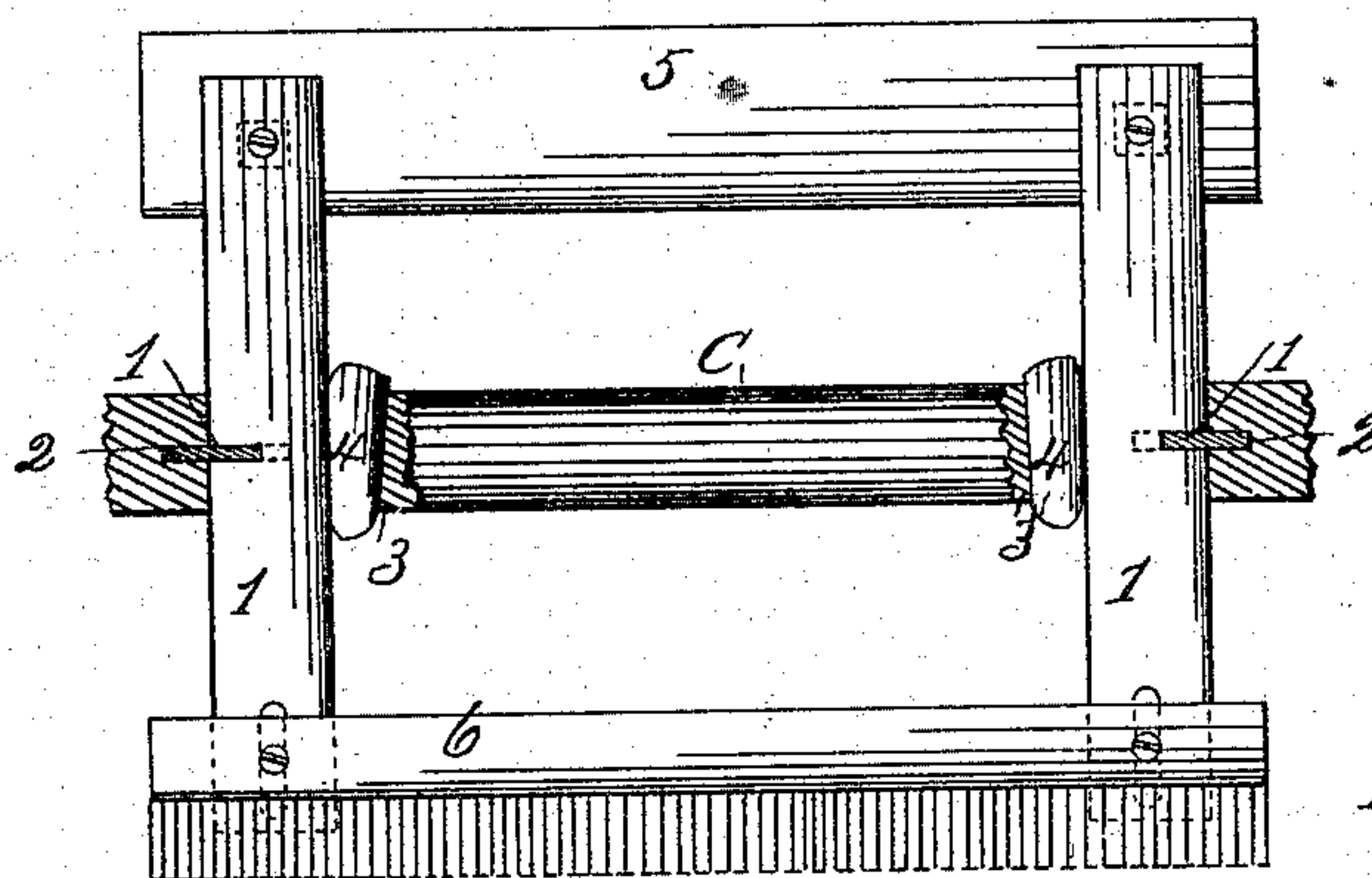
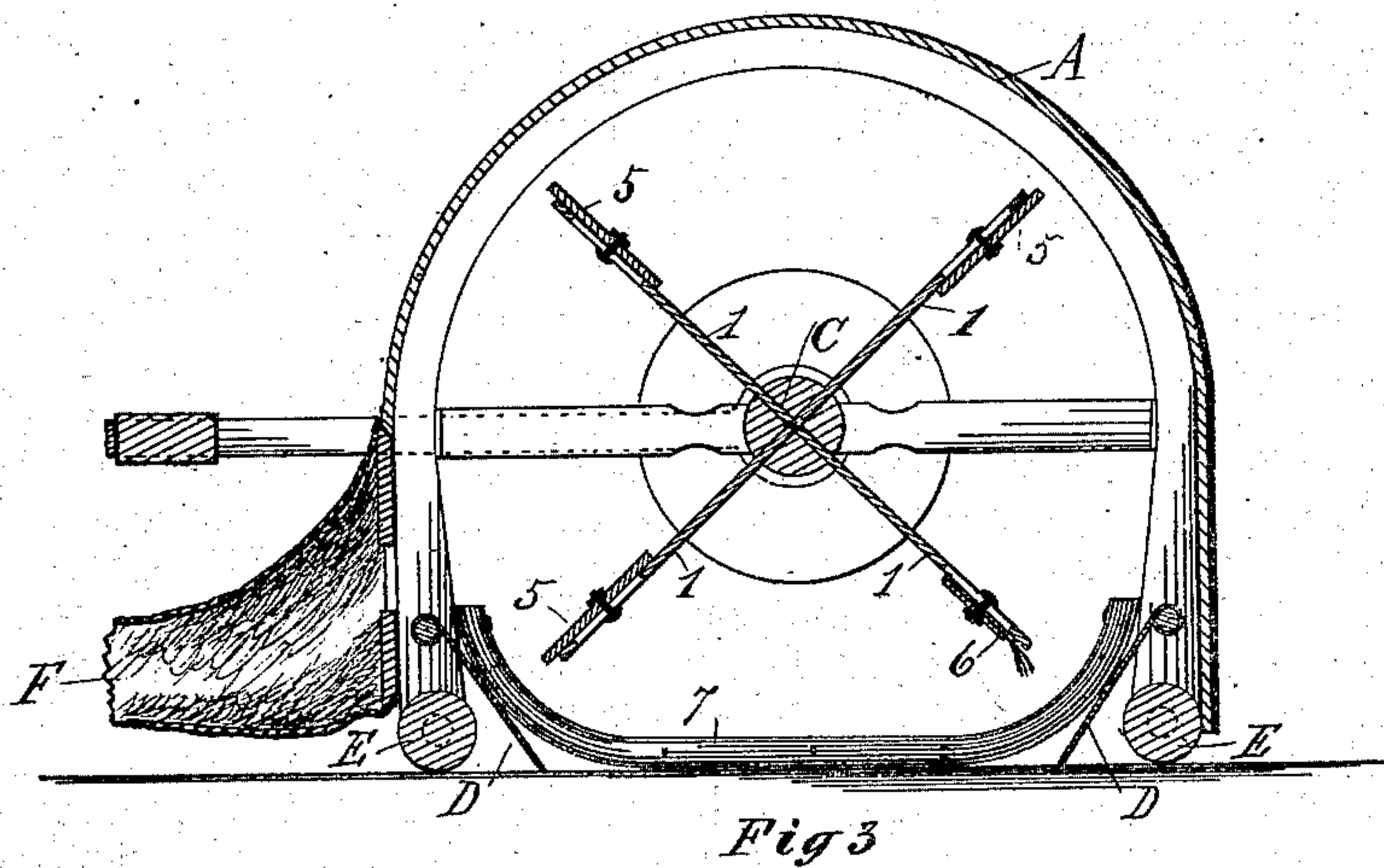
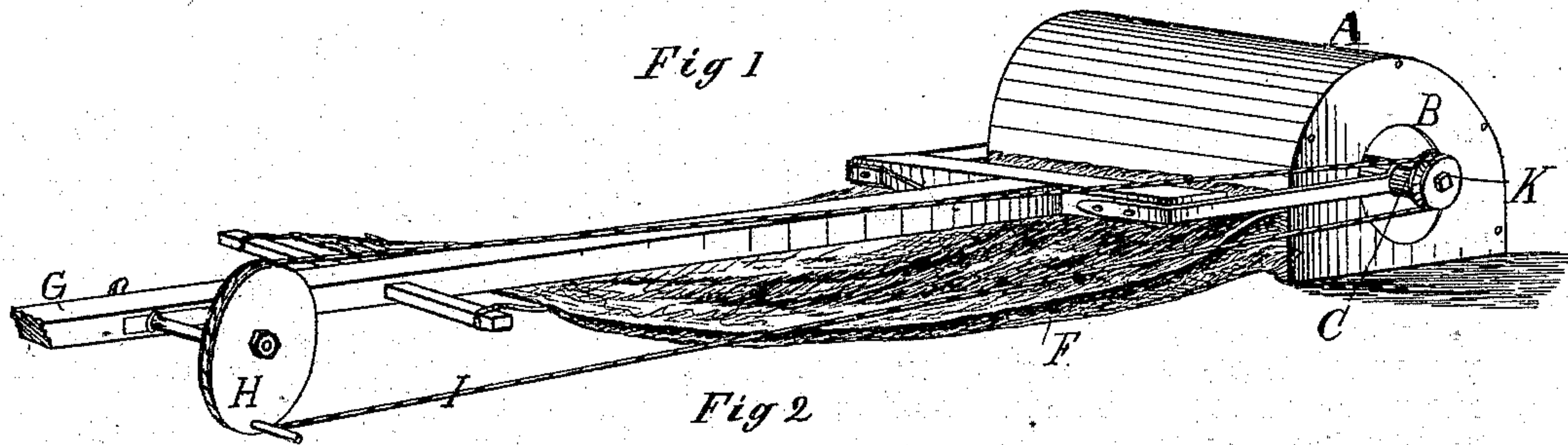


G. S. NORRIS.  
Carpet-Sweepers.

No. 158,511.

Patented Jan. 5, 1875.



Witnesses

Geo. T. Smallwood.

Chickensloop

Inventor.

George S. Norris,  
by John J. Halsted  
his Atty.



# UNITED STATES PATENT OFFICE.

GEORGE S. NORRIS, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **158,511**, dated January 5, 1875; application filed July 31, 1874.

*To all whom it may concern:*

Be it known that I, GEORGE S. NORRIS, of the city and county of Baltimore and State of Maryland, have invented certain Improvements in Sweeping-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is a perspective view of a sweeper embodying my improvements. Fig. 2 is a vertical section through the casing, showing the flaps and rubber springs; and Fig. 3 is a section showing construction of the radial arms which support the fans and brushing-beaters.

My present invention is an improvement upon the sweeping-machine patented to me March 12, 1871, No. 112,837, and it seeks to make the improvement more efficient and practical, less liable to injury, and more durable than heretofore constructed; and to this end my improvements consist, first, in making the radial arms, which support the fan-floats and beaters or brushes, of leather or other elastic material, mortised in the axle, so that they may not only be firmly held to place, but that they may yield and prevent breakage when the fans or beaters are brought into contact with heavy or solid articles; secondly, in making the beaters of leather, whereby I avoid scraping off the nap of the carpet; thirdly, in combining with the flaps or drop-pans a device which not only gives them a gentle elastic downward pressure upon the carpet, and permitting play, when required, for large articles to be swept up and bagged, but which also hugs the carpet across the space at the ends of the flaps, and prevents the escape of dust; fourthly, in dispensing with the india-rubber ends for the case or box, and substituting pasteboard, paper-board, artificially-made board, or other kindred cheap material, which, in connection with the above-named device for giving the drop-pans a gentle downward pressure, at the same time keeps the ends closed to the carpet when the case is raised by the rollers passing over any article, and thereby preventing the escape of the dust.

It is unnecessary particularly to describe the well-known parts of the apparatus or their

operation. I shall, therefore, proceed to describe my improvements, premising that A represents the case; B, its end; C, the axle or shaft which carries the rotary brushes and fan-floats; D, the flaps or drop-pans; E, rollers on which the case is mounted; F, the dust bag or receiver; G, the handle; H, the driving-crank and pulley, and I the cord or band from this pulley to the smaller pulley K on the shaft. The arms which support the floats, beaters, or brushes are shown at 1 1, and I make them of leather or other yielding or elastic material, such that while they are capable of giving way somewhat to solid or heavy articles, they shall also spring back to position after passing over such objects. I secure these arms in the shaft as follows: I make mortises or slots 2 3 entirely through the shaft at right angles to each other, and make the slot 3 somewhat broader than slot 2. The leather or other material is made of the proper width and thickness to fit the slot 2, and long enough, when inserted in its slot, to project through both sides of the shaft, and thus form two opposite arms with its two ends. It is also notched transversely on one side, as shown at the center of its length, that it may be locked by a similar notch cut in its fellow piece, which is to be placed in the adjacent broader slot 3. This slot 3 is made broader in order to permit the piece of leather to be inserted without obstruction from the piece already placed in slot 2. When properly drawn in, so that the notches of both pieces coincide, the piece in the broader notch is forced edgewise toward the other piece, to compel these notches to interlock, and then they are secured against any possible dislocation by inserting plugs or wedges 4 in the unfilled portion of the slots 3.

It will now be evident that each piece locks and positively prevents the other from moving endwise, and that the plug prevents their unlocking.

The fans or beaters secured to the projecting arms of these yielding or spring pieces have the capacity of yielding or springing accordingly.

The leather beaters 6 (of which one or more may be employed, as desired) I make, preferably, of a strip of leather, slitted up, as shown,



to resemble a fringe. It may be made of a single piece, or of a number of such strips secured together, and it may be made from any flexible material other than leather, such as will not tend to scratch and scrape the surface of the carpet, and wear away the nap.

The beaters 6 and floats 5 are both made adjustable on their arms, so that they may be set nearer to or farther from the shaft, as occasion may require.

To insure that the drop flaps or pans D shall be gently but positively pressed down upon the carpet, instead of merely dropping by gravity, I employ a yielding rubber, preferably a rubber tube, (shown at 7,) located just above the ends of the flaps, and extending across the space between these ends. The effect of this construction is that the flaps are gently but yieldingly held close to the carpet, and the tube or elastic piece 7 itself bears upon and hugs closely to the carpet at the ends of the flaps, thus preventing the escape at those parts of any of the dust.

Instead of closing the ends B of the box, as heretofore, by sheet-rubber, I substitute pasteboard, or other kindred material, which, in connection with the tube or elastic piece 7, extending across and projecting below the lower

edges of the end pieces, prevents the escape of dust when the case is raised from the carpet by passage of the rollers over unequal surfaces.

What I claim as new in a sweeping-machine, and desire to secure by Letters Patent, is as follows:

1. In combination with the shaft or axle, the leather or other elastic arms 1 1, for supporting the beaters or fans, mortised and secured in the axle and locked to each other, substantially as shown and described.

2. The beater or beaters 6, formed of leather or similar flexible material, constructed and applied substantially as shown and described.

3. In combination with the drop flaps or pans D, the elastic piece 7, applied substantially as described, and serving to press the flaps downward, and also to prevent the escape of dust.

4. In combination with the case, the pasteboard end pieces B, having the elastic pieces 7 applied to them, substantially as and for the purpose set forth.

G. S. NORRIS.

Witnesses:

EDWARD VOSS,  
THOS. I. CAREY.