** between the flange **13** and the rear face **21**. Thus positioned, pressure is brought to bear upon the finished margins **28** and **29** and they are held securely affixed to the appliance through the pressure transmitted by turning the handle **22** so as to cause it to be located deeper in the socket **17** and the shoulder **25** to bear downward pressure against the boss **26**. As is quite obvious, the working member may be easily detached by simply loosening the handle in the socket and removing the finished margins from the released clamping media or pressure contacts.

Figure 8 has been included in the drawings merely to illustrate that other types of work members may be easily adapted to this type of appliance. The particular work element illustrated is a mop and it will be immediately seen that it may be affixed to the appliance in the same manner as the work element **27**, that is, by causing the clamping effect upon the finished margins **30** and **31**.

It will be noticed that the handle, when attached, is immobile, no provision being made for a pivot of any type. Such provision is not required since the socket **17** is permanently disposed at an angle of approximately 45° to the rear plane of the plate **12** and the plate is bent transversely in concavo-convex form on an arc of large radius. This structure permits the appliance to be used comfortably by an operator of any height, even though the handle is stationary, since the contour of the plate **12** allows the handle to be held at various angles from the floor.

As will readily be appreciated, the novel construction of this appliance offers a combination heretofore unattained in this type of device, that is, beauty, simplicity and

functionalism. The cover may be constructed of metal, wood or plastic and may be shaped in a contour pleasing to the eye. Although the device is simple and attractive, it nevertheless provides for durable means by which working elements may be securely, but detachably affixed. Although means are provided for this secure attachment, when ready to be operated, none of the attaching means are visible to the eye. Furthermore, because of its unique method in utilizing a pressure-transfer system of retention, work members may be employed which are substantial in size and perform a laborious task.

It will be apparent from the above that the device provides a multi-purpose household appliance adapted for many different floor maintenance uses, each characterized by convenience, simplicity and utility.

While the preferred embodiment of the invention has been illustrated and described herein, it will be understood that changes may be made in the construction within the scope of the claim without distinguishing from the spirit of the invention.

I claim:

A device of the character described comprising a handle having a threaded lower extremity, a cover member having an opening through which the lower extremity of said handle may be inserted, and a retainer upon which said cover member is superposed, said retainer including an elongated plate portion bent transversely of its direction of elongation in concavo-convex form on an arc of large radius and having longitudinal flanges disposed on opposite sides of said plate portion and parallel to said direction of elongation, one of said flanges having an inwardly directed portion disposed on substantially a horizontal plane, the inner surface of said plate portion being provided with a threaded attaching means extending upwardly-angularly therefrom in a transverse vertical plane whereby the lower extremity of said handle may be detachably affixed to said retainer by rotation of said handle and with axial displacement of said handle along its axis of rotation, said cover member having complementary elongated thrust surfaces adapted to rest on said inwardly directed portion and bear against the other of said flanges when said cover member is superposed on said retainer, said cover member having means to receive pressure from said handle when extended downwardly thereon upon axial displacement of said handle, said flanges and thrust surfaces providing a clamping means for holding a work element when the lower extremity of said handle is affixed to said retainer.

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