(No Model.)

R. D. GALLAGHER.

BROOM.

No. 386,310. Patented July 17, 1888.

Fig. 1.

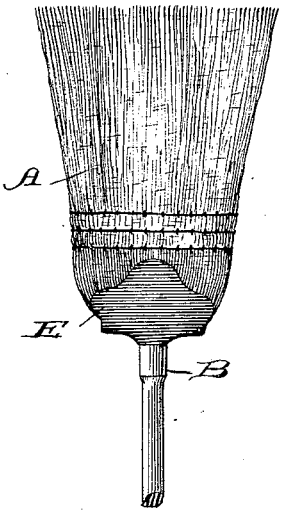


Fig. 2.

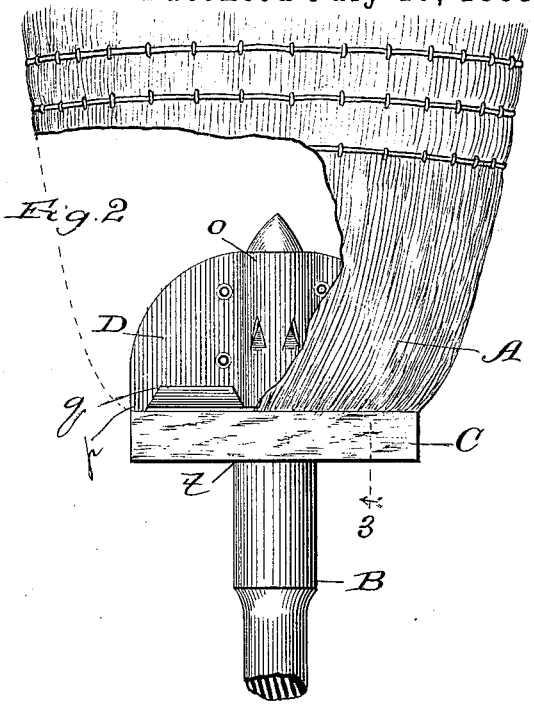


Fig. 3.

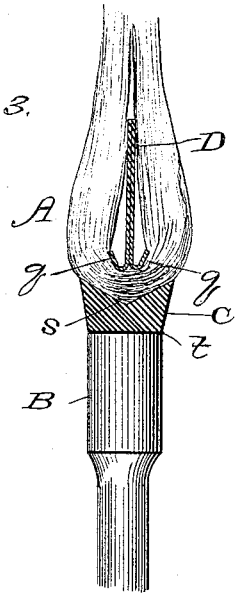


Fig. 4.

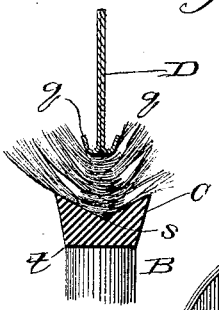
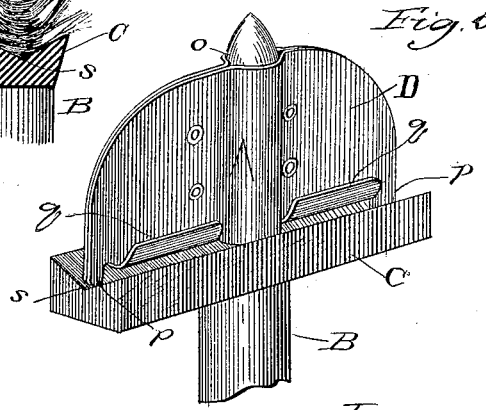


Fig. 5.



Witnesses:
Chas. E. Gaylord.
J. W. Dyrenforth

Inventor:
Richard D. Gallagher.
By Dyrenforth & Dyrenforth,
Attys.

UNITED STATES PATENT OFFICE.

RICHARD D. GALLAGHER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GALLAGHER-DICKINSON BROOM COMPANY, OF SAME PLACE.

BROOM.

SPECIFICATION forming part of Letters Patent No. 386,310, dated July 17, 1888.

Application filed January 3, 1887. Serial No. 223,213. (No model.)

To all whom it may concern:

Be it known that I, RICHARD D. GALLAGHER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brooms; and I hereby declare the following to be a full, clear, and exact description of the same.

My present invention relates to an improvement upon the construction of brooms for which Letters Patent of the United States No. 335,808 were granted me on the 9th day of February, 1886, it being my object to simplify materially the construction set forth in my aforesaid Letters Patent, and at the same time to increase the strength of the article, without, however, discarding any of the advantages afforded by my said patented construction.

My improvement relates particularly to the plate for holding the straw or broom-corn in place and to the manner of its construction and combination with other parts.

My invention consists in certain details of construction and combinations of parts, all as hereinafter more fully set forth, and pointed out in the claims.

In the drawings, Figure 1 is a broken side elevation of a broom embodying my improvements; Fig. 2, a similar view enlarged and having parts removed and broken away to display details of construction; Fig. 3, a view in longitudinal section taken on the line 3 of Fig. 2 and viewed in the direction of the arrow, showing my improved means for securing the broom-corn to the broom-handle; Fig. 4, a similar view of a broom in process of manufacture, and Fig. 5 an enlarged detail perspective view showing my improved retaining-plate and the manner of fastening it to the broom-handle to secure the broom-corn. (Not shown to avoid obstructing the parts to be displayed.)

In the construction set forth in my aforesaid Letters Patent the plate for holding the broom-corn in place comprises a single thickness of sheet metal inserted into a slot in the end of the handle, wherein it is secured by riveting, and a bent wire is used to prevent the broom-corn from being forced out laterally. I now form the holding-plate of a double thickness of sheet metal, surrounding the reduced end of the broom-handle as a collar, thereby avoiding the necessity for a slot in the handle, and, by means of such improved construction, adding materially to the strength of the article. I dispense with the bent wire for holding the broom-corn from lateral displacement by providing ears on the lower edge of the retaining-plate, thus simplifying the construction, and I flange or upset the lower edge of the retaining-plate to blunt it, thereby preventing contact with the broom-corn, against the bent ends of which the plate is forced and secured in an improved manner, of a sharp edge.

The foregoing is an outline of the more important features of my present improved construction.

A is the broom-corn.

B is the handle, enlarged in diameter toward one end, as shown, to form a shoulder, *t*.

C is a base or block grooved longitudinally on one side, as shown at *s*, and fitting around the handle against the shoulder *t*.

D is the retaining-plate, formed, preferably, of two similarly-shaped pieces of sheet metal (or, if desired, of a single piece of material of the required length bent upon itself) fastened together, and bent to form when so fastened together a close-fitting central socket or collar, *o*, to receive the end of the handle, as shown in Fig. 5, and of about the same length as the block C.

At the edge of the plate D, adjacent to the block C, I provide lateral flanges *q*, to extend nearly to the outer extremities of the plate D, leaving the projections or ears *p*, for the purpose hereinafter described. The flanges *q* are formed by bending the edges of the sheet or sheets forming the plate in opposite directions to present blunt surfaces to the broom-corn when adjusted, as hereinafter described.

While I prefer to flange the plate laterally in both directions, as described, the purpose will be subserved if a flange, *q*, be provided to extend only on one side of the plate.

In the manufacture of my improved broom the ends of the broom-corn are laid across the grooved surface of the block C, as shown in Fig. 4, and the plate D is then forced down to press the broom-corn against the grooved surface of

the block C. The flanges *q*, bearing against the broom-corn, retain the ends of the same firmly in position without any danger of injuring it, while the projections *p* prevent the broom-corn from being forced out at the ends of the block C. To hold the plate D in place, I indent or cut it around the collar *o*, thereby forcing the metal into the wood of the handle, substantially as shown. To force the retaining-plate into operative position and fasten it, I use a machine especially constructed for the purpose. A shield, E, covers the ends of the broom-corn and block C and gives a finish to the broom.

What I claim as new, and desire to secure by Letters Patent, is—

1. A retaining-plate, D, formed of sheet metal, having a socket, *o*, and flange *q*, substantially as and for the purpose set forth.

2. A retaining-plate, D, formed of sheet metal, having a collar, *o*, a flange, *q*, and ears *p*, substantially as and for the purpose set forth.

3. A retaining-plate, D, formed of two thicknesses of sheet metal, having a collar, *o*, and lateral flanges *q* and ears *p* on one edge, substantially as and for the purpose set forth.

4. In a broom having the broom-corn bent at its end across a suitable base, C, on the broom-handle, the combination, with the base and broom-corn, of a retaining-plate, D, formed of sheet metal and having a collar, *o*, fitting upon and secured to the end of the broom-handle, and provided with flanges *q* and ears *p* on one edge, held against the bent end of the broom-corn, substantially as and for the purpose set forth.

5. In a broom, the combination of the handle B, enlarged in diameter toward one end to form a shoulder, *t*, a grooved block, C, broom-corn, A, having its end bent crosswise upon the block C, and a retaining-plate, D, comprising two sheet-metal plates secured flatwise together and provided with a collar, *o*, closely fitting the end of the handle, flanges *q*, and ears *p*, and forced and secured into position against the bent end of the broom-corn, substantially as described.

RICHARD D. GALLAGHER.

In presence of—
J. W. DYRENFORTH,
A. S. PARÉ.