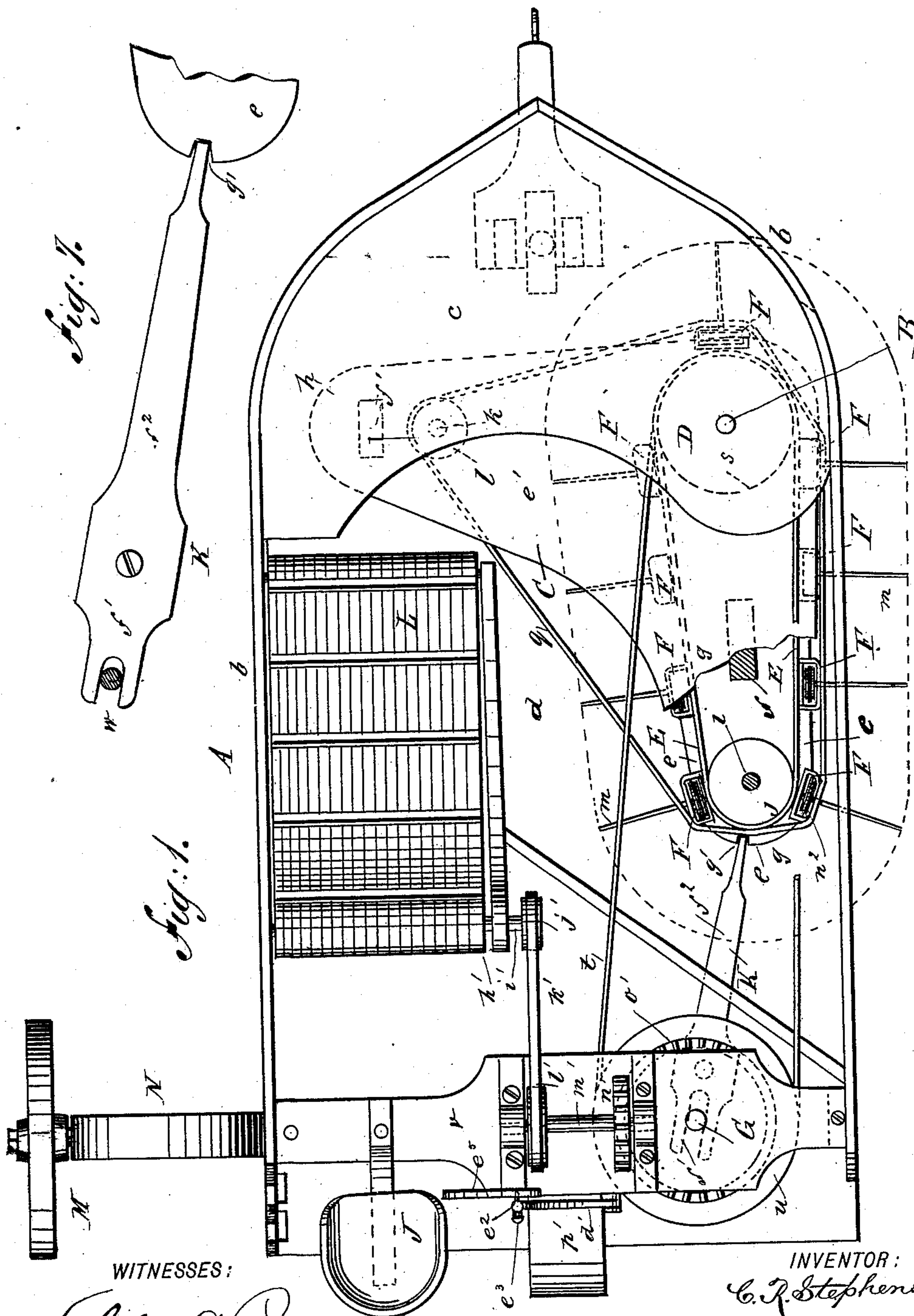


3 Sheets—Sheet 1.

No. 428,867.

Patented May 27, 1890.



WITNESSES:

Chas. Viola
C. Sedgwick

INVENTOR:

C. F. Stephenson

BY

Munn & Co

ATTORNEYS

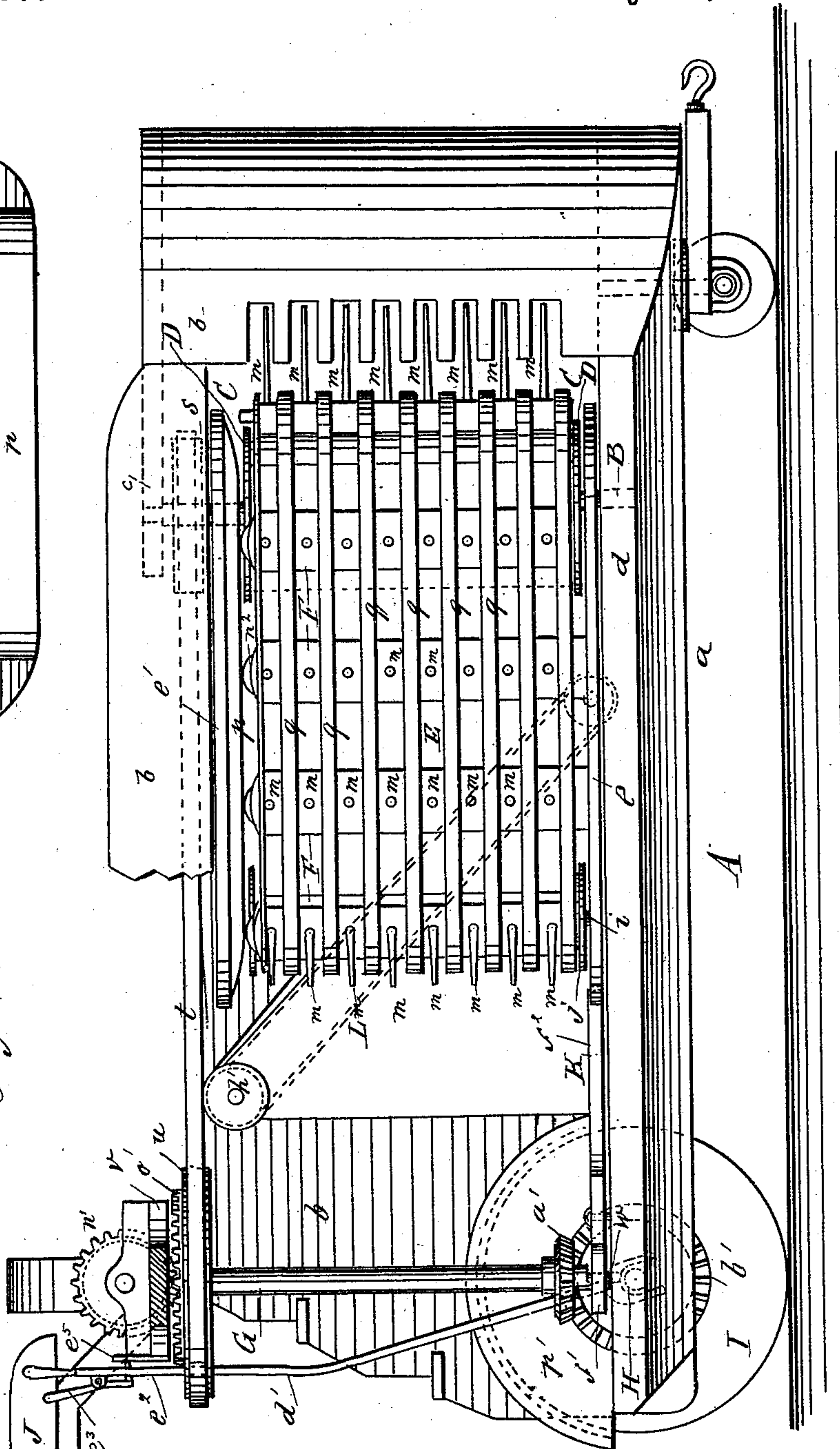
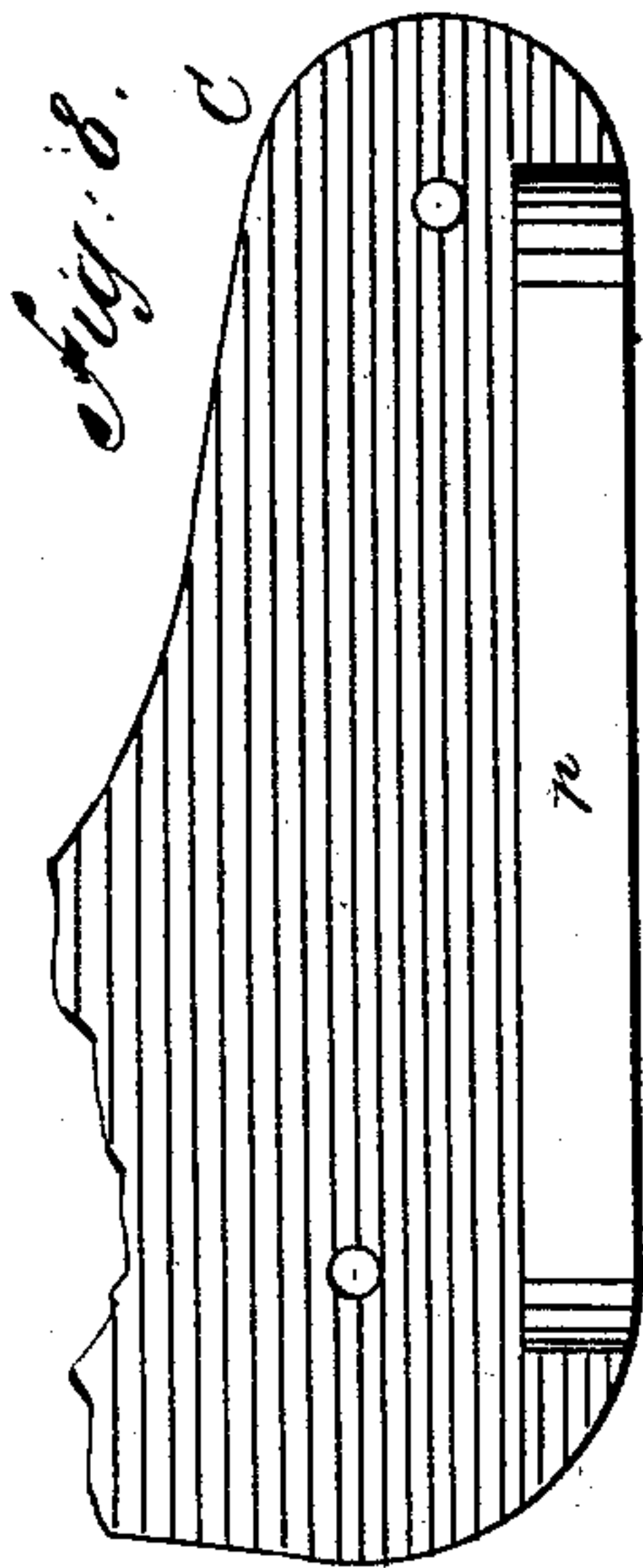
(No Model.)

3 Sheets—Sheet 2.

C. R. STEPHENSON.
COTTON PICKER.

No. 428,867.

Patented May 27, 1890.



WITNESSES:

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INVENTOR:

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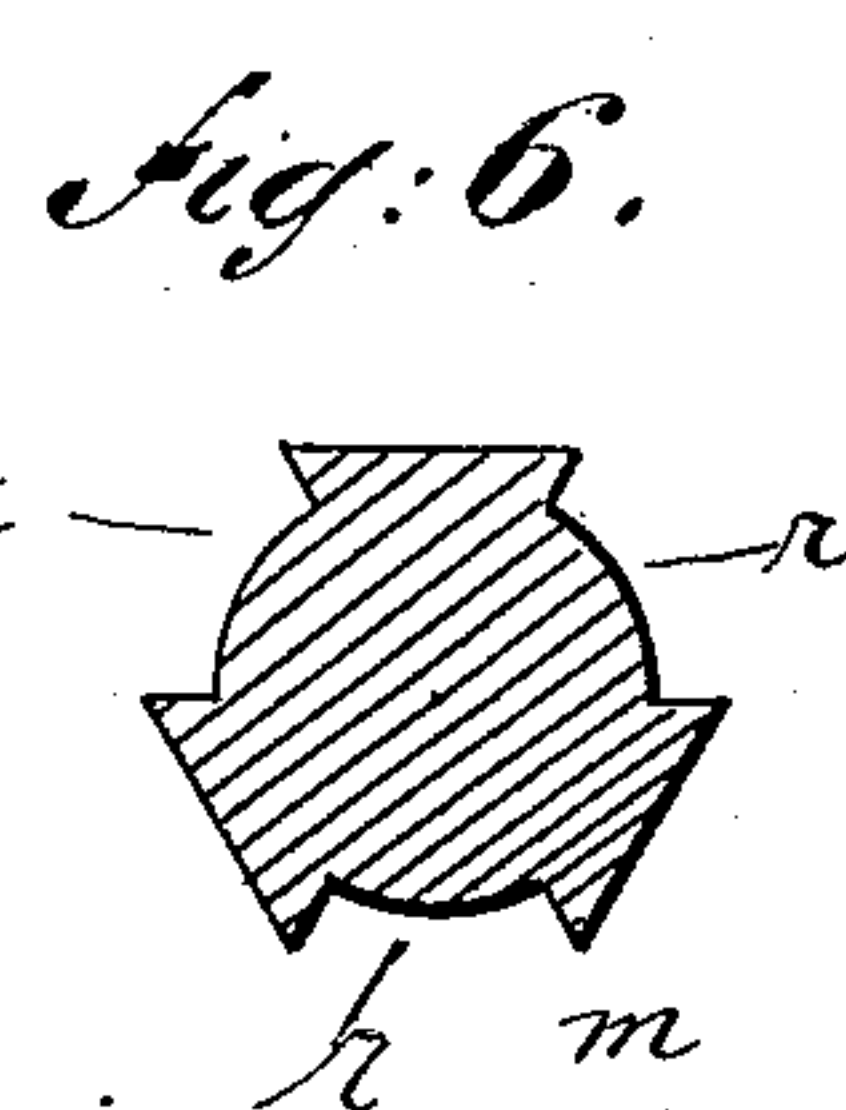
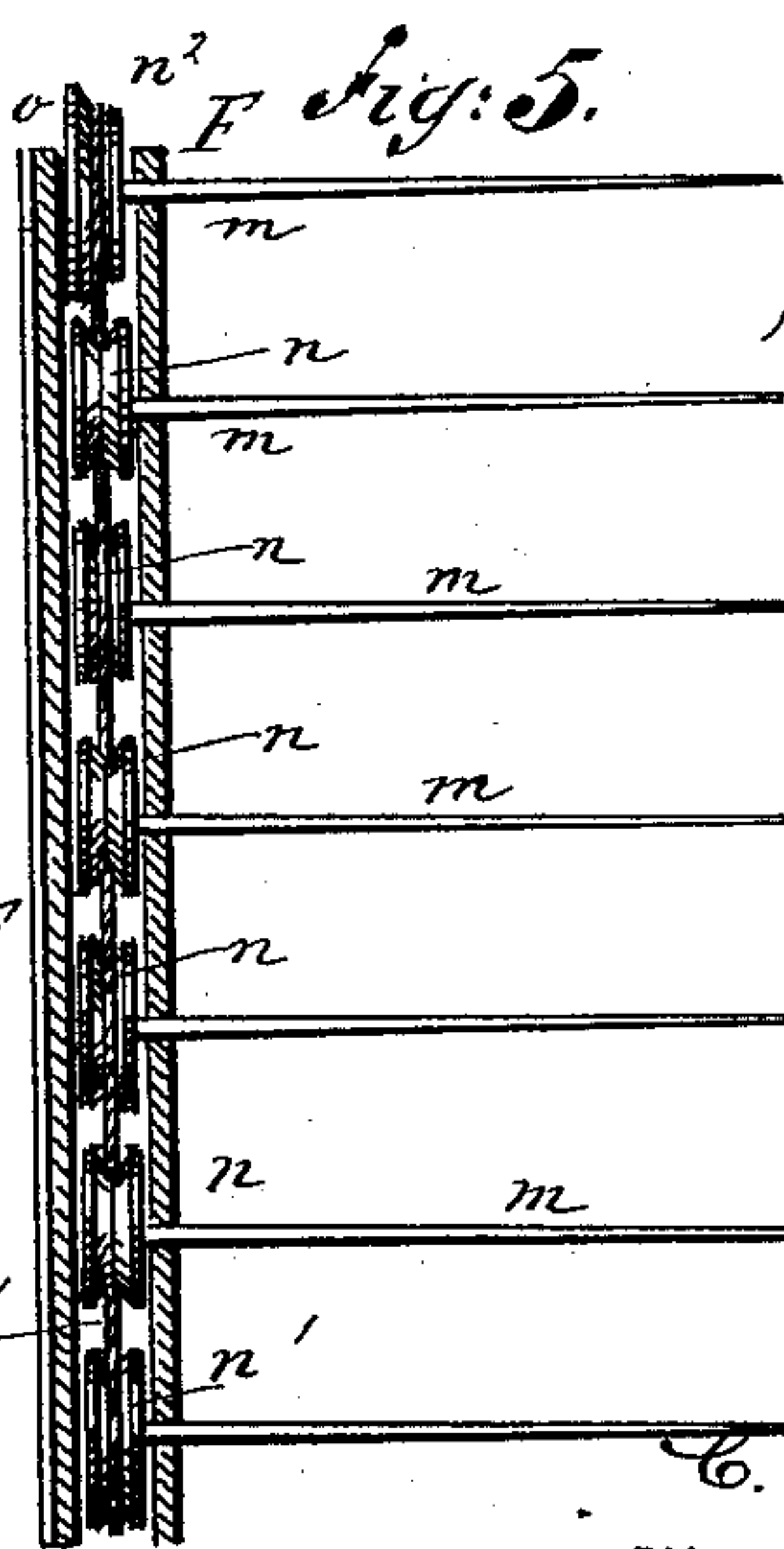
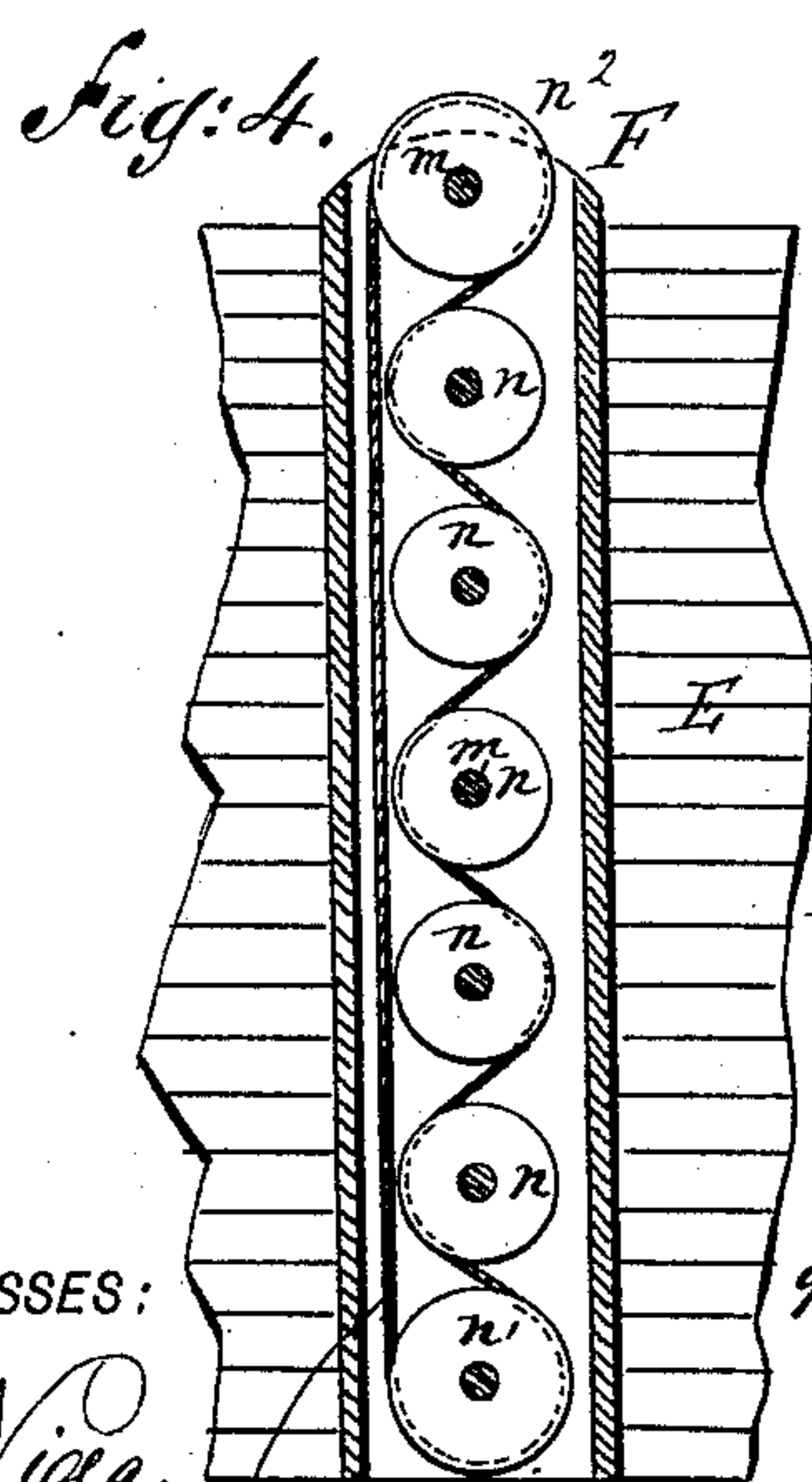
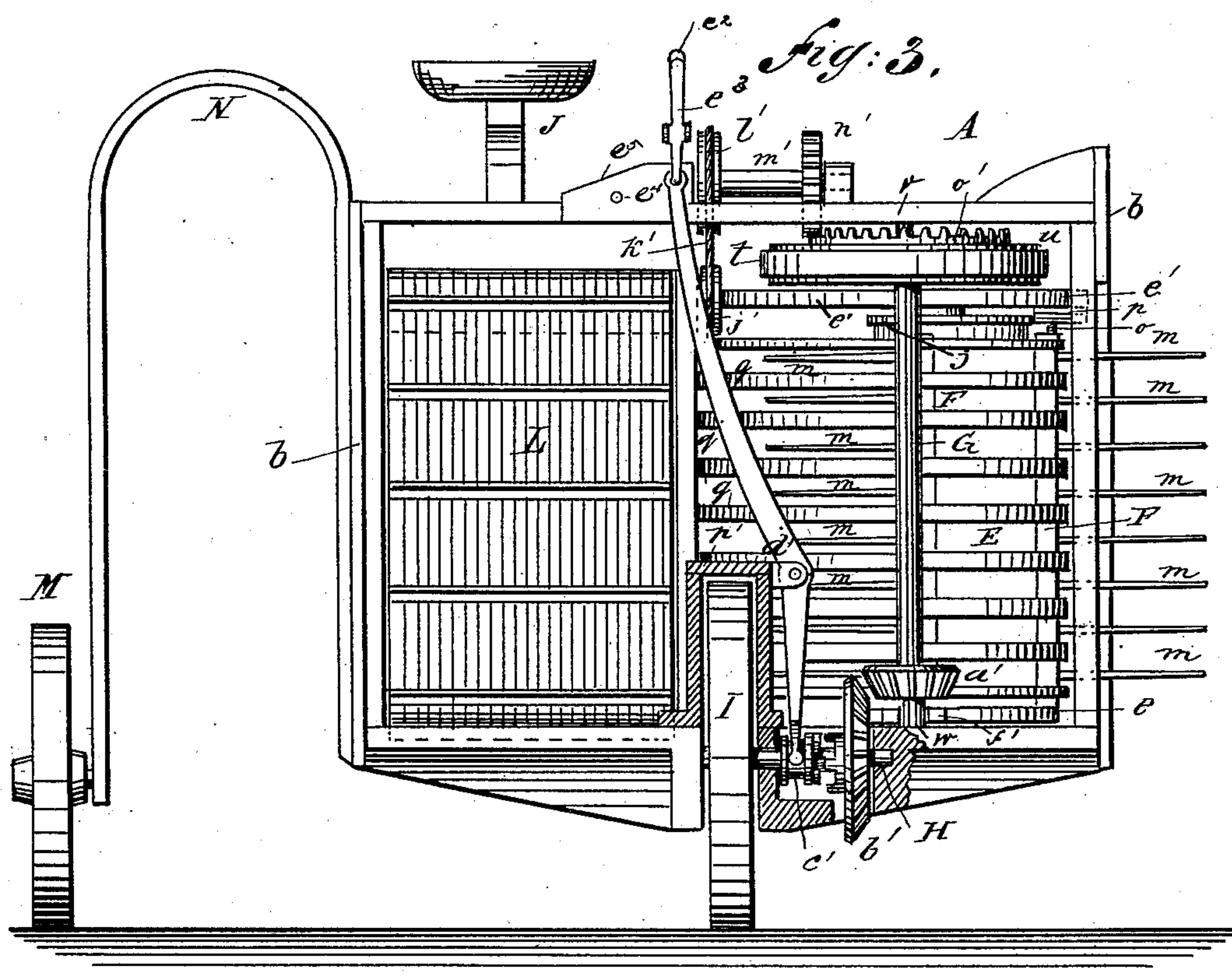
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3 Sheets—Sheet 3.

No. 428,867.

Patented May 27, 1890.



WITNESSES:

Chas. Vida
c. Sedgwick

INVENTOR:

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UNITED STATES PATENT OFFICE.

CHARLES R. STEPHENSON, OF LYON, MISSISSIPPI.

COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 428,867, dated May 27, 1890.

Application filed February 10, 1890. Serial No. 339,837. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. STEPHENSON, of Lyon, in the county of Coahoma and State of Mississippi, have invented a new and Improved Cotton-Picker, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view, partly in section, of my improved cotton-picker. Fig. 2 is a side elevation, partly in section. Fig. 3 is an end elevation, partly in section. Fig. 4 is a vertical transverse section of the spindle-operating mechanism. Fig. 5 is a side elevation, partly in section, of the same. Fig. 6 is an enlarged transverse section of one of the spindles. Fig. 7 is an enlarged detail view of the agitating-lever, and Fig. 8 is an inverted plan view of the roller-operating track. Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct a cotton-picker which can be drawn through the cotton-field and brought into engagement with the cotton-plants in such a way as to pick only the ripe cotton without disturbing the bolls of the unripe cotton or the leaves or limbs of the cotton-plant.

My invention consists in the combination and construction of parts hereinafter described and claimed.

The car A, which carries the mechanism of the picker, is formed of a boat-shaped bottom *a* and vertical sides *b*, which are curved inward toward each other at the forward part of the car and meet at an obtuse angle. The top of the car is partly covered with planking *c*, which extends across the car at the forward end. In the floor *d* and planking *c* is journaled a shaft B, upon which is loosely mounted a frame C, formed of the angled pieces *e e'* and the vertical timbers *f f'*. One arm *g* of this frame extends toward the rear of the car and the other arm *h* toward the side.

On the shaft B, within the frame C, is mounted a drum D, and in the arm *g* of the frame C is journaled the shaft *i*, upon which is mounted the drum *j*. In the arm *h* of the frame C is journaled a shaft *k*, upon which is mounted a drum *l*. An endless apron E extends around the drums D *j*, and to this apron are secured vertical boxes F.

In the boxes F are journaled the spindles *m*, which project outwardly beyond the boxes, and upon which within the box are mounted the grooved pulleys *n n' n''*. The upper pulley *n''* is provided with a flange *o*, which is adapted to roll in contact with the track *p*, attached to the under surface of the upper part of the frame C. The pulleys *n'* and *n''* are a little larger in diameter than the pulleys *n*. A belt *q'*, which runs under the pulley *n'* and over the pulley *n''*, runs behind the first pulley *n* and outside of the second pulley *n*, behind the third pulley *n*, and so on, so that as the pulley *n''* receives its motion through the friction of the flange *o* upon the track *p* the belt *q'* transmits rotary motion to all of the other pulleys in the series; but, owing to the arrangement of the belt relative to the alternate pulleys and spindles of the series, the spindles and pulleys move in opposite directions. The spindles *m* are tapered and provided with longitudinal grooves *r*, as shown in Fig. 6.

Upon the upper end of the shaft B is mounted a pulley *s*, which receives its motion through the belt *t* and the pulley *u* on the shaft G, journaled in bearings in the floor and in the cross-bar *v* at the rear end of the frame of the machine. Upon the lower end of the shaft G is formed an eccentric *w*, and to the shaft above the eccentric is attached the beveled pinion *a'*, which is engaged by a bevel-wheel *b'* on the axle H of the drive-wheel I. The bevel-wheel *b'* is placed loosely upon the axle H and is connected with the axle through the clutch *c'*. The clutch *c'*, which is of the ordinary well-known form, is operated by means of the lever *d'*, which extends to the top of the machine and is provided with a handle-extension *e''*, located near the driver's seat J and having a locking-lever *e''*, the lower end of which engages either one of two apertures *e''* in a plate *e''*, to lock the lever *d'* in its two positions.

The short arm *f'* of the lever K is forked to receive the eccentric *w* on the shaft G. The longer arm *f''* of the said lever projects into a notch *g'* in the lower part *e* of the frame C.

Adjoining the wall *b* of the car A is arranged an inclined endless carrier L, the lower end of which is placed near the floor

d, while the upper end runs over a drum *h'* on the shaft *i'*. The shaft *i'* is provided with a pulley *j'* and receives its motion through the belt *k'*, which runs over the said pulley 5 and over a pulley *l'* on the shaft *m'*, journaled in boxes attached to the cross-bar *v*. Upon the shaft *m'* is mounted a pinion *n'*, which engages a crown-wheel *o'*, placed on the shaft *G* above the pulley *u*.

10 The upper part of the drive-wheel *I* is incased by a semi-cylindrical covering *p'*. The side wheel *M* turns on a stud projecting from the inverted-U-shaped bar *N*, attached to the side of the car. The outer surface of the 15 wall *b* of the car is made smooth to allow the machine to pass between the rows of cotton-plants without disturbing the limbs and bolls.

As the machine progresses the drum *D* is revolved in the manner already described, 20 and the friction of the flange *o* of the pulley *n*² upon the track *p* causes the entire series of spindles *m* to revolve. The eccentric *w* on the shaft *G* vibrates the frame *C* through the lever *K*, so that the spindles *m* are alter-

25 nately projected into the cotton-plants and withdrawn therefrom as they progress toward the rear of the machine. The cotton is wound loosely upon the spindles, and as the spindles pass into the car at the rear end of 30 the frame *C* the belts *q*, which run around the drums *D* *j* and around the boxes *F*, (which are upon the outer side of the drums,) also around the drum *l*, by their oblique arrangement gradually withdraw the cotton from the 35 spindles and deposit it at the foot of the endless carrier *L*, which carries the cotton upward and delivers it to bags or to a wagon designed to attend the picker and receive the cotton.

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

1. In a cotton-picker, the combination of a pair of drums and a vibratory frame on which 45 the drums are mounted with an endless apron running over the drums, a series of revoluble spindles carried by the endless apron, and a series of endless belts running between the spindles upon the receiving side of the machine and arranged obliquely to the plane of 50 motion of the spindles on the discharge side of the machine, substantially as specified.

2. In a cotton-picker, the combination, with

an endless belt carrying a series of revoluble spindles, of a vibratory frame supporting said 55 belt and means for imparting motion to the vibratory frame, substantially as specified.

3. The combination, with a car, of an angle-frame pivoted at its angle within the car to vibrate horizontally, vertical drums mount- 60 ed in the angle and ends of said frame, an endless belt carrying a series of revoluble spindles and mounted on the rear drum, and the drum at the angle, and a series of endless 65 belts extending around the three drums between the spindles, an elevator in the car behind the vibrating frame, and an operating-frame, substantially as set forth.

4. The combination, with the car and a horizontally-vibrating frame formed of upper and 70 lower connected angle-pieces *e' e*, pivoted at their angles to the upper and lower sides of the car, of the vertical drum *D*, mounted in the angle of the frame, and the drums *j* and *l* in the rear and inner ends of the frame, re- 75 spectively, the endless apron passing around the drums *C* and *j* and carrying a vertical series of revoluble spindles having pulleys on their inner ends, belts connecting each series, a track on the lower face of the upper angled 80 piece *e'*, with which the upper pulleys engage to rotate the series, and mechanism for vibrating the said frame, substantially as set forth.

5. In a cotton-picker, the combination of the pivoted frame *C*, the drums *D* *j* *l*, the end- 85 less apron *E*, the boxes *F*, the pulleys *n n' n*², contained by the boxes, the spindles *m*, the belts *q'*, and means for revolving the pulleys *n n' n*², substantially as specified.

6. In a cotton-picker, the combination, with 90 a horizontally-vibrating frame *C*, pivoted at its angle and carrying the cotton-picking mechanism, of the horizontally-swinging lever *K*, pivoted between its ends and engaging with its forward end the rear end of the said frame, 95 the eccentric *w*, engaging the rear end of the lever, the shaft *G*, and the drive-wheel *I*, substantially as set forth.

7. In a cotton-picker, the combination of the spindles *m*, the pulleys *n n'*, and the pul- 100 ley *n*², provided with the flange *o*, the belt *q'*, and the track *p*, substantially as specified.

CHARLES R. STEPHENSON.

Witnesses:

ANDREW D. GWYNNE,
WYMER FERGUSON.