

(No Model.)

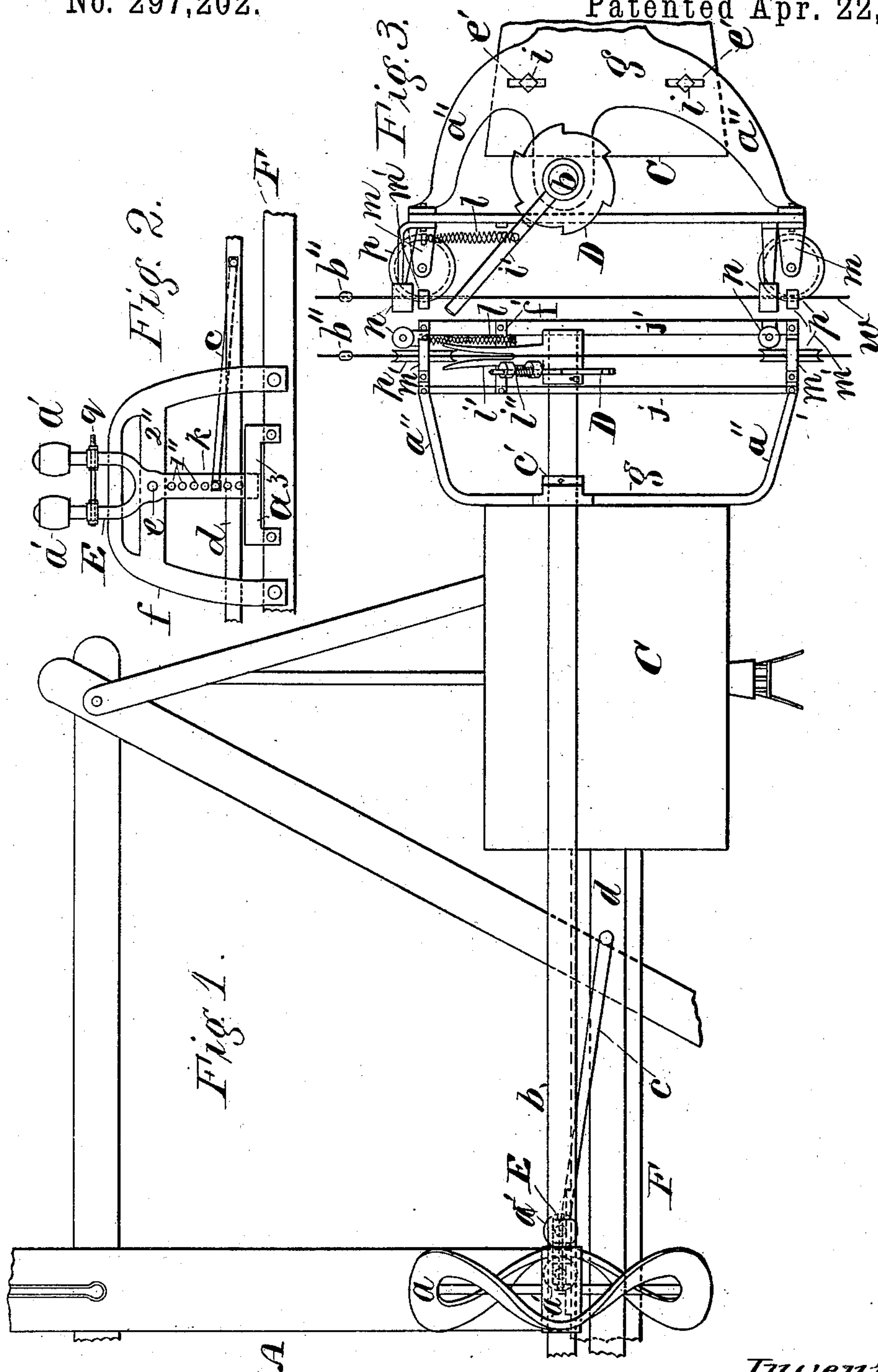
2 Sheets—Sheet 1.

J. J. TUTTLE.

CHECK ROWER.

No. 297,202.

Patented Apr. 22, 1884.



Attest:

M. M. Corwell
Thomas Strong

Inventor.
John J. Tuttle
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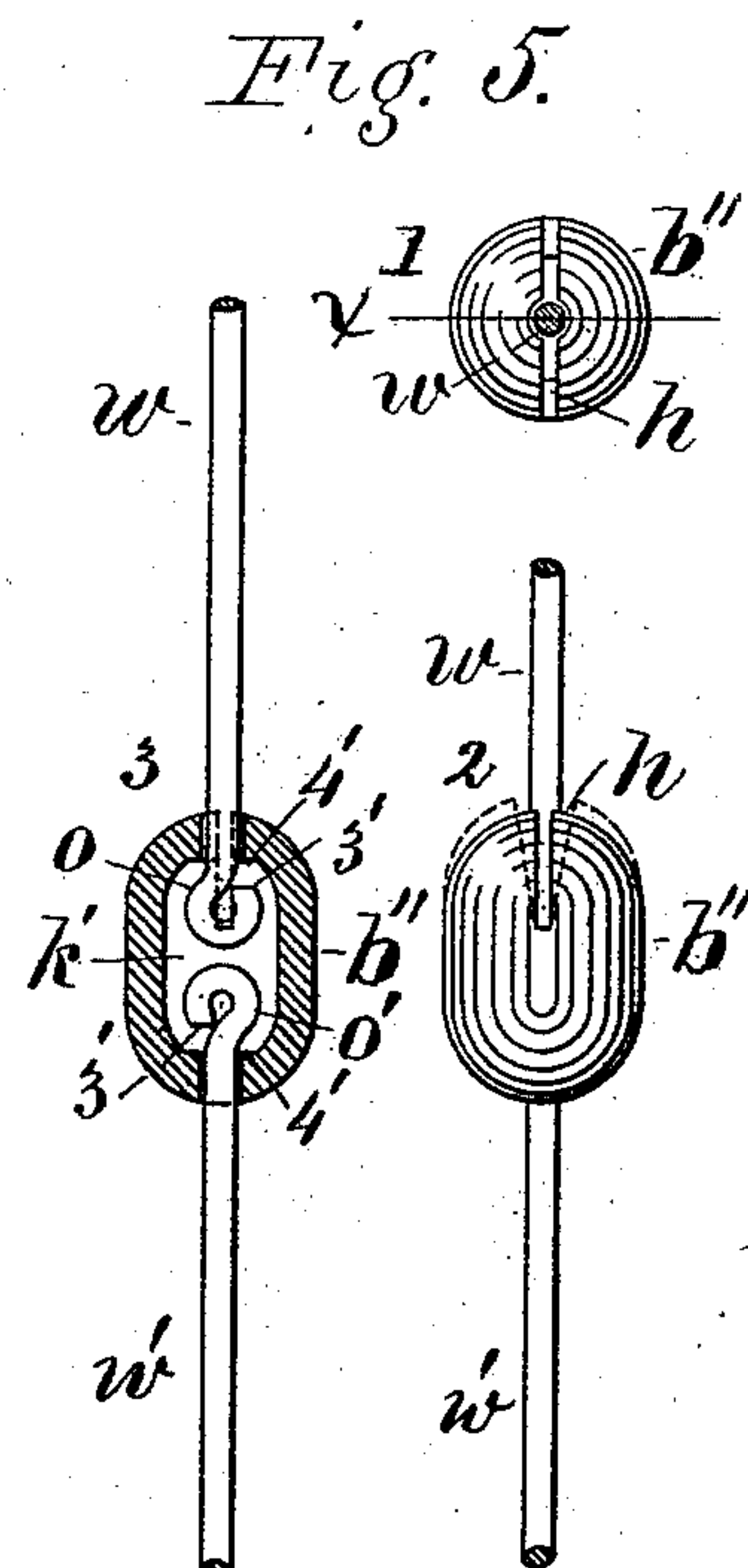
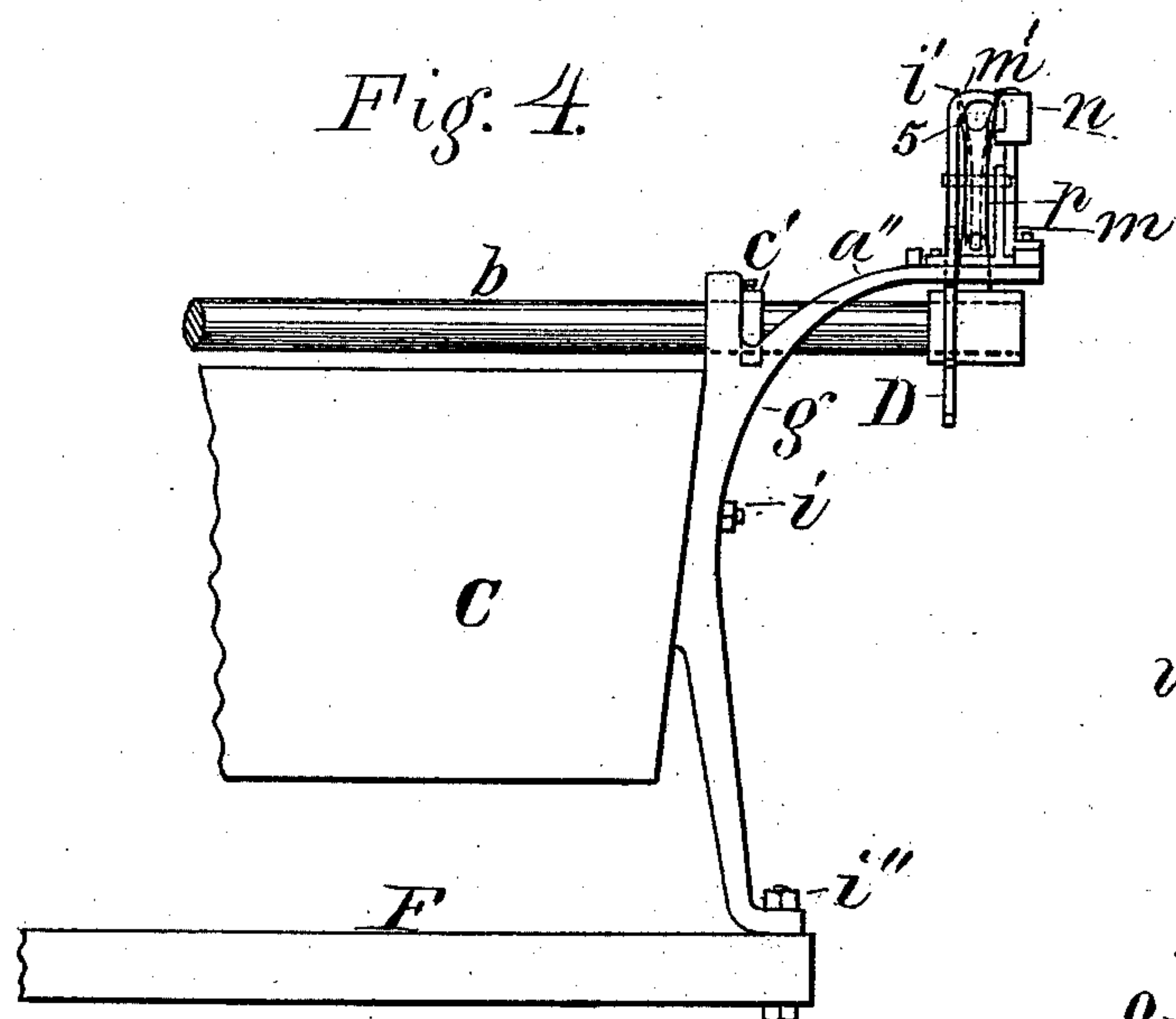
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B. C. Converse,
Atty.

UNITED STATES PATENT OFFICE.

JOHN J. TUTTLE, OF SPRINGFIELD, OHIO.

CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 297,202, dated April 22, 1884.

Application filed June 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. TUTTLE, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Check-Rowers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in check-rows; and it consists in certain novel features in connection with the devices for operating the check-rower; also, in improvements in the guard hook or loop for preventing the wire from being thrown out of the pulley; also, in a certain novel construction in the button, and in the manner of connecting the wire therewith.

The object of the invention is to produce a check-rower which shall be simple in its construction and effective in its operation, making the movement of the slide-lever with certainty and accuracy.

Figure 1 is a top view of the right half of the front section of a two-horse corn-planter to which my improved check-rower is applied, Fig. 2 is a detail of a part of the movement used. Fig. 3 is an end view of the check-rower from the right. Fig. 4 is a rear view of the right end of the check-rower and bracket attachment, a part of the seed-box and main cross-bar being also shown. Fig. 5 comprises end and side views and a longitudinal section of the button and wire connections therewith.

In the figures, A is the frame and part of the tongue of the right half of the front section of a corn-planter. C is the seed-box, and F the main cross-bar, of the same. Mounted over the top is seen the check-rower, consisting of a shaft, *b*, mounted in a box-bearing in the supporting-brackets *g*. These latter are made in the form of a frame having a fork, the limbs *a''* of which are bent upward and outward from the main frame, and have the cross-pieces *j* and *j'*, bearing the pulleys and other devices operated by the wire *w* and its buttons *b''*. These latter are carried upon one side of the check-rower, the tension of the wire be-

ing made by anchors on either end of the field in the usual manner. At the middle of the shaft *b* is a circular cam-wheel, *a*, having a single flange pitched alternately in opposite directions in the form of a double spiral. This male cam revolves between the two friction-rollers *a'* in the ends of the upright fork E. This latter stands over the front edge of the main cross-bar, and is pivoted to the flat arched bar *f*. This bar is forged with a cross-piece, 2", near the top, and its two lower ends are bolted to the front of the main cross-bar F. The fork E is pivoted near its center to the cross-piece 2" of the arched bar *f*, on the front side, by a pivot-bolt, *e*, so as to oscillate freely thereon in line with the main cross-bar F. The stem of E extends below its pivot to near the top of the main cross-bar, and has a series of holes, 1", therein to permit of the adjustment of the throw of the slide-lever *d*, which is connected with E by the rod *c*, having a hook on its end engaging with the holes 1, as seen in the detail, Fig. 2. The friction-rollers *a'* are also made adjustable to the cam-flange, which the fork B straddles, by the connecting screw-rod *q* and its nut, the two arms of the fork, with their rollers, being sprung closer together when it is desired to increase the throw. To prevent any lateral motion of the stem *k* of the fork E, and to keep it vertical during its operation, a thin flat bar, *a³*, having its ends turned down at right angles, is bolted through them to the front side of the main cross-bar F, as shown in Fig. 2, under the middle of the arch-bar *f*. The end of the stem *k* extends down over the front side of the bar *a³*, touching the latter as it oscillates.

In order to time the check-rower, it is made adjustable toward the front and rear by means of the horizontal slots *e'*, (seen in the brackets *g*,) through which the bolts *i* secure them to the outside of the seed-boxes on either side of the planter. The foot end of the bracket is secured by the bolt *i''*, and a slot in this end also allows the entire bracket and its devices to be shifted. At the extreme end of the limbs *a''* of the bracket, where the ends of the cross-bar *j* unite therewith, are friction-rollers *n*. The rollers on the front are a little in advance of the axle and standard of the pulley, and the rear ones are on the same side of the rear pulley-standard. The friction-rollers

n are pivoted vertically upon their standards, attached to the frame-bar of the bracket, and their object is to receive the pressure of the wire *w* when the machine is turning at the ends of the rows, and guide it into the pulleys *p*. The guard-hooks, which extend over the vertical pulleys *p* from the inside standard, *m'*, of the same, and in which they are pivoted, are each provided with an inside projection or shoulder, 5, which extends down, and has its inside surface in the same vertical line with the inside surface of the flange of the sheave or pulley, so as to prevent the wire from getting between the pulley and the standard while in operation.

In operating the machine, as the planter advances wire *w* is drawn over pulleys *p* and through the intermediate fork, *i'*, (which latter is pivoted upon the end of shaft *b*,) until the button *b''* strikes the fork, when it is thrown backward, and its latch *i''* (seen in Fig. 1) in the meantime engages with a tooth in the ratchet-wheel *D*, on the shaft *b* under it, and the latter is revolved one-sixth of a revolution, or the distance from one tooth to another of the ratchet-wheel. As the latter is rigidly attached to the shaft, it carries the cam-wheel with it, which is also revolved a like distance, it being equal to that from the outer to the next inner curved angle of one of its pitched sides, and as it engages the rollers *a'* of the fork *E* the latter is oscillated upon its pivot *e*, and the movement is transmitted through rod *c*, connecting its stem *k* with slide-lever *d*, to the seeding devices.

The wire of my check-rower is in sections, and connected by a hollow ellipse-shaped shell cleft through diametrically from one end to the center. The end of the wire is turned into a circular eye, which is turned on the end, and drawn inside the shell of the button *b''* through the closed end in one section of the wire, and the eye in the other section is inserted through the cleft *h* and the latter afterward closed up.

Fig. 5 shows the details of the button. In the detail 1 the end of the button *b''* is shown with the wire *w* in cross-section, the cleft *h* being closed. 2 shows a longitudinal elevation of the button with the wire sections inserted, (the cleft *h* being also closed, so as to fasten the upper section of the wire,) with the normal position of the two jaws of the cleft *h* shown in dotted lines. In the detail 3 the eye ends of the two wire sections, and their relative positions with respect to the cavity within the button, are plainly seen. The inside of the cavity *k'* is flat at the ends 4', and the end 3' of the wire ring *o* is also made square, to allow it to bear upon the flat inner surface, 4', of the button, so as to allow the button to turn easily upon the wire, and to prevent the latter from being kinked when in operation. When the cleft is open, it is sufficiently wide apart to introduce the section *w'* through the cleft, and through the hole in the closed end of the button, as the ring *o'* on the

wire *w'* can easily be drawn down through the open cleft within the lower end of the button, as seen in detail 3. The upper section, *w*, with the wire *o* turned upon its end, is then inserted through the open cleft, as before described, and the latter closed, either by means of a hammer or tool made for the purpose. The two wire sections *w* and *w'* are swiveled in the button, so that it is impossible to kink the wire in operating the check-rower, or in coiling the wire for transportation.

I claim as my invention—

1. In a check-rower, the combination, with a revoluble shaft having the double-spiral male cam on the center of the same engaging with an adjustable oscillating fork provided with rollers, and pivoted over the slide-lever of a corn-planter, a ratchet-wheel rigidly attached to said shaft, and a pivoted spring-fork having a spring-latch engaging with the teeth of said ratchet-wheel for operating the check-rower, of the adjustable bracket having the upwardly and outwardly bent limbs, the cross-bars connecting the same, and the bearing-pulleys and guide-rollers arranged as shown, and adapted to be operated as set forth.

2. The combination, with the seed-boxes and the main cross-bar of the planter, of the brackets having the upwardly-bent and outwardly-extended limbs, the cross-bars connecting the same, said brackets being adapted to support the revoluble shaft and its auxiliary operative devices, and having the horizontal slots extending through the body of the same, whereby they are made adjustable (in connection with bolts securing them to the ends of the seed-hoppers and the main cross-bar) toward the front and rear of the planter, as set forth.

3. In a check-rower wire, a hollow button of ellipse shape having a cleft extending longitudinally through the axial line of the same from one end to the middle of said button, said cleft being wider at the outer end to allow of the insertion of the wire sections, and adapted to be closed to retain the eye ends of said wire sections and swivel them within the button, as set forth.

4. In a check-rower, a hollow button of ellipse shape having an open cleft extending from one end through it to the middle of the same for the insertion of the ring ends of the wire sections, and adapted to be closed over the same, and having its inner cavity flat at the ends around the wire-hole to allow the ring end of said wire (having a square abutting end) to turn freely within said cavity, and to prevent it from kinking when operated or in coiling for transportation.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. TUTTLE.

Witnesses:

B. C. CONVERSE,
THOS. STRONG.

It is hereby certified that in Letters Patent No. 297,202, granted April 22, 1884, upon the application of John J. Tuttle, of Springfield, Ohio, for an improvement in "Check-Rowers," the residence of the patentee was written in the grant thereof as "Springfield, Massachusetts" instead of *Springfield, Ohio*; and that the Letters Patent should be read with this correction therein to make it conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 29th day of April, A. D. 1884.

[SEAL.]

M. L. JOSLYN,
Acting Secretary of the Interior.

Countersigned:

BENJ. BUTTERWORTH,
Commissioner of Patents.