

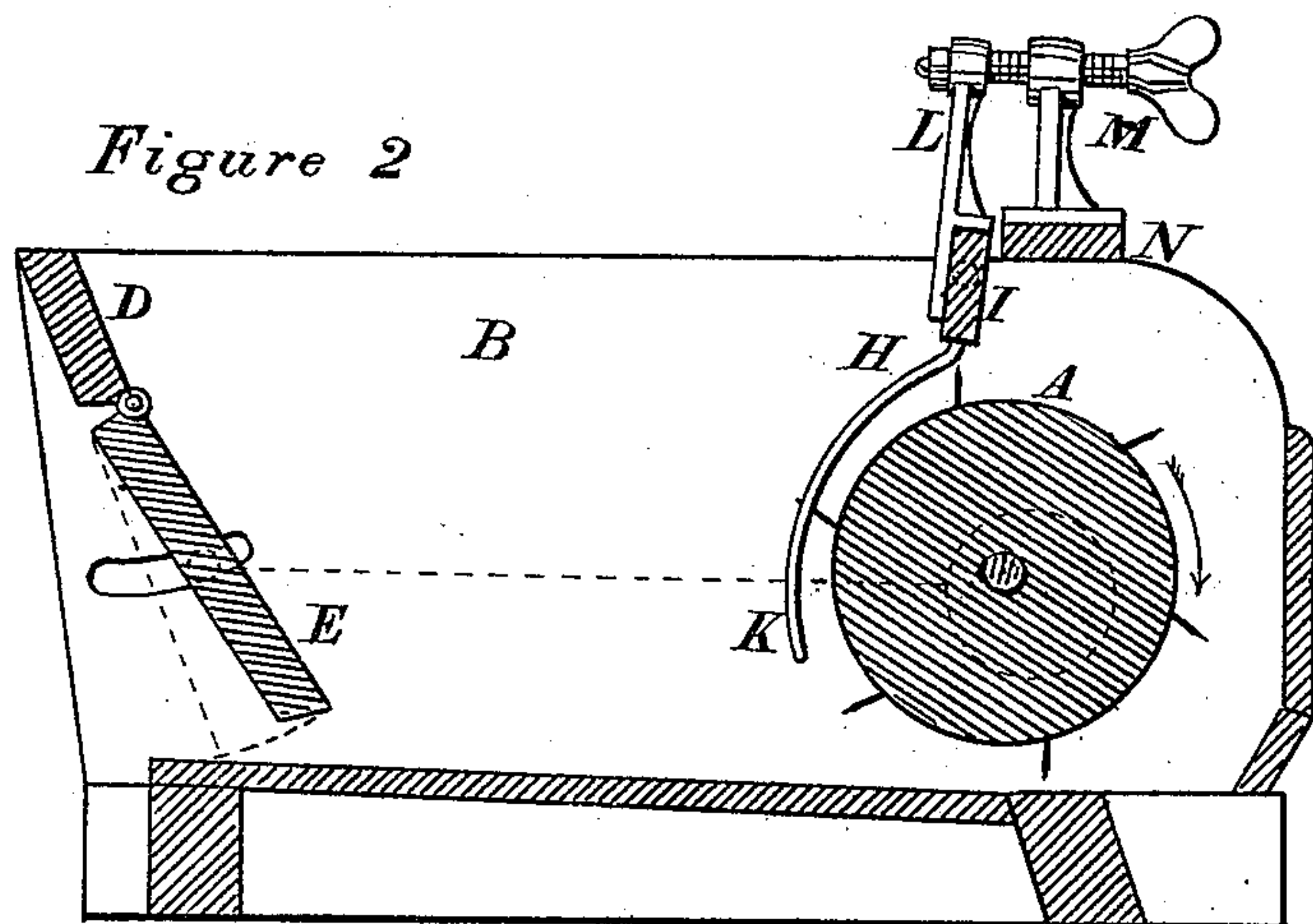
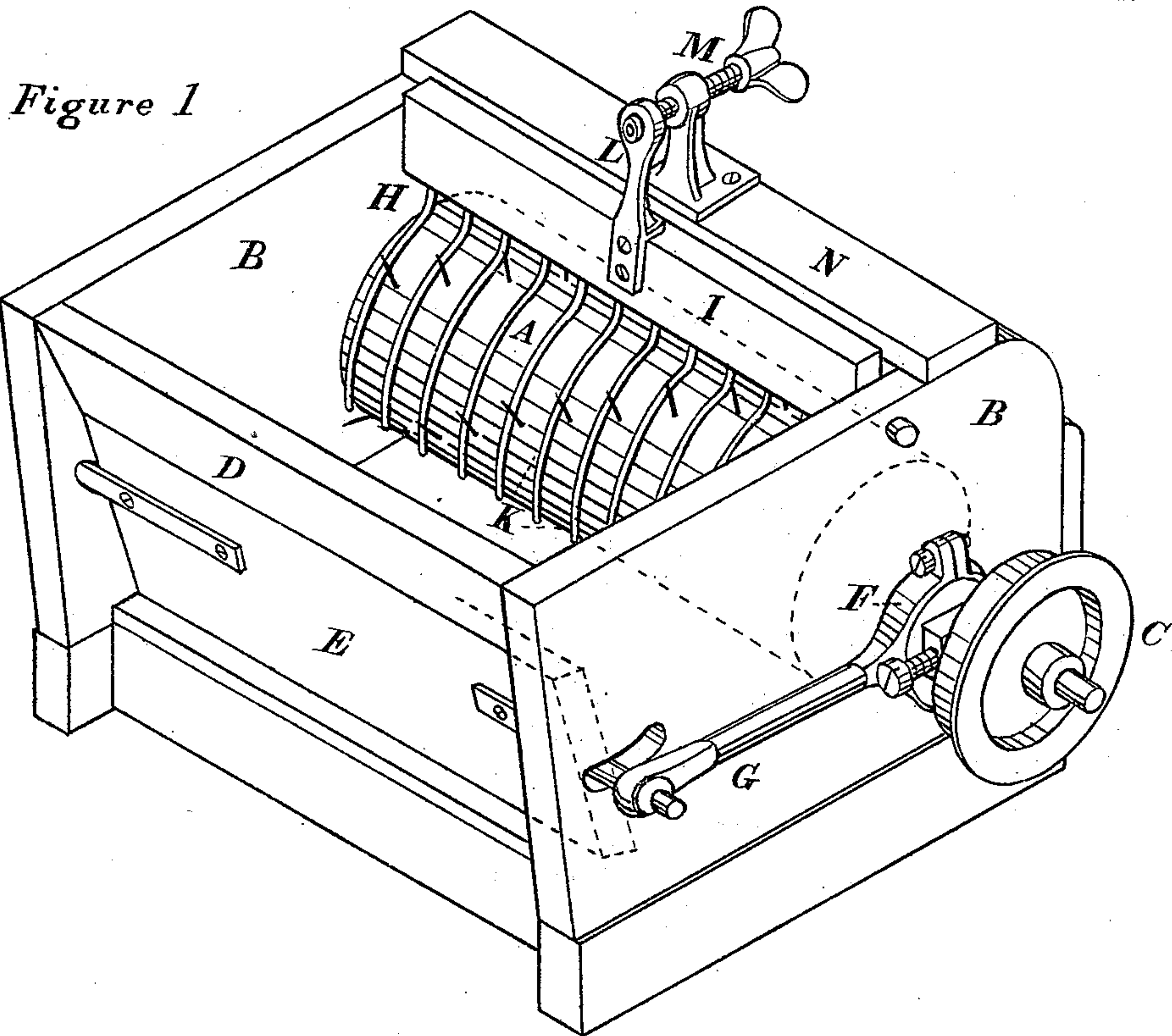
(Model.)

J. L. STERRITT & W. H. TURNER.

COTTON GIN FEEDER.

No. 251,072.

Patented Dec. 20, 1881.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH L. STERRITT AND WILLIAM H. TURNER, OF SING SING, N. Y.

## COTTON-GIN FEEDER.

SPECIFICATION forming part of Letters Patent No. 251,072, dated December 20, 1881.

Application filed October 10, 1881. (Model.)

*To all whom it may concern:*

Be it known that we, JOSEPH L. STERRITT and WILLIAM H. TURNER, citizens of the United States, both residing at Sing Sing, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Cotton-Gin Feeders, of which the following is a specification.

The value of a mechanical feeder to a cotton-gin has been fully demonstrated, as with such attachment a gin is proved to do more and better work than any machine of the kind fed by hand alone; but in order that the seed-cotton shall be fed to the gin with perfect regularity, so that it may not at one time be crowded with more material than can be properly operated on and at another time be insufficiently supplied, thereby causing breaks or discontinuity in the web as it is discharged from the gin, experience has shown that the feeder itself requires regular feeding, and that that feed must be capable of ready adjustment, so that sufficient and no more than sufficient of the raw cotton shall be carried forward continuously.

The unginned cotton is peculiar in its nature, requiring special means to cause it to move toward the revolving toothed cylinder of the feeder, and the means hitherto employed for that purpose have proved in a great degree inefficient. When the gravity of the cotton in the hopper has been depended on, the feed has been found fitful and irregular, and where rollers in the bottom of the hopper, revolving toward the cylinder, are employed, the case is not much better, for if the rollers are rough they drag the cotton between them, and if smooth and polished, as they soon get to be, they revolve without acting on the cotton at all.

It is with a view to give a positive motion to the seed-cotton in the hopper toward the feeding-cylinder and to regulate the amount passed over to the gin that our improvements are designed.

In the accompanying drawings, Figure 1 is a perspective view of the improved feeder, and Fig. 2 is a longitudinal section of the same.

A is a cylinder, having upon its surface a number of pointed teeth set in spiral or straight rows and slightly inclined forward. The cylinder

is mounted in suitable bearings in the case or hopper B, of which it constitutes the front end. It is provided with a driving-pulley, C, on its shaft, by which it receives motion in the direction of the arrow. The sides of the hopper B are vertical and its bottom is horizontal. The back end consists of a stout bar, D, to which is hinged or pivoted the vibrating back board, E, to which is given a forward and back motion by means of an eccentric, F, on the shaft of the cylinder, the rod of which, G, is jointed to an arm projecting from the back board, E. Two eccentrics may be used, or other equivalent means of giving the required motion to the back board may be employed. The extent of the motion thus imparted is made adjustable by varying the throw of the eccentric, by changing the position of attachment to the back board, or otherwise.

Near the forward end of the hopper B, immediately above the inner face of the toothed cylinder A, is the adjustable rack H, composed of a bar, I, which works on pivots in the sides of the hopper, and the curved rods K, projecting downward from the lower edge of the bar. These rods are equal in number to the number of teeth in a row on the cylinder, and the latter revolve upward between the rods. The distance of these rods K from the surface of the cylinder, or rather their position in regard to the curve described by the points of the teeth, is made adjustable by means of the arm L on the bar I, which is operated by the screw and nut M, fixed on the cross-bar N, or by other equivalent means.

The machine having been set in motion and the hopper filled, the action is as follows: The vibrating back board presses the compact cotton-bolls forward toward the cylinder, and during the retrograde motion more cotton falls into the space left in front of it, and is in turn forced forward with a positive motion, the elasticity of the interposed cotton serving to equalize its advance toward the teeth of the cylinder. The boll-cotton thus pushed forward is taken up on the points of the teeth projecting from the cylinder, and is carried by them between the curved bars of the rack, and, according to its adjustment, more or less is allowed to pass over on the teeth to be fed into the hopper of the gin. Should the feed be inadequate

quate, the rods are allowed to approach near  
the surface of the cylinder; but should too  
much be passing over, the rods are adjusted to  
lie nearer the path of the points of the teeth,  
5 in which position they relieve the teeth of the  
surplus they have taken up. Whether feeding  
fast or slow, the whole breadth of the gin-saws  
is supplied with an equal amount of the seed-  
cotton in every part, and with a certainty and  
10 continuity which have not been hitherto accom-  
plished.

What we claim, and desire to secure by Let-  
ters Patent, is—

In combination with the vibrating back board,  
E, and the mechanism by which its motion is 15  
imparted, situated and operating substantially  
as described, the adjustable rack H, its means  
of adjustment, L M, and the toothed cylinder  
A, for the purpose specified.

JOSEPH L. STERRITT.  
WILLIAM H. TURNER.

Witnesses:

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