H. ANDERSON.

MANDREL FOR BROOM-MACHINE.

No. 169,330. Patented Nov. 2, 1875.

FIG. 1.

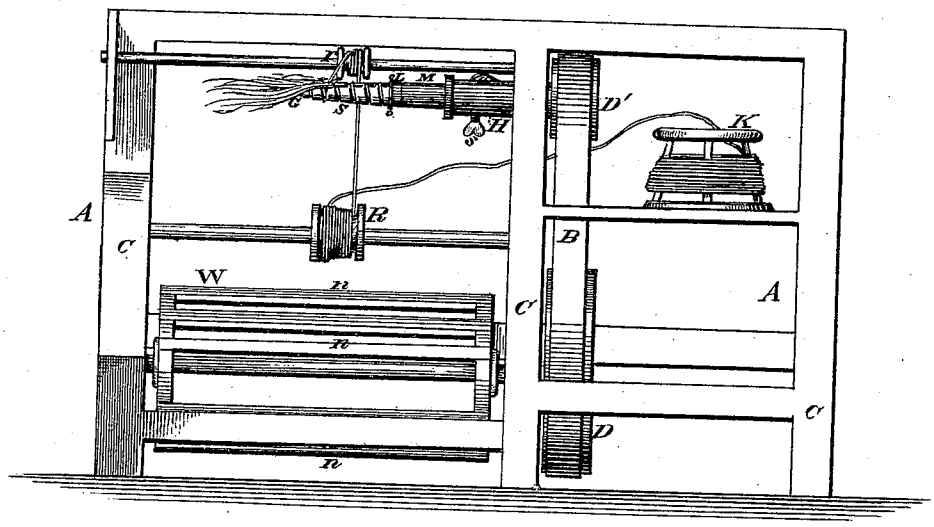


FIG. 2.

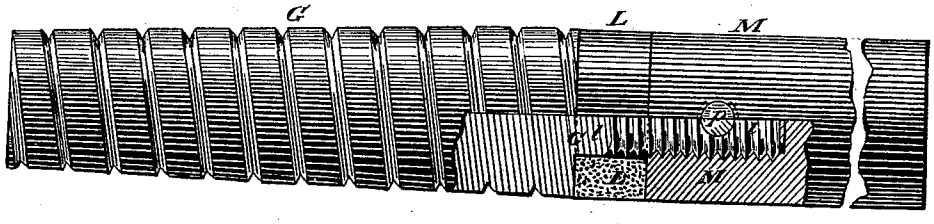


FIG. 4.

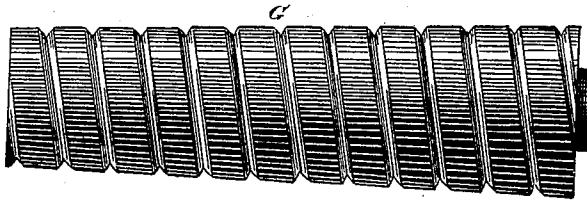


FIG. 3.

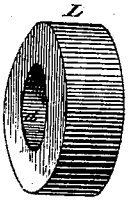
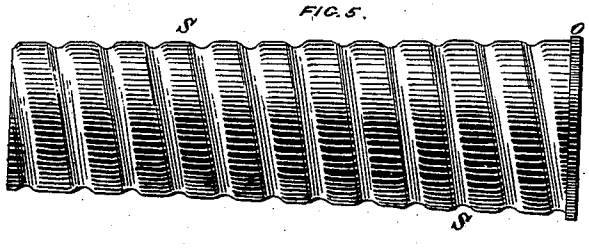


FIG. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY ANDERSON, OF VALLEJO, CALIFORNIA.

IMPROVEMENT IN MANDRELS FOR BROOM-MACHINES.

Specification forming part of Letters Patent No. **169,330**, dated November 2, 1875; application filed September 11, 1874.

To all whom it may concern:

Be it known that I, HENRY ANDERSON, of the city of Vallejo, Solano county, State of California, have invented an Improvement in Broom-Mandrels, of which the following is a specification:

My invention in broom-mandrels relates to a form or mandrel one end of which is threaded, so as to receive a broom-socket provided with corresponding thread in such manner that it may be adjusted thereon, and held in place during the laying of broom-corn sprigs for the manufacture of detachable brooms.

My improvement consists in a peculiar adaptation of a ring of soft material to the mandrel placed at the termination of the screw-threads thereof, against which ring the knife may cut in trimming the butt-ends of the broom-corn without danger of blunting or otherwise injuring its edge.

Figure 1 is a vertical longitudinal elevation of a broom-machine. Fig. 2 is a side or longitudinal view of the mandrel embodying my invention, having a portion broken away in order to show the several parts and mode of adjustment. Fig. 3 is a perspective view of the ring-piece embodying my invention for preserving a corn-trimming knife from being blunted. Fig. 4 is a side or longitudinal view of the threaded portion of the mandrel provided with the threaded shank for the adjustment of the several parts together. Fig. 5 represents a side view of a corrugated or threaded socket for detachable brooms, such as may be fitted to this machine, provided with a mandrel of this description.

With reference to the drawings, A A is a broom-machine, which is constructed in the usual manner; and consists of a frame, C C, treadle-wheel W, connected to a large drum, D, so as to engage a smaller drum, D′, by means of a belt, B. To this drum D′ is fitted a holder, H, into which ordinary broom-handles are secured by the adjustment of the thumb-screw *s* on the spring *a*. A roll of wire is wound around a spool, K, so as to supply a reel, R, and pass over, in a single thread, a smaller reel, *r*, conveniently placed for the manufacturer in winding round such broom-corn as may be spread on the wooden handle usually fixed in this holder H, the treadle-wheel W serving to turn such handle round by the pressure of the foot on the rungs *n n*, for the proper laying and securing of this corn.

G L M is the form or mandrel embodying my invention, which is fitted to the holder H in place of the usual broom-handle, so that a screw-shaped socket, S, for detachable brooms, may be adjusted thereto for receiving layers of broom-corn, by screwing onto it, in the same manner that it would be screwed onto the end of an ordinary broom-handle, prepared with a corresponding thread. For this purpose this mandrel is composed of three parts, the taper or straight-threaded portion G, the ring-piece L, and the spindle M, which fits partially into the holder H, all of which are adjustable to one another by means of the threaded shank *l*, forming part of the threaded portion G, being arranged to pass through a hole, *d*, in the ring L, and screw into the spindle M, thus binding each part firmly to the other, with the ring-piece L in the center.

By this arrangement a corrugated or screw-shaped socket can readily be adjusted to such mandrel; and, when placed in its proper position, the corn-layers attached for making a broom may be cut off near the rim *o* of this socket on the ring-piece L, which is made of horn, vulcanized india-rubber, or such other material as will not readily blunt the trimming-knife; also, both the threaded portion G and this ring L can be detached, and fresh ones substituted in their places to meet the requirements of the manufacture; and, in order to secure the portion G from being disengaged during the withdrawal of a socket, S, a pin, P, is introduced, so as to still further bind all the pieces together.

I do not confine myself to any particular material for the parts G and M, as hard wood, as well as metal, may be found to answer for all purposes. At the same time I wish it to be distinctly understood that I do not claim, broadly, a mandrel of a broom-machine provided with a softer material, against which the knife that trims off the projecting ends of the broom-corn may cut, but that I confine myself strictly to the particular construction and arrangement of the parts shown.

I disclaim the socket S, as this is covered in Patent No. 156,324; also, the parts of this

broom-machine comprising the drums D D′, treadle-wheel W, holder H, spring *a*, and screw *s*, and reels R *r*, as I am aware that these are not new; but

What I claim as my invention, and for which I am desirous of obtaining Letters Patent, is—

The mandrel G L M, consisting of the threaded socket-holder G, provided with the screw-shank *l*, ring for the trimming of broom-corn ends, as described, L, spindle M, and pin *p*, for the adjustment of the device to the holder H of the broom-machine A A, substantially as and for the purposes herein set forth and specified.

HENRY ANDERSON.

Witnesses:

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LIONEL VARICAS.