(No Model.)

4 Sheets—Sheet 1.

J. C. BARLOW.

CORN PLANTER.

No. 317,075. Patented May 5, 1885.

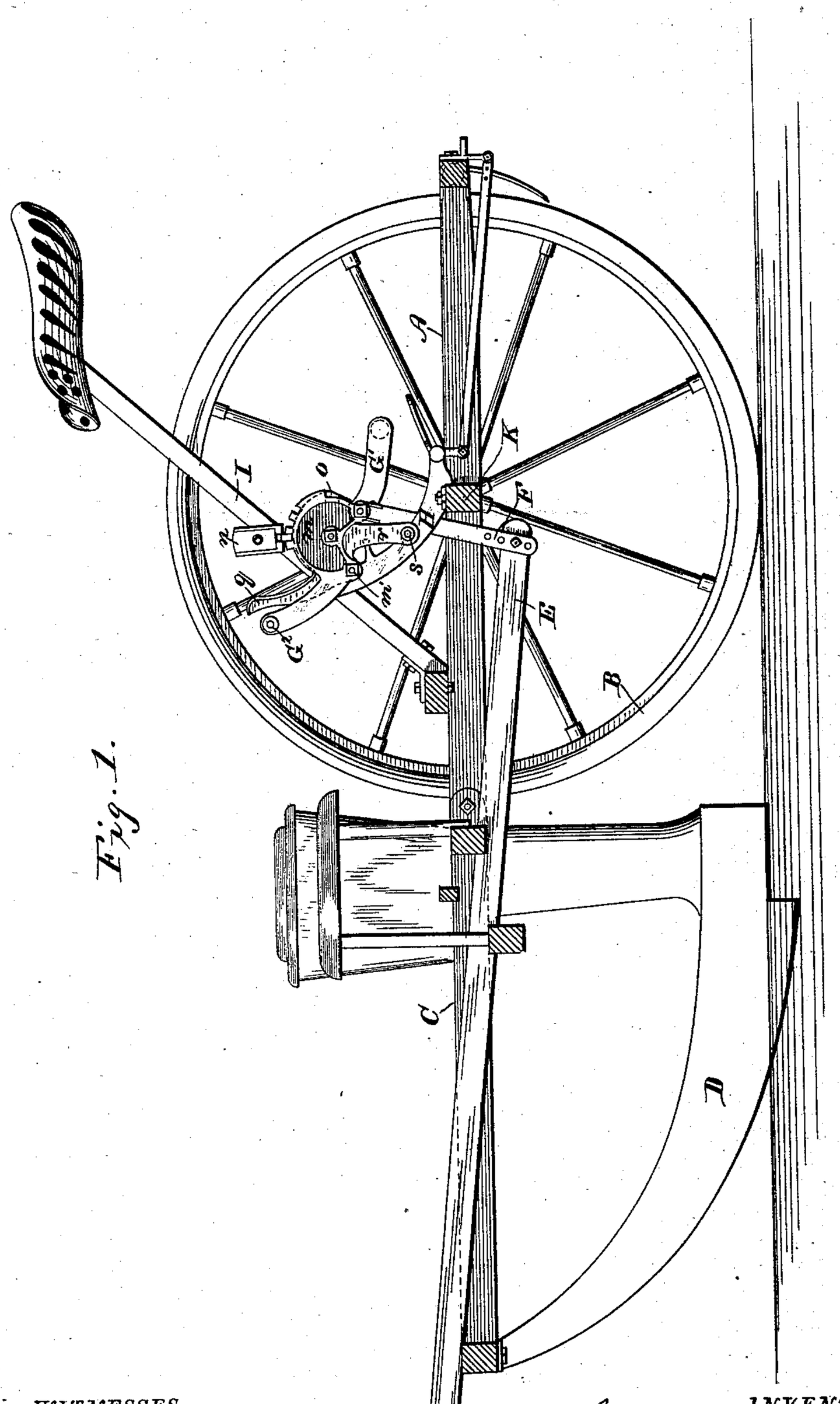


Fig. 1.

WITNESSES

Chas. R. Burr

Fred F. Church.

INVENTOR

Joseph C. Barlow

By Church & Church

His Attorneys

(No Model.)

4 Sheets—Sheet 2.

J. C. BARLOW.

CORN PLANTER.

No. 317,075. Patented May 5, 1885.

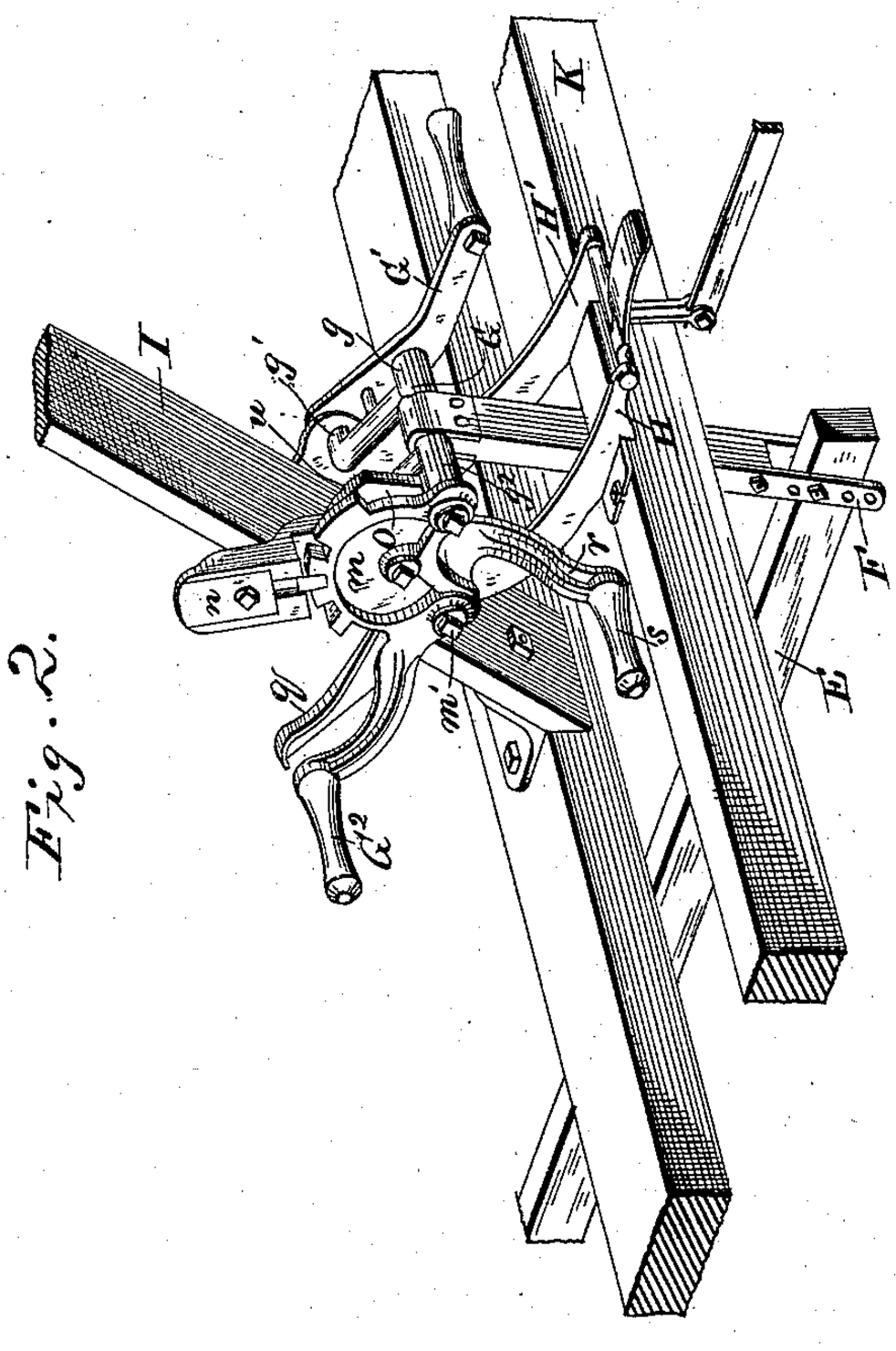


Fig. 2.

WITNESSES

Chas. R. Burr

Fred F. Church

INVENTOR

Joseph C. Barlow

by Church & Church

His Attorneys

(No Model.)

4 Sheets—Sheet 3.

J. C. BARLOW.

CORN PLANTER.

No. 317,075. Patented May 5, 1885.

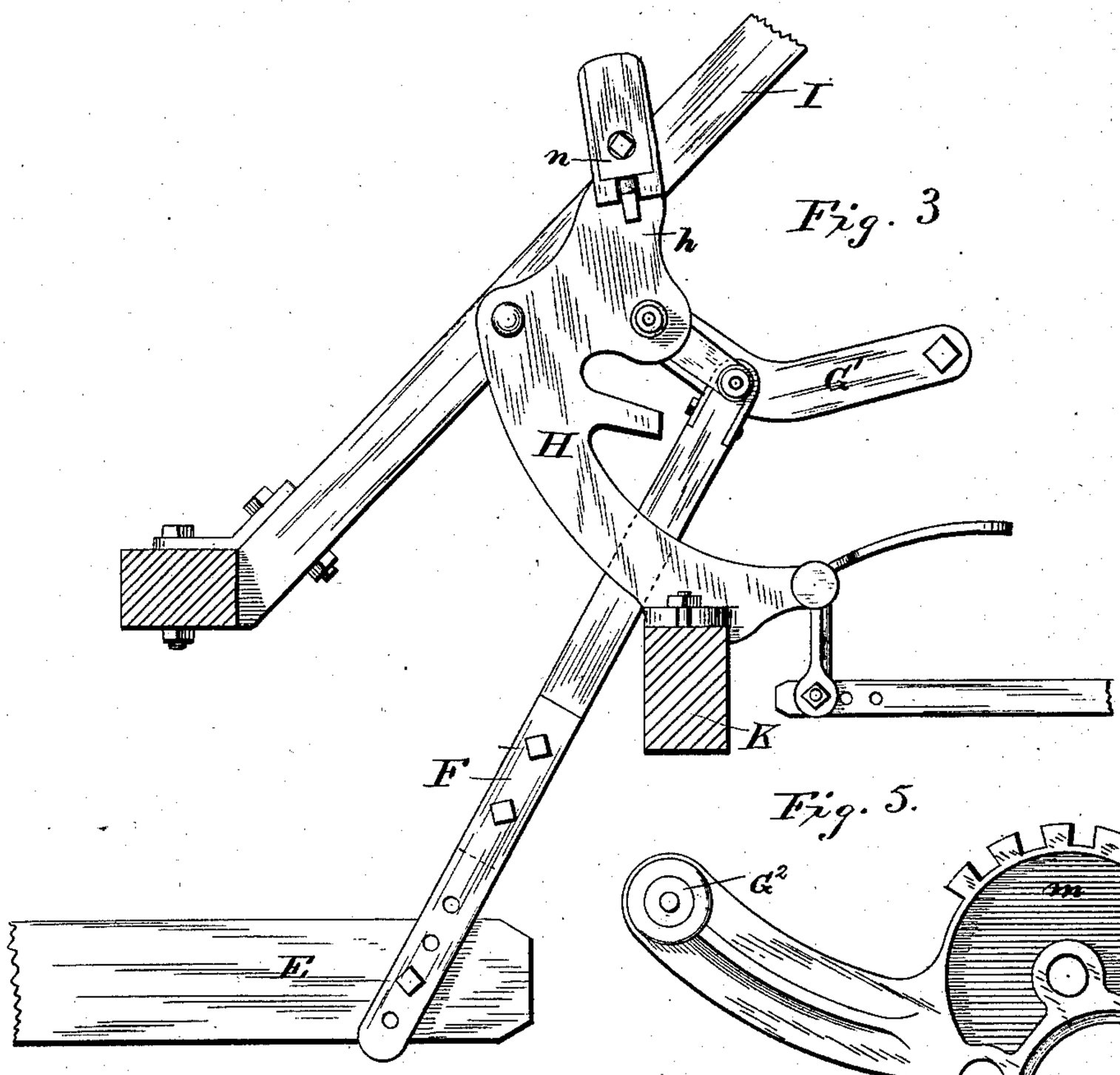


Fig. 3

Fig. 5.

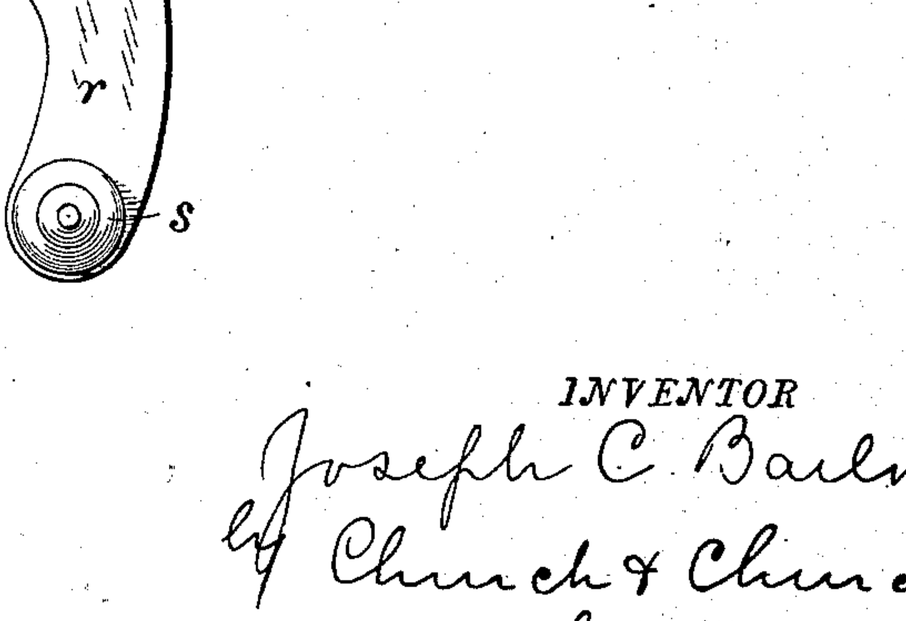
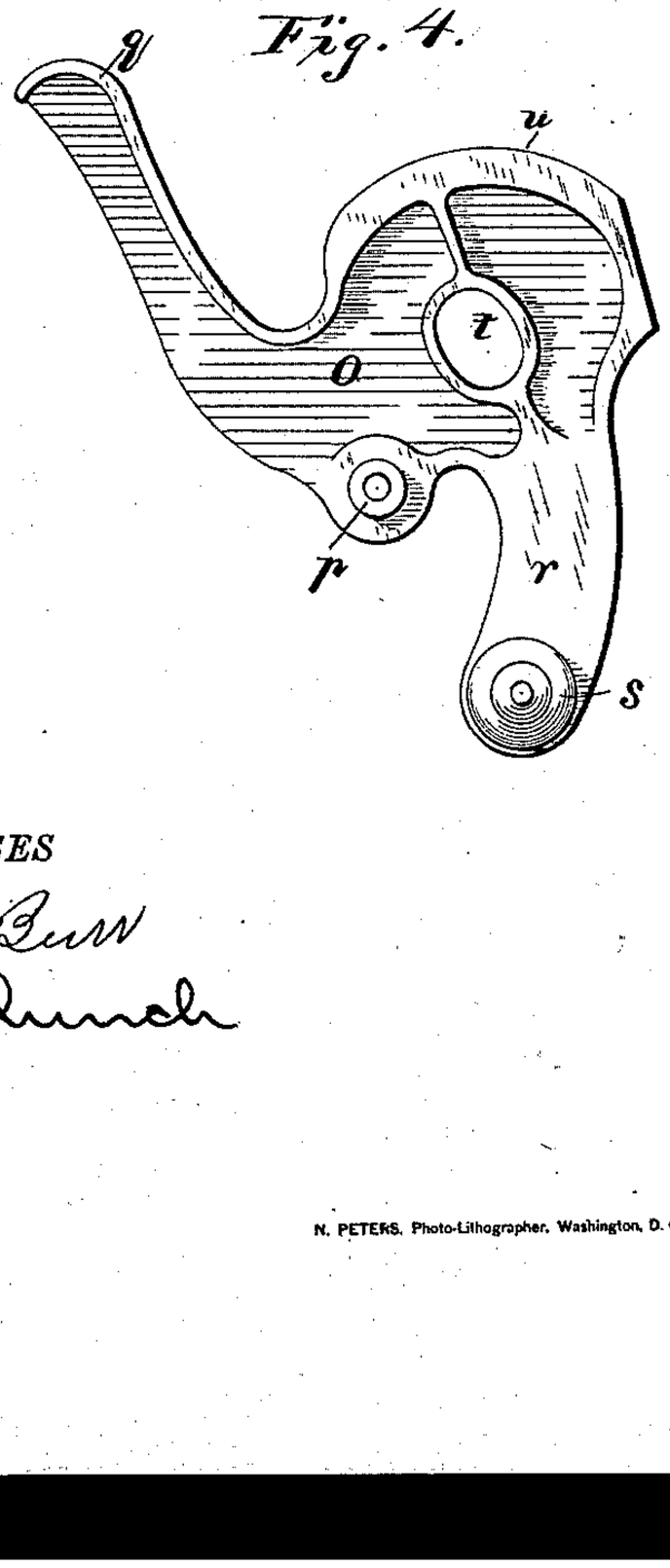


Fig. 4.



WITNESSES

Chas. R. Burr

Fred F. Church

INVENTOR

Joseph C. Barlow

by Church & Church

his Attorneys

(No Model.) 4 Sheets—Sheet 4.

J. C. BARLOW.

CORN PLANTER.

No. 317,075. Patented May 5, 1885.

Fig. 6.

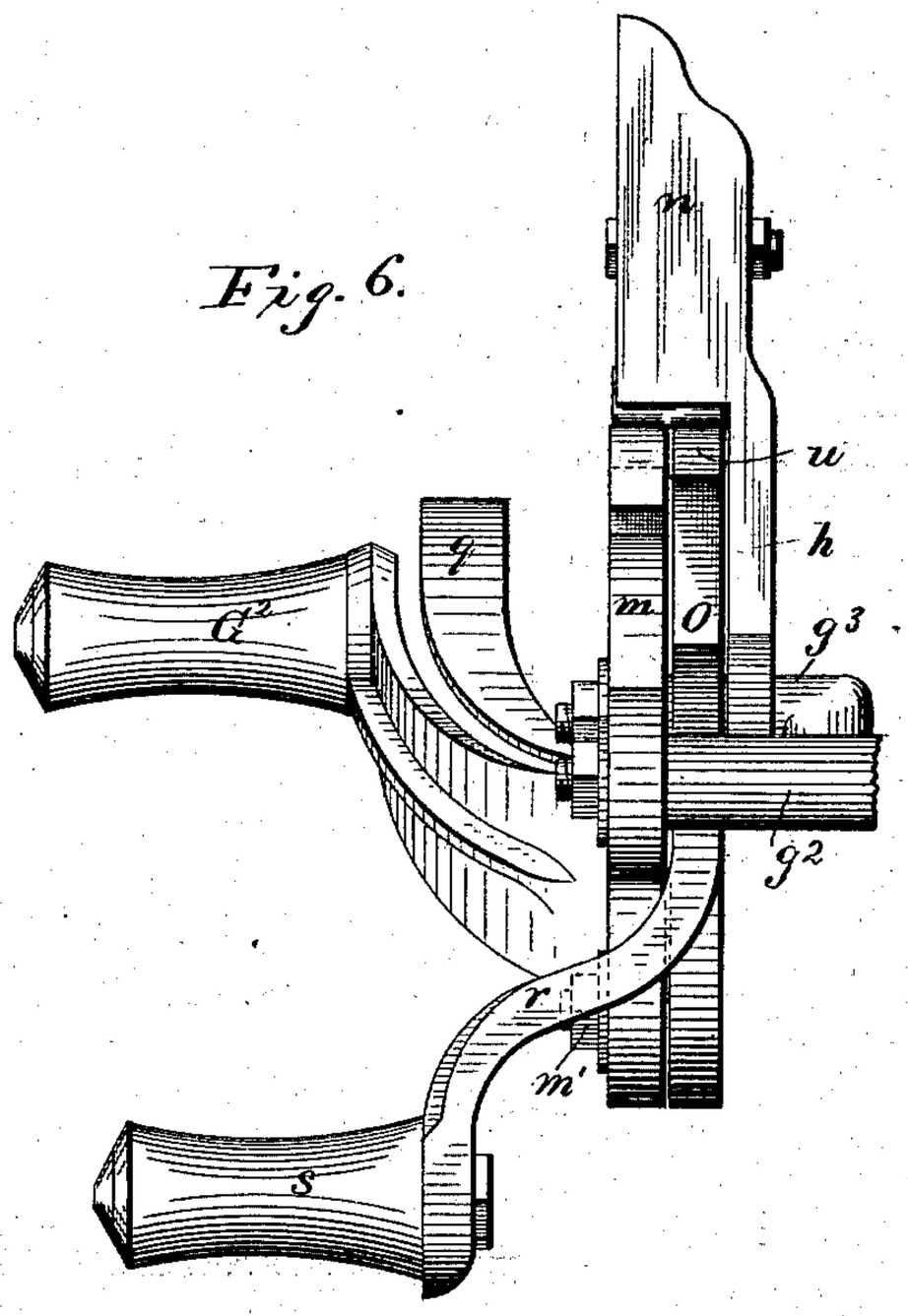
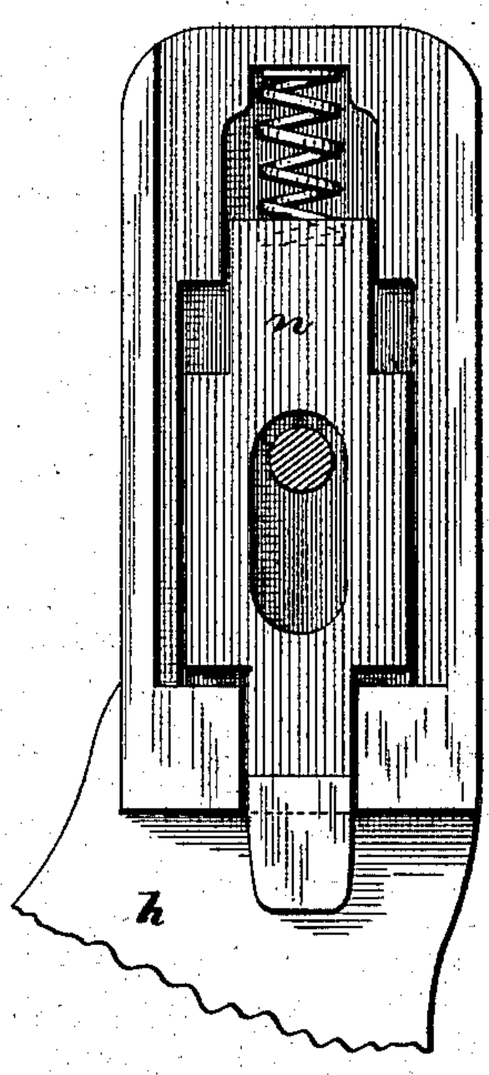


Fig. 7.



WITNESSES

Chas. R. Burr

Fred F. Church

INVENTOR

Joseph C. Barlow,

by Church & Church

his Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH C. BARLOW, OF QUINCY, ILLINOIS.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 317,075, dated May 5, 1885.

Application filed December 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. BARLOW, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates particularly to that class of corn-planters in which two flexibly-connected frames are employed, one of said frames being mounted upon the transporting-wheels and bearing the driver's seat, and the other carrying the runners or furrowing mechanism, and also the mechanism for dropping the seed.

By Letters Patent of the United States No. 162,599, dated April 27, 1875, there was granted the Vandiver Corn Planter Company, of Quincy, Illinois, as my assignee, a certain valuable improvement in means for effecting, at the will of the driver, the raising and lowering of the runner-frame of planters of the class referred to, such improvement, briefly stated, consisting of a crank-shaft mounted in suitable bearings upon the seat-standard, and connected by a suitable pitman to the false tongue or rear extension of the runner-frame, and provided at its opposite ends with foot-levers or pedals, by means of which the driver while sitting in his seat could rotate the crank-shaft either forward or backward, so as to depress or raise the runners into or out of the ground.

In practice it has been found desirable that some means be provided for locking at will the runners in any position to which they may be adjusted, and for some time I have been engaged in the invention of a locking attachment which could be conveniently and effectively used in connection with the above-described patented adjusting mechanism. My application to the subject has resulted in the production of a locking attachment, which I will now proceed to describe with reference to the accompanying drawings.

In said drawings, Figure 1 represents a longitudinal vertical section of a corn-planter of the type referred to provided with the said patented runner-adjusting mechanism, and also with my improved locking attachment. Fig. 2 is a perspective view looking from the rear of the seat-standard and the adjusting and locking devices connected thereto. Fig. 3 is a side elevation of the same with one of the operating foot-cranks and the eccentric which operates the locking-bolt detached. Fig. 4 is a view of the said detached eccentric. Fig. 5 is a view of the detached foot-crank. Fig. 6 is a detail view showing the relation of the locking-bolt to the eccentric and the foot-crank with which it co-operates. Fig. 7 is a detail view of the locking-bolt.

Similar letters of reference in the several figures indicate the same parts.

The letter A represents the main frame of the machine, mounted on the wheels B. C is the runner-frame, carrying the runner D and flexibly jointed to the main frame, as shown. E is the false pole or rear extension of the runner-frame; F, the pitman which connects the said rear extension to the crank-shaft G. The crank-shaft has its bearings in two plates, H H′, secured to opposite sides of the seat-standard I, and also, preferably, to the cross-piece K of the main frame.

To the projecting end g of the crank-shaft, and to the extension g' of the crank-wrist on the same side of the seat-standard, is secured, by means of a bolt or otherwise, the right foot-lever or crank G′, while to the opposite projecting end g^2 of said crank-shaft, and to the extension g^3 of the crank-wrist on that side, is secured the left foot-lever G^2.

By the devices thus far described and arranged, as shown, the driver is enabled by means of the foot-levers to rotate the crank-shaft backward or forward at will, so as to raise or lower the runner-frame and runners in accordance with my former invention, patented August 27, 1875, as aforesaid. To provide, however, in the present instance for the locking of the crank-shaft at any point of adjustment, I form a toothed sector, m, on the left foot-lever G^2, and I mount upon an extension, h, of the supporting-plate H′ a sliding bolt or pawl, n, or other equivalent device adapted to engage with the teeth of the toothed sector m.

Having thus contrived for the locking of the foot-lever, (and the consequent locking of its connected parts,) it only remains to arrange for the unlocking or disengagement of the pawl or

bolt to place the locking arrangement under the full control of the driver. This is accomplished by means of an eccentric, O. (Shown detached in Fig. 4.) This eccentric is provided with a boss, *p*, by means of which it is pivoted to the left foot-lever at *m'*, and with a forwardly-projecting arm, *q*, that extends out to the foot-rest of the left foot-lever, and with a downwardly-projecting arm, *r*, that is provided with a foot-rest, *s*. It is further constructed with an elongated slot or opening for the accommodation of the end of the crank-shaft, and with an eccentric projection, *u*, that is adapted when the eccentric is turned on its bearings to strike against and raise the locking bolt or pawl *n*, and disengage the latter from the teeth of the sector *m*.

The locking-bolt is preferably kept normally projected by means of a spring, as shown.

With this much of a description of the locking device it is believed its operation will be readily understood. When the driver desires, for instance, to press the runners into the ground, he, with his left foot, bears lightly upon the end of the forwardly-projecting arm *q* of the eccentric until his foot also comes in contact with the foot-rest of the lever G^2. This causes the surface *u* of the eccentric to raise the sliding bolt out of the path of the toothed sector, and the driver then by pressing upon the right foot-lever is enabled to drive the runners into the ground the desired depth. To effect the locking of the runners in this position it is only necessary for him to raise his left foot from the forward arm of the eccentric, whereupon the eccentric by its own weight will turn on its pivot, and permit the sliding bolt to descend and engage with one or the other of the teeth of the sector. Should the weight of the eccentric not operate promptly enough to move it out of the way of the bolt, it may be turned positively by the pressing of the driver's left foot upon the foot-rest *s* on its arm *r*.

It will be observed that the location of the forward end of the eccentric-lever *q* enables the driver by simply lifting slightly the inner side of his foot to press upon and operate said lever without entirely lifting his foot from the foot-lever proper. So convenient, indeed, is this eccentric-lever arranged that the driver in the act of pressing upon the left foot-lever will almost involuntarily strike said eccentric-lever and disengage the bolt, and thus render his intended pressure upon the foot-lever effective in shifting the position of the runners. When, in fact, the driver has his feet upon both foot-levers, and has the eccentric-lever covered and held depressed by his left foot, he has the runner-shifting mechanism under as full control as though there were no locking devices present, and it is only when pressure is removed from the eccentric-lever that the locking devices go into operation, and then they serve to lock the parts rigidly at the last point of adjustment reached.

In transporting the machine to and from the field, and at other times when it is desired to hold the runners elevated and locked, the driver has only to depress the left-hand foot-lever sufficiently far to enable the pawl or bolt to drop behind the last tooth of the sector. To disengage the pawl or bolt, when the parts are in this last-named position, the foot-rest *s* of the other arm of the eccentric is pressed upon by the left foot of the driver, so as to cause the eccentric to swing backward, and in so doing raise the bolt from engagement with the sector-tooth.

It is apparent that neither the special form of the eccentric herein shown nor the particular kind of locking-bolt shown need be employed, since other forms of eccentrics and different kinds of locking devices of well-known construction might be used with the same effect, and would be but the mechanical equivalents of the mechanism shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a corn-planter, the combination, with the main frame, the hinged runner-frame, the crank-shaft, and the foot-levers for rotating the crank-shaft so as to raise or lower the runner-frame, of a bolt or pawl mounted upon a fixed support and operating to lock the crank-shaft in any position of its adjustment, and an unlocking device mounted upon and moving with the foot-lever and operated by the driver's foot for disengaging the looking-bolt and permitting the raising or lowering of the runner-frame by the foot-levers, substantially as described.

2. In a corn-planter, the combination, with the main frame, the hinged runner-frame, the crank-shaft, and the foot-levers for rotating the crank-shaft so as to raise or lower the runner-frame, of a bolt or pawl for locking the foot-levers and an eccentric operated by the driver's foot for throwing the locking bolt or pawl out of engagement, substantially as described.

3. In a corn-planter, the combination, with the main frame, the hinged runner-frame, the crank-shaft, and the foot-levers for operating the crank-shaft so as to raise or lower the runner-frame, of a bolt or pawl mounted upon a fixed support for locking the foot-levers, and an eccentric for disengaging the bolt, mounted upon and moving with the foot-levers and operated by the driver's foot, substantially as described.

4. In a corn-planter, the combination, with the main frame, the hinged runner-frame, the crank-shaft, and the foot-levers for operating the crank-shaft so as to raise or lower the runner-frame, of a bolt or pawl mounted upon a fixed support for locking the foot-levers, and an eccentric for disengaging the bolt mounted upon the foot-lever, and having an arm extended forward to the foot-rest of the foot-lever, substantially as described.

5. In a corn-planter, the combination, with the main frame, the hinged runner-frame, the crank-shaft, and the foot-levers for operating

the crank-shaft so as to raise or lower the runner-frame, of a bolt or pawl for locking the foot-levers and a supplemental lever projecting in proximity to the foot-lever, and operating, when pressed forward by the driver's foot, to throw the bolt or pawl out of engagement, and to itself serve as a means of operating the crank-shaft, substantially as described.

6. The combination, with the crank-shaft and the foot-levers, one of the latter having the toothed sector, of the locking-bolt and the eccentric pivoted to the foot-lever, and having the forward arm and the downwardly-projecting arm, the whole constructed substantially as described.

JOSEPH C. BARLOW.

Witnesses:
CHAS. SEEGER,
CHAS. D. SEEGER.