

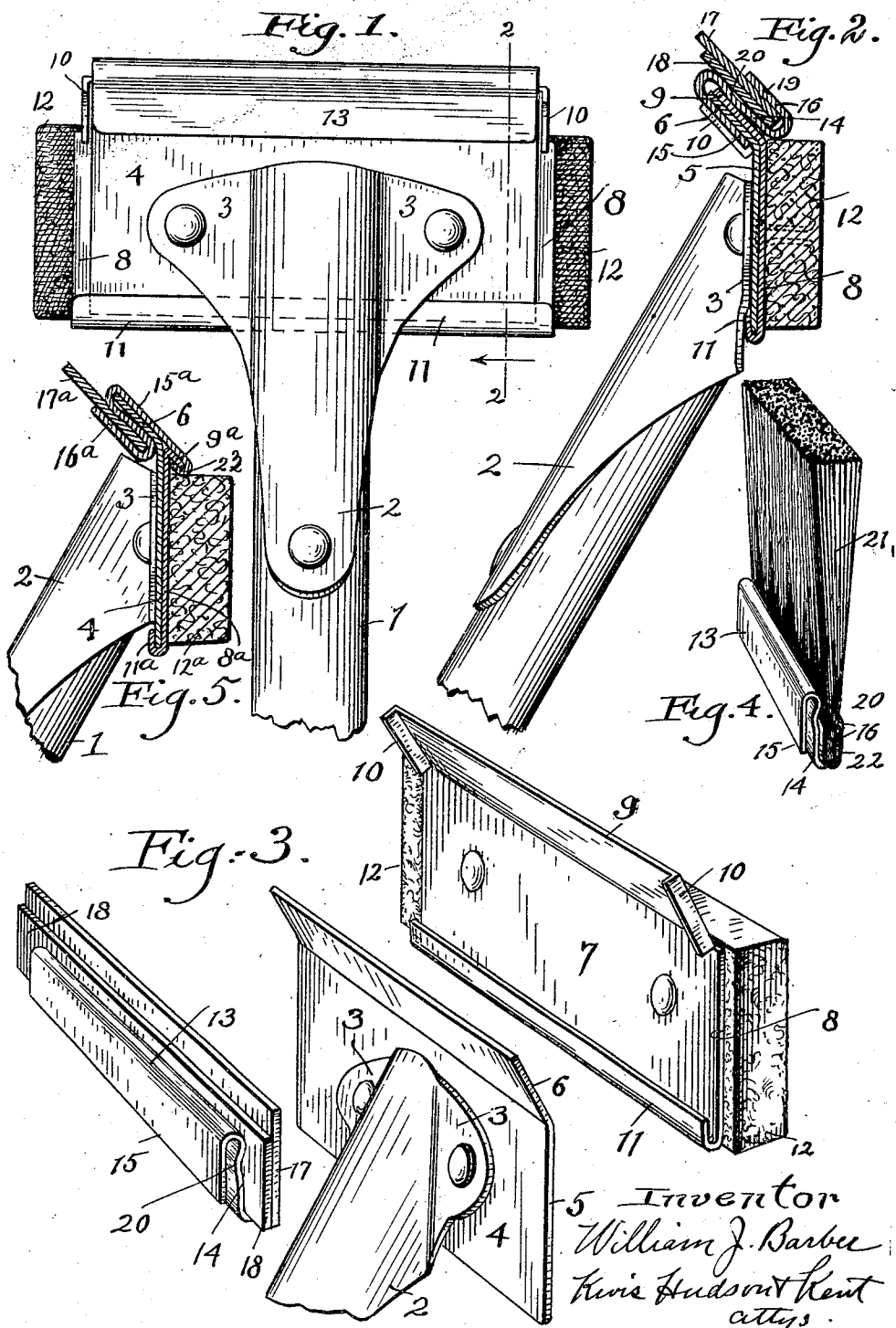
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CLEANING IMPLEMENT

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CLEANING IMPLEMENT.

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This invention relates to a cleaning implement and more particularly to a device of the type in which a plurality of different kinds of cleaning elements are mounted upon the end of a handle in such manner that said cleaning elements may be used alternately or selectively.

The invention has for its object to provide a simple mounting for the cleaning elements which will permit the said elements to be easily and quickly removed from the handle. More specifically it is the object of the invention to provide the cleaning elements and the handle with parts that interfit and interlock when assembled so as to secure the cleaning elements together and to the handle and further to provide interchangeable holders carrying different kinds of cleaning elements so that the implements can be used for many different purposes.

With the above and further objects in view, which will appear as the description proceeds, the invention may be said to comprise the device as illustrated in the accompanying drawings hereinafter described and particularly set forth in the appended claims together with such variations and modifications thereof as will be apparent to one skilled in the art to which the invention appertains.

Reference should be had to the accompanying drawings in which Fig. 1 is a rear elevation showing the forward portion of the handle with the cleaning elements mounted thereon; Fig. 2 is a transverse section through the attaching member of the handle and the cleaning elements mounted thereon, showing the manner in which they are secured together and to the handle; Fig. 3 is a perspective view showing the attaching end of the handle and the cleaning elements detached from the handle. Fig. 4 is a perspective view showing a brush adapted to replace the squeegee and mounted in an identical holder; Fig. 5 shows an alternative construction in which there is a different form of interlock.

Referring to the accompanying drawings the handle 1 has a suitable ferrule 2 rigidly secured to the forward end thereof, the ferrule being provided with laterally extending flanges 3 to which a suitable attaching plate 4 is rigidly attached by means of rivets or other suitable securing devices. The attaching member 4 is in the form of a sheet metal plate having a flat body portion to which the flanges 3 of the ferrule are attached. The

body portion 5 of the attaching member extends transversely of the handle and lies in a plane inclined with respect to the axis of the handle. The upper edge portion of the attaching member 4 is bent back to form a rearwardly inclined flange 6 as clearly shown in Figs. 2 and 3.

The attaching member 4 forms the support for the cleaning elements and one of these cleaning elements is provided with a sheet metal holder 7 which has a flat body portion 8 of substantially the same size and shape as the body portion 5 of the attaching member. The holder 7 has a rearwardly inclined flange 9 at its upper edge which is adapted to lie upon the rearwardly inclined flange 6 of the attaching member 4, the flange 9 being provided with inturned edge portions 10 which are adapted to engage the opposite edges of the flange 6 to prevent lateral movement of the holder 7 on the attaching member 4.

At its lower edge the holder 7 is provided with an inturned flange 11 which is bent back upon itself into substantial parallelism with the body portion 8 and forms a channel to receive the lower edge of the attaching member 4. A suitable cleaning element is secured to the outside of the body portion 8 of the holder 7 and this cleaning element may be in the form of a washing pad 12 which, as shown herein, is of felt or other suitable material riveted or otherwise rigidly secured to the holder 7.

A second holder 13 is formed from a strip of sheet metal which has its opposite longitudinal edge portions bent back upon themselves, the holder having a central portion 14 and opposite edge portions forming inner and outer flanges 15 and 16 which are bent back into substantial parallelism with the central portion 14 forming oppositely facing channels throughout the length of the holder.

A suitable cleaning element may be secured within the channel formed between the outer flange 16 and the central portion 14 of the holder 13 and as shown herein this second cleaning element may be a squeegee consisting of two flat rubber strips 17 and 18 the inner strip 18 being of less width than the outer strip 17 to form a second scraping edge. The rubber strips 17 and 18 are rigidly secured within the channel by any suitable means and as shown herein may be held in place by indentations 19 formed in the outer flange 16. The channel which is formed be-

tween the inner flange 15 and the central portion 14 of the holder 13 is adapted to receive the overlying flanges 6 and 9 of the attaching member 4 and the holder 7. The flange 15 is of substantially the same length as the flange 6 of the attaching member and fits between the inturned edge portions 10 of the flange 9 so that the holder 13 is held by the flanges 10 against longitudinal movement of the holder 13 receiving the flanges 6 and 9 is retracted between the top and bottom thereof so that the holder 13 has a frictional grip upon the overlying flanges 6 and 9 to secure the holder 7 firmly in place on the attaching member 4 and to retain itself upon the overlying flanges 6 and 9. This restriction may be formed by providing an inward bulge 20 in the central portion 14 of the holder 13 so that as the holder 13 is forced onto the overlying flanges 6 and 9 the flange 15 is sprung slightly away from the central portion 14 of the holder and by reason of its resiliency compresses the flanges 6 and 9 against the bulge 20.

In assembling the cleaning elements upon the attaching plate 4 the holder 7 is first slipped into place with the lower edge of the attaching plate 4 in the channel formed by the inturned flange 11, the body portion 8 of the holder lying against the body portion 5 of the attaching plate and the flange 9 of the holder overlying the flange 6 of the attaching plate. The channel between the flange 11 and body portion 8 of the holder 7 being slightly wider at the top than at the bottom to permit the holder 7 to be readily slipped into place on the attaching plate 4. The holder 13 is then slipped onto the overlying flanges 6 and 9, securing these flanges together and firmly retaining the holder 7 on the attaching plate. The cleaning elements with their sheet metal holders may be manufactured and sold separately and whenever one of the cleaning elements becomes worn out it may be quickly replaced by a new element.

A further advantageous feature of the invention is that either holder with its attached cleaning element may be very quickly replaced with another holder provided with the same or a different kind of cleaning element while the device is being used. For instance, the pad might become too dirty to function properly, in which case it could be quickly replaced with a clean pad. For some cleaning operations a different combination of cleaning elements may be desirable and such cleaning elements may be provided on separate interchangeable holders. As an illustration of the idea of interchangeable cleaning elements there is shown, in Fig. 4, a holder 13 in which there is a brush 21 mounted in the channel formed between the flange 16 and the central portion 14 thereof, the brush 21 with its holder being adapted to replace the squeegee. The bristles of the brush 21 may be held by a suitable fabric binder 22 which encloses the bristles along the inner edge of the brush and which may be secured in place by sewing through the bristles. The specific manner of securing the bristles is, however, immaterial to the present invention and the brush itself may be formed in various ways well known in the art. To replace the squeegee with the brush or vice versa the holder 13 can be stripped off the attaching member of the handle by a single movement and replaced with another holder 13 carrying a brush or squeegee as the case may be.

In Fig. 5 of the drawing there is shown a slightly modified construction in which the sheet metal holders have a different form of interlock with each other and with the flange 6 of the attaching member. In this modification the holder 7^a has a flange 11^a at its lower edge which corresponds to the flange 11 in the modification first described but at its upper edge the holder 7^a has a flange 9^a which is bent outwardly instead of inwardly, the flange 9^a being at an inclination such that, when the holder 7^a is in place on the attaching member 4, it will lie substantially in the plane of the flange 6. The holder 13^a is similar to the holder 13 above described except that when in place the channel which holds the cleaning element lies to the inner side of the flange 6 and the outer flange 16^a extends beyond the holding channel for the cleaning element and has a return bend 23 along its outer edge forming a channel to receive the flange 9^a of the holder 7^a. When the holder 7^a is in place in the attaching member 4 the holder 13^a may be slipped endwise over the flanges 6 and 9^a to secure the two holders together and to the attaching plate 4. In this modification the holder 7^a may be removed independently of the holder 13^a by clipping the same endwise on the attaching member 4 and the same or a counterpart holder may be replaced with the holder 13^a in place by properly engaging its flanges with the plate 4 and with the flange 16^a and sliding it endwise on the attaching plate 4. Also the holder 7^a is held upon the flange 6 when the holder 7^a is removed with sufficient security to permit use of the cleaning element carried thereby so that it is not necessary to mount the second cleaning element until said second cleaning element is needed.

Having described my invention what I claim is:

1. In a device of the character described, a handle having an attaching member provided with a projecting edge portion, a holder adapted to fit upon said attaching member and having a projecting edge portion adapted to lie alongside the projecting edge portion of the attaching member, a second holder having a portion adapted to grip said project-

ing edge portions to secure said holders together and to the attaching member, and a cleaning element carried by one of said holders.

2. In a device of the character described, a handle having an attaching member secured thereto, a pair of holders provided with interfitting portions formed to interlock with each other and with said attaching member to detachably secure the same together and to said member, and a cleaning element carried by one of said holders.

3. In a device of the character described, a handle having a transversely disposed attaching plate secured to the end thereof, said plate having a flange extending along an edge thereof, a holder formed of sheet metal and adapted to overlie said plate, said holder having edge portions bent to engage with edge portions of said plate to hold the same to the plate and against lateral movements on the plate, and a holder in the form of a sheet metal clip engageable with the flange of the attaching plate and with an adjacent edge of the first holder to secure the same against removal from the plate and a cleaning element carried by said second holder.

4. In a device of the character described, a handle having a transversely disposed attaching plate secured to the end thereof, said plate having a flange extending along an edge thereof, a holder formed of sheet metal and adapted to overlie said plate, said holder having an edge flange adapted to lie alongside the edge flange of the attaching plate and having another edge flange engageable with an edge portion of said attaching plate, a holder embracing the adjacent edge flanges of the first holder and of the attaching plate to secure the holders together and to the attaching plate, and a cleaning element carried by one of said holders.

5. In a device of the character described, a handle having a transversely disposed attaching plate secured to the end thereof, said plate having a flange extending along an edge thereof, a sheet metal holder adapted to overlie said attaching plate, said holder having a reversely bent flange forming a channel to receive the edge of the attaching plate opposite the flange thereof and a flange on the opposite edge adapted to overlie the flange of the attaching plate, a sheet metal holder provided with a portion bent back upon itself to form a channel adapted to receive the flange of the attaching plate and the overlying flange of the first holder, and a cleaning element carried by one of said holders.

6. In a device of the character described, a handle having an attaching plate secured to the end thereof, said plate having a flat body portion extending across the end of the handle and lying in a plane inclined to the axis of the handle, said plate having a rearwardly inclined flange along its upper edge, a sheet

metal holder having a flat body portion adapted to lie upon the outer face of said attaching plate and a rearwardly inclined flange along its upper edge adapted to lie upon the flange of the attaching plate, said holder having a flange at its lower edge bent inwardly and back into parallelism with the body to form a channel to receive the lower edge of the attaching plate, a second sheet metal holder having a central portion and opposite longitudinal edge portions bent back into parallelism with the central portion to form oppositely facing channels, the inner of which is adapted to receive the overlying flanges of said attaching plate and said first mentioned holder, and a cleaning element carried by one of said holders.

7. In a device of the character described, a handle having an attaching plate secured to the end thereof, said plate having a flat body portion extending across the end of the handle and lying in a plane inclined to the axis of the handle, said plate having a rearwardly inclined flange along its upper edge, a sheet metal holder having a flat body portion adapted to lie upon the outer face of said attaching plate and a rearwardly inclined flange along its upper edge adapted to lie upon the flange of the attaching plate, said flange having end portions bent inwardly to engage opposite ends of the flange of the attaching plate, said holder having a flange at its lower edge bent inwardly and back into parallelism with the body to form a channel to receive the lower edge of the attaching plate, a second sheet metal holder having a central portion and opposite longitudinal edge portions bent back into parallelism with the central portion to form oppositely facing channels, the inner of which is adapted to receive the overlying flanges of said attaching plate and said first mentioned holder, said inner channel having a restricted portion adapted to frictionally grip the overlying flanges of the attaching plate and first mentioned holder, and a cleaning element carried by one of said holders.

8. In a device of the character described, a handle having a transversely disposed attaching plate attached to the end thereof, said plate having a flange extending along the edge thereof, a cleaning element holder formed of sheet metal and adapted to overlie said plate, said holder having edge portions bent to engage with edge portions of said plate to hold the same to the plate and against lateral movement on the plate, and a retaining member in the form of a sheet metal clip engageable with the flange of the attaching plate and with an adjacent edge of said holder to secure the same against removal from the plate.

9. In a device of the character described, a handle having a transversely disposed attaching plate secured to the end thereof, said

plate having a flange extending along the edge thereof, a cleaning element holder formed of sheet metal and adapted to overlie said plate, said holder having an edge flange adapted to lie alongside the edge flange of the attaching plate and an edge flange engageable with the edge of said attaching plate opposite the flange thereof, and a re-

taining member adapted to embrace the adjacent edge flanges of said holder and attaching plate to secure said holder to the attaching plate. 10

In testimony whereof, I hereunto affix my signature.

WILLIAM J. BARBER.