

No. 841,825.

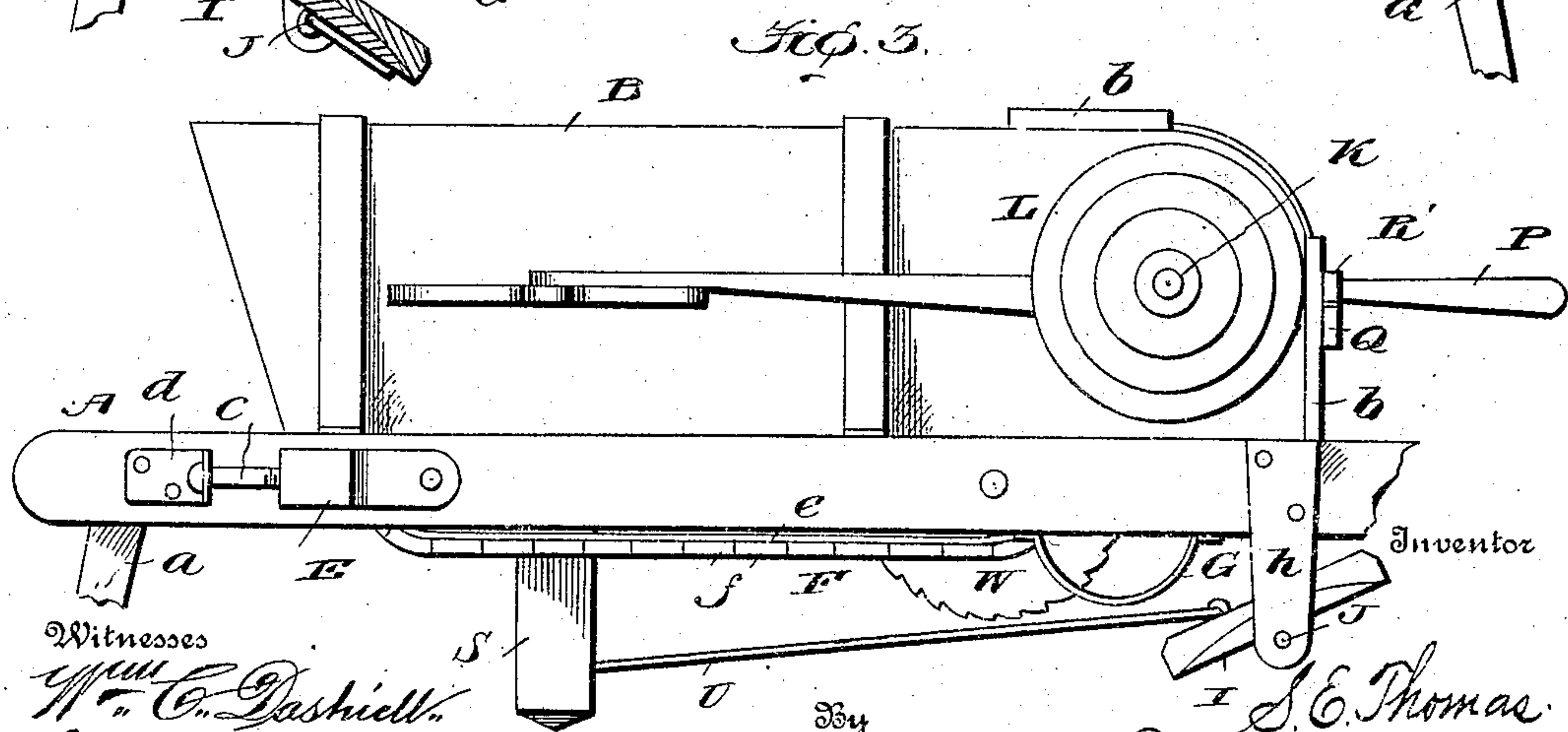
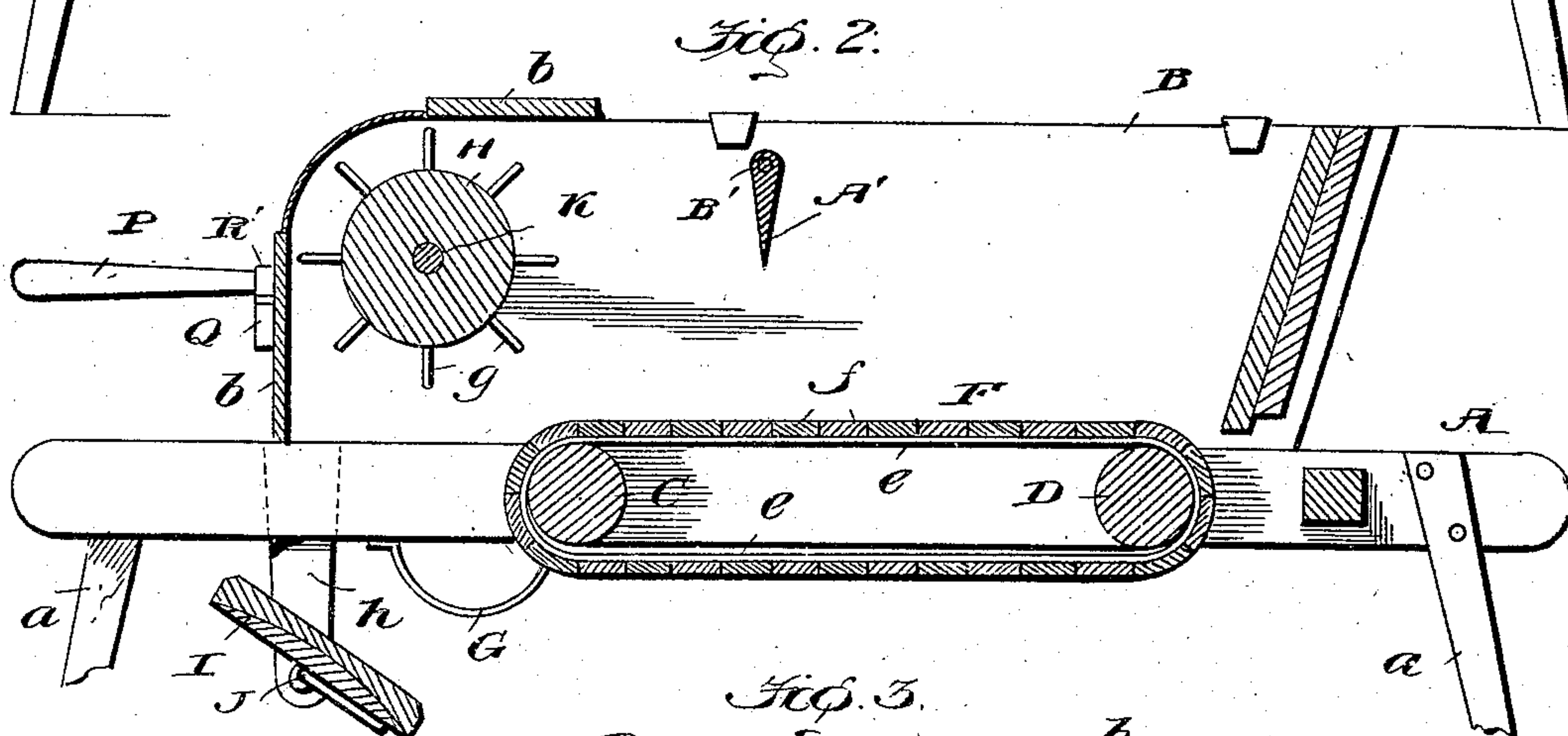
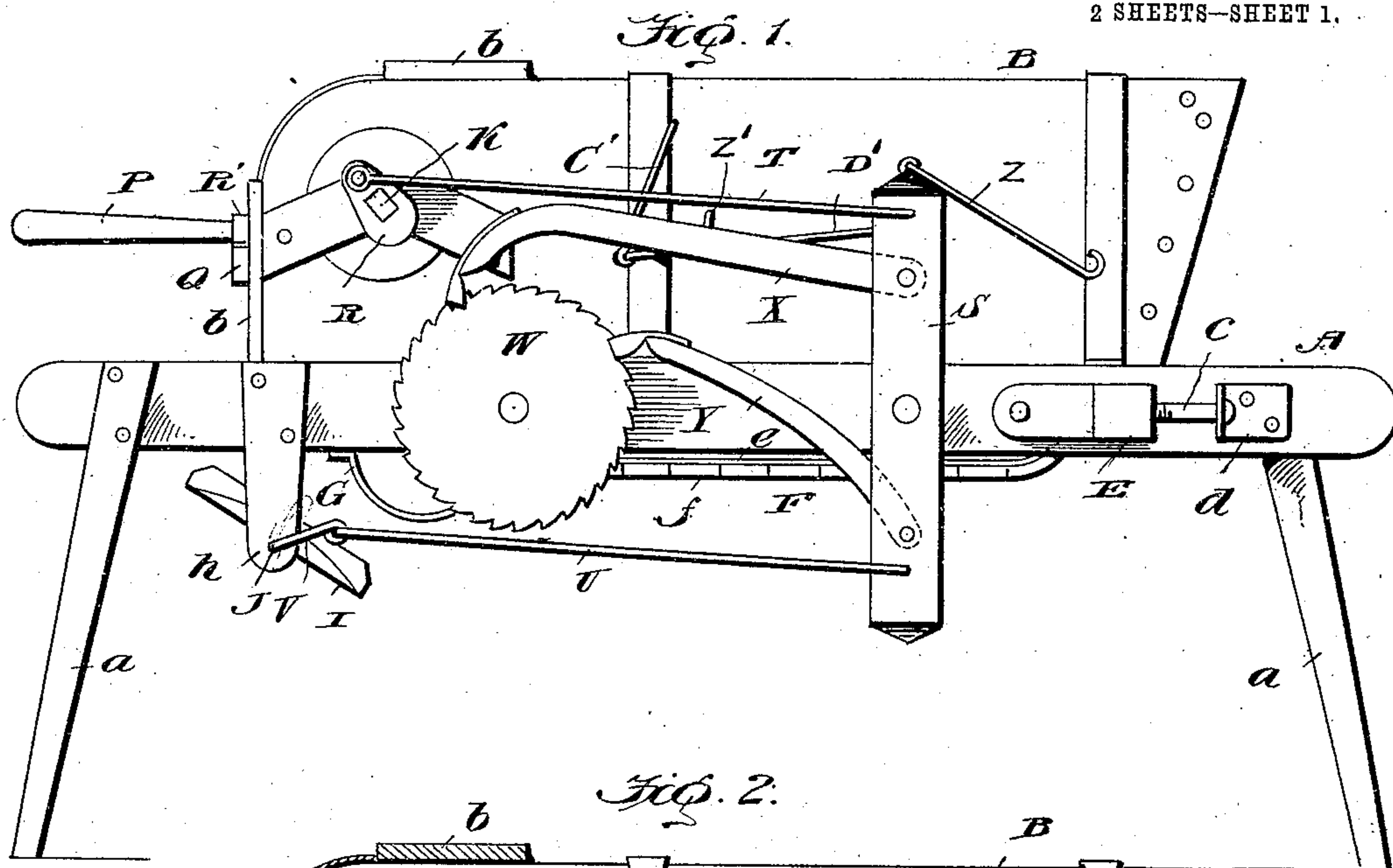
PATENTED JAN. 22, 1907.

S. E. THOMAS.

## GIN FEEDER.

APPLICATION FILED DEC. 28, 1905.

2 SHEETS—SHEET 1.



## Witnesses

Wm. C. Gastrell.  
N. C. Dealy.

M. E. Deahy

Inventor

S. E. Thomas

James J. Sheehy  
Attorney

Ottorino

No. 841,825.

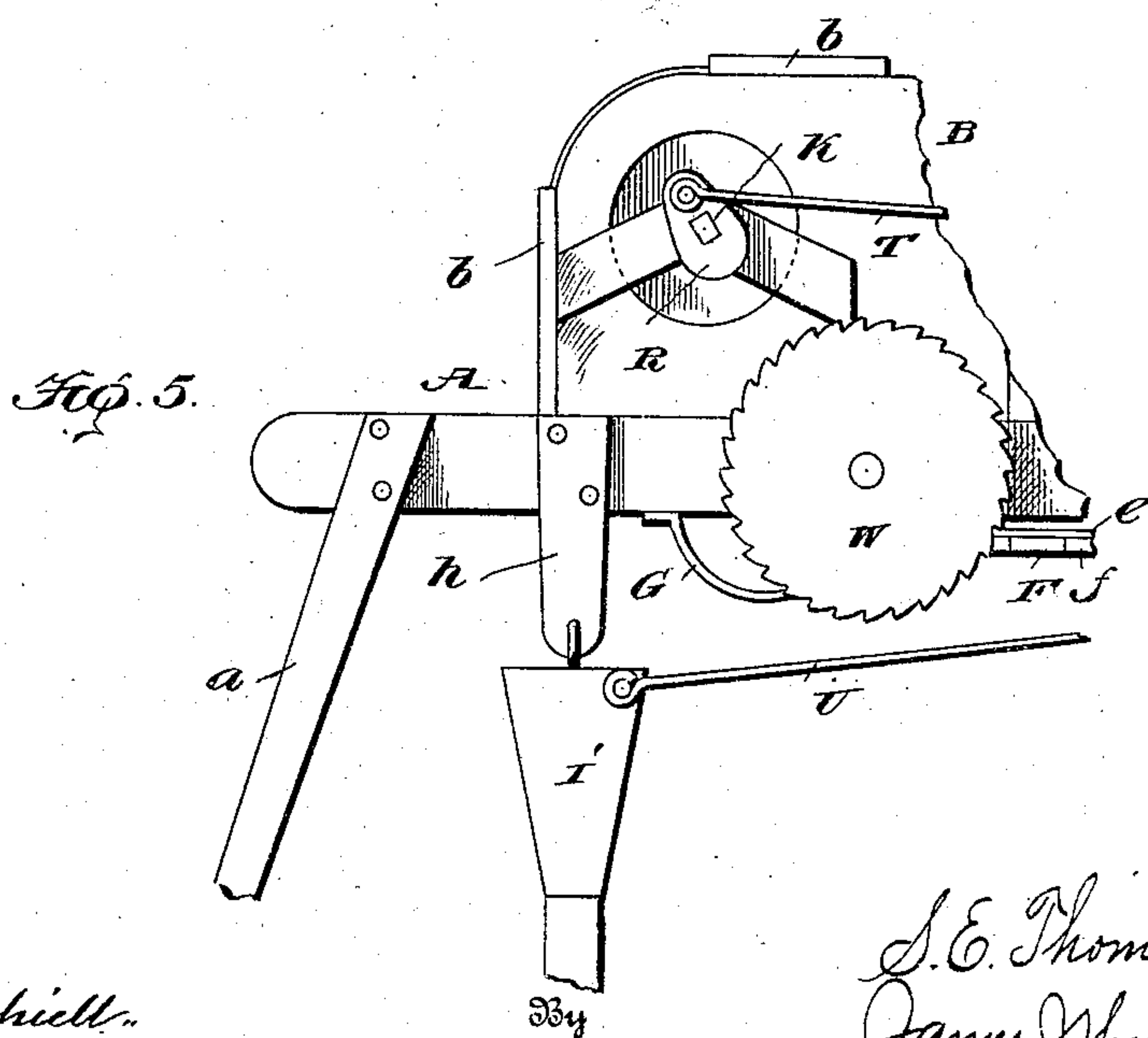
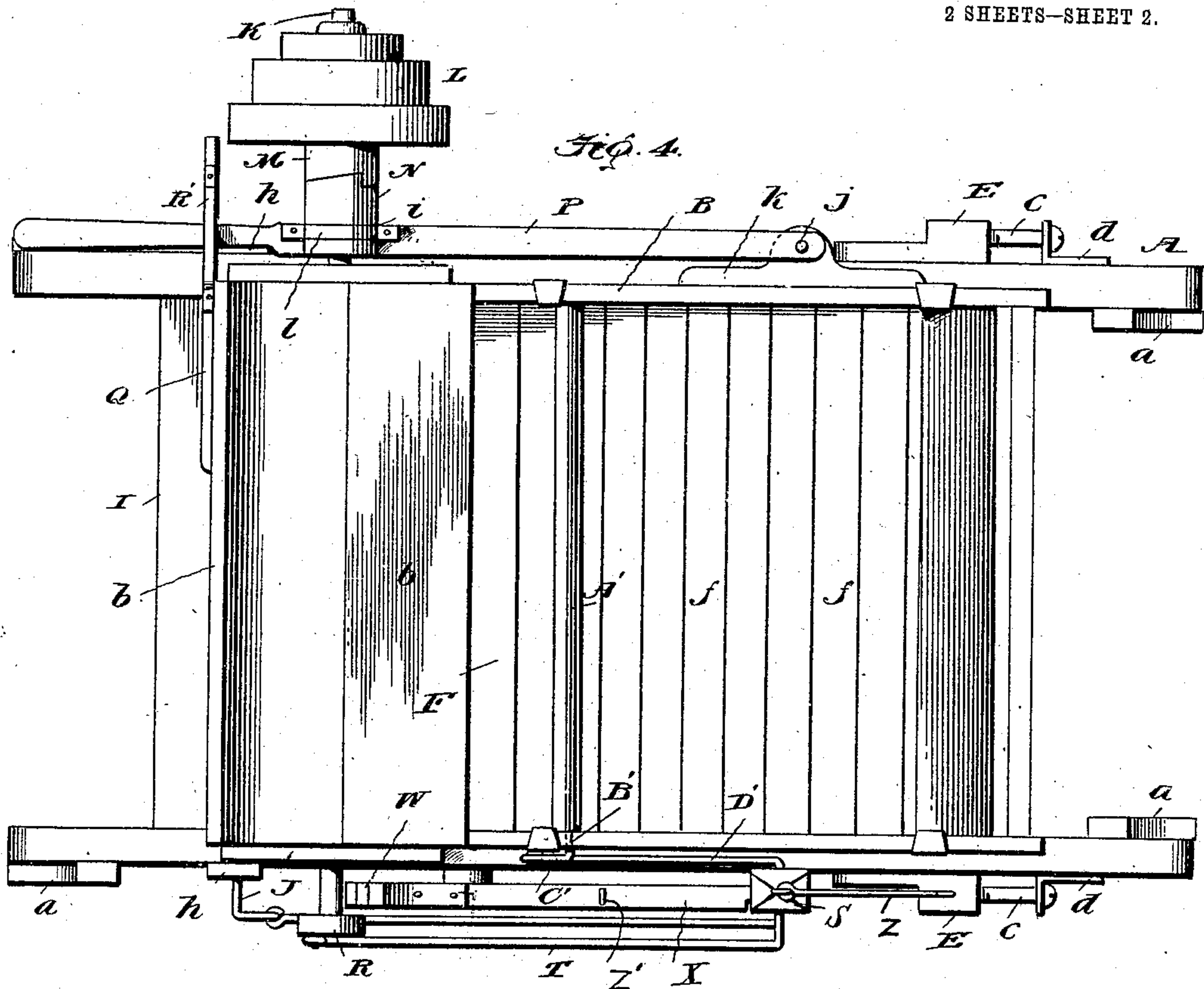
PATENTED JAN. 22, 1907.

S. E. THOMAS.

GIN FEEDER.

APPLICATION FILED DEC. 28, 1905.

2 SHEETS—SHEET 2.



Witnesses

Wm. C. Dashiell.  
W. C. Stealy

Inventor

S. E. Thomas.  
James J. Shubert

Attorney



# UNITED STATES PATENT OFFICE.

STEPHEN EICHLEBURGER THOMAS, OF HAGAN, GEORGIA.

## GIN-FEEDER.

No. 841,825.

Specification of Letters Patent.

Patented Jan. 22, 1907.

Application filed December 28, 1905. Serial No. 293,641.

*To all whom it may concern:*

Be it known that I, STEPHEN EICHLEBURGER THOMAS, a citizen of the United States, residing at Hagan, in the county of Tattnall and State of Georgia, have invented new and useful Improvements in Gin-Feeders, of which the following is a specification.

My invention pertains to cotton-gin feeders; and it contemplates the provision of a feeder constructed with a view of efficiently feeding Sea Island or long-staple cotton and one designed more particularly for use in connection with double-roller cotton-gins, of which the Foss gin is an example, and embodying means whereby the feed may be readily regulated to suit different conditions.

Other advantageous features peculiar to my invention will be fully understood from the following description and claims when the same are considered in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the feeder constituting the present and preferred embodiment of my invention. Fig. 2 is a longitudinal vertical section of the feeder. Fig. 3 is a view illustrating in elevation the side of the machine opposite to that shown in Fig. 1. Fig. 4 is a top plan view of the feeder, and Fig. 5 is a detail view illustrative of a modified discharge-chute hereinafter referred to.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is the main frame of my novel feeder. The said main frame is preferably open in construction and rectangular in form and is supported by legs *a*, disposed adjacent to its ends, as illustrated.

B is a receiving box or hopper arranged on and fixedly connected to the frame A and open at its upper and lower sides and having its forward upper corner covered by one or two walls *b*, as illustrated.

C and D are front and rear transverse rollers journaled in the side bars of the main frame A, and E E are adjustable bearings carrying the shaft of the roller D. The said bearings E are connected, through the medium of screws *c*, to brackets *d*, fixed on the main frame, and hence it will be apparent that by simply turning the screws the roller D may be moved toward or away from the roller C for a purpose which will presently appear.

F is an apron mounted on the rollers C and

D and adapted to be tightened or loosened by the described adjustment of the roller D. The said apron is preferably formed by belts *e* of canvas or other suitable material and closely-arranged slats *f* of wood connected to and carried by the belts. It is arranged to form the bottom of the receiving box or hopper B, as shown in Fig. 2, and extends from a point adjacent to the forward end of the receiving box or hopper to the rear end thereof.

G is a trough, preferably of sheet metal, fixed to the main frame A and arranged transversely under the forward portion of the apron F, so as to receive waste cotton.

H is a transversely-arranged feed-cylinder mounted in the receiving box or hopper B under the wall or walls *b* thereof and having peripheral teeth *g*, and I is a rocking discharge-chute arranged to receive cotton from between the forward portion of the apron F and the feed-cylinder H and carried by a transverse shaft journaled in hangers *h*, depending from the forward portion of the main frame A.

As best shown in Figs. 3 and 4 of the drawings, the shaft K of the feed-cylinder H is extended a considerable distance beyond one side of the receiving box or hopper and is equipped with a loose band-pulley L. This band-pulley L is preferably stepped, as shown, to permit of the speed of the feeder being increased or diminished, as desired, and it is provided at its inner side with a clutch member M.

N is a clutch member opposed to the clutch member M and arranged on the shaft K so as to turn therewith and move thereon in the direction of the length of the shaft and having a circumferential groove *i*.

P is a shipping-lever fulcrumed at *j* on a bracket *k*, carried by one side wall of the receiving box or hopper B and having a strap *l* loosely receiving the circumferentially-grooved portion of the clutch member N, and Q is an arm fixed to the forward end of the box B and extending laterally therefrom, so as to support the free portion of the lever P and provided with a spring-strip *R'*, arranged to frictionally hold the free portion of the lever P against casual movement, while permitting of said lever being moved by hand when the same is necessary.

It will be apparent from the foregoing that when the forward or free end of the lever P is swung outwardly to engage the clutch member N with the complementary clutch



member M the shaft K, which constitutes the main driver of the machine, will be rotated from the pulley L, while when the clutch member N is disconnected from the member M the shaft K and all of the parts connected therewith will be rendered idle. The feed-cylinder H is fixed on and derives motion from the shaft K, and motion is taken from the said shaft K to rotate the forward roller C and actuate the discharge-chute I. The connection intermediate the shaft K and the chute I comprises, as best shown in Fig. 1, a crank R on shaft K, a vertical lever S, fulcrumed at about its center on the main frame A, a link-rod T, connecting the crank R and the upper arm of lever S, and a link-rod U, connecting the lower arm of the lever S, and a crank V on the shaft J of the said chute I. By virtue of this construction it will be observed that during the rotation of the feed-cylinder H the chute I, which is preferably in the form of a board, will be rocked first in one direction and then in the other. From this it follows that the said chute is adapted to feed cotton first to one of the rollers of a double-roller gin and then to the other roller thereof. It also follows that the speed at which the chute I is rocked, as stated, will correspond to the speed at which the cylinder H is rotated, and hence there is no liability of the discharge of the feeder becoming choked. The driving connection intermediate the shaft K and the forward roller C of the apron F comprises the before-mentioned crank R, link-rod T, and lever S and a ratchet-wheel W, fixed on the shaft of the roller C, and gravitating dogs X and Y, pivoted to the upper arm and the lower arm, respectively, of lever S and arranged to engage the teeth of the wheel W. As the lever S is rocked to and fro it will be seen that one or the other of the dogs X Y will engage a tooth of the wheel W and move the same forwardly through a part of a revolution, with the result that the upper stretch of the apron F will be moved forwardly step by step at a uniform speed. In the event of the apron F supplying too much cotton to the gin the speed of the apron may be diminished by rendering the dog X idle, this through the medium of a holder-rod Z, pivoted to the upper arm of the lever S and having a hook at its free end arranged to be placed in engagement with an eye Z' on the said dog. When the holder-rod is connected in the manner stated to the dog X, the said dog will be kept out of engagement with the teeth of the wheel W and will swing idly above the wheel W.

A', Figs. 2 and 4, is a striking-board arranged transversely in and pivoted to the receiving box or hopper B and having for its purpose to regulate the feed or passage of the cotton between the forward portion of the apron F and the cylinder H. The said

striking-board is carried by a shaft B', on one end of which is a crank C', Fig. 1, which crank is connected, through a link-rod D', with the upper arm of the lever S. In virtue of this it will be apparent that when the machine is in operation the striking-board A' will be oscillated from the lever S, so as to perform the function ascribed to it.

In the practical operation of my novel feeder the cotton is placed by hand or otherwise in the box or hopper B at a point in rear of the striking-board A' and is conveyed by the upper stretch of the apron F to a point below the feed-cylinder H, where it is engaged by the teeth of said cylinder and positively ejected from between the forward portion of the apron and the cylinder. When the cotton is thus ejected, the waste portion thereof drops into the trough G, while the long-staple product is deposited on the chute I to be fed to one or the other of the rollers of a double-roller gin, according to the position in which the chute I happens to be at the time. When it is necessary for any reason to stop the working parts of the feeder, the same may be quickly and easily accomplished by simply shifting the clutch member N out of engagement with its complementary member M. It will also be apparent that the speed of the working parts may be varied by placing the band on different portions of the pulley L.

It will be gathered from the foregoing that my machine is simple and inexpensive in construction and yet is calculated to efficiently feed Sea Island or long-staple cotton, which is an important desideratum. It will also be apparent that my novel machine has no connection with the gin which it feeds, and hence when repairs are necessary on the gin the feeder may be moved out of the way.

In Fig. 5 of the drawings I have illustrated a modified rocking chute I' in the form of a spout. This spout is arranged to receive the cotton in the same manner as the board I before described and is oscillated or swung to and fro by the lever S and the link-rod connected to the lower arm thereof. The board I and the spout I' perform identical functions, and one is designed to be used in lieu of the other, according to the desire of the purchaser of the feeder.

I claim—

1. In a gin-feeder, the combination of a receiving box or hopper, a feed-cylinder mounted in said box or hopper and having a crank, an apron, rollers supporting the said apron; one of said rollers being provided with a ratchet-wheel, a vertical lever, a connection intermediate the crank on the feed-cylinder and one arm of said lever, a gravitating dog arranged to engage the teeth of the ratchet-wheel and pivoted to the said lever, a vertically-rocking chute arranged in one position to receive cotton from the apron



and immediately discharge the cotton in one direction and in another position to receive cotton from the apron and immediately discharge the cotton in the opposite direction, 5 and a connection between the lever and the chute for operating the latter by the former.

2. In a gin-feeder, the combination of a receiving box or hopper having a discharge, means in the receiving box or hopper for 10 moving cotton toward said discharge, a vertically-rocking chute arranged in one position to receive cotton as the same drops from the discharge of the receiving box or hopper and immediately discharge the cotton in one 15 direction and in another position to receive cotton as the same drops from the discharge of the receiving box or hopper and immediately discharge the cotton in the opposite direction, and means for rocking the chute.

20 3. In a gin-feeder, the combination of a receiving box or hopper, a feed-cylinder

mounted in said box or hopper, and having a crank, an apron, rollers supporting the said apron; one of the said rollers being provided with a ratchet-wheel, a vertical lever, a con- 25 nection intermediate the crank on the feed-cylinder and one arm of said lever, a gravitating dog arranged to engage the teeth of the ratchet-wheel and pivoted to the said lever, a rocking chute arranged to receive cot- 30 ton from the apron and discharge the same first in one direction and then in another direction; said chute having a crank, and a connection between the lever and the crank of the chute. 35

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

STEPHEN EICHLBURGER THOMAS.

Witnesses:

C. S. GRISE,

J. B. BREWTON.