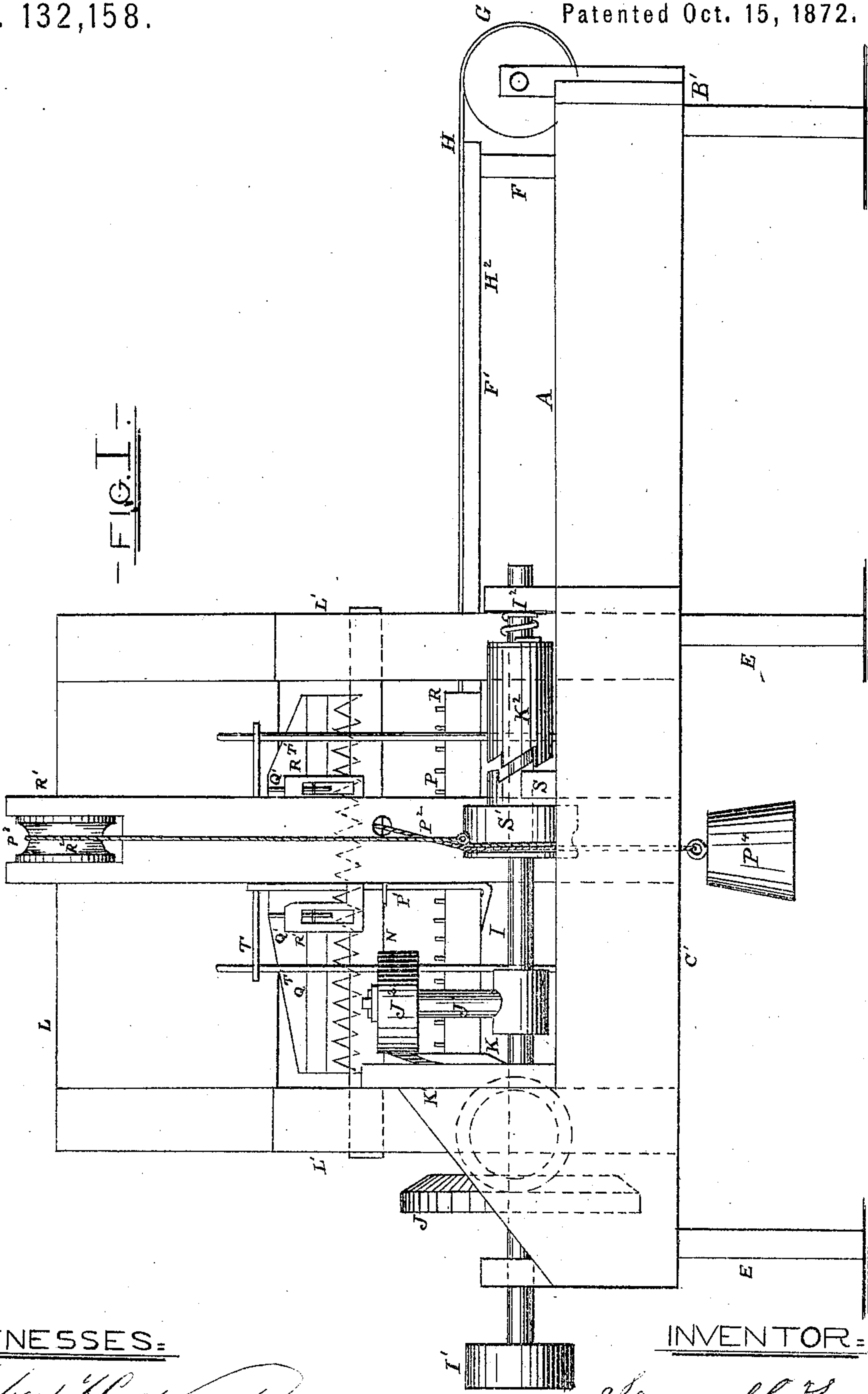


S. C. KENAGA.

Improvement in Machines for Feeding Broom-Corn to Strippers.

No. 132,158.

Patented Oct. 15, 1872.



WITNESSES:

Wm. H. Dudley
H. A. Daniels

INVENTOR=

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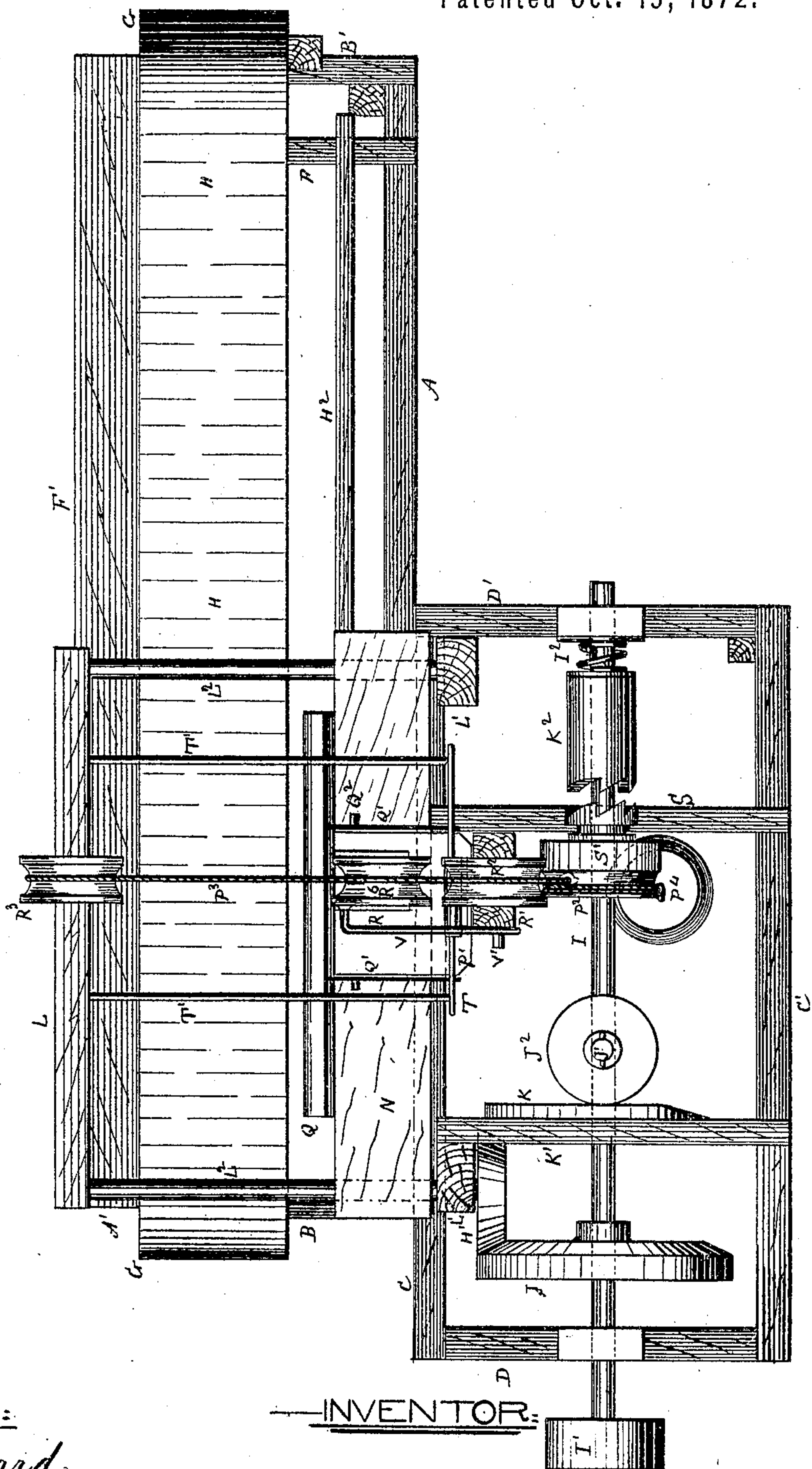
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FIG. II



WITNESSES:

Geo. H. Howard

J. Dennis Jr.

INVENTOR:

Samuel C. Kenaga

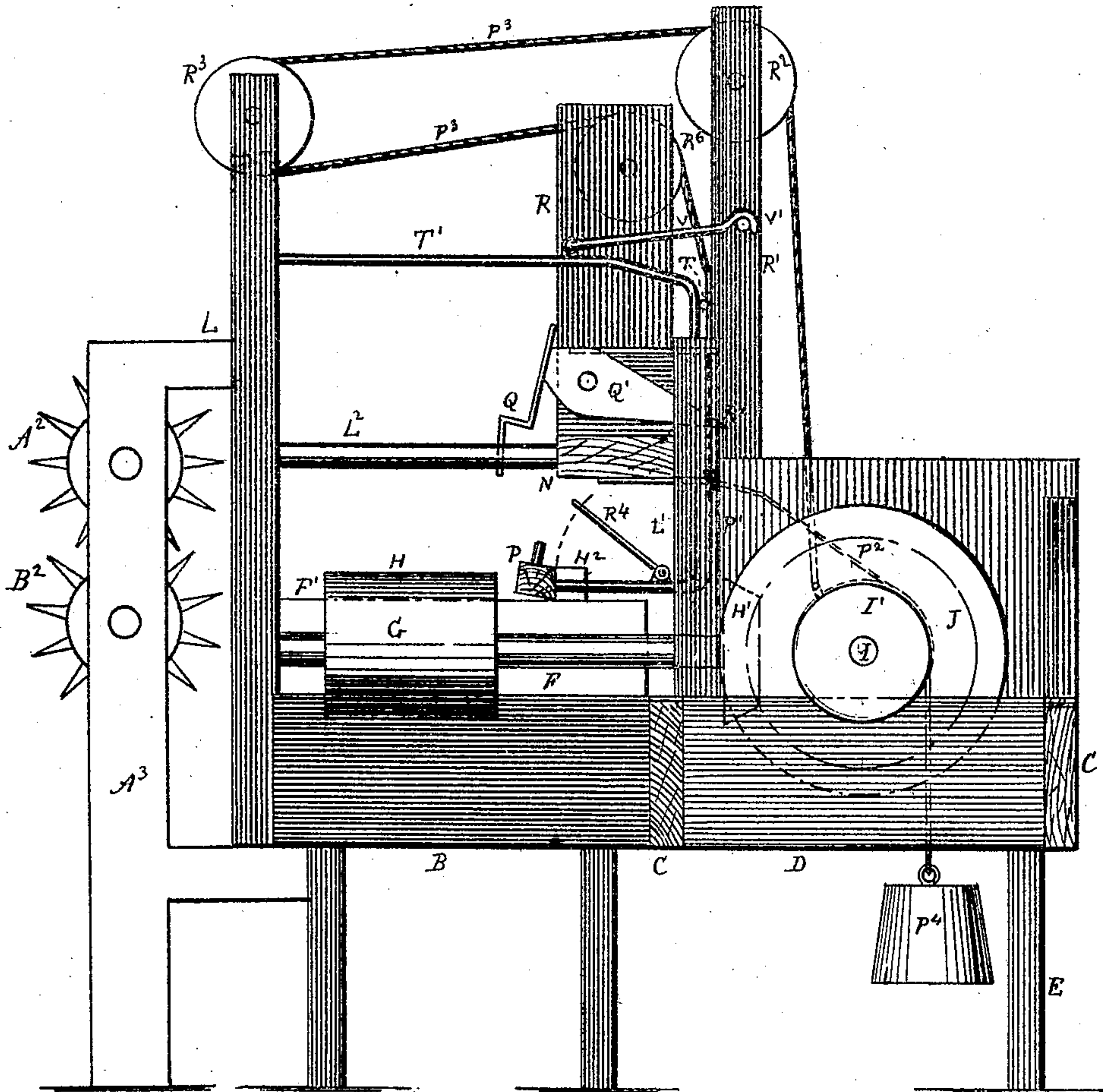
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—FIG. III.—



WITNESSES:—

Geo. H. Howard

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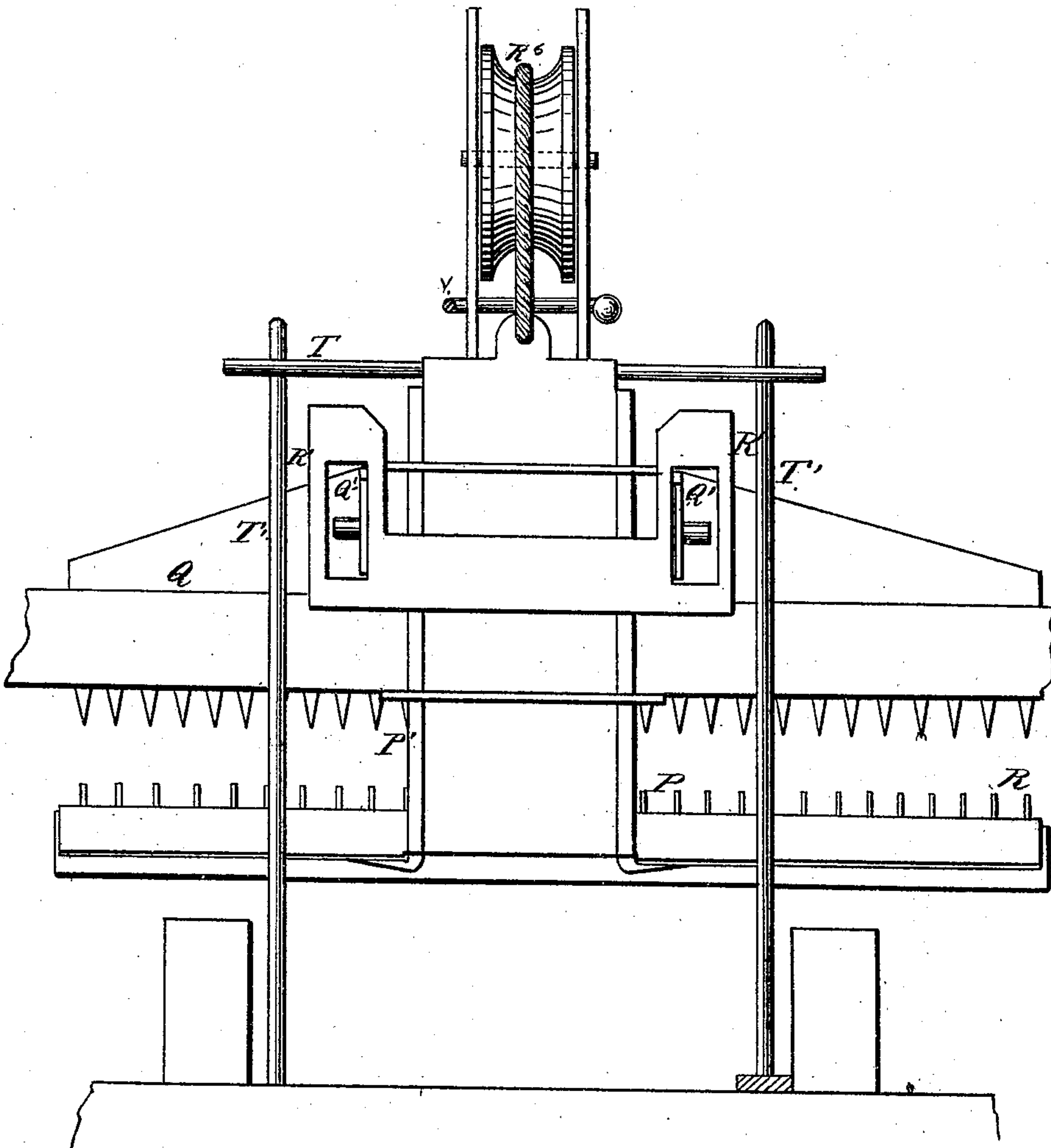
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Fig IV



Witnesses:
Geo H Howards,
Jr, Dennis Jr.

Inventor:
Samuel C Kenaga

UNITED STATES PATENT OFFICE.

SAMUEL C. KENAGA, OF KANKAKEE, ILLINOIS.

IMPROVEMENT IN MACHINES FOR FEEDING BROOM-CORN TO STRIPPERS.

Specification forming part of Letters Patent No. 132,158, dated October 15, 1872.

To all whom it may concern:

Be it known that I, SAMUEL C. KENAGA, of Kankakee, Kankakee county, in the State of Illinois, have invented an improved machine to feed the broom-corn-stripping machines, with two rotating toothed cylinders, in common use in the State of Illinois; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawing forming part of this specification.

The nature or essence of my invention consists in the particular construction and arrangement of devices forming the improvements in machines for feeding broom-corn to the seed-stripping machines, described in the following specification and represented in the accompanying drawing.

In the accompanying drawing, Figure 1 is a front elevation of my machine; Fig. 2 is a plan or top view; and Fig. 3 is an elevation of the left-hand end, and also showing the toothed stripping-rollers. Fig. 4 is a detail view of a portion of the mechanism.

In the drawing, A A' are the sides, and B B' the ends, of an oblong rectangular frame supported by four posts at the corners, as shown in the drawing. To the side of this frame I fasten the oblong rectangular supplemental frame, consisting of the sides C C' and the ends D D' supported by the two posts E E. To these two frames the other parts of the machine are fastened or connected. To the top of the sides A A' I fasten three bars like F, to support the table F', which is fastened to the bars. At each end of the table F' the drums G G are arranged on shafts with journals to turn in proper boxes fastened to the frame, which drums carry the belt H, which may have teeth projecting from its outer surface, if preferred that way, the upper portion of the belt traversing on the top of the table with an intermittent motion communicated by the friction-wheel H¹ on the shaft of the left-hand drum G. The shaft I is arranged to turn and traverse in boxes fastened to the ends D D', and is provided with a pulley, I', for a band from some moving power to operate the machine. The wheel J is fastened to the shaft I to turn the wheel H¹, when the wheel J is carried against it by traversing the shaft I, which has the arm J¹ fastened to it, and is provided with a roller, J², which, in rolling over the stationary cam or rim K fastened to the side of the plate K', traverses the shaft

I, and carries the wheel J against the wheel H¹, and turns the drum G traversing the belt H a proper distance, when the roller J² rolls off from the cam K, the spring I² on the shaft I acting against the clutch K² traverses the shaft to the left and releases the wheel J from the wheel H¹ and the belt H stops. The wheels H¹ and J may be provided with teeth to gear together, and the wheel J may be made to turn loose on the shaft, and be locked by a clutch, when required, instead of traversing the shaft. The frame L is made in the form shown, and fastened to the bar A¹ and table F'; and in this frame the two rods L² L² are fastened. Their opposite ends are supported by the posts L¹ L¹ fastened to the side C of the frame. Upon the rods or ways L² the carriage N is arranged to traverse, which carries the clamping-jaws P and Q, which jaws are arranged and operated to seize the stalks of broom-corn, take them from the belt H, and carry and feed them to the two rotating toothed cylinders of the machines for stripping broom-corn in common use in the State of Illinois, and hold the stalks until the seed is stripped off, and then draw them (the stalks) back, and lay them on the belt and release them, so that they are carried forward by the belt H and discharged from the machine. The lower jaw P is provided with teeth and fastened to the frame P¹, which turns up vertically behind the jaw and traverses in the long mortises in two iron plates fastened to the carriage N. The brush ends of the stalks, with the seed on, are laid on the belt H with the round ends of the stalks across the bar H², on which they traverse as the belt moves the brush along over the jaw P, the teeth of which and the top of the clearing-plate R⁴ are dropped a little below the top of the belt H to let the brush pass over the teeth in the jaw. The upper jaw Q is fastened to the ends of two levers, Q¹, which vibrate on the pin Q² in a block on the top of the carriage. The rear ends of the levers Q¹ extend back through the slots in the plate R¹, which is fastened to the frame P¹ of the lower jaw P, so that when the lower jaw is drawn up by the cord P³, which is fastened to it, the frame carries down the upper jaw Q, so as to clamp the brush between the two jaws near the stalks, where there is no seed, and hold it firmly while the cord P³—which drew up the lower jaw so high as to clear the belt H—draws the car-

riage back, projecting the ends of the brush with the seed on between two toothed rotating stripping-cylinders, A^2 and B^2 , Fig. 3, arranged behind the frame L for that purpose. When the brush has been held between the cylinders until the seed is all stripped off the cord P^3 slacks, and the cord P^2 , which has the weight P^4 fastened to it, draws the carriage back, and the jaws open and lay the stripped brush on the belt again, from which it was taken, when the lower jaw drops down, the plate R^4 resting on the end of the bar H^2 , to hold the stalks and brush up to clear them from the teeth of the jaw. As the upper jaw Q was raised up the under side of the carriage N held the stalks and brush down, so as to clear them from the teeth of the upper jaw, and leave the brush and stalks free to be carried off by the belt H when it moves forward to bring a new supply between the jaws. To raise the lower jaw and traverse the carriage N, the standard R is fastened to the top of the carriage, and provided with a pulley, R^6 , for the cord P^3 , which passes over it and around the pulley R^3 in the frame L, and back over the pulley R^2 in the standard R^1 , fastened to the side C of the frame, and then down and is fastened to the pulley S' , fitted to turn loose on the shaft I; and it has a groove in its hub for a flange on the bar S, which prevents the pulley from moving endwise with the shaft, when it is traversed, to lock and release the clutch K^2 to and from the clutch on the hub of the pulley S' ; for, when the shaft I is traversed so as to connect the clutches, the pulley S' is turned and the cord P^3 is wound up, closing the jaws P and Q, and traversing the carriage, as before mentioned. To move the carriage in the opposite direction the cord P^2 is fastened to it, and passes through a hole in the standard R^1 , and once around the pulley S' , and is fastened to the weight P^4 , which turns the pulley S' back and winds up the cord P^3 , and at the same time draws the carriage toward the front of the machine, and opens the jaws, as before mentioned, ready to receive another supply of broom-corn as the belt H brings it forward. There is a horizontal bar, T, fastened to the top of the carriage P^1 of the lower jaw P, which bar T traverses on the guide-rods T' T' , fastened in the frame L and side C, and are bent in the form shown in Fig. 3, so that as the carriage N moves back the bar T, traversing on the rods T' , tends to press the jaws P and Q closer on the broom-corn and to hold them there, while the corn is carried to the stripping-cylinders and the seed stripped off. As the jaw P closes the bar T rises and passes onto the horizontal parts of the rods T' as the carriage moves back, and when the carriage moves forward the bar descends by the vertical parts of the rods. When the bar T rises it releases the hook V from the pin V' , and holds the hook up until the carriage returns, when the bar descends and the hook drops onto the pin again, to hold the carriage until it is time for it to move again.

The several parts of this machine are so arranged and timed that when the broom-corn is laid upon the belt H, as before mentioned, and a band applied to the pulley I' , the belt H is traversed so as to carry a portion of the broom-corn between the jaws, when the belt stops, and the jaws close on the broom-corn and carry it to the stripping-cylinders arranged behind the frame L, and hold it a proper time for the seed to be stripped off, and then take it back and lay it on the belt H again, when the belt moves forward, discharging the broom-corn from the machine, and bringing a fresh supply between the jaws to be operated upon, as before mentioned.

I contemplate that skillful artisans will be able to modify my machine in various ways, and yet retain the merits and principles of my invention; that they may substitute racks and pinions for cords and pulleys, and use clutches, levers, and cams to obtain the intermittent motions required; and also that the top or bottom of the carriage may be made to serve as one of the jaws, either with or without teeth, as may be preferred.

I claim—

1. In combination with a feeding-belt, H, having an intermittent motion, the clamping-jaws P and Q, arranged and operated to seize the stalks to be stripped, and carry them to the stripping-cylinders, and hold them there until the seed is stripped off, and then take them back to the belt and release them.
2. In combination with the lower clamping-jaw P, the plate R^4 , hinged to the frame of the lower jaw for clearing the stalks from the teeth of the lower jaw.
3. In combination with the rotating toothed cylinders A^2 and B^2 , the above-described mechanism for feeding the broom-corn to said cylinders and withdrawing it therefrom, substantially as described.
4. In combination with the traversing-belt H, the wheels J and H' , stationary cam K, and traversing-shaft I, for giving an intermittent motion to the feeding and discharging belt H, substantially as described.
5. The combination and arrangement of the clutch K^2 , pulley S' , cord P^3 , pulleys R^2 , R^3 , and R^6 , for closing the jaws and traversing the carriage to feed the broom-corn to the stripping-cylinders, substantially as described.
6. In combination with the carriage N and jaws P and Q, the cord P^2 and weight P^4 , for drawing the carriage forward and turning back the pulley S' , substantially as described.
7. In combination with the lower jaw P, the bar T, on the lower jaw-frame P^1 , and the rods T' T' , on which it traverses, for holding the jaws close together while they traverse in each direction, substantially as described.
8. The upper jaw Q, arranged to rise so high as to be stripped of broom-corn by the under side of the carriage bar or frame.

Witnesses: SAMUEL C. KENAGA.

J. DENNIS, Jr.,

JOS. T. K. PLANT.