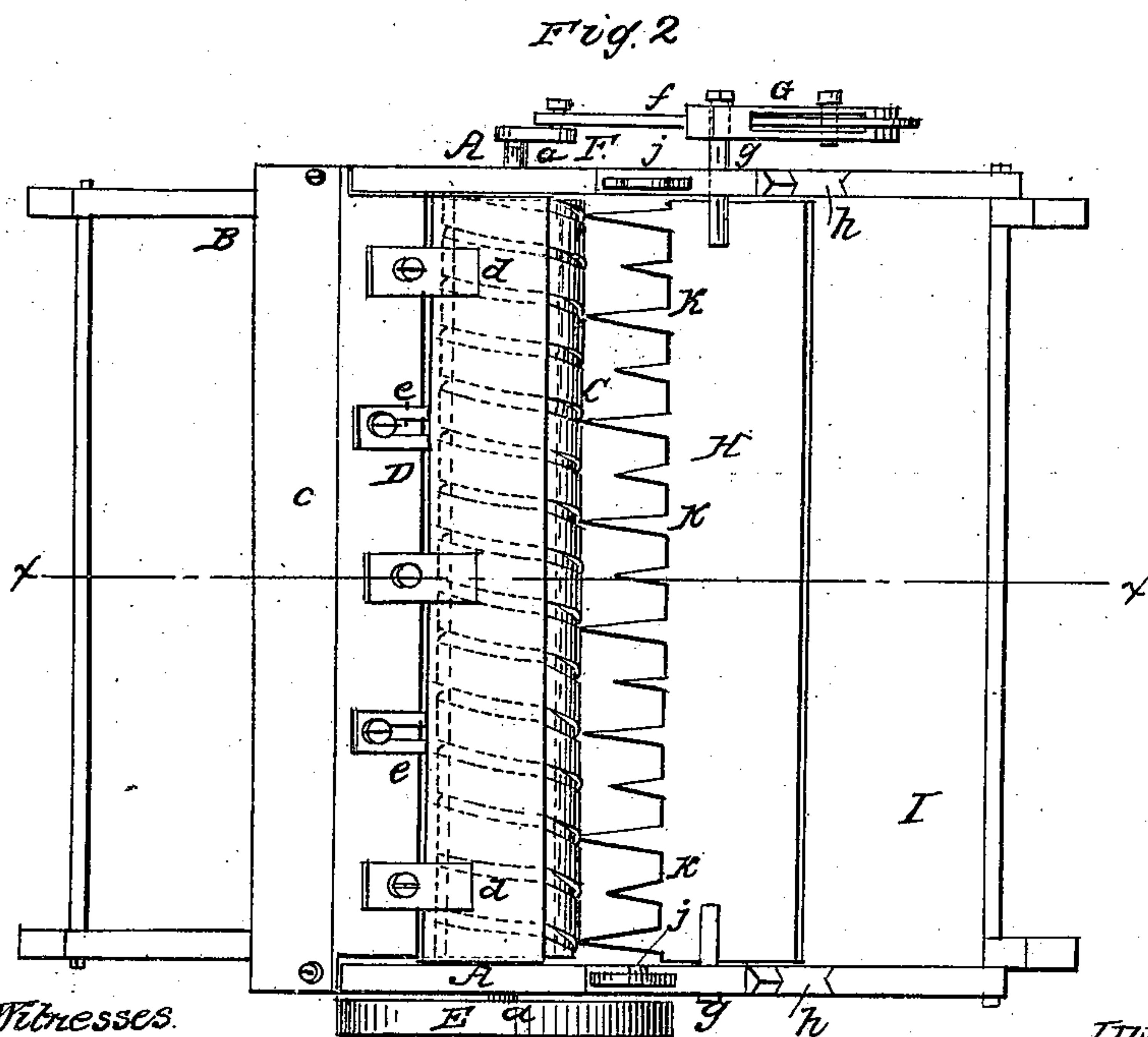
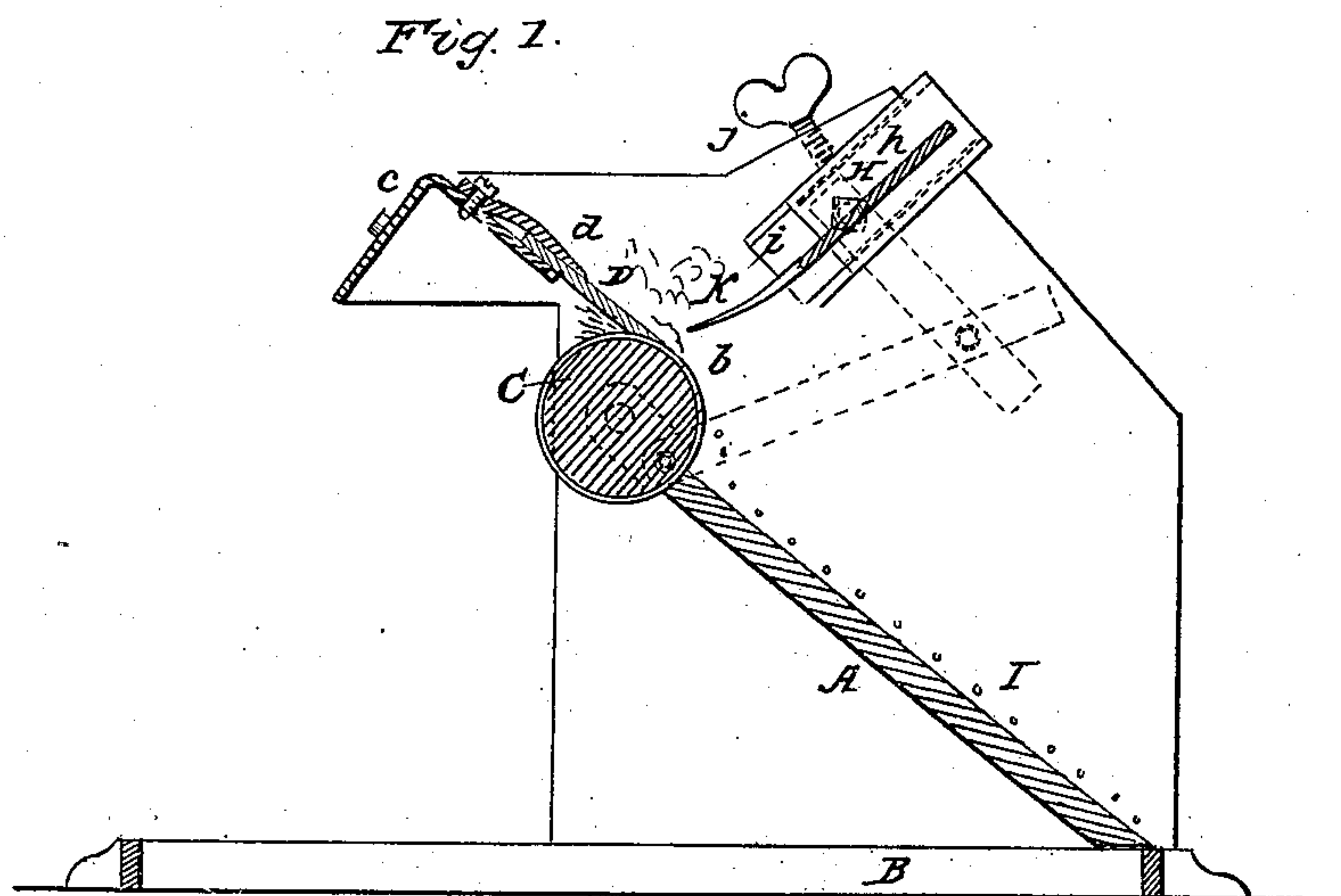


J. E. FERGUSON.

Cotton Gin.

No. 31,062.

Patented Jan. 1, 1861.



Witnesses.
J. W. Coombs
R. S. Spencer

Inventor:
James E Ferguson
per Munroe & Co
Attorneys

UNITED STATES PATENT OFFICE.

JAMES E. FERGUSON, OF MICANOPY, FLORIDA.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 31,062, dated January 1, 1861.

To all whom it may concern:

Be it known that I, JAMES E. FERGUSON, of Micanopy, in the county of Alachua and State of Florida, have invented a new and Improved Cotton-Gin; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention taken in the line *x x*, Fig. 2. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding part in the two figures.

This invention relates to an improvement in that class of cotton-gins in which rollers are employed, and which are designed, chiefly, for ginning long-staple cotton.

The object of the invention is to obtain a simple and efficient gin for the purpose specified, and one which, while capable of working rapidly, will not injure or break the staple or fiber.

The invention consists in the employment or use of a roller in connection with an adjustable plate and vibrating rake or comb, arranged for joint operation, as hereinafter shown, whereby the desired end is attained.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A A represent two side pieces or plates, which are supported by a suitable base, B, and C is a roller, the journals *a' a'* of which have their bearings in the side pieces, A A. This roller is covered with a leather strip, *b*, which is wound around it in a spiral form, as shown clearly in Fig. 2. The roller C has a horizontal position, and directly above it there is an inclined metal plate, D, the lower edge of which is beveled or ground to conform to the surface of the roller, and is quite close to it, as shown clearly in Fig. 1. The plate D is secured to a cross-plate, *c*, of the side pieces, A A, by means of clamps *d*, the upper edge of plate D bearing against adjustable gages *e'*, which are also attached to the cross-plate *c*. This arrangement admits of the plate D being adjusted higher or lower, and consequently nearer to or farther from the surface of the roller C, as circumstances may require.

To one of the journals *a* of the roller C there is attached a driving-pulley, E, and to the other journal there is attached a crank, F, which is connected by a pitman, *f*, with an arm, G, said arm being attached to one of the journals *g* of a vibrating rake or comb, H. This rake or comb H is formed of a metal plate provided at each end with a journal, *g*, said journals being fitted in bearings *h h*, which bearings are placed in inclined slots *i i* in the plates or side pieces, A A, and secured therein at any desired point by set-screws *j j*. The slots *i i* are in a plane at right angles with the plane of the plate D, as shown in Fig. 1. The inner part of the plate of the comb is toothed, the teeth being alternately long and short, as shown at *k* in Fig. 2. The teeth *k* may be adjusted as near the roller C as desirable by adjusting the bearings *h h* in the slots *i i*.

The operation is as follows: The roller C may be rotated by any convenient power in the direction indicated by the arrow, and the cotton to be ginned is fed down to the roller, and is caught by the roller and drawn between it and the plate D. The rake or comb H ripples or loosens the seed from the staple as the latter is drawn between the plate and roller, the seed of course being prevented from passing between the plate and roller, and the rake or comb by its vibrating favoring the separation of the seed from the staple, and without subjecting the fibers to any undue strain or tension which would be liable to break them.

The length of the vibrations of the rake or comb H may be regulated, as occasion may require, by adjusting the pitman *f* in the arm G at a greater or less distance from its end, the arm G being slotted to admit of such result.

I is an inclined board, which is placed between the end pieces, A A, and extends from the roller C to the base B. This board serves to convey the seed from the machine.

The action of the rake or comb on the staple may be modified considerably by means of its adjustability relatively with the roller C, and the machine therefore may be adapted to suit the length of the fiber. The shorter the fiber the nearer the teeth *k* require to be to the roller C.

I do not claim separately the roller C, for that has been previously used; nor do I claim

a comb or device to ripple the seed from the cotton irrespective of the arrangement of the one herein shown and described; but

I do claim as new and desire to secure by Letters Patent—

The roller C, constructed as described, and the adjustable plate D, in combination with

the adjustable vibrating rake or comb H, arranged for joint operation, as and for the purpose set forth.

JAMES E. FERGUSON.

Witnesses:

A. J. NEAL,

R. E. JOHNSTON.