

No. 757,137.

PATENTED APR. 12, 1904.

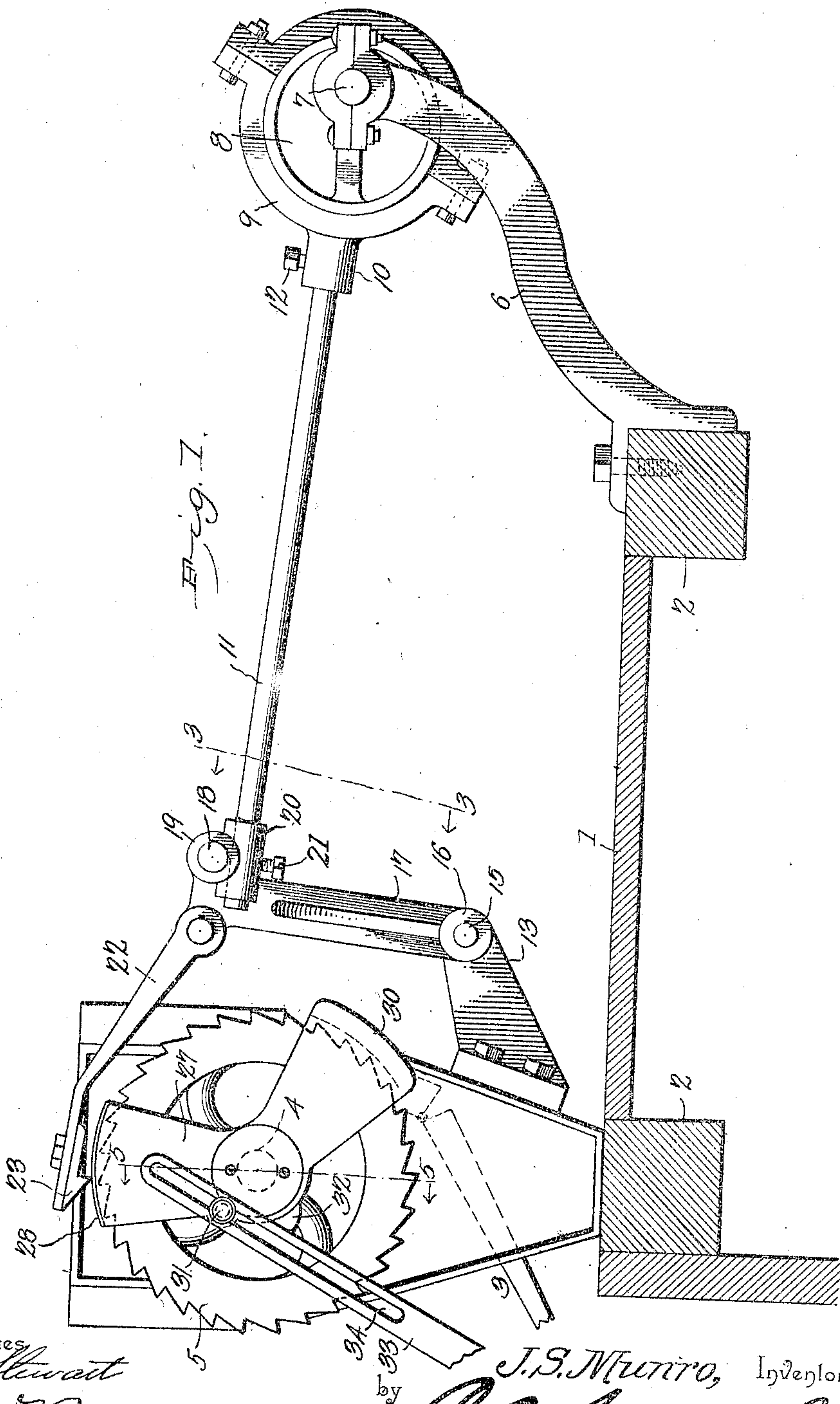
J. S. MUNRO.

FEEDING MECHANISM FOR COTTON SEED LINTERS.

APPLICATION FILED MAR. 28, 1903.

NO MODEL.

2 SHEETS--SHEET 1.



Witnesses,

Wm Bagger

J. S. Munro, Invenlor.

*Cashwell*  
Attorneys

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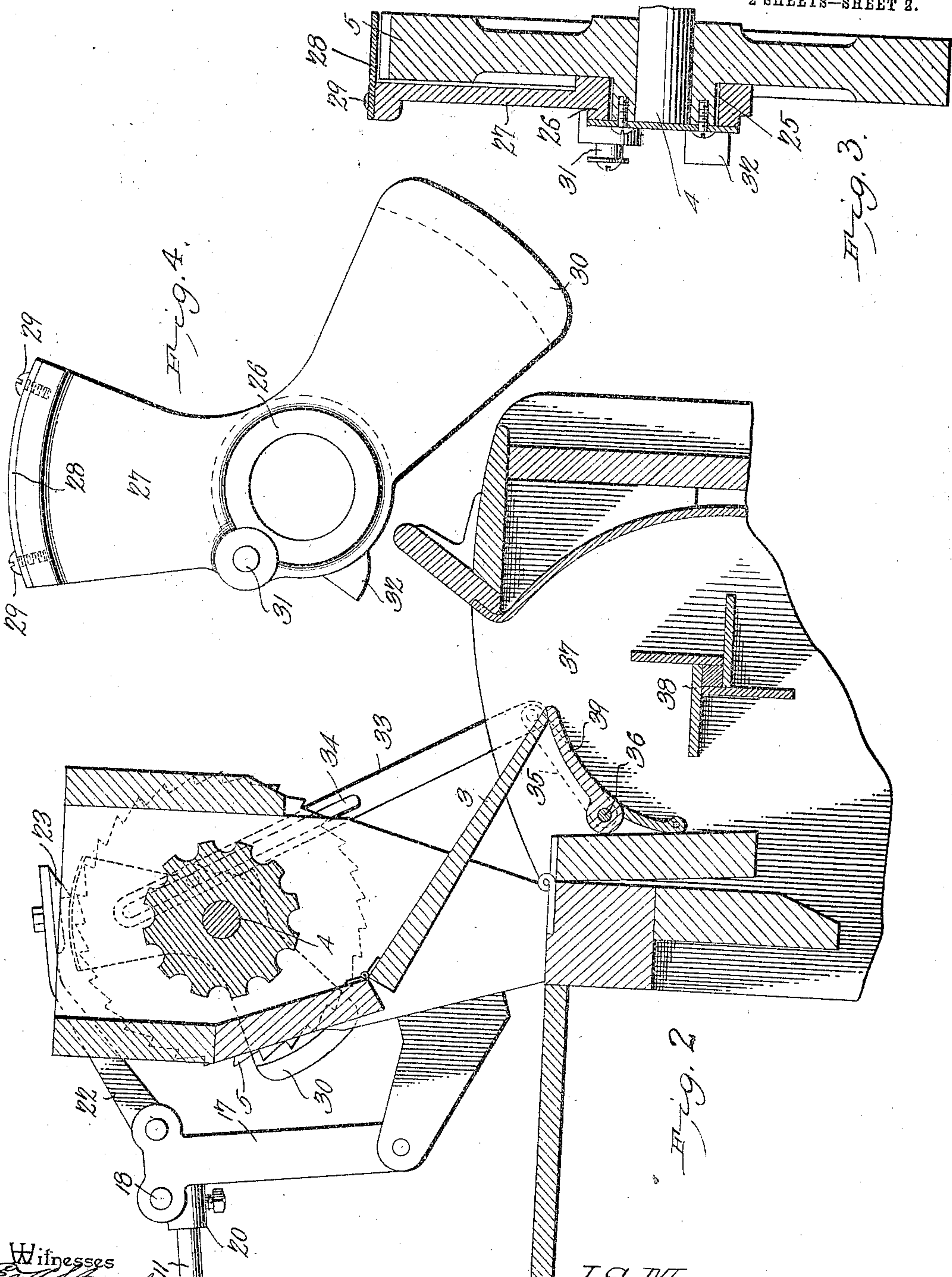
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Witnesses  
E. C. Stewart  
Wm. Bagger

J. S. Munro, Inventor.  
by *Cashmore & Co.*  
Attorneys



## UNITED STATES PATENT OFFICE.

JOHN S. MUNRO, OF MEMPHIS, TENNESSEE.

## FEEDING MECHANISM FOR COTTON-SEED LINTERS.

SPECIFICATION forming part of Letters Patent No. 757,137, dated April 12, 1904.

Application filed March 28, 1903. Serial No. 150,046. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. MUNRO, a subject of the King of Great Britain, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Feeding Mechanism for Cotton-Seed Linters, of which the following is a specification.

This invention relates to an improved feeding mechanism for cotton-seed linters. It has for its object to provide a device in which the feeding operation may be performed with certainty and efficiency.

With these ends in view the invention consists in the improved construction which will be hereinafter particularly described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation illustrating my invention applied in position for operation to a cotton-linter, a part of the framework of which is shown in elevation. Fig. 2 is a vertical sectional view taken through the hopper and feed-chute of the linter. Fig. 3 is a sectional view taken on the line 5 5 in Fig. 1. Fig. 4 is a side elevation of the shield for governing the speed of the feed.

Corresponding parts in the several figures are indicated by similar numerals of reference.

1 designates the top, and 2 a portion of the framework, of a linter which is of ordinary construction.

3 is the feed-chute, containing the feed-shaft 4, carrying at its outer end a ratchet-wheel 5.

6 is a bracket rising from the opposite side of the linter-frame and forming a support for a driven shaft 7, carrying an eccentric 8, which carries the eccentric-strap 9, one part of which is provided with a socket 10, in which the inner end of an eccentric-rod 11 is secured by means of a set-screw 12. The rod 11 may be of ordinary round iron.

Suitably secured to the iron part of the feeder-box, in which the journals of the feeder-shaft 4 are supported, is a bracket 13, the upper end of which has a journal-box supporting a shaft or pivotal pin 15, upon the projecting end of which is pivotally mounted a sleeve 16, having an upwardly-extending arm 17, which constitutes a rocker the upper end of which is provided with a laterally-extending

ing pin 18, upon which is pivotally mounted a sleeve 19, the under side of which has a socket 20, in which the outer end of the connecting-rod 11 is adjustable by means of a set-screw 21. The upper end of the rocker 17 is also pivotally connected with a pull-dog or pawl 22, having an adjustable tooth 23, adapted to engage the ratchet-wheel 5.

The hub of the ratchet-wheel 5 is provided with an annular recess 25, forming a shoulder upon which is seated the hub portion 26 of a shield 27. Said shield comprises an angular plate the upper edge of which is segmental in shape and disposed slightly beyond the periphery of the ratchet-wheel, said shield being provided with a segmental guard 28, which forms a cover for a portion of the teeth of the ratchet-wheel. This guard may be secured in position upon the shield by means of set-screws 29. The lower portion of the shield 27 is provided with a counterweight 30, extending under the ratchet-wheel.

33 designates a connecting-rod provided at its upper end with a slot 34, engaging the pin 31 in the shield-plate, and upon which it may be retained in any suitable manner. Said connecting-rod extends downwardly and has pivotal connection with a crank 35 upon the outer end of a rock-shaft 36, which is mounted pivotally in the hopper 37 of the linter. Said hopper contains the usual winged roller 38, which serves to agitate the mass of seed contained in the hopper and to bring it within the field of action of the saws. The rock-shaft 36 carries a float 39, which normally rests and is supported upon the mass of seed contained in the hopper.

It is obvious that when from any cause there is not a sufficiency of seed in the hopper the float 39 will swing downward and acting through the slotted arm 33, which engages the pin 31 of the shield, will draw the said shield out from under the end of the pawl 22 and allow the latter to act upon the teeth of the ratchet-wheel 5, thereby increasing the range of movement of the feed mechanism and supplying an increased quantity of cotton-seed to the hopper. This action will continue until the normal amount of seed is in the hopper, when the float 39 will be forced upward and



the counterweight 30 of the shield 27 will restore the latter to normal position. When in this position, the pawl when actuated will partially ride upon the guard 28 and on its return stroke will move the ratchet-wheel but a short distance. This automatic regulating mechanism is quite sensitive and will enable the cotton-seed to be fed at just the proper rate of speed to enable it to be acted upon by the linter, and the governing mechanism, as will be seen, operates automatically.

The counter-shaft 7 may be driven from the saw-cylinder shaft in the linter by belting it to the same, as will be readily understood, the belt-pulleys being proportioned so as to give the desired relative speeds. Other means of driving said shaft 7 may, however, be used, and driving means have not been illustrated in the drawings, because the necessity for their presence will be well understood and for the further reason that they form no part of the invention.

The rocker 17 is preferably provided with a web or fin, whereby it is braced, as will be readily understood, to enable it to resist strain.

In operation the rotation of the shaft 7, with its eccentric 8, imparts, through the connecting rod or pitman 11, a rocking or oscillatory motion to the rocker 17, whereby the pawl 22 is caused to impart to the feed-shaft 4 an intermittent rotary motion such as is desired in this class of mechanism, the extent of such motion being determined by the means hereinbefore described.

The mechanism thus far described is a well-known form of cotton-seed feeder to which my invention is applied. My improvement consists in the cam-shaped projection 32, engaging against the side of said connecting-rod, which will positively prevent the shield-plate from being swung by the action of the counterweight any farther in the direction of the pawl when the connecting-rod is at the upper limit of its movement, as illustrated in Fig. 1 of the drawings. This is important for the reason that in the absence of some such restraining means the pawl would be liable to engage the edge of the guard-plate 28, in which event injury or breakage might result. Thus

in Figs. 1 and 2 of the drawings the slotted connecting-rod has been shown as rising to a point at which the pin 31 ceases to be engaged by the upper end of the slot 34. If the shield 27 were permitted to follow this movement, the plate 28 would swing to a position where the said guard-plate 28 would be engaged by the pawl to the detriment of the working parts. The danger of anything of the kind is, however, entirely obviated by the presence of the cam-shaped projection 32, as will be readily understood.

It will be seen from the foregoing description that the feeder-shaft will be operated with certainty and without danger of interruption.

I desire it to be understood that I do not limit myself to the precise structural details herein shown and described, but reserve the right to such changes and modifications as lie within the scope of my invention and which may be resorted to without departing from the spirit or sacrificing the utility of the same.

Having thus described my invention, I claim--

In a device of the class described, the combination of a ratchet-wheel upon the feeder-shaft, a shield connected pivotally with said ratchet-wheel and having a forwardly-extending pin and a cam-shaped extension, a guard-plate at the upper end of said shield extending over a portion of the teeth of the ratchet-wheel, a counterweight at the lower end of said shield, a slotted rod connected with the pin upon the shield-plate and adapted, at the upward limit of its movement, to engage the cam-shaped projection, means within the hopper of the machine for actuating said connecting-rod, a rocking member and a pawl upon said rocking member having engagement with the teeth of the ratchet-wheel limited by the guard-plate of the shield.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN S. MUNRO.

Witnesses:

EMMA ROBERTS,  
MAY WILLIAMS.