

May 7, 1940.

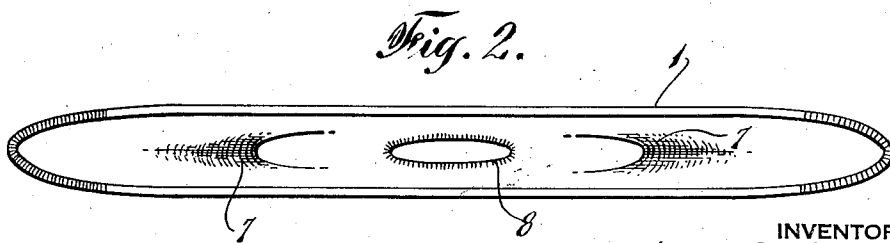
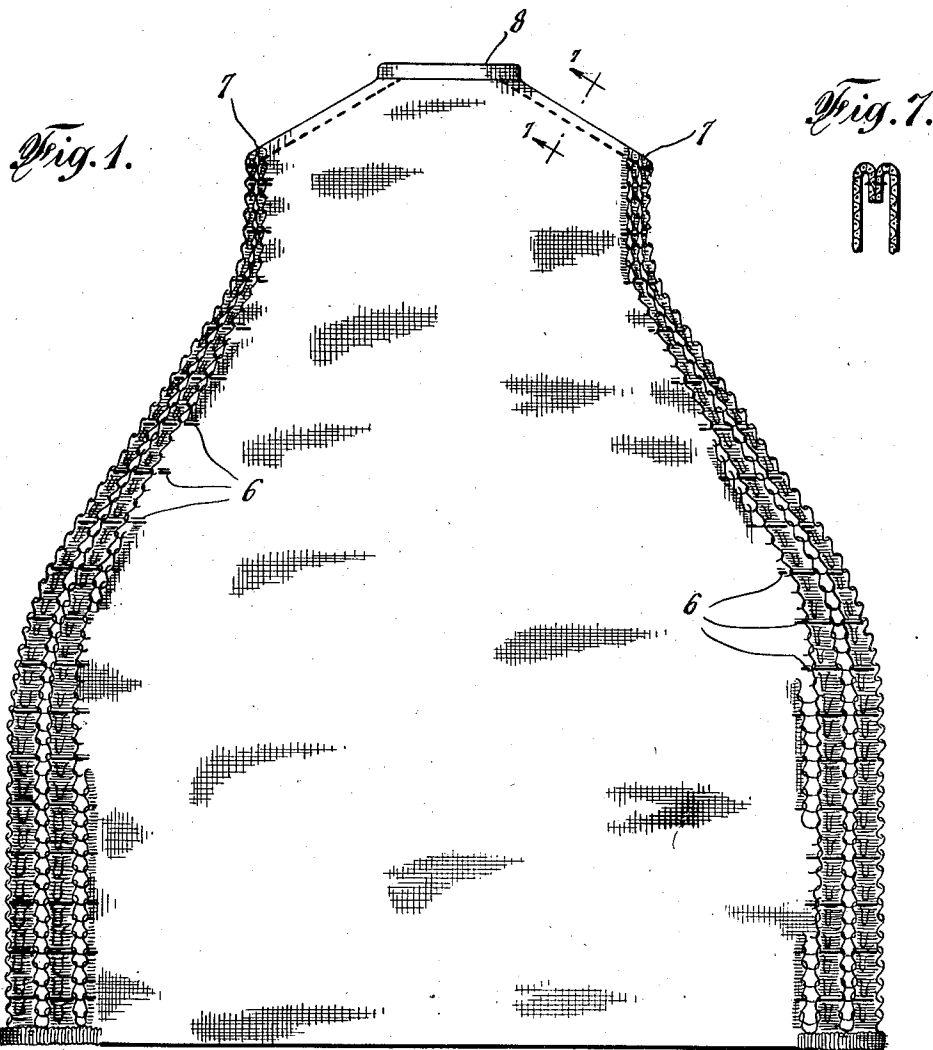
L. A. O'LENA

2,200,121

BROOM REINFORCER

Filed July 8, 1938

2 Sheets-Sheet 1



INVENTOR,

Louis A. O'lena.

BY

Samuel F. O'lena.
ATTORNEY.

May 7, 1940.

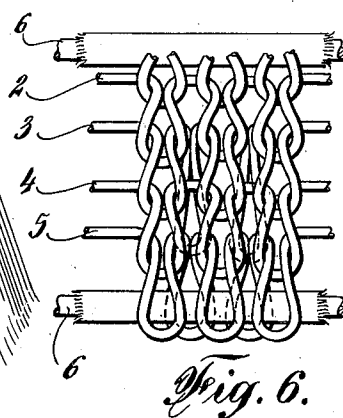
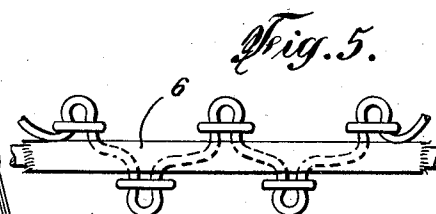
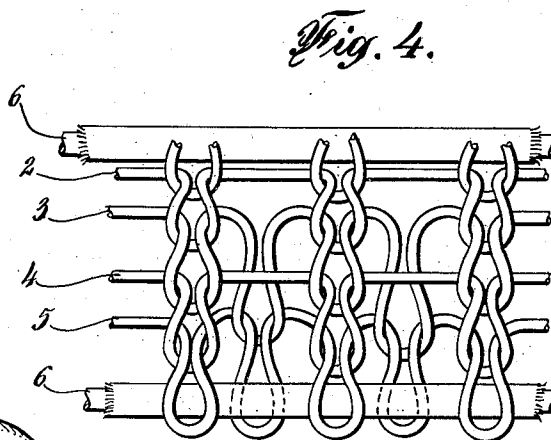
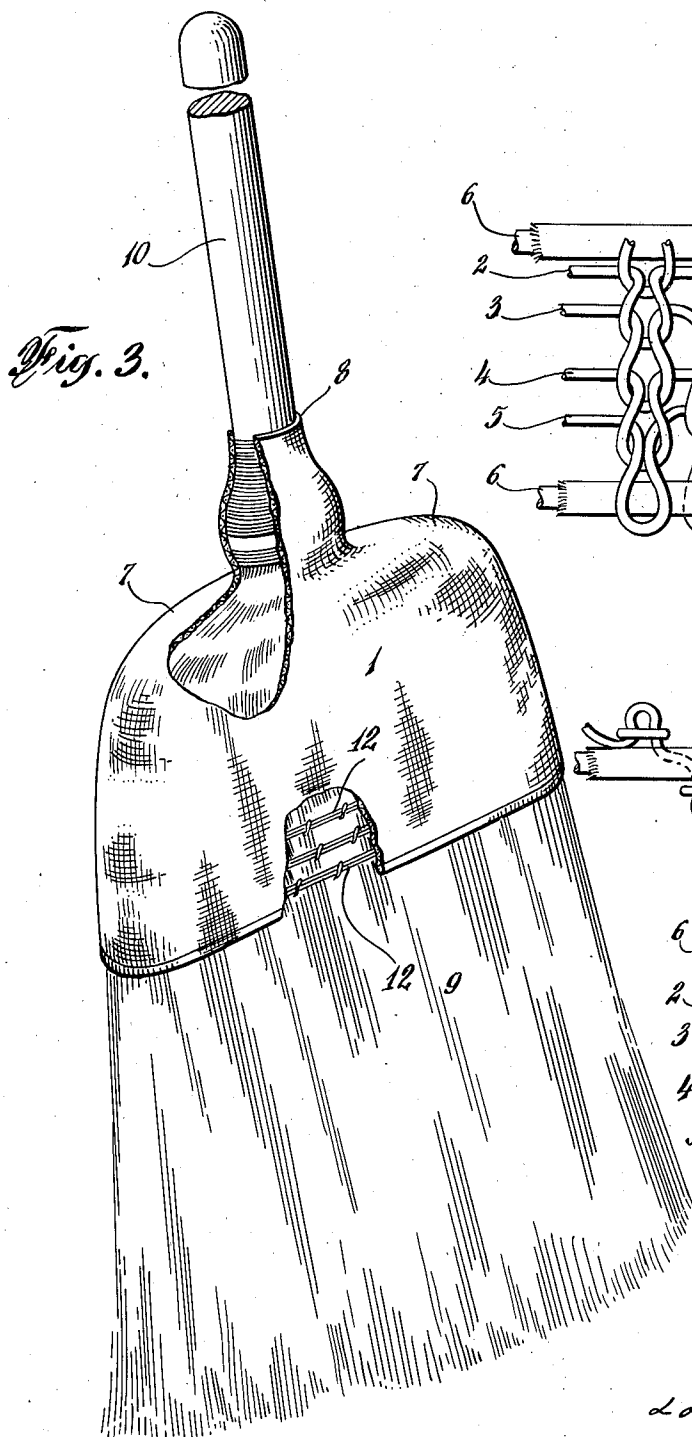
L. A. O'LENA

2,200,121

BROOM REINFORCER

Filed July 8, 1938

2 Sheets-Sheet 2



INVENTOR,
Louis A. O'lena.
BY
Arthur H. O'lena
ATTORNEY.

UNITED STATES PATENT OFFICE

2,200,121

BROOM REINFORCER

Louis A. O'Lena, Forest Hills, N. Y.

Application July 8, 1938, Serial No. 218,055

1 Claim. (Cl. 15—247)

My improvements relate to means for reinforcing and protecting brooms, such particularly as are made from the panicles of broom corn, and which embody an assembly of such panicles in a compact body firmly fastened together and attached to a suitable handle, and having free ends below the compact body. The compact body portion of such a broom is usually held together by transverse strands of rather stiff cord on opposite sides of the body stretched or tied to each other through the body; so that the free ends of the panicles when flexed back and forth will bend against the quite rigid resistance of the cords, and tend to fracture or break about the cord lines. Between and above the transverse cords the outer panicles of the body are unsupported exteriorly, and may be displaced or broken, particularly by being pulled outward, to the detriment of the broom.

Objects of my invention are to provide a yieldable reinforcement for the upper portions of the free ends of the panicles; to yieldably reinforce and protect the body of the broom, with an upwardly increasing tension; to cover the usual wire lashing around the panicles and handle; to use means readily attachable to and detachable from the broom; to secure a unitary and attractive reinforcer for the broom; and to obtain the other desirable results hereinafter pointed out and claimed.

In the drawings Fig. 1 is a side view of my improved reinforcer, only the stitching near the edges being shown, the rest of the article being similarly formed; Fig. 2 is a bottom view; Fig. 3 is a perspective view of the reinforcer applied to a broom, and partially broken away for better illustration; Fig. 4 is a face detail of the stitches preferably employed in the lower portion of the reinforcer; Fig. 5 is an edge view; Fig. 6 is a view of the stitching in the upper portion of the reinforcer; Figs. 4, 5 and 6 are on a much enlarged scale; and Fig. 7 is a sectional view on the line 7—7 of Fig. 1, showing the seam on the shoulder of the reinforcer.

Similar reference numerals designate similar parts in all the figures.

The reinforcer is formed of knitted fabric, preferably embodying series of looped stitches formed for instance from threads, some of which are interlooped only on one side, for instance the face of the fabric as in Figs. 4 and 6; while others are interlooped on both sides as indicated in Fig. 5.

Between two rows of stitches interlooped on both faces of the fabric, I preferably insert reinforcing threads of sheathed rubber, 6, 6, which are not bent into loops, but simply laid straight, so that stretching of the reinforcer laterally puts the rubber under positive tension. The rows of looped stitches run upward vertically, in nearly parallel lines, for a distance, for instance about

one third, of the length of the reinforcer; from which point they draw together, progressively, curving in to points which may be called the shoulders, which slope toward each other quite abruptly, and are connected by a neck band 8 which is preferably overwhipped or otherwise stiffened.

When this reinforcer is drawn down over the broom, with the handle 10 passing up through the neck 8, the reinforcer will fit snugly around the handle, the wire lashing, and the shoulder and body of the broom and its lower edge will extend down below the stiff transverse cords, so as to constitute a yieldable reinforcement around the tops of the free panicles; so that when the panicles are flexed to and fro they will not bend sharply from the line of cord, but will spring gradually from below the reinforcement, thus minimizing the danger of fracturing them by abrupt bending, and thereby increasing the life of the broom.

It will be seen also that the progressive drawing together of the rows of stitches gives a denser and more resistant body to the upper portions of the reinforcer, so that there is increased protection against damage to the panicles of the broom in the portions where they are drawn together in the compacted body of the broom. This is particularly valuable on what may be called the shoulders of the broom body which are liable to contact with hard objects in the ordinary use of the broom.

It will be seen, also, that where the upper part of the reinforcer draws around the wire lashing and the lower end of the broom it not only prevents contact between the metal lashing and objects of furniture and the like when the broom is being used, but that it also forms a neat and tasty finish around the lower end of the broom handle.

I wish it to be understood that the form of embodiment of my improvements which I have illustrated and described is to be considered as typical and not as an exclusive embodiment, for details of my invention may be modified as by the use of mechanical equivalents without departing from the spirit of my invention or the scope of my claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

A reinforcer for brooms embodying a unitary knit body having continuous and contiguous lines of looped stitches progressively approaching each other substantially from the bottom to the top of the reinforcer thus creating a stiffened and restricted neck opening formed of the textile material of the body.

LOUIS A. O'LENA. 60