

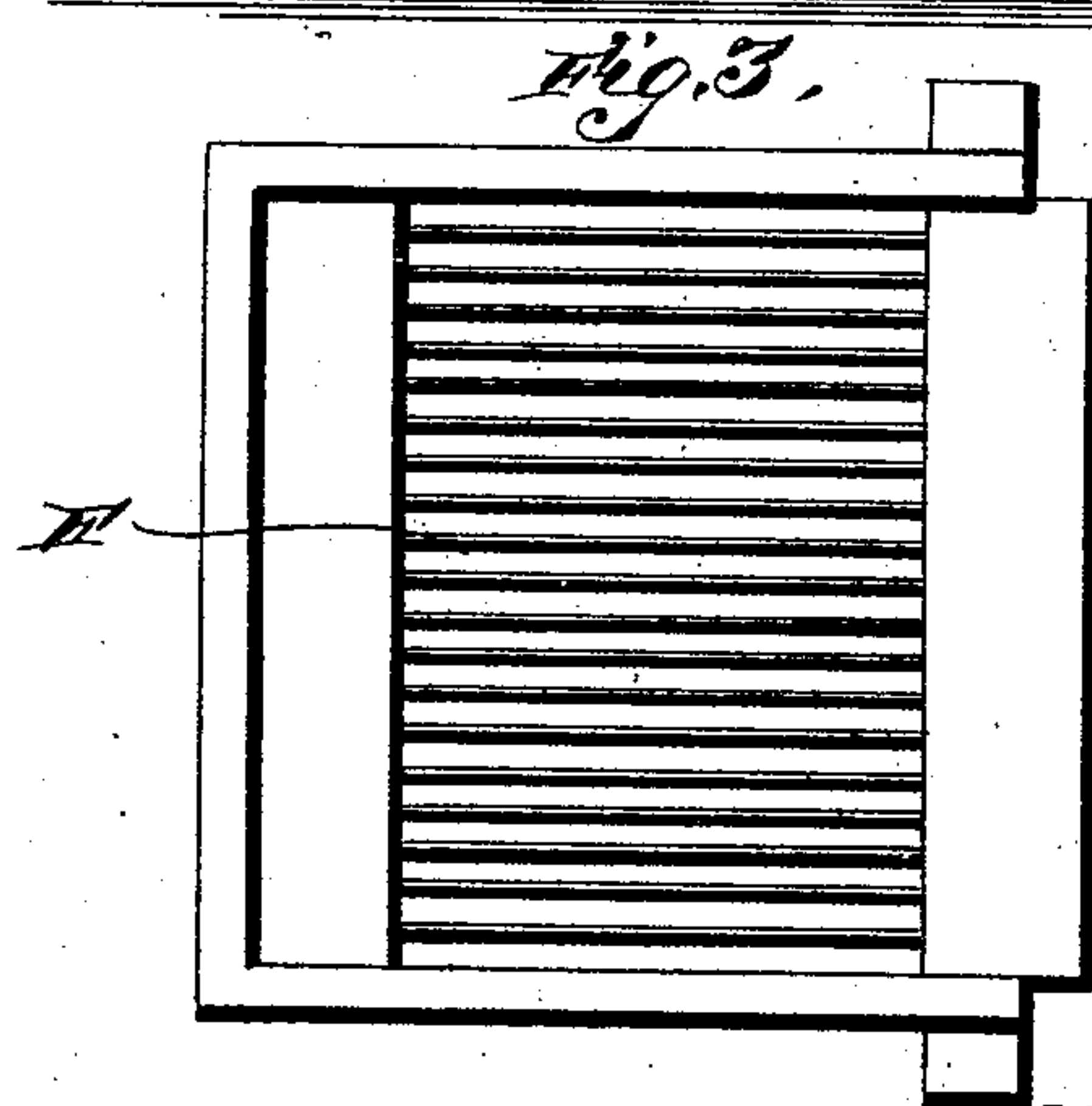
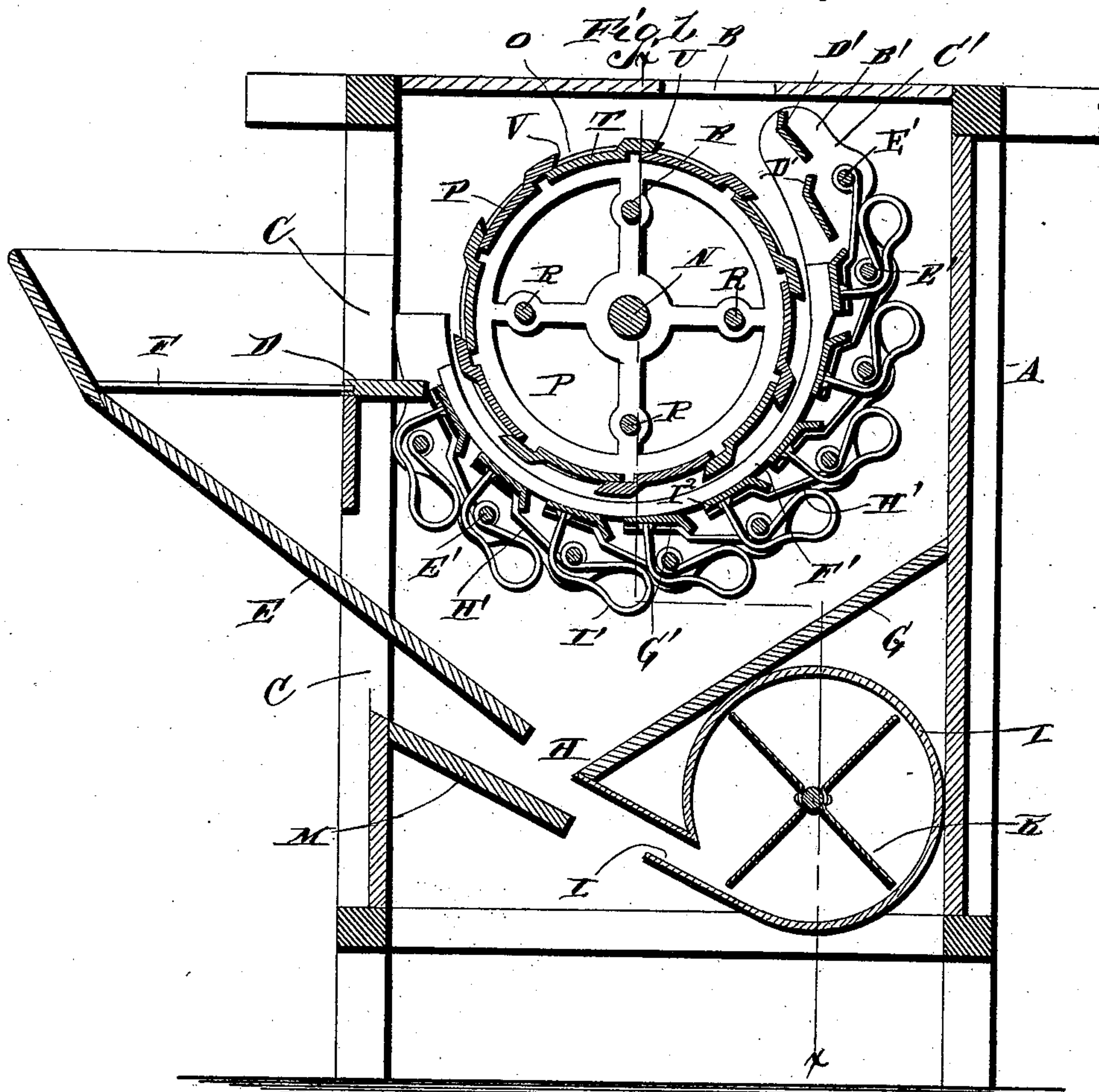
(No Model.)

3 Sheets—Sheet 1.

L. R. WHITING.
CORN HUSKER AND SHELLER.

No. 407,710.

Patented July 23, 1889.



Witnesses

C. L. Taylor,
J. W. Garner

Inventor

L. R. Whiting

By *his* Attorneys

C. A. Howells

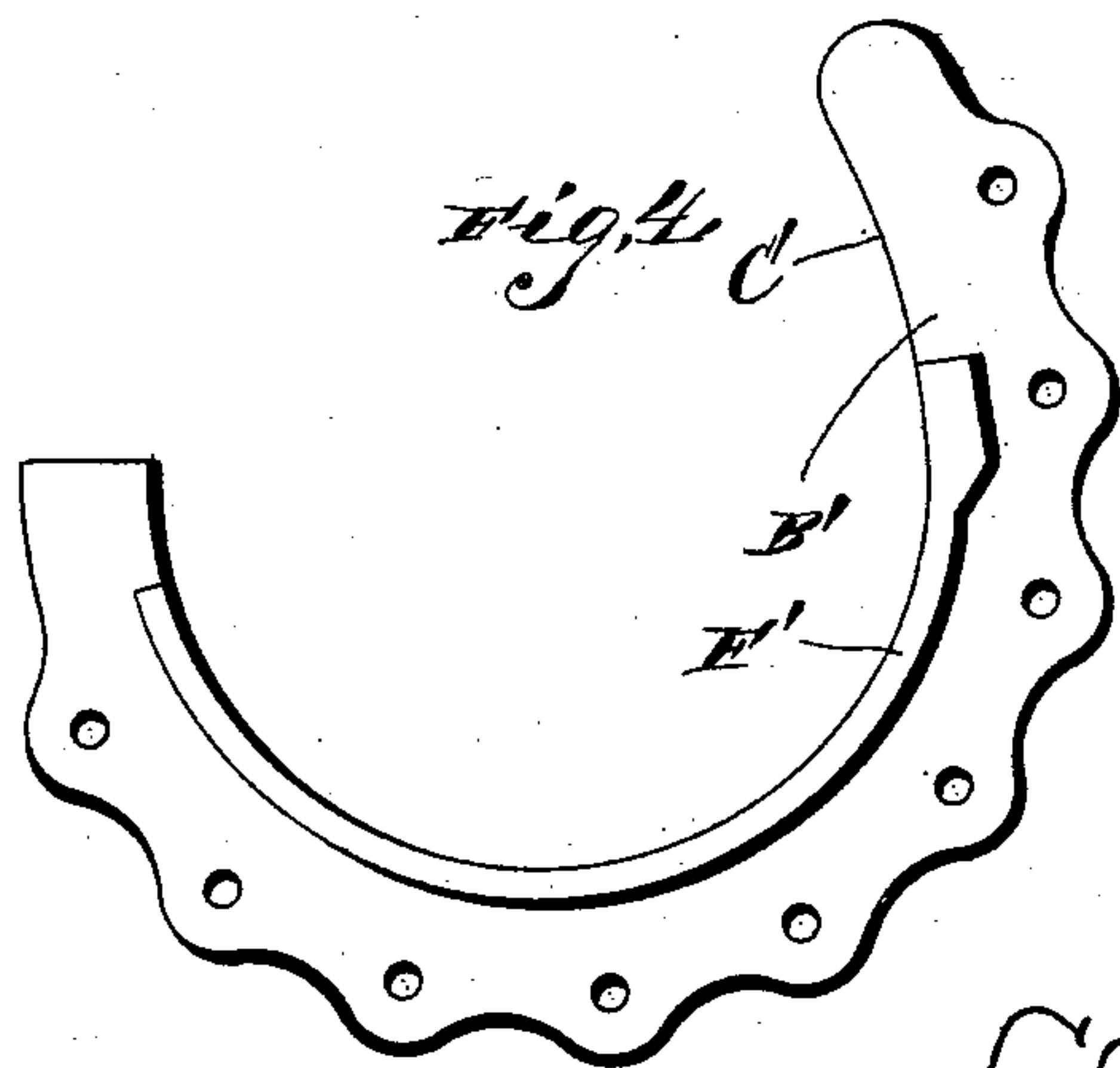
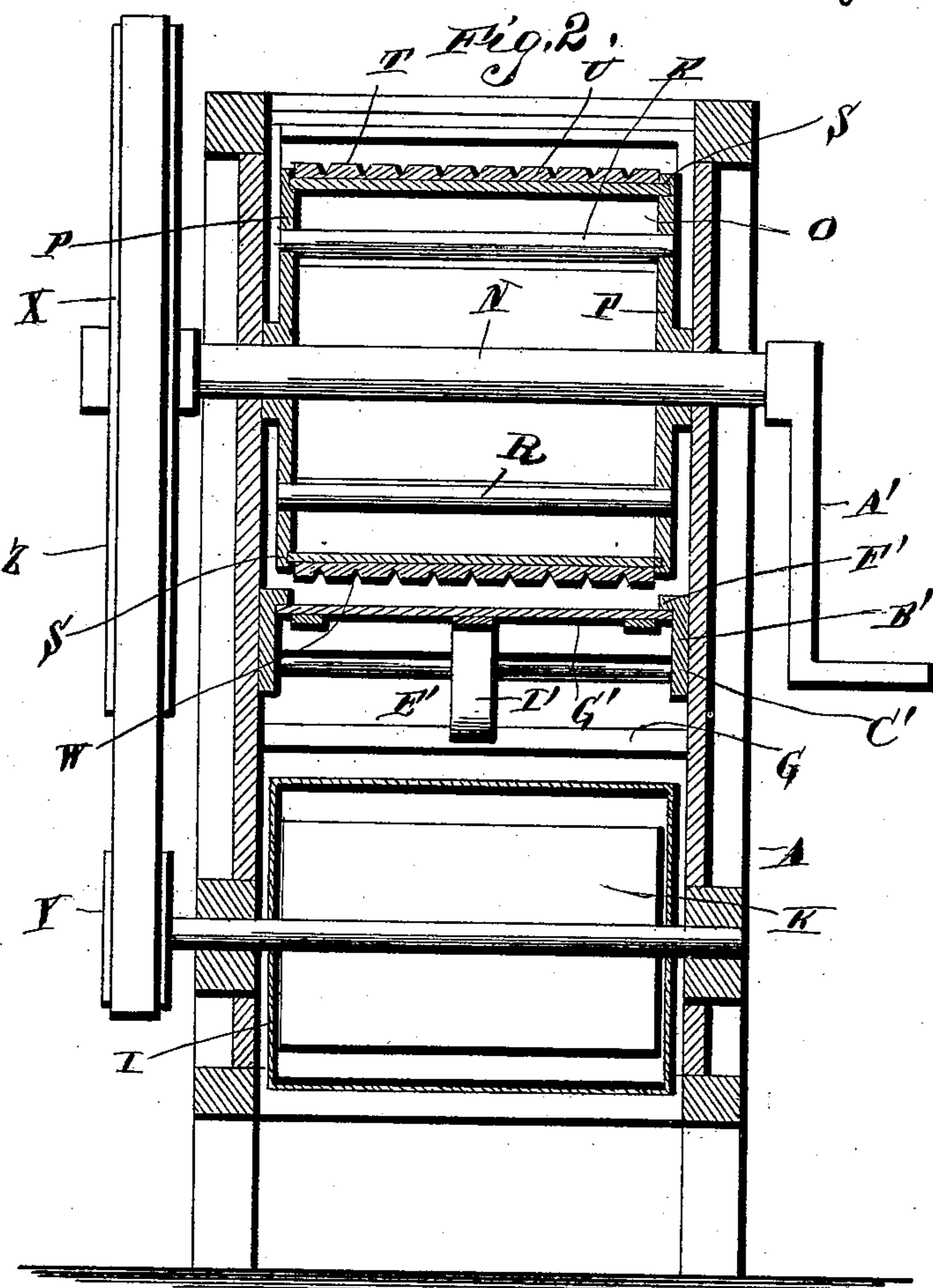
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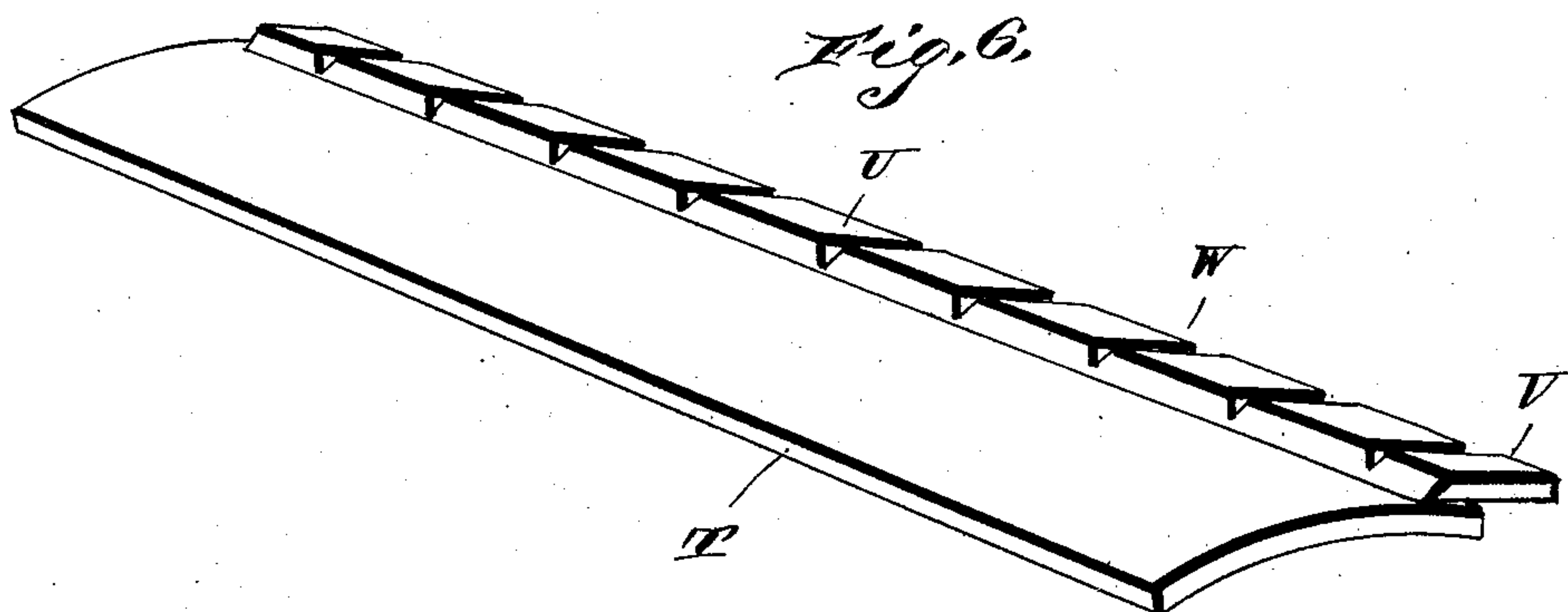
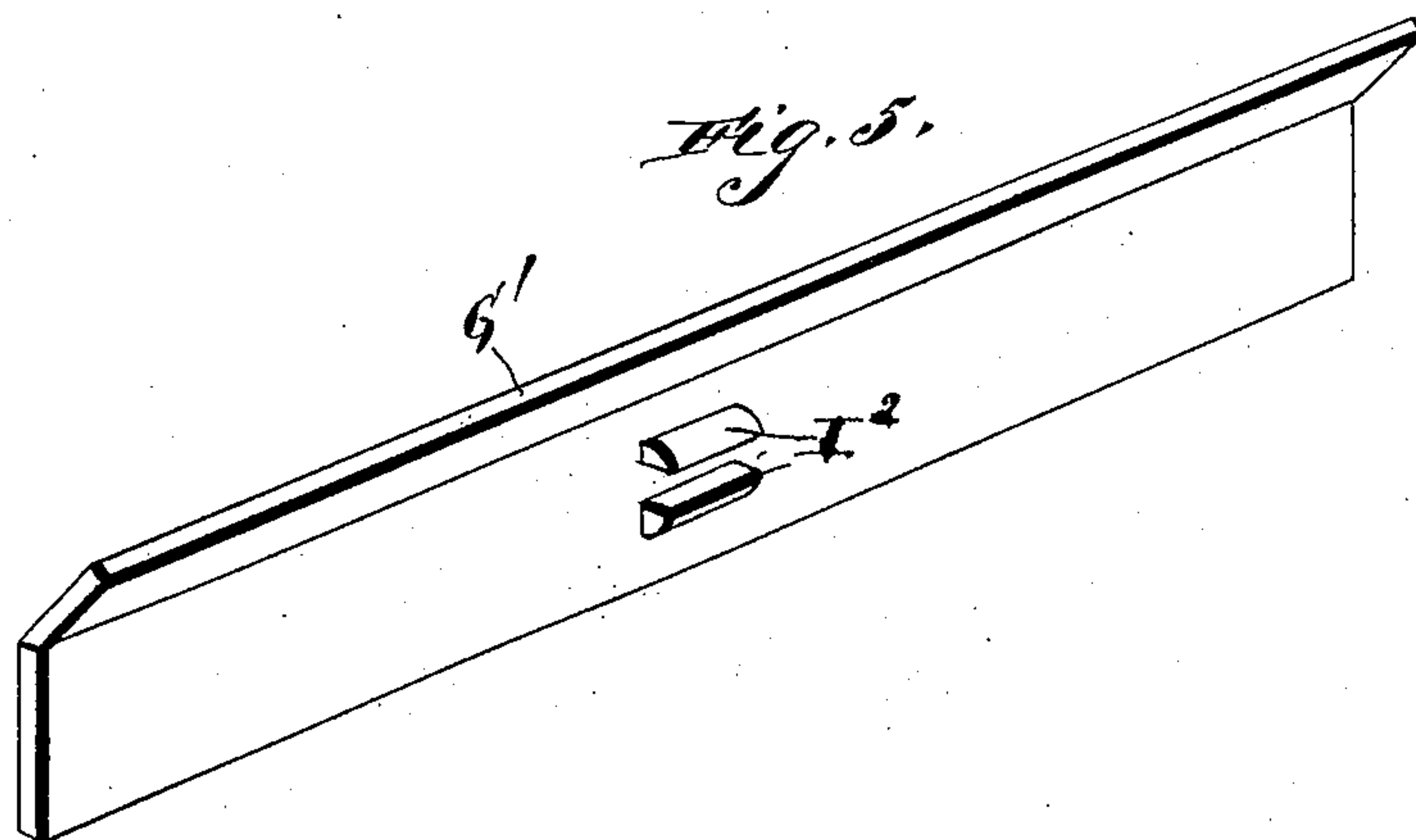
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3 Sheets—Sheet 3.

L. R. WHITING.
CORN HUSKER AND SHELLER.

No. 407,710.

Patented July 23, 1889.



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UNITED STATES PATENT OFFICE.

LOUIS ROSSELL WHITING, OF DALLAS, TEXAS.

CORN HUSKER AND SHELLER.

SPECIFICATION forming part of Letters Patent No. 407,710, dated July 23, 1889.

Application filed July 10, 1888. Serial No. 279,494. (No model.)

To all whom it may concern:

Be it known that I, LOUIS ROSSELL WHITING, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented a new and useful Improvement in Corn Huskers and Shellers, of which the following is a specification.

My invention relates to an improvement in corn huskers and shellers; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of a corn shucking and shelling machine embodying my improvement. Fig. 2 is a vertical sectional view of the same, taken on the line xx of Fig. 1, longitudinally through the shelling-cylinder. Fig. 3 is a top plan view of the separator. Fig. 4 is a detail elevation of the rib-frame. Fig. 5 is a detail perspective view of one of the ribs. Fig. 6 is a similar view of one of the cylinder-teeth. Fig. 7 is a detail perspective view of a part of one of the cylinder-heads.

A represents a rectangular vertical inclosing-case, which is provided on its upper side with an inlet-opening B. In one side of the case is a discharge-opening C, in the lower side of which is located a horizontal delivery-board D.

E represents an inclined board, which is arranged in the opening C, extends down into the inclosing-case, and projects outward therefrom. Near the outer end of the board D is a separator-frame F, which is composed of a series of parallel bars, and has its outer end secured in a transverse groove in the board E and its inner end similarly secured in the outer edge of the board D. In one side of the bottom of the case is arranged a board G, inclined in an opposite direction to the board E, and with its lower end somewhat below the lower end of the board E, thereby forming an opening H.

I represents a cylindrical case, which is located below the board G, and in the said case is journaled a rotary fan or blower K. The case I has at its lower side an upwardly-inclined discharge-spout L, which is adapted to direct a blast of air from the fan or blower

onto an inclined board M, which is arranged below and parallel with the board E and opposite to the openings H.

N represents a shaft, which is arranged horizontally and journaled in the sides of the case in the center. To this shaft is secured a cylinder O, which comprises a pair of circular heads P, and bolt-rods R, which connect the said heads. Said rods are arranged parallel and concentric with the shaft.

The heads P are provided on their inner sides, near their peripheries, with annular grooves or recesses S, in which are fitted the ends of a series of concavo-convex plates T, which form the face of the cylinder. Each of the said plates is provided at one edge with a raised flange U, which overlaps the adjacent edge of the next adjoining plate, the said flanges U having their outer edges or shoulders, which are presented in the direction in which the cylinder rotates, beveled obliquely to form cutting-edges V. Across the flanges or teeth U, at suitable regular distances, are made V-shaped grooves or notches W, which serve to serrate the flanges, and thereby increase their efficiency as abrading-surfaces.

To one end of the shaft N is secured a large pulley X, which is connected with a pulley Y on the fan-shaft by means of an endless belt Z. To the opposite end of shaft N is secured a crank-arm A'.

B' represents a concave frame, the end walls C' of which are secured on the inner side of the inclosing-case and are arranged concentrically with the cylinder. The said end walls C' at their upper ends diverge somewhat from the opposing sides of the cylinder, the upper end of the end walls being arranged immediately to the rear of the opening B. D' represents a pair of stationary ribs, which connect the upper ends of the end walls and are obtuse-angled in transverse section, as shown in Fig. 1. The end walls C' are provided near their outer edges with a series of openings, in which are secured the ends of a series of connecting-rods E'. At the inner edges of the sides C' are formed flanges F', which are arranged concentric with and in proximity to the cylinder.

G' represents a series of obtuse-angled ribs similar to the ribs D', and bear against the

flanges F', the latter serving to prevent the ribs from approaching too near the face of the cylinder. The said ribs G' are supported in the rib-frame by means of arms H', which
 5 are pivoted on the rods E', and have their outer ends riveted or bolted to the outer sides of the ribs, as shown. By this means the ribs are pivotally arranged in the rib-frame, and are adapted to swing toward and from the face
 10 of the cylinder.

By reference to Fig. 1 it will be observed that the ribs G' are arranged at slight distances apart, so that spaces through which shelled corn may drop are formed between
 15 them.

I' represents a series of spring-arms, which have their outer ends pivoted on the rods E', and have their inner ends engaging the outer sides of the ribs and retained between parallel flanges or offsets I², formed on said ribs. The function of these spring-arms is to normally keep the ribs in contact with the flanges F' and arranged in proximity to the cylinder.
 20

The operation of my invention is as follows: The ears of corn that drop through the opening B in the case are partially crushed between the revolving cylinder and the stationary ribs D'. As the ears of corn move with the cylinder they are rotated against
 25 each of the spring-pressed ribs in succession, the action of the said ribs and of the teeth of the cylinder serving to tear the shucks and the grains of corn from the cobs. The grains drop through the spaces between the spring-pressed ribs onto the inclined bottom boards E and G, and are delivered through the opening H onto the blast-board M, the blast of air from the fan serving to winnow the grains as they fall to the blast-board. The shucks and
 30 cobs are thrown by centrifugal force from the cylinder as they leave the spring-actuated ribs onto the separator F. The grains which may chance to remain with the shucks and cobs fall through the bars of the separator
 35 onto the board E and are discharged at the bottom of the case, as before stated, and the

cobs and shucks are removed from above the separator by hand from time to time.

Having thus described my invention, I claim—

1. The cylinder having the plates T, provided with the overlapping flanges U, the latter having their front sides sharpened to form cutting-edges V and being provided with transverse grooves or recesses W, substantially as described. 50

2. The combination of the cylinder-heads P, having the annular recesses or grooves S near their peripheries, the plates T, having their ends arranged in said grooves or recesses, said plates being provided with the overlapping flanges U, and the clamping-bolts securing the heads of the cylinder on the ends of the plates, substantially as described. 60

3. The combination of the rib-frame comprising the end walls C', having the flanges F', and the connecting-rods E', with the ribs G', obtuse-angled in cross-section and arranged at a slight distance apart between the end walls C', the arms H', secured to the ribs and pivoted on the rods E', and the springs I', bearing against the outer sides of the ribs and pressing the latter normally against the flanges F, substantially as described. 70

4. In a corn-shelling machine, the rotating cylinder having the peripheral teeth, in combination with the end walls C', having the flanges F', concentric with the cylinder, the rods E', connecting said end walls, the arms H', pivoted on said rods, the ribs secured to the free ends of said arms and obtuse-angled in cross-section, and the springs bearing against the ribs and keeping the latter normally in contact with the flanges F', substantially as described. 80

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses. 85

LOUIS ROSSELL WHITING.

Witnesses:

J. WELBORN JACK,
 ALEX. WHITE.