

(No Model.)

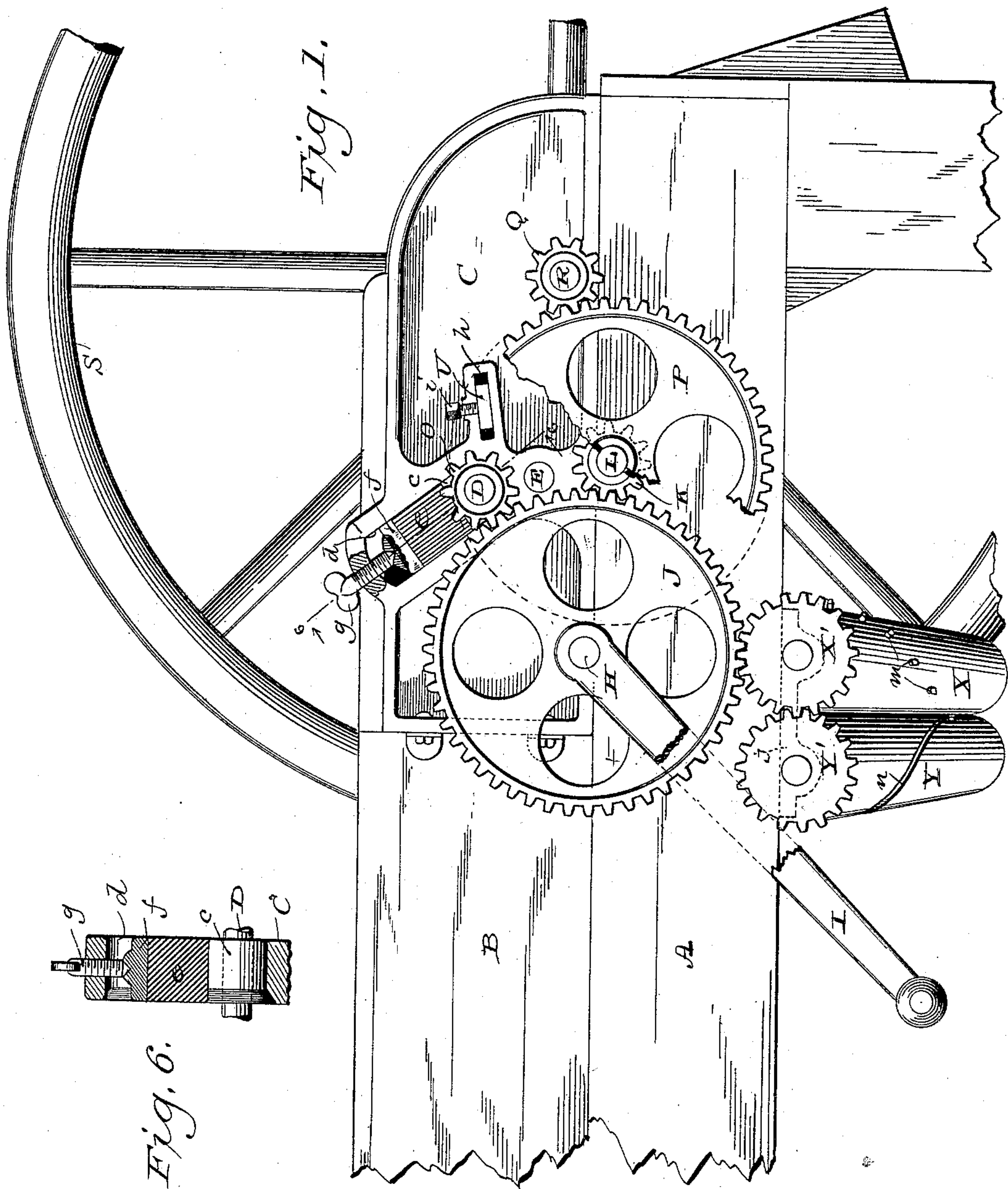
3 Sheets—Sheet 1.

A. ROSENTHAL.

COMBINED FEED CUTTER AND CORN HUSKER.

No. 401,719.

Patented Apr. 16, 1889.



Witnesses,
Geo. W. Joung,
N. E. Oliphant

Inventor
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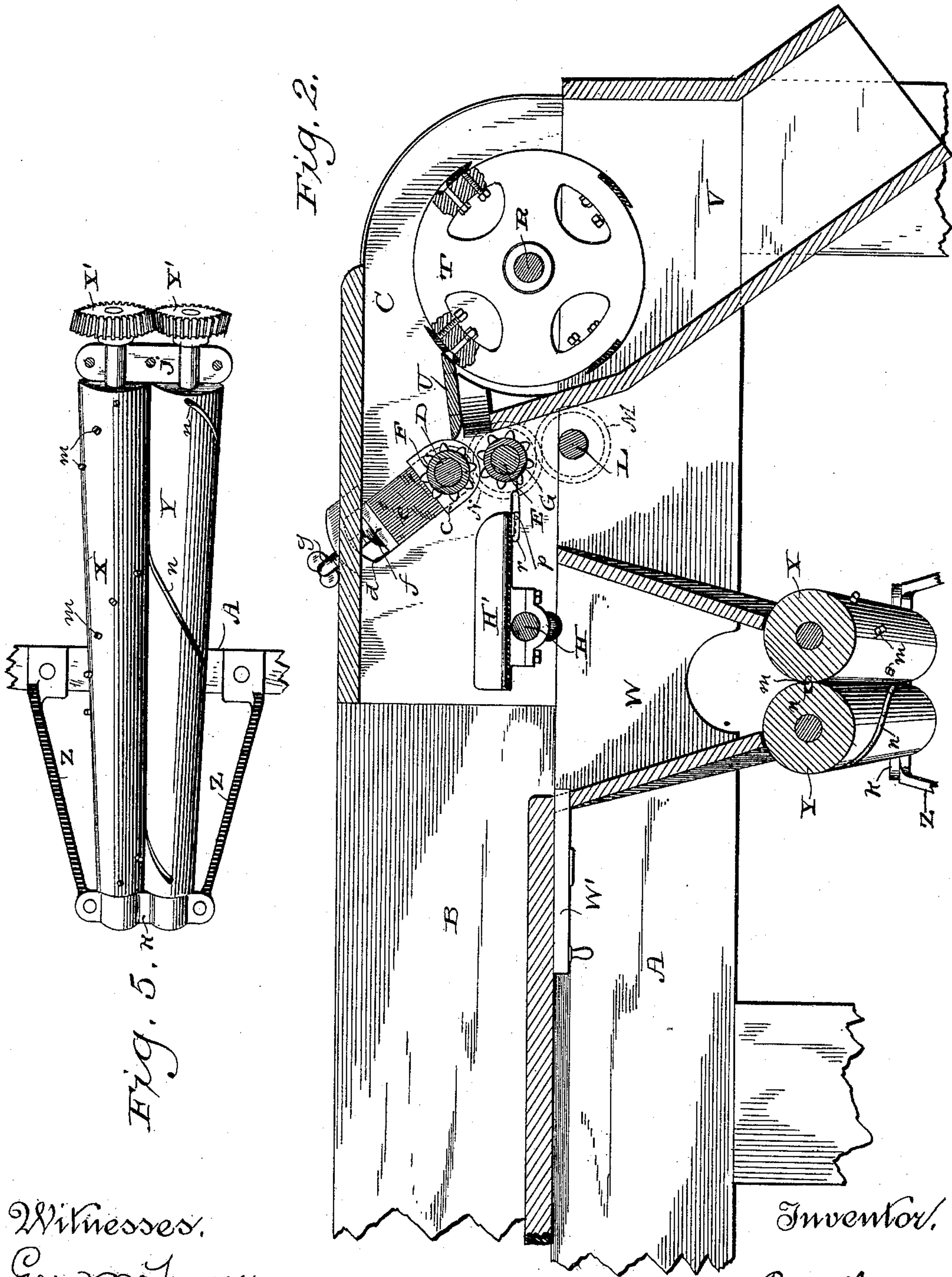
3 Sheets—Sheet 2.

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(No Model.)

3 Sheets—Sheet 3.

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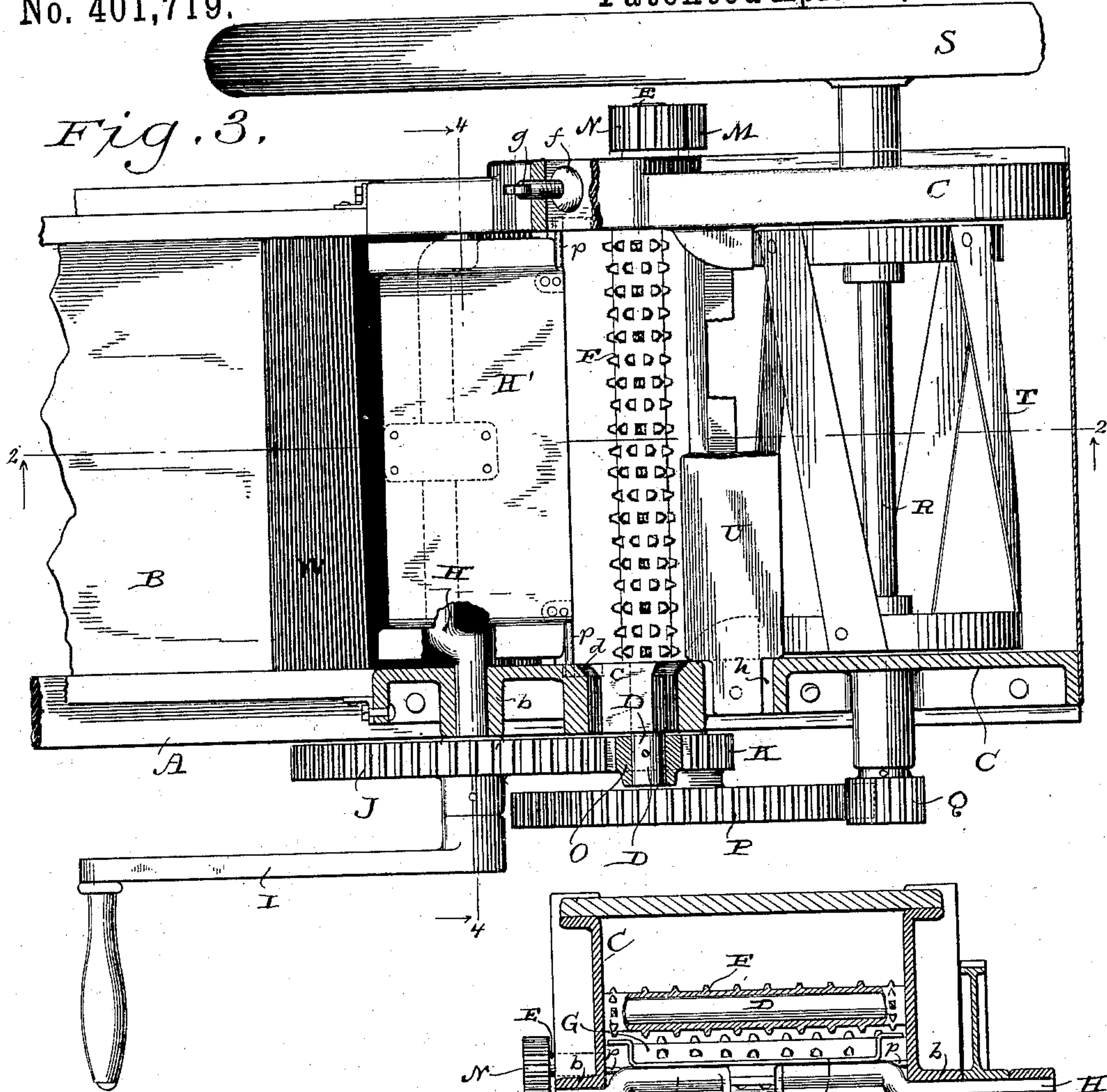
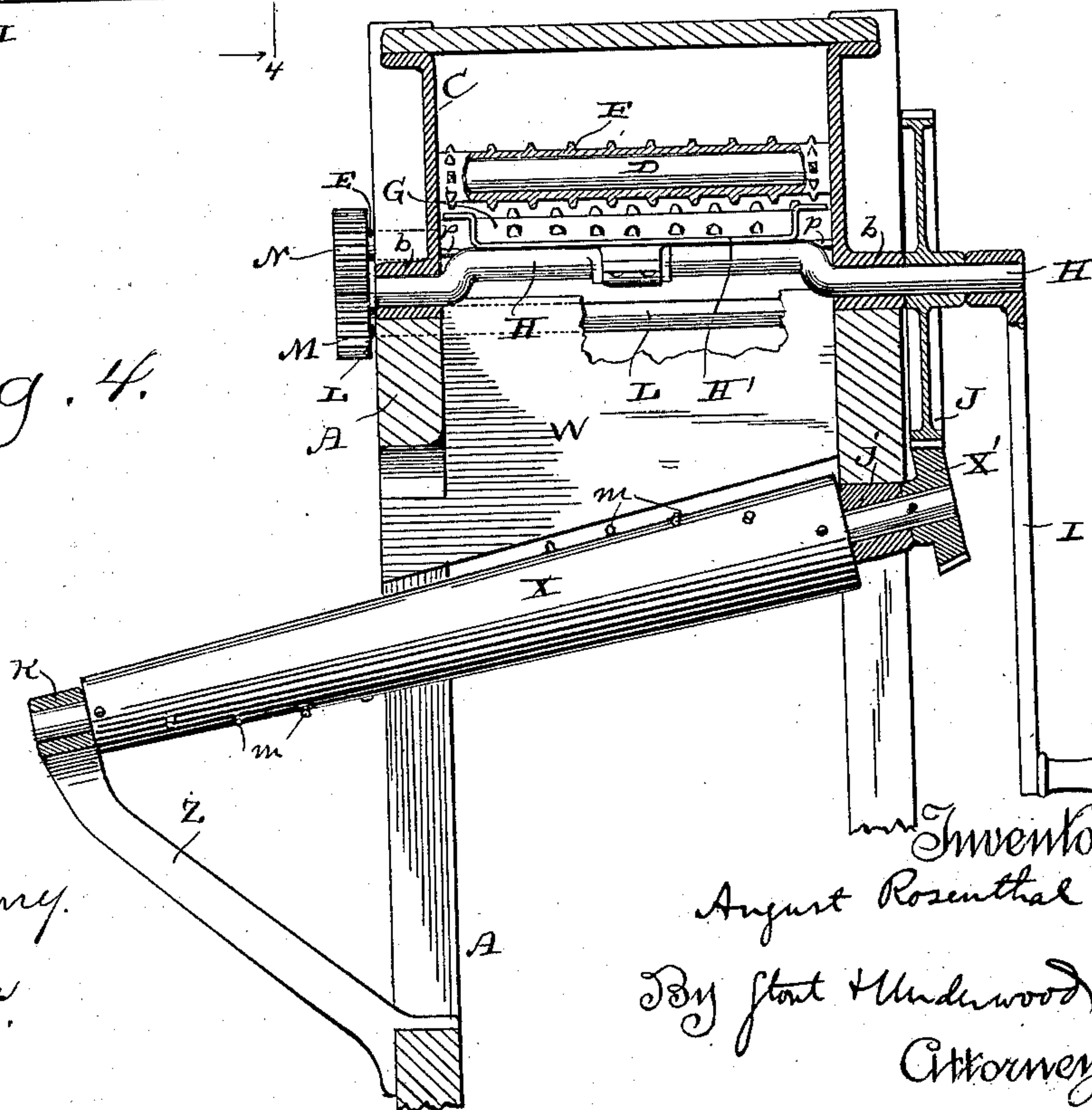


Fig. 4.



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UNITED STATES PATENT OFFICE.

AUGUST ROSENTHAL, OF MILWAUKEE, WISCONSIN.

COMBINED FEED-CUTTER AND CORN-HUSKER.

SPECIFICATION forming part of Letters Patent No. 401,719, dated April 16, 1889.

Application filed October 29, 1888. Serial No. 289,399. (No model.)

To all whom it may concern:

Be it known that I, AUGUST ROSENTHAL, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Combined Stalk-Cutters and Corn-Huskers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to a combined stalk-cutter and corn-husker; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a side elevation of a machine constructed according to my invention; Fig. 2, a longitudinal vertical section of the same, taken on line 2 2, Fig. 3; Fig. 3, a plan view; Fig. 4, a vertical transverse section taken on line 4 4, Fig. 3; Fig. 5, a detail plan view of the husking-rollers; and Fig. 6, a detail section on line 6 6, Fig. 1.

Referring by letter to the drawings, A represents the frame, B the feed-box, and C the cutter-box, of my machine. Journaled in the cutter-box are two shafts, D E, and fast on these shafts are detachable toothed sleeves F G, that form the upper and lower feed-rollers of my machine. By means of the shafts and toothed sleeves I provide feed-rollers that are economical in their construction and can be readily repaired should any of the teeth become broken, it being only necessary in such a case to substitute a new sleeve for the one on which the broken teeth occur.

The cutter-box C is provided with bearings *b*, for a cranked shaft, H, that may be driven by a crank, I, or any other suitable means, and fast on this shaft is a gear-wheel, J, that meshes with a pinion, K, on a shaft, L, the latter having its bearing in the frame A of the machine. Fast on the opposite end of shaft L is a pinion, M, that meshes with another pinion, N, on the shaft E, whereby motion is imparted to the lower feed-roller, G, the latter rotating in opposition to the upper feed-roller, F, that is driven by a pinion, O, on the shaft D, being in mesh with the gear-wheel J.

As best illustrated by Figs. 1 and 6, the bearings *c* for the shaft D fit loosely in elongated slots *d* in the sides of the cutter-box,

and are held down in their normal position by blocks *e*, of rubber or other elastic material, the tension of these blocks being regulated by means of pressure-plates *f* and set-screws *g*. The elastic blocks permit a yield of the upper feed-roller, and instead of said blocks it is obvious that I may substitute metallic springs for the same purpose.

Fast on the shaft L, adjacent to the pinion K, is a gear-wheel, P, that meshes with a pinion, Q, on a shaft, R, which latter shaft has its bearings in the sides of the cutter-box and carries a fly-wheel, S, and cutter-head T, this cutter-head being in opposition to a shear-plate, U, adjustably arranged in slots *h* in said sides of the cutter-box and retained in its adjusted position by means of set-screws *i*, as best illustrated in Fig. 1. The knives on the cutter-head are preferably adjustable and arranged to cut in an upward direction, the adjacent edge of the shear-plate being beveled to correspond with the curve of said knives, and the opposite edge of said shear-plate is also beveled to give clearance to the material on its way to the cutting-point. The cut material is carried off by a chute, V, arranged in the frame of the machine.

In the rear of the chute V is another chute, W, that leads down to a pair of inclined and tapered rollers, X Y, that are arranged parallel to each other and have bearings *j* on the frame A and bearings *k* on a bracket, Z, that extends outward from said frame, as best illustrated by Fig. 4.

The tapered roller X is provided with a series of spirally-arranged pins, *m*, that engage a spiral groove, *n*, in the tapered roll Y, and these rollers are respectively provided with intermeshing pinions X' Y', said pinion X' being also in mesh with the gear-wheel J, as best illustrated by Fig. 1.

For the purpose to be hereinafter described, the chute W is provided with a sliding cover, W', as best illustrated in Fig. 2.

A plate, H', is loosely clipped to the crank-shaft H and is provided with laterally-extended pins *p*, that engage guide-slots *r* in the sides of the cutter-box C, whereby the movement of said crank will impart a reciprocating and tilting motion to the plate.

In the operation of my machine cornstalks as they come from the shocks are placed in

the feed-box and pushed forward over the plate H' to the rollers F G, by which latter they are caught and forced onto the cutting-point. The cutter-head T, acting in opposition to the shear-plate U, makes an upward diagonal cut, and thus the material offers the least possible resistance to the knives on said cutter-head. While the cornstalks are passing between the feed-rollers, the butts of the ears will be macerated by said rollers to loosen the husks, and the tilting reciprocating plate H', acting as a lever, will, by its upward forward movement, cause said ears to become detached from said stalks. The detached ears fall onto the plate H', and by its downward tilt this plate discharges said ears into the chute W, from whence they fall onto the inclined and tapering rollers X Y. The ears slide down along the inclined and tapering rollers to the point of discharge, and such husks as remain on said ears are caught between the pins *m* on the roller X and the groove *n* in the roller Y, to be thus stripped off and pass down between said rollers.

At any time that it may be desirable to cut straw, hay, or such short material that would be liable to fall down into the chute W on its way to the feed-rollers, the sliding cover W' is pushed forward a sufficient distance to partially close said chute and not interfere with the rotation of the cranked shaft H, the plate H' on this shaft always acting to force the material forward to said feed-rollers.

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

1. In a stalk-cutter and corn-husker, the combination of the cutter-box provided with longitudinal guides, a crank-shaft journaled

to said cutter-box, and a plate loosely clipped to the shaft and provided with lateral projections for engagement with said guides, substantially as set forth.

2. In a stalk-cutter and corn-husker, the combination of a cutter-box having its sides provided with slots, a crank-shaft journaled to said cutter-box, and a plate loosely clipped to the shaft and having projections that engage said slots, substantially as set forth.

3. A stalk-cutter and corn-husker comprising a cutter-box, shear-plate, cutter-head, and feed-rollers, in combination with a tilting reciprocating plate arranged in the rear of said feed-rollers, a chute depending from said cutter-box beneath the plate, and husking-rollers arranged below the chute, substantially as set forth.

4. A stalk-cutter and corn-husker comprising a cutter-box, shear-plate, cutter-head, and feed-rollers, in combination with a tilting reciprocating plate arranged in the rear of said feed-rollers, a chute depending from said cutter-box beneath the plate, and inclined and tapered rollers arranged parallel to each other below the chute, one of these rollers being provided with a series of pins spirally arranged thereon and the other with a spiral groove to engage said pins, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

AUGUST ROSENTHAL.

Witnesses:

STANLEY S. STOUT,
N. E. OLIPHANT.