M. V. LIDDELL.

BROOM FOR SWEEPERS.

APPLICATION FILED MAY 27, 1920.

1,418,088. **Patented May 30, 1922.**

Fig. 1.

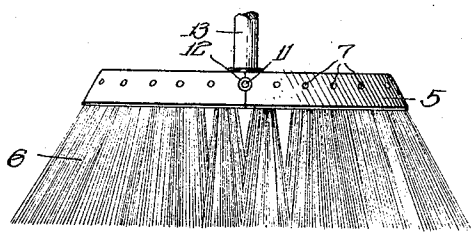


Fig. 2.

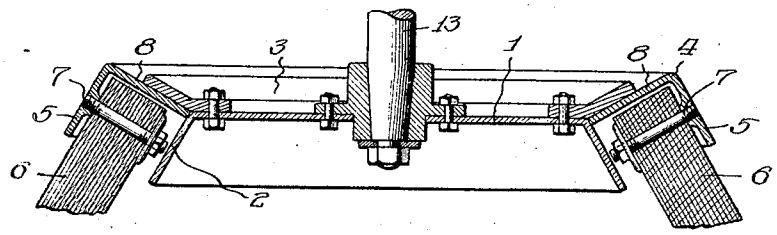


Fig. 4.

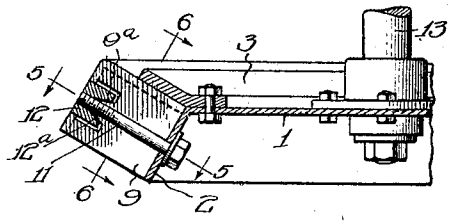


Fig. 5.

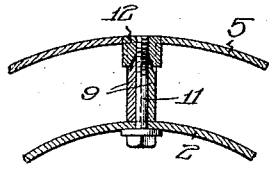


Fig. 6.

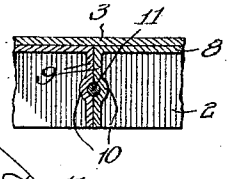
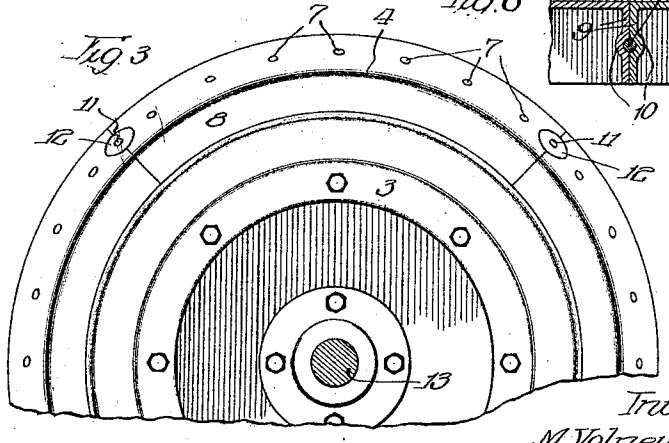


Fig. 3.



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UNITED STATES PATENT OFFICE.

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BROOM FOR SWEEPERS.

1,418,088. Specification of Letters Patent. Patented May 30, 1922.

Application filed May 27, 1920. Serial No. 384,527.

To all whom it may concern:

Be it known that I, MOSES VOLNEY LIDDELL, a citizen of the United States, residing at Mattituck, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Brooms for Sweepers, of which the following is a specification.

This invention relates to a broom to be mounted upon a street sweeper or the like, and while designed primarily for embodiment in a broom which rotates, as, for instance, brooms employed to sweep the gutter portion of the surface being swept, the features of the invention are applicable to other types.

The primary object of the invention is to provide a mounting for splints or other material with which the broom is to be clothed, which will embody in its structure a series of independent carriers for groups of splints, which are conveniently removable for replacing the splints when worn, and to which the splints may be conveniently applied while the carriers are removed so that the groups of splints may be secured in place by merely returning the carriers to position. And to this end, one feature of the invention consists in mounting the splints in a series of carriers removably associated in the structure, as, for instance, by detachably securing the carriers upon a suitable base.

A further object is to provide a simple and efficient construction through which to realize the above-mentioned primary object. And to this end, further features of the invention consist in providing a base having an attaching flange and a confining flange, forming with the attaching flange an angular seat into which the carriers fit and in which they are secured, as, for instance, by the bolts uniting them with the attaching flange; the series of carriers being framed around the sides of the base and having their ends in abutment; and the securing bolts for holding the carriers being preferably located at the meeting ends of adjacent carriers so that each bolt may engage the meeting ends of two carriers and serve to sustain the same against both vertical and longitudinal displacement.

In order that the invention may be fully understood, I will describe in detail one illustrative embodiment thereof.

In the accompanying drawing,—

Figure 1 is a side elevation of a broom embodying features of the present invention.

Figure 2 is a diametric section of the same on an enlarged scale.

Figure 3 is a plan view of a part of the broom.

Figure 4 is a detail view in radial section showing one of the joints for securing the splint carriers to the base.

Figure 5 is a section on the line 5—5 of Figure 4; and

Figure 6 is a section on the line 6—6 of Figure 4.

1 represents the base of the broom mounting, preferably in the form of a circular disk with a depending attaching flange 2 and a confining flange 3 projecting at an angle to the flange 2 and forming therewith a seat to receive the splint carriers 4. Carriers 4 are preferably in the form of an annular series of segmental members L shaped in cross section so as to provide an outer wall 5, to which the splints 6 are secured by bolts 7, and an inwardly extending top wall 8 seating between the flanges 2 and 3. This leaves the carrier open at its inner side to give free access to the securing means 7 and the splints 6 when the carrier is removed, which open side, however, is closed by the flange 2 when the carrier is in position. At the abutting ends of two carriers 4 there are transverse walls 9, preferably integral with the walls 5 and 8 of the carriers, and in these abutting end walls are formed half bearings 10 for bolts 11 which project from the attaching flange 2 of the base 1 so as to sustain the carriers 4 against downward as well as circumferential displacement. Upon the outer ends of the bolts 11 are gripping nuts 12 working through the outer walls 5 of the carriers and having conical recesses 12^a through which they seat upon correspondingly formed projections 9^a of the end walls 9. The effect of this construction is that when the gripping nuts 12 are drawn tightly upon the conical projections 9^a, they not only firmly press the carriers 4 into the seat between the flanges 2 and 3, but tie the abutting ends of the carriers firmly together, and it is only necessary to loosen two of the bolts 11 to permit any one of the carriers 4 to be removed. When removed, the wisps of splints 6 or other

equivalent brushing material may be very rapidly removed and replaced; or an entire carrier equipped with new splints may be substituted for the one removed. The transverse walls 9 at the ends of the carriers afford effective means for maintaining the bundles or wisps of splints in vertical position against the side thrust developed from their contact with the ground, each wall being ordinarily sufficient to sustain the whole column of bundles of bristles in the particular carrier. Similar walls, however, may be located transversely of the carrier at points intermediate its ends if desired.

The broom herein selected for illustration is designed for mounting through its shaft 13 upon a sweeping machine, which will be equipped with suitable mechanism for raising and lowering the broom to its duty and rotating it while in use.

I claim:

1. In a broom, a circular base having outwardly and downwardly presented flanges forming an outwardly presented annular seat, segmental splint carriers adapted to fit in said seats, and bolts located between opposed ends of splint carriers and drawing said splint carriers by their said ends into said seat.

2. In a broom, a circular base, having an outwardly presented annular seat, segmental splint carriers adapted to fit in said seat with their ends in approximate abutment and having bolt-receiving recesses formed in their opposed faces, bolts carried by said base in position to enter said recesses, and means carried by a bolt engaging two abutting ends of the splint carriers and thereby holding the splint carriers in bearing upon the bolt and in said seats.

3. In a broom, the combination of a base, splint carriers arranged in series on said base and having opposed ends, bolts located between said opposed ends and upon which said ends seat, and a nut carried by each bolt interlocking with said opposed ends and holding them in bearing upon the bolt.

4. In a broom, a base having an attaching flange and a confining flange forming a seat thereon, splint carriers fitting the seat between said flanges, and bolts projecting from the attaching flange and engaging the carriers to hold them in said seat; said carriers comprising each an outer wall and an inwardly projecting wall.

5. In a broom, a base having an attaching flange and a confining flange forming a seat thereon, splint carriers fitting the seat between said flanges, and bolts projecting from the attaching flange and engaging the carriers to hold them in said seat; said carriers comprising each an outer wall and an inwardly projecting wall; the outer walls of said carriers having means for attaching splints thereto.

6. In a broom, a circular base, an arcuate splint carrier fitted to the circumference of said base and having inwardly extending upper wall, a circumferential depending wall, and a transverse end wall, and splints secured in bundles upon said carrier and sustained in position by all of said walls.

7. In a rotary broom, a circular base having an outwardly and downwardly opening angular circumferential seat, and an annular serres of splint carriers fitted in said seat and comprising each a top wall and a transverse end wall through which it bears against the walls of the seat and an annular splint attaching wall depending from the top wall; said splint carriers having splints secured thereto and positioned by their said walls.

Signed at Rochester, N. Y., this 20th day of May, 1920.

MOSES VOLNEY LIDDELL.