

No. 620,433.

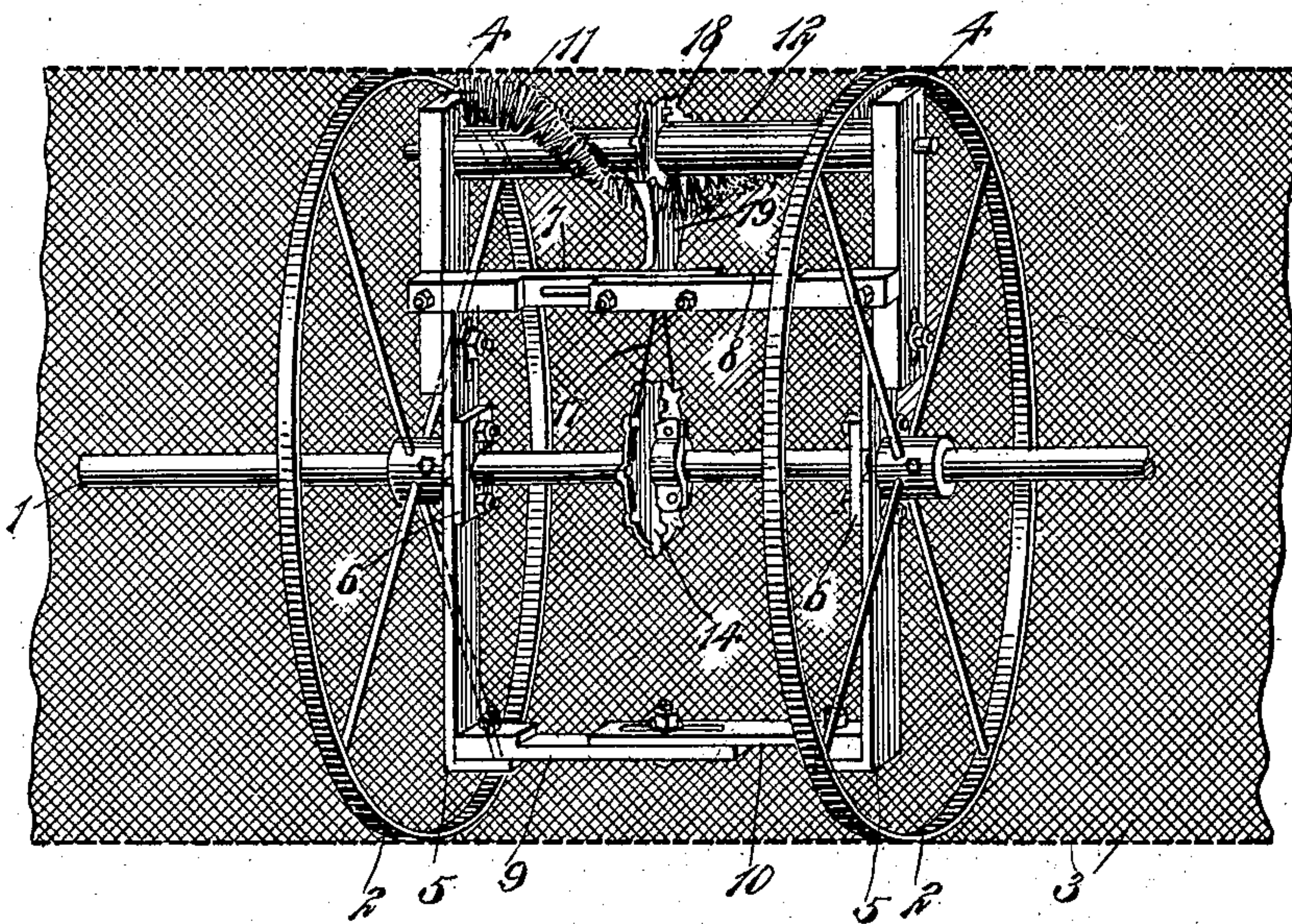
Patented Feb. 28, 1899.

H. H. EMMINGA.  
BOLTING CLOTH CLEANING BRUSH.

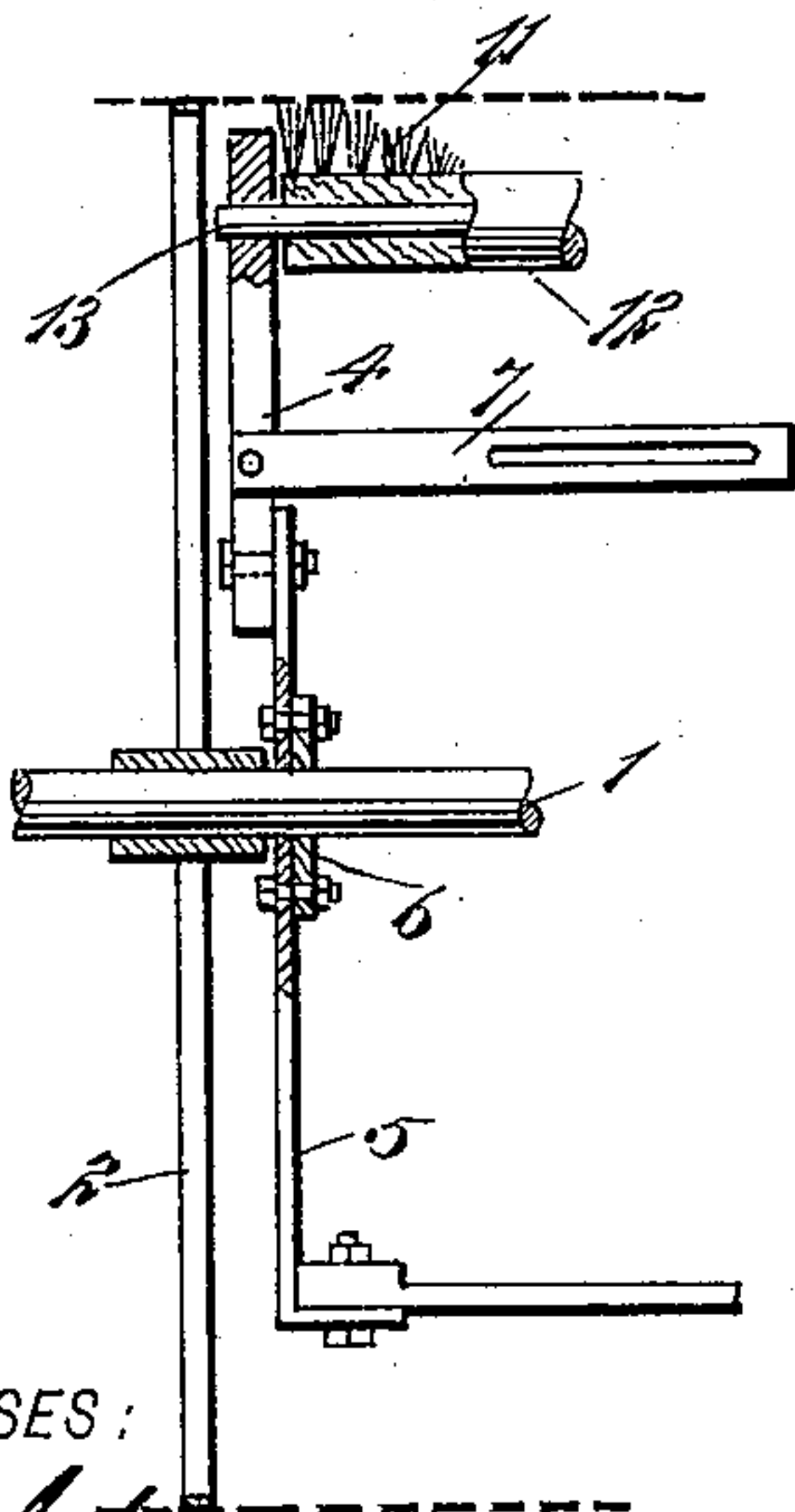
(Application filed July 29, 1898.)

(No Model.)

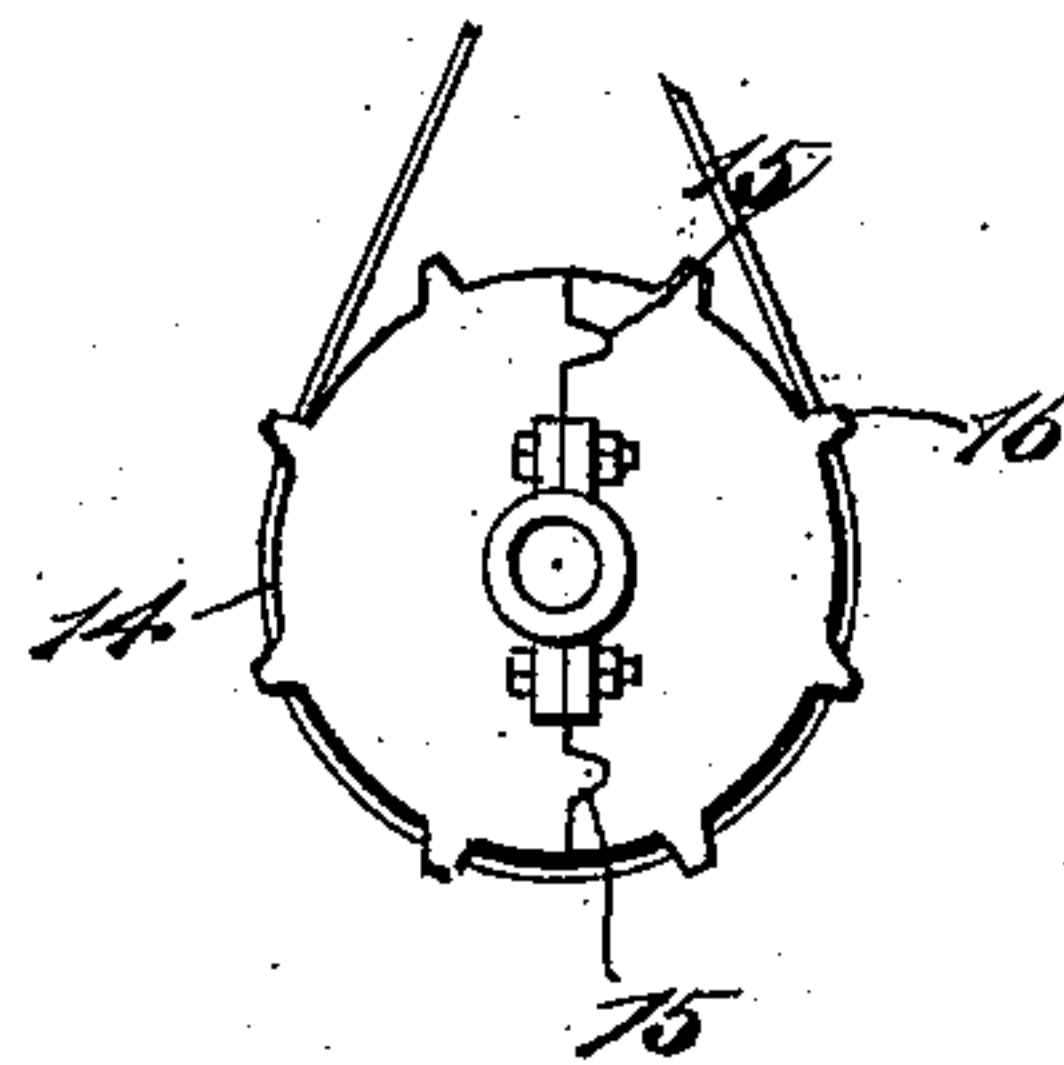
*Fig 1*



*Fig 2*



*Fig 3*



WITNESSES:

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INVENTOR

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# UNITED STATES PATENT OFFICE.

HARM H. EMMINGA, OF GOLDEN, ILLINOIS.

## BOLTING-CLOTH-CLEANING BRUSH.

SPECIFICATION forming part of Letters Patent No. 620,433, dated February 28, 1899.

Application filed July 29, 1898. Serial No. 687,176. (No model.)

*To all whom it may concern:*

Be it known that I, HARM H. EMMINGA, of Golden, in the county of Adams and State of Illinois, have invented a new and Improved Bolting-Cloth-Cleaning Brush, of which the following is a full, clear, and exact description.

This invention relates to improvements in brushes for cleaning the interior of flour-bolting reels; and the object is to provide a brush for this purpose which will be simple and comparatively cheap to manufacture and so constructed that it may be easily mounted on the reel-shaft or detached therefrom without first removing the spiders from the shaft.

I will describe a brush embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a brush embodying my invention and showing the same as arranged in a reel. Fig. 2 is a fragmentary view, partly in section and partly in elevation; and Fig. 3 is a side view of a driving-sheave employed.

Referring to the drawings, 1 designates the reel-shaft, upon which are mounted the spiders 2, to which the bolting-cloth 3 is attached. The cleaning-brush is mounted in a frame consisting of side upper sections 4 and lower sections 5, through which the shaft 1 loosely passes. To place the sections 5 on the shaft, I provide the said sections with outwardly-opening slots, into which the shaft may pass, and then bearing-blocks 6, having outwardly-opening slots, are passed over the shaft and bolted to the sections 5. The slots of the blocks will extend in an opposite direction to those in the sections 5. Other means, however, may be provided for mounting the frame or the sections 5 on the shaft.

The sections 4 of the frame are adjustable vertically relatively to the sections 5. As here shown, the upper portions of the sections 5 are provided with slots, through which bolts extended from the sections 4 are passed. The sections 4 may also be provided with slots, as indicated in the drawings, to receive said bolts. A cross-bar consisting of two sec-

tions 7 8 connects the sections 4 to the frame, and these sections 7 and 8 of the cross-bar are adjustable one relatively to the other and are held as adjusted by means of bolts passed from one section (here shown as the section 8) through a slot in the section 7. The lower sections 5 of the frame preferably consist of iron, and their lower ends are connected by the cast-iron cross-bar, made in two sections 9 10. The sections of this lower cross-bar are slotted to receive a fastening-bolt.

Mounted in the upper portion of the frame is a brush consisting of bristles 11 or the like, mounted on a shaft 12, having bearings in the sections 4 of the frame. In long brushes a solid wooden shaft may be employed, in which case short pieces of iron will be inserted in the ends to form the journals. In short brushes the shaft 12 is to be made tubular and the rod 13 of iron passed through it and projecting sufficiently at the ends to form the journals. The brush 11 is here shown as extending spirally around the shaft 12; but obviously it may be placed in straight rows thereon without departing from the spirit of my invention.

Mounted on the shaft 1 is a pulley 14. This pulley 14 for convenience in placing it on the shaft is made in two halves or sections having ears or projections at the sides, through which bolts are passed to fasten the sections together, and they may be further secured or braced one section relatively to the other by lugs 15 on one section engaging in notches formed in the other section. The pulley 14 is provided on its sides with a series of band-retaining lugs 16, the spaces between which will allow the escape of flour or dust, and thus prevent it from becoming packed between the band and the pulley. From the pulley 14 a band 17 extends to an engagement with a pulley 18, similar to the pulley 14 on the brush-shaft 12, and preferably to prevent the brush material from being caught between the band and the pulley 18 I pass the band through a tube 19, attached to the section 7 of the upper cross-bar and extended close to the under side of the pulley 18. By adjusting the upper and lower cross-bars it is evident that the frame may be accommodated to the space between the spiders in a reel, and by providing for the adjustment of the sections 4 rela-



tively to the sections 5 the brush may be caused to bear more or less closely against the bolting-cloth.

5 In operation it is desired that the frame shall maintain a substantially vertical position while the bolting-reel is rotating, and for this reason I weight the lower portion of the frame with the cast-iron lower cross-bar. Obviously as the shaft 1, bearing the reel, rotates a rotary motion will be imparted to the brush by the band connection, and I find that better results are obtained by crossing the belt, so that the brush may rotate in an opposite direction to that of the reel.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bolting-cloth-cleaning brush, comprising a frame formed in sections adjustably secured together, said frame being mounted on the bolting reel-shaft and adapted to maintain a substantially vertical position while the reel is rotating, a brush carried in the upper section of said frame, a pulley on the reel-shaft, a pulley on the brush-shaft, and a band connecting said pulleys, substantially as specified.

2. A bolting-cloth-cleaning brush, comprising a frame consisting of side portions having upper and lower sections, the upper sections being adjustable relatively to the lower sections, the said lower sections having openings

to receive the reel-shaft, an upper cross-bar consisting of two sections adjustable relatively to each other and connecting the upper portions of the side pieces, an adjustable lower cross-bar connecting the lower portions of the side pieces, a brush-shaft mounted to rotate in the upper portion of the frame, brush material secured to said shaft, a pulley on said shaft, a pulley on the shaft of the reel, and a band connecting said two pulleys, substantially as specified.

3. A bolting-cloth-cleaning brush, comprising a frame adapted to be mounted on the reel-shaft, said frame being adjustable as to length and width and weighted at its lower end, a rotary brush at the upper portion of the frame, a pulley on the shaft of the brush, a pulley on the shaft of the reel, and a band connecting the two pulleys, substantially as specified.

4. A bolting-cloth-cleaning brush, comprising the rectangular frame mounted on the bolting reel-shaft and having each of its four sides formed in sections adjustably secured together, whereby the frame may be adjusted in length and width and a brush held in said frame in contact with the bolting-cloth, as set forth.

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Witnesses:

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