D. J. BENOIT.

BROOM.

APPLICATION FILED NOV. 17, 1921.

1,438,741.

Patented Dec. 12, 1922.

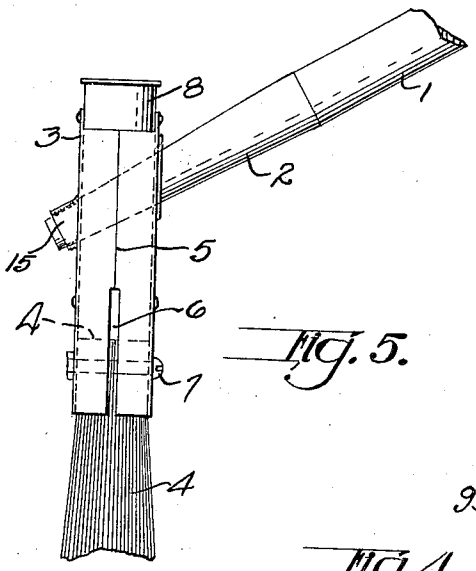


Fig. 5.

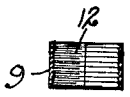


Fig. 3.

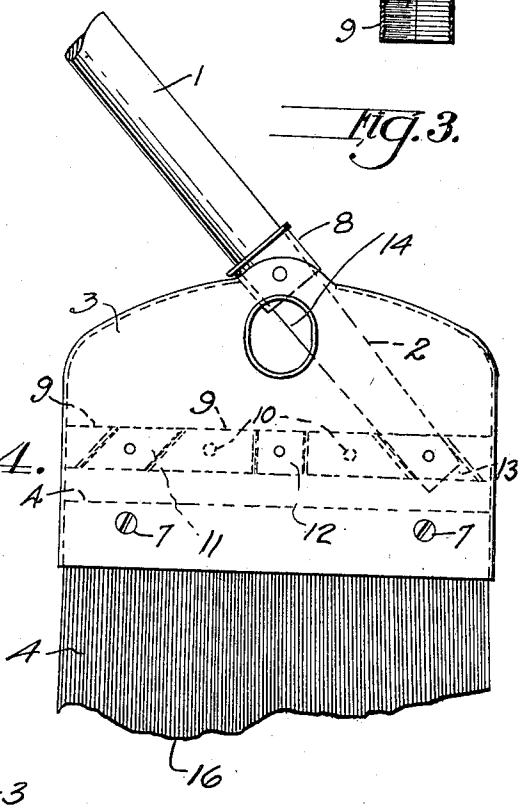


Fig. 4.

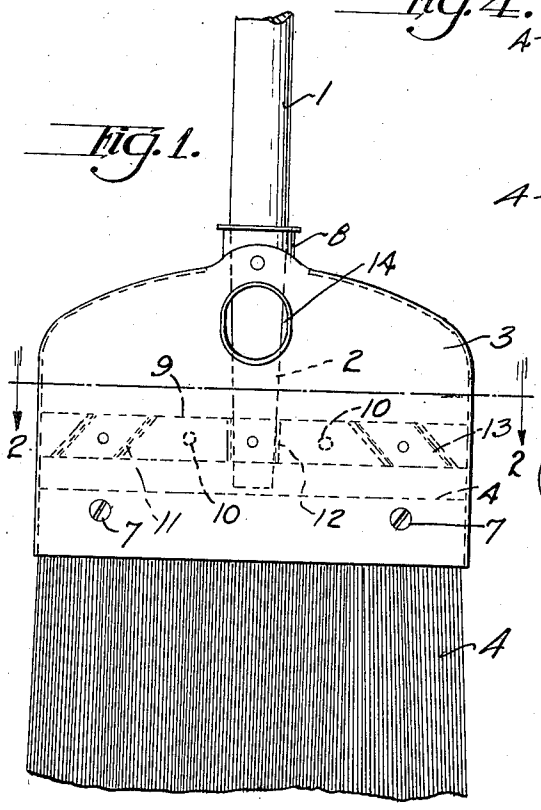


Fig. 1.

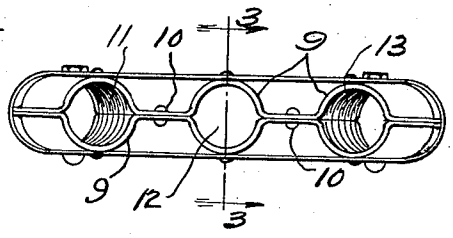


Fig. 2.

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UNITED STATES PATENT OFFICE.

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BROOM.

Application filed November 17, 1921. Serial No. 515,780.

To all whom it may concern:

Be it known that I, DELOR J. BENOIT, a citizen of the United States, residing at Highland Park, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Brooms, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to brooms and the object of the invention is to provide a broom in which the handle may be set at any of several different angles to allow the broom to be used in places where it is difficult to sweep with the ordinary straight handled broom. Another object of the invention is to provide a permanent broom head in which new broom portions may be inserted which are of low manufacturing cost and which provide a practically new broom at a much lower cost than the ordinary broom. A further object of the invention is to provide a broom having a pivoted ferrule for receiving the handle, the end of the handle extending through the ferrule into the broom head and being adapted to be positioned in a member having a series of spaced apertures to receive the end thereof. Another object of the invention is to provide a sheet metal broom head apertured at an angle to the transverse axis thereof through which the broom handle may extend to allow the broom to be used as a scrubbing brush when worn down. These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which—

Fig. 1 is a front elevation of the preferred form of broom.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Fig. 3 is a section taken on line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 1 showing the handle set at angle to the vertical axis of the broom head.

Fig. 5 is a side elevation of the broom when used as a scrubbing brush.

The broom handle 1 is preferably tapered slightly at the end 2 and a broom head 3 is provided formed of sheet metal in which the broom straw, portion 4 is secured. As shown in Fig. 5 the edges of the sheet metal head 3 are brought together at 5 and the said edges are cut back at 6 to allow the sides of the metal head to be drawn tightly together by the bolts 7 to bindingly secure the broom straw portion 4 in the head. The head 3 is provided with an opening at the upper end in which a tapered ferrule 8 is pivotally mounted. Within the head as shown in Fig. 2 is a member 9 formed of two pieces of metal riveted together by the rivets 10. These members 9 form openings 11, 12 and 13 which are threaded on the interior and are adapted to receive the end 2 of the handle 1 which extends through the ferrule 8. The end of the handle 1 is threaded so that the handle may be inserted through the ferrule 8 and threaded into the desired opening, the threading of the handle into the opening drawing the same to tight engagement in the ferrule 8. An opening 14 is provided in one side of the head as shown in Figs. 1 and 4 and a threaded member 15 is provided in the opposite side of the head into which the end of the handle 1 may be threaded. This is to be used when the broom straws 4 are worn down so as to be unfit for use as a broom. By unthreading the handle from the threaded opening 11, 12 or 13, as the case may be, the handle may be removed from the ferrule 8 and inserted through the aperture 14 and threaded into the member 15. When in this position the device may be used as a scrubbing brush until the broom straws are entirely worn out. The handle is usually threaded into the opening 12 as shown in Fig. 1 with the handle in the vertical position so that the broom may be used as usual. During use however the broom gradually wears down on one side and when this occurs as indicated by the line 16 in Fig. 4 the broom handle 1 is threaded into the opening 13. By using the broom with the handle adjusted in this manner the broom straw portion 4 will be worn down until parallel with the lower edge of the head at which time the handle may be again set in the vertical position. In case the face of the broom is worn down at the opposite angle the end of the handle 1 is threaded into the opening 11 the object in this case being also to position the handle so that the edge or face of the broom is again worn down evenly. Also by positioning the handle at an angle to the vertical, the broom may be utilized in

places that are difficult of access with the ordinary straight handled broom such as under lathes, work-benches, etc., when used in machine shops, or under tables, desks and articles of like character found in the ordinary dwelling or office. When the broom straw portion 4 has been completely worn down the bolts 7 may be removed therefrom thus allowing the worn broom portion to be removed and a new one inserted. As the broom straw portions for use with this device are perfectly straight they may be made much more easily and cheaply than the usual broom and as the broom head may be used over and over again the device is much cheaper when used over a period of time and at the same time may be used more effectively in places of difficult access.

From the foregoing description it becomes evident that the device is very simple and efficient in operation, will not easily get out of order, is of cheap construction and easily made and provides a device which accomplishes the objects described.

Having thus fully described my invention, its utility and mode of operation what I claim and desire to secure by Letters Patent of the United States is—

1. In a broom, a hollow sheet metal head portion, a broom straw portion adapted to be detachably secured in the said head portion, a tapered ferrule pivotally mounted in the upper end of the head portion, a handle having a tapered end adapted to be inserted through the ferrule, a member provided with a series of spaced threaded apertures opening toward the ferrule and into which the end of the handle is adapted to be threaded, the arrangement being such that the threading of the handle into the said member draws the tapered portion thereof into binding engagement in the ferrule.

2. In a broom, a hollow sheet metal head portion, means for detachably securing a broom straw portion therein, a member secured in the head having a series of spaced threaded apertures, a ferrule pivotally mounted in the top of the broom head, a handle adapted to be inserted through the ferrule and threaded into one of the series of threaded apertures, the hollow head portion being provided with a pair of apertures in alignment at an angle to the plane of the head, one of the apertures being provided with an internally threaded flange thereabout.

3. In a broom, a hollow sheet metal head portion, a ferrule pivotally mounted in the upper end thereof, a broom straw portion, means carried by the head portion for detachably securing the broom straw portion therein, a member secured within the sheet metal head having a series of threaded apertures and a handle adapted to be inserted through the ferrule and threaded into one of the series of threaded apertures.

4. In a broom, a head portion, means for detachably securing a broom straw portion therein, a member secured in the head portion having a series of threaded apertures, a ferrule pivotally mounted in the top of the broom head and a handle adapted to be inserted through the ferrule and threaded into one of the series of threaded apertures.

5. In a broom, a hollow sheet metal head portion, means for detachably securing a broom straw portion therein, a ferrule pivotally mounted in the upper end of the head, a handle adapted for insertion through the ferrule, and means within the head portion having a series of sockets in spaced relation transversely of the head to receive the inner end of the handle.

In testimony whereof, I sign this specification.

DELOR J. BENOIT.