

No. 717,434.

Patented Dec. 30, 1902.

J. O. MORRIS.  
TOBACCO STEMMER.

(Application filed Mar. 25, 1902.)

(No Model.)

3 Sheets—Sheet 1.

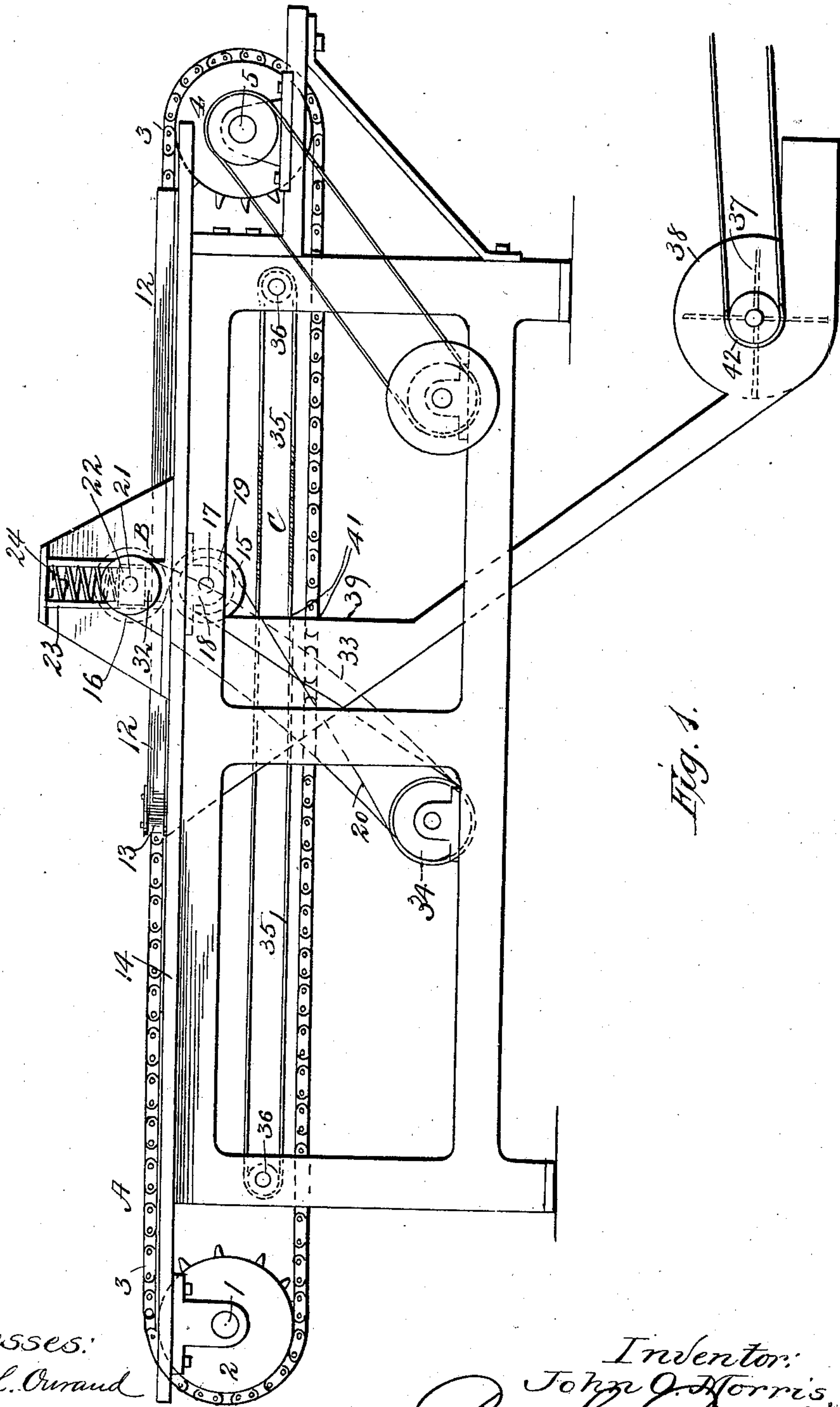


Fig. 1.

Witnesses:

Frank L. Ourand

Frank L. Radelfinger

Inventor:

John O. Morris

By Louis Daggert & Co.,  
Attorneys.

No. 717,434.

Patented Dec. 30, 1902.

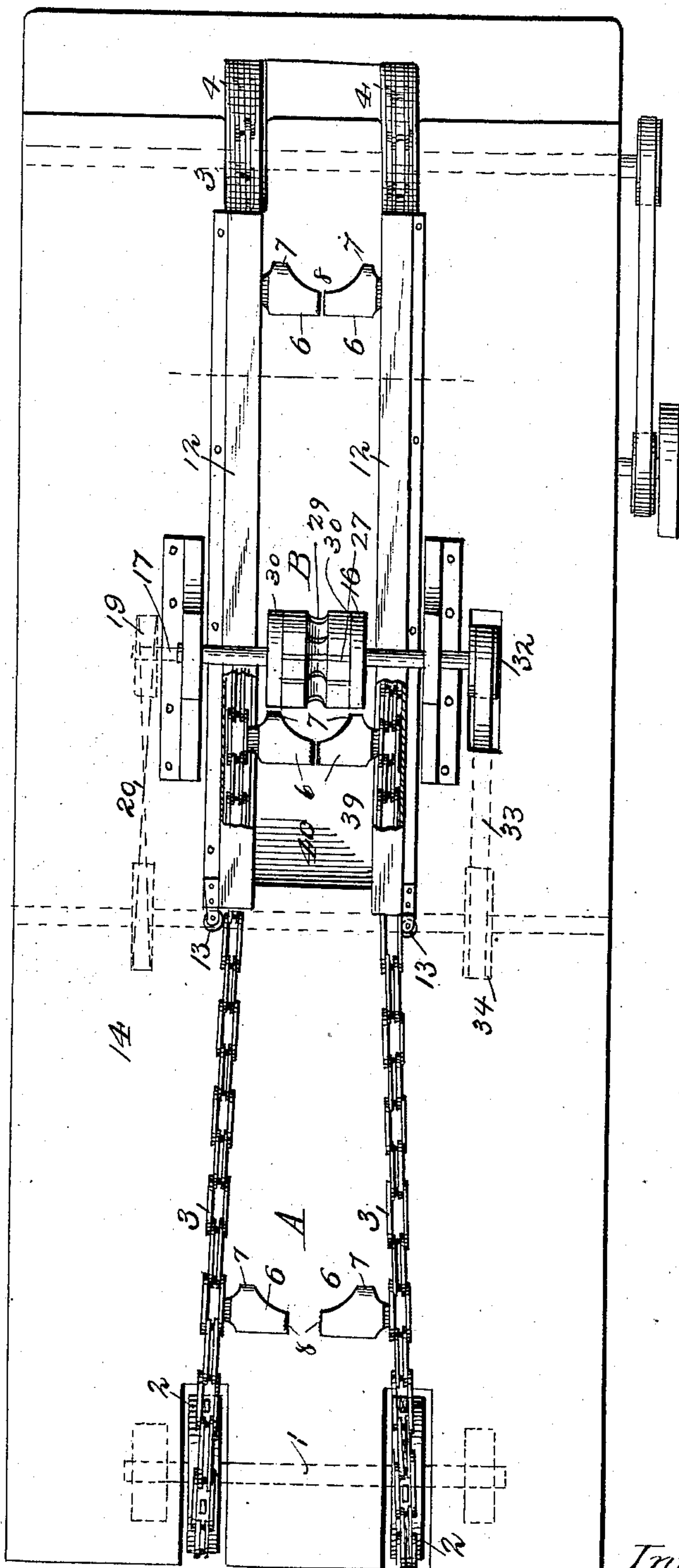
J. O. MORRIS.  
TOBACCO STEMMER.

(Application filed Mar. 25, 1902.)

(No Model.)

3 Sheets—Sheet 2.

Fig. 2.



Witnesses.  
J. L. Orvand  
Frank G. Radelfinger.

Inventor:  
J. O. Morris  
Lawson & Baggett  
Attorneys.

No. 717,434.

Patented Dec. 30, 1902.

J. O. MORRIS.  
TOBACCO STEMMER.

(Application filed Mar. 25, 1902.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 3

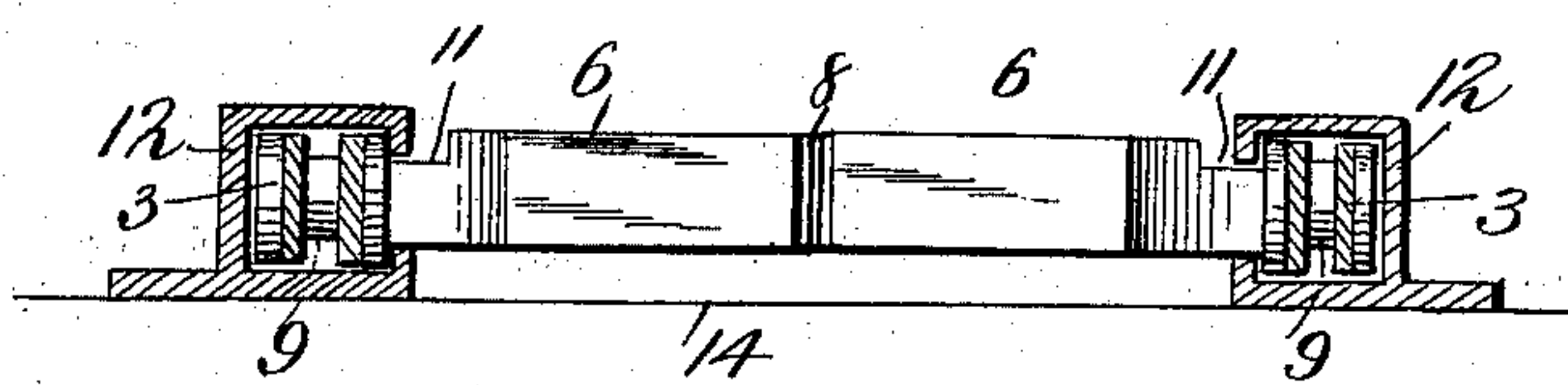


Fig. 4

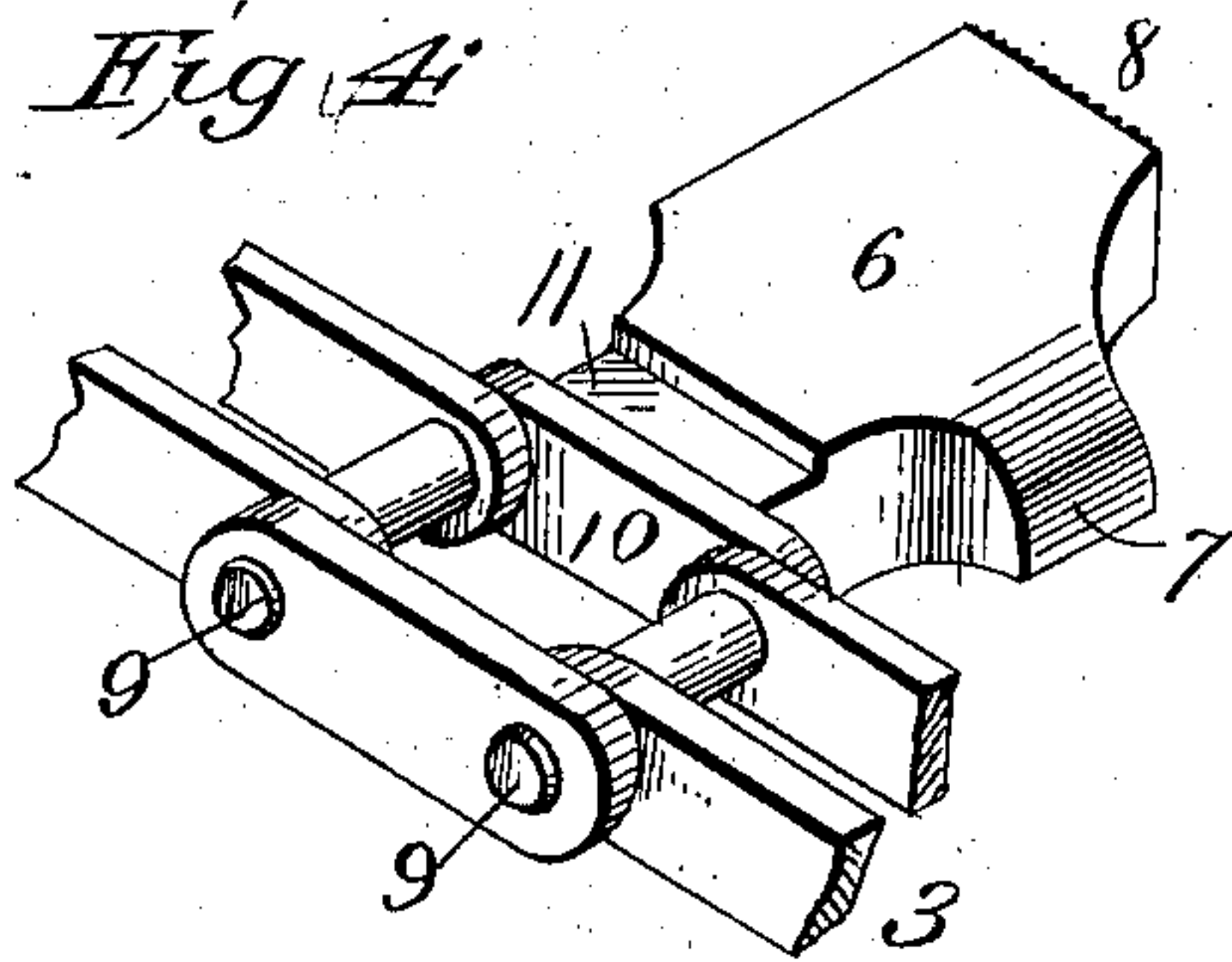


Fig. 7

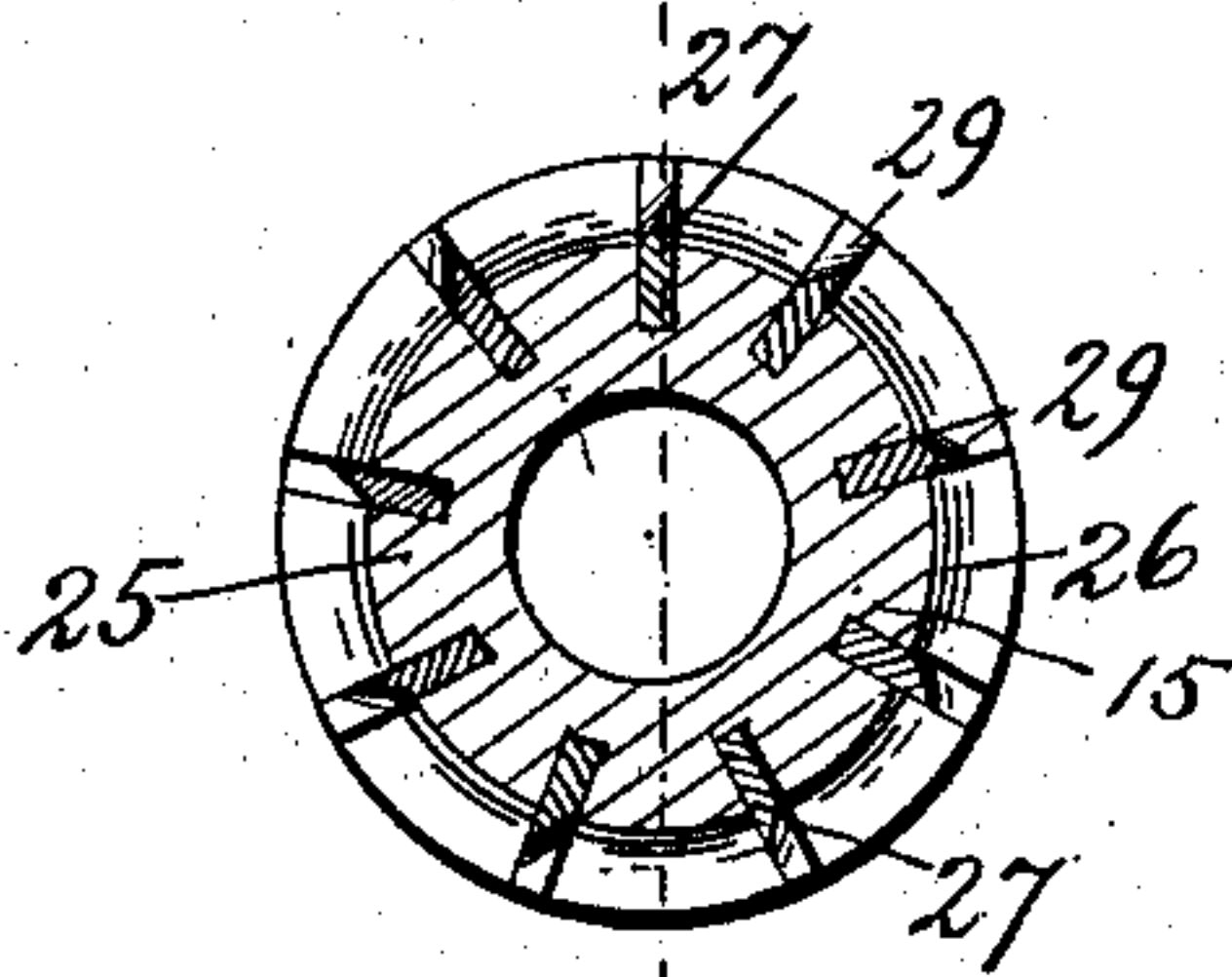
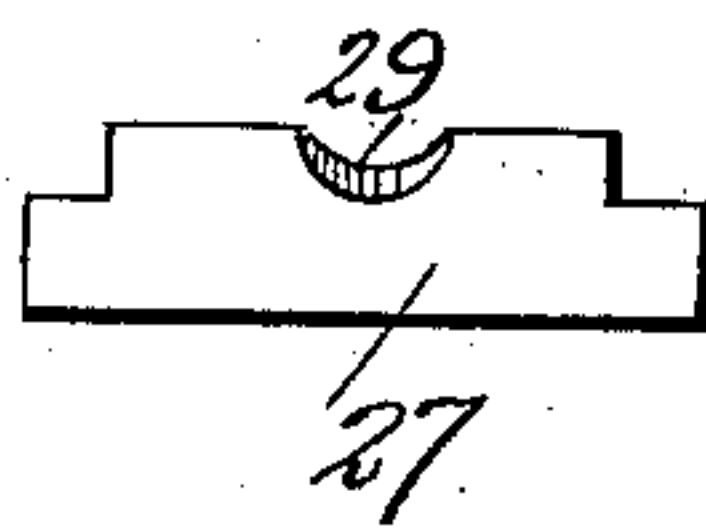


Fig. 5.

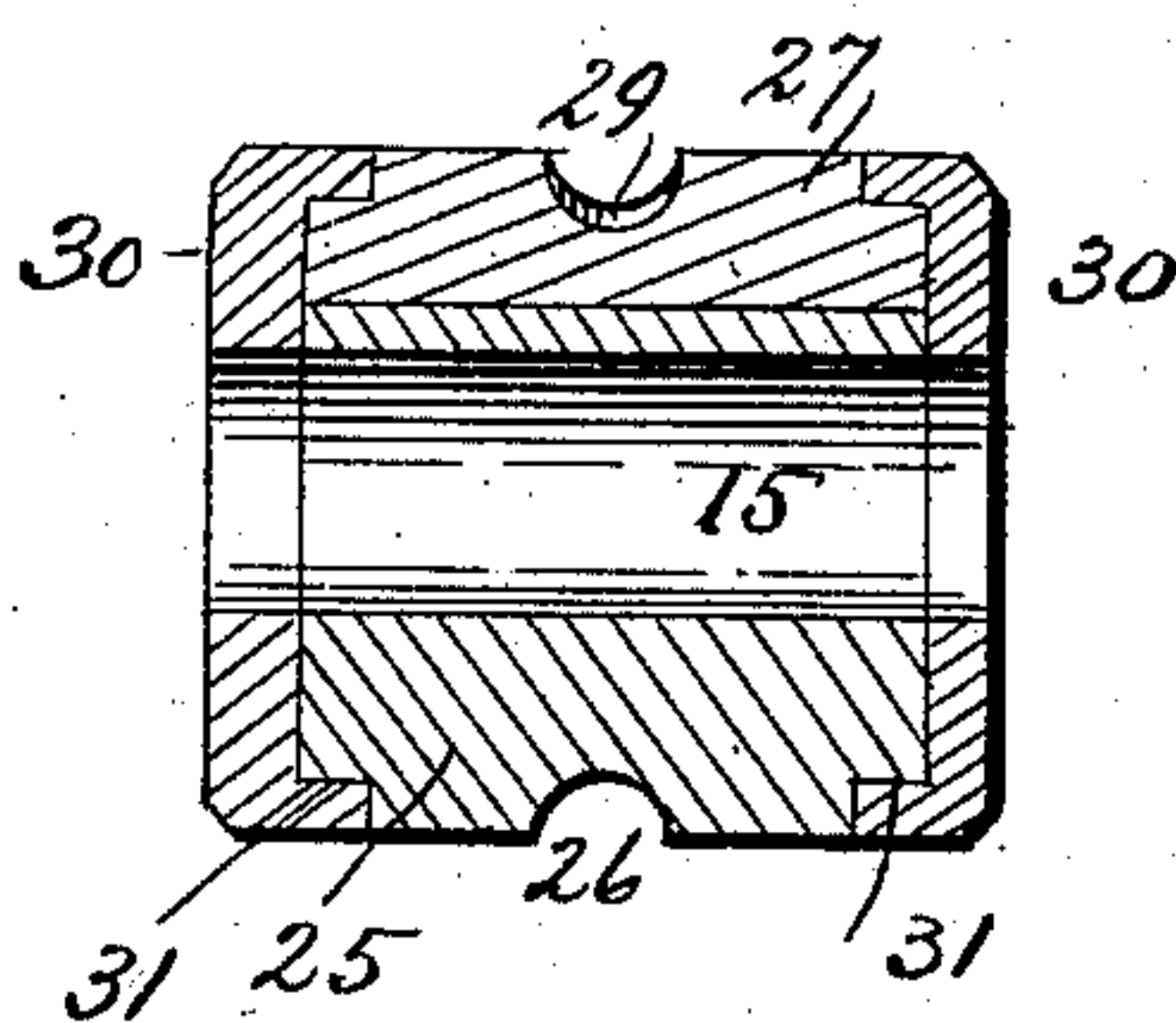


Fig. 6.

Witnesses:  
Frank L. Ourand,  
Frank G. Radelfinger

Inventor:  
John O. Morris,  
By Lewis Sawyer & Co.  
Attorneys.



# UNITED STATES PATENT OFFICE.

JOHN ODEN MORRIS, OF RICHMOND, VIRGINIA, ASSIGNOR OF THREE-FIFTHS TO MORRIS MOORE, OF DANVILLE, VIRGINIA.

## TOBACCO-STEMMER.

SPECIFICATION forming part of Letters Patent No. 717,434, dated December 30, 1902.

Application filed March 25, 1902. Serial No. 99,950. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ODEN MORRIS, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented new and useful Improvements in Tobacco-Stemmers, of which the following is a specification.

My invention relates to tobacco-stemmers; and the object of the same is to construct a simple and efficient machine for stripping the leaf portion from the stem.

The novel construction employed by me in carrying out my invention is fully described in this specification and claimed, and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a plan view of the same. Fig. 3 is a detail section of the guides. Fig. 4 is a detail of one of the grippers. Fig. 5 is a detail transverse section of one of the stripping-rollers. Fig. 6 is a longitudinal section of the same. Fig. 7 is a detail elevation of one of the knives.

Like characters of reference designate like parts in the different views of the drawings.

My invention comprises three groups of mechanism—a feeder A, stripping means B, and a conveyer C—which groups will be taken up and described in the order named, after which a sketch of the operation will be given.

The numeral 1 designates a shaft which carries two sprockets 2, which carry two endless chains 3, which extend back and pass over sprockets 4, carried by a shaft 5, bearing a pulley connected to be driven from some source of power. Mounted on the chains 3 are feeding-grips 6, arranged opposite to each other in pairs to coöperate, which pairs are located about eighteen inches apart on the chains. Each of the grips 6 comprises a body bearing a beveled lug 7 for engaging and raising the stripping-rollers, as will appear, and serrated faces 8 for gripping a tobacco-stem.

The grippers are secured by means of rivets 9, passing through apertured flanges 10, formed thereon. The body 7 is grooved at 11 adjacent to the flanges to adapt them to fit guides 12. The guides 12 extend parallel to each other, but are closer together than the interval between the sprockets 2, so that the chains

3 after clearing the sprockets 2 will converge up to the mouths of the guides 12, where they engage a pair of rollers 13, designed to deflect the chains 3 and bring the grips 6 together to engage a stem. The guides 12 extend up to the sprockets 5, which are the same distance apart as the guides. The chains 3 diverge from the under side of the sprockets 5 up to the sprockets 2. A table 14 is located just below the chains 3.

The stripping means B comprises two stripping-rollers 15 and 16, located below and above the feeding-chains, which just clear the ends of said rollers, while the grips 6 pass between them. The lower roller 15 is carried by a shaft 17, which is journaled in boxes 18, carried by the frame of the machine. The shaft 17 bears a pulley 19, over which passes a belt 20, driven from some source of power. The upper roller 16 is carried by a shaft 21, journaled in boxes 22, slidably mounted in guides 23. Springs 24 bear on the boxes 22 and hold the roller 16 normally in contact with the roller 15. Each of the stripping-rollers consists of a cylindrical body portion 25, having a circumferential groove 26 therein, and a series of longitudinally-extending knives 27, seated in grooves 28 in the body 25. Each of the knives 27 has a semicircular notch 29 therein, which is located within the groove 26. The semicircular portion 29 has a beveled edge formed thereon to adapt it to engage and strip the leaves of tobacco clear of the stems. The knives 27 are secured in place by caps 30, which snugly fit the reduced ends 31 of the body 25. In replacing one set of knives by another the caps 30 are first removed, after which the knives 27 may be lifted out. The shaft 21 carries a pulley or sprocket 32, which is driven by a belt or chain 33, passing over it and over a pulley or sprocket 34, which chain is given slack enough to permit the roller 16 to be intermittently raised about one-half inch by the lugs 7 on the grippers 6 to permit the grippers to pass between the said rollers, after which the roller 16 is restored to its initial position by the springs 24.

To carry the strippings away, a conveyer is employed, which consists of a perforated canvas belt 35, mounted on two rollers 36, and a fan 37, located beneath the belt within a cas-



ing 38. The rollers 36 are driven by a belt (not shown) from some source of power, as will be readily understood. The upper portion 39 of the casing 38 is hopper-shaped and is connected to the edges of an aperture 40 in the table 14 just in front of the stripping-rolls 15 and 16. The hopper 39 is apertured at 41 to permit the belt 35 to pass through. A fan 37 is driven by a belt 42 to cause an indraft down through the aperture 40, which draft carries the tobacco down to the belt 35. As before mentioned, the belt 35 is perforated, so that it does not stop the passage of the air through the casing.

The operation of my device can now be sketched. Leaves of tobacco are placed by an attendant on the table 14 just in front of the ends of the guides 12. These leaves are laid down one at a time and the stem engaged between two of the grippers 6 just before they come opposite the rollers 13, which will force them together to grip the stem. The leaf so held will be carried along up to the stripping-rolls, when the lugs 7 on the grippers 6 will engage the roll 16 and raise it sufficiently to permit the grippers 6 to pass between the rolls. It should be noted that the projecting lugs 7 keep the knives from engaging the grippers 6, as they might otherwise do if the jaws 6 were straight along their front sides. As soon as the jaws 6 pass between the stripping-rolls the springs 24 will force the upper roll 16 down and permit the notched knives 27 to embrace the stem of the leaf held by the grippers 6 and strip the leaf from the stem. The strippings will fall into the aperture 40, be carried down by the indraft through the hopper 39, and will fall on the belt 35, which will carry them away. The stem will remain in the grip of the grippers 6 until they pass over the sprockets 5 and the chains 3 start to diverge, when it will be dropped.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the spirit of my invention.

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

1. In a tobacco-stemmer, the combination with a pair of stripping-rollers arranged to be

forced apart and to engage a stem, of a pair of flexible members, means for driving said members, grippers mounted on said members, parallel guides located to engage said members, and rollers mounted at the entrance to said guides and located to deflect said members to compel said grippers to positively engage a tobacco-stem, substantially as described.

2. In a tobacco-stemmer, the combination of a pair of sprocket-chains, sprockets supporting said chains, means for driving said sprockets, grippers secured to said sprocket-chains and having grooves therein, parallel guides located to engage the grooves in said grippers, a pair of stripping-rollers located to be engaged by said grippers and to be forced apart to insert a tobacco-stem between said rollers and arranged to be released to grip said stem, substantially as described.

3. In a tobacco-stemmer, the combination of a pair of flexible members, means for driving said flexible members, grippers mounted on said members and having beveled lugs thereon, stripping-rollers located to be engaged by said beveled lugs to be forced apart, substantially as described.

4. In a tobacco-stemmer the combination of two shafts each bearing a pair of sprockets, two endless chains mounted on said sprockets, grippers mounted on said chains, stripping-rolls located to be engaged by said grippers to be separated, guides engaging said chains, and rollers mounted at the forward ends of said guides to engage said chains to operate said grippers, substantially as described.

5. In a tobacco-stemmer, the combination with a horizontal table, two sprocket-chains, located in the same horizontal plane above said table, means for driving said chains, grippers mounted on said chains and located to contact with said table and to cooperate to grip a tobacco-stem, and means for engaging said chains to operate said grippers, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN ODEN MORRIS.

Witnesses:

AUGUST PETERSON,  
BENNETT S. JONES.