F. W. NEVIUS.

RUBBER FLOOR CLEANER.

APPLICATION FILED SEPT. 29, 1920.

1,395,058.

Patented Oct. 25, 1921.

FIG. 1

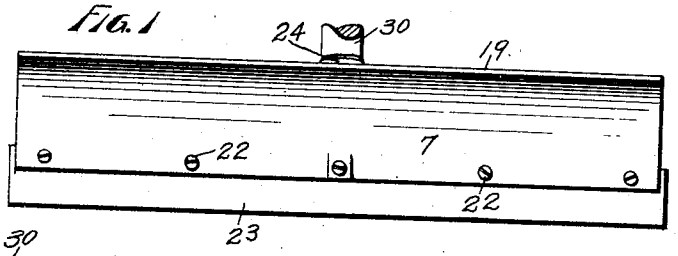


FIG. 2

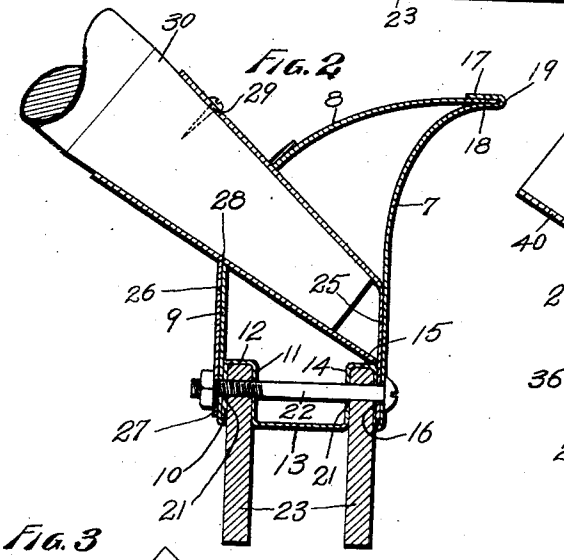


FIG. 5

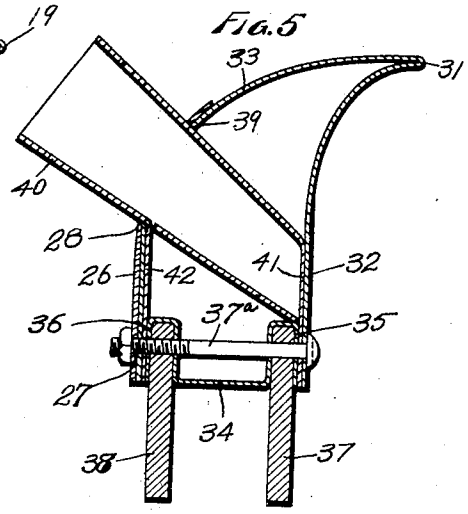


FIG. 3

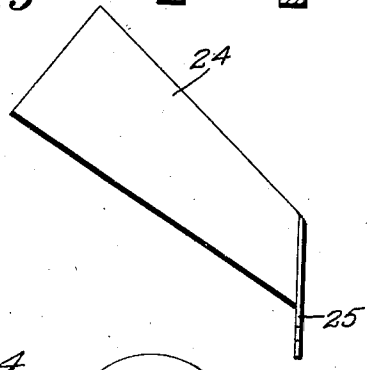


FIG. 4

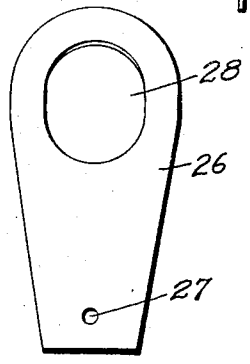
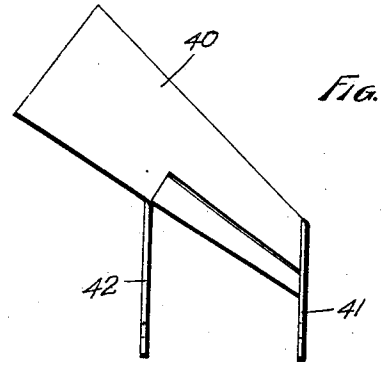


FIG. 6



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RUBBER FLOOR-CLEANER.

1,395,058. Specification of Letters Patent. Patented Oct. 25, 1921.

Application filed September 29, 1920. Serial No. 413,482.

To all whom it may concern:

Be it known that I, FRAZIER W. NEVIUS, a citizen of the United States, and resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Rubber Floor-Cleaners, of which the following is a specification containing a full, clear, and exact description, references being had to accompanying drawings, forming a part thereof.

My invention relates to improvements in rubber floor cleaners and has for its object a cleaner of the squeegee type in which the head is formed of sheet metal, thus making a lighter construction and stronger than if the same were made out of wood, as is at present the method of making them.

In the drawings:

Figure 1 is a front elevation of my device with parts of the handle broken away.

Fig. 2 is an enlarged vertical cross section of the same taken through the handle.

Fig. 3 is a side elevation of the ferrule made use of.

Fig. 4 a face view of the ferrule brace.

Fig. 5 a modified form of head.

Fig. 6 is a modified form of ferrule.

In the construction of my device I form the head preferably of one sheet of material, having a front wall 7 and a back wall 8. A portion of the back wall is formed convex and the remaining portion straight, as indicated by the numeral 9. The portion 9 is bent upon itself forming a wall 10. This wall is provided with a rightangular bend forming a wall 12. This wall 12 is again bent at rightangles so as to parallel the wall 10 forming the wall 11, this forms a rectangular channel open at both ends and one edge. The wall 11 is then bent at rightangles forming a horizontal wall 13. This wall 13 is again bent to form the vertical wall 14. Another rightangular bend in the wall 14 forms the wall 15, which is again bent to form the wall 16. The walls 14, 15 and 16 forming a channel similar to that formed by the walls 10, 11 and 12. The wall 16 is then doubled on itself and forms the front wall 7 of the head. The wall 7 is concaved as shown in Fig. 2 and has its end 17 bent over the end 18 of the wall 8. This forms a complete head and the bending of the portion 17 forms the sharpened edge 19, which acts as a scraper, the wall 8 being provided with a perforation 20 through which the ferrule is inserted. The walls 9, 10, 11, 14, 16 and 7 are provided with openings 21 through which bolts 22 pass. These bolts secure the rubbers 23 within their respective channels. The ferrule is provided with a tapered portion 24 and at its front end with a downwardly projecting perforated ear 25. This ear is adapted to be inserted between the walls 16 and 7 and in alinement with one of the openings 21 so that the bolt 22 passing through this opening will not only secure the rubbers, but also the ferrule in the head. Lying along the back wall 8 is a ferrule brace 26. This is provided with the opening 27 through which the central bolt which secures the rubbers and ferrule is passed and with the opening 28 through which the ferrule passes. This tends to stiffen the back wall and hold the ferrule more rigidly within the head. The ferrule is also provided with the opening 29 through which a screw or nail is inserted to secure the handle 30 within the ferrule and against accidental withdrawal. In my modified construction the head is made of a single piece of metal bent approximately at its center so as to form the scraper edge 31 and the front wall 32 and back wall 33,—the shape of these walls being identical with the walls 7 and 8. This leaves the head open at its bottom. In this open portion is inserted a strip of metal 34 formed with two U-shaped rectangular channels 35 and 36 in which the rubbers 37 and 38 are located. The walls 33 and 32 and the walls of the U-shaped channels are provided with openings through which bolts 37^a pass for securing the rubbers, head and sheet of material 34 together. The wall 33 is provided with the opening 28 through which the ferrule is inserted. In Fig. 6 I have shown the modified form of ferrule, which has the handle receiving portion 40. The ferrule is provided on its front portion with the perforated ear 41 and approximately midway its length with a second perforated ear 42. These ears are designed to be placed between the head and the rubber retaining channels and secured in the head by one of the bolts which secure the rubber. In the modified form the ferrule brace 26 is also used.

I may, however, without departing from the spirit of my invention, use either the ferrule 24 in the modified form shown in Fig. 5 and use the ferrule 40 in the construction shown in Fig. 2.

I may also use either one or two rubbers

in my device although the use of two rubbers is preferable in that a better contact can be made with the floor without the danger of bending the rubbers over and cracking them.

The scraper edges 19 and 31 are useful in removing caked dirt from the floor, which is too hard for the rubbers to remove.

Having fully described my invention, what I claim is:

1. A floor cleaner comprising a head having an upper and a lower portion and formed of a single sheet of metal and provided along its upper portion with a scraper edge; said head being provided in its lower portion with parallel channels, rubber strips located in said channels, a ferrule mounted in said head, a ferrule brace provided with an opening carried by said ferrule, and a bolt adapted to pass through the head ferrule brace and rubber strips for securing the same together.

2. A floor cleaner comprising a head having an upper and a lower portion formed of sheet material and provided along its upper portion with a scraper, said head being provided in its lower portion with U-shaped channels, rubber strips located in said channels, a ferrule mounted within the head having at its inner end a downward extending ear, a ferrule brace surrounding said ferrule, and a plurality of bolts for securing the rubber strips within the channels, one of said bolts passing through said ear, ferrule, brace and head for securing the ferrule and ferrule brace to said head.

3. A floor cleaner comprising a hollow head having an upper and a lower portion formed of a single sheet of material and open at both ends, said head being provided with a scraper formed along its upper portion and with an opening in one wall thereof, a ferrule seated in said opening having at its inner end a downward extending ear, a ferrule brace carried by said ferrule, U-shaped channels being formed in the lower portion of said head, rubber strips located in said channels and a bolt passing through said ear for securing the rubber strips, ferrule and ferrule brace to said head.

In testimony whereof I have signed my name to this specification.

FRAZIER W. NEVIUS.