

(No Model.)

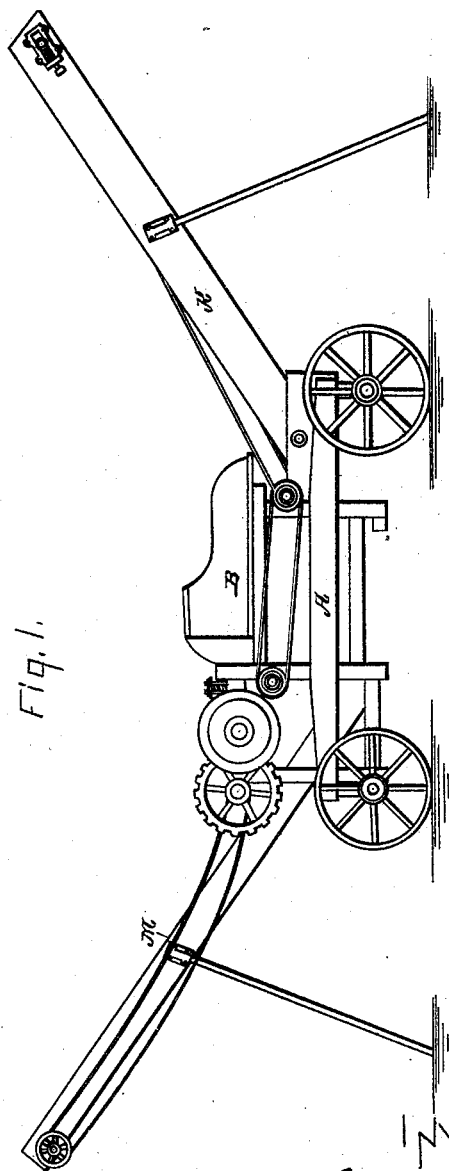
4 Sheets—Sheet 1.

T. A. GALT & G. S. TRACY.

COMBINED CORN HUSKER AND FODDER CUTTER.

No. 422,932.

Patented Mar. 11, 1890.



WITNESSES _____

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W. C. Weibler.

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By Emanuel and Ward
Their Attorneys.

(No Model.)

4 Sheets—Sheet 2.

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Fig. 2.

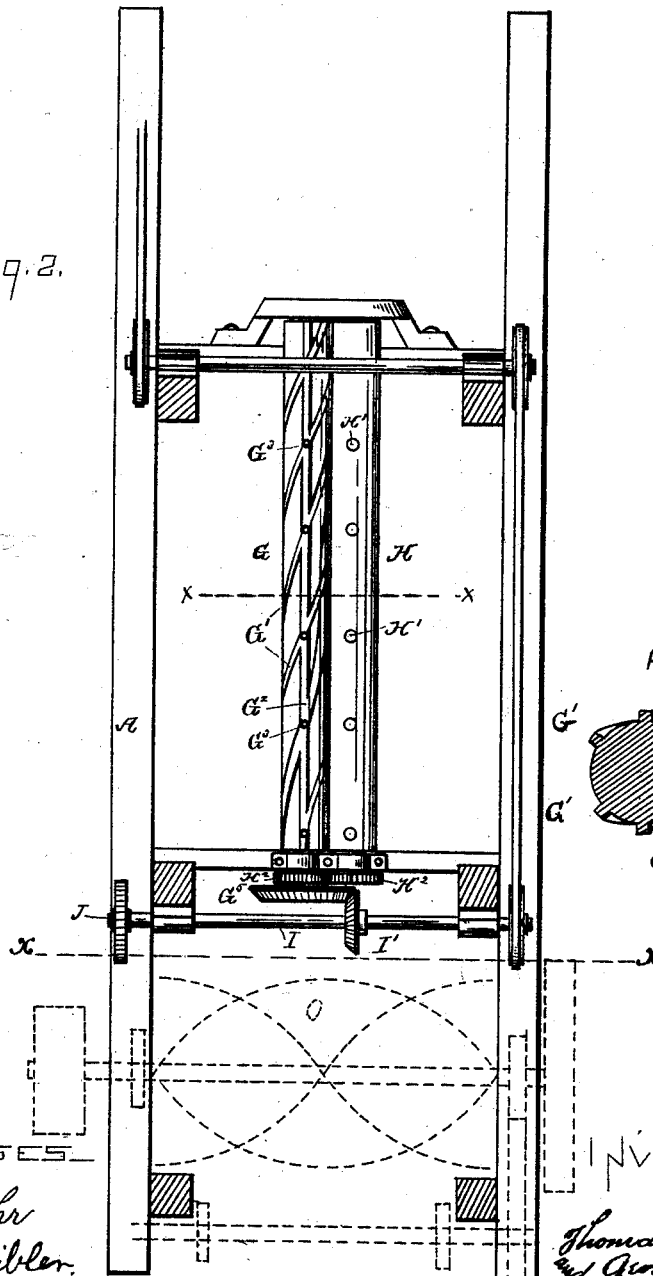
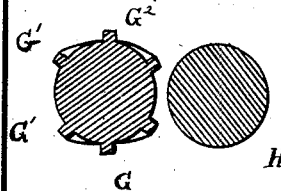


Fig. 3



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Fig. 4.

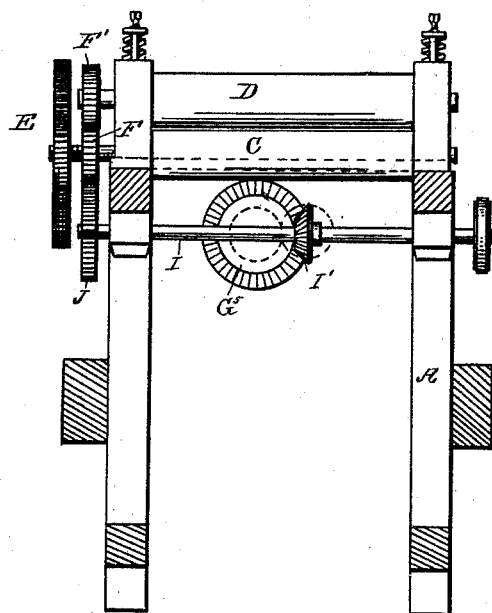
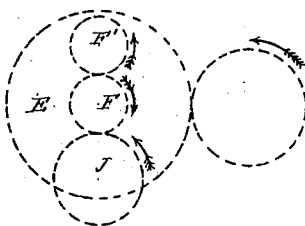


Fig. 5.



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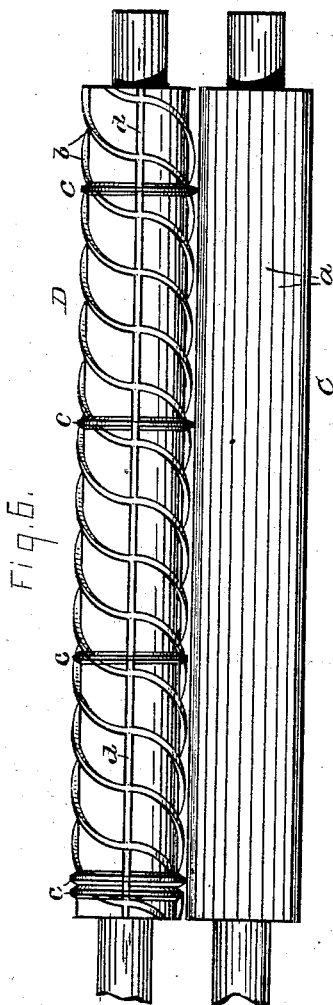
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WITNESSES—

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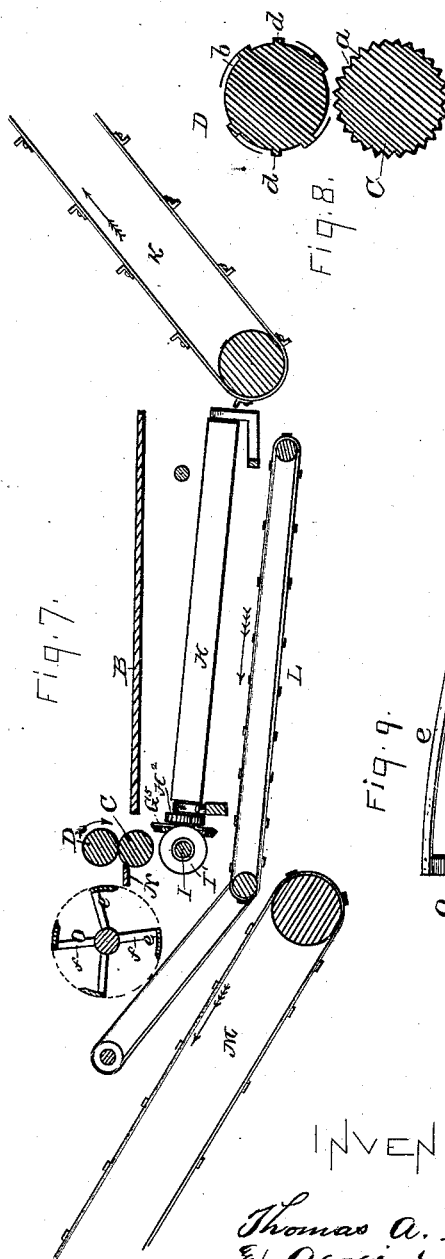


Fig. 8.

Fig. 9.

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UNITED STATES PATENT OFFICE.

THOMAS A. GALT AND GEORGE S. TRACY, OF STERLING, ILLINOIS.

COMBINED CORN-HUSKER AND FODDER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 422,932, dated March 11, 1890.

Application filed March 16, 1887. Serial No. 231,201. (No model.)

To all whom it may concern:

Be it known that we, THOMAS A. GALT and GEORGE S. TRACY, citizens of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Combined Corn-Huskers and Fodder-Cutters; and we do hereby 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 letters of reference marked thereon, which form a part of this specification.

The present invention relates to improvements in corn-huskers and fodder-cutters; and the novelty consists more particularly in the construction and combination of the several parts of the machine, all as will be more fully set out and explained, reference being had to the accompanying drawings.

In the drawings, Figure 1 is a side elevation of a machine embodying our invention, exhibiting in a general way the location and interrelation of the several parts involved. Fig. 2 is a plan view of part of the machine, showing the relation of the husking apparatus and that of the cutting or chopping mechanism. Fig. 3 is a vertical cross-section of the husking-rolls on line *xx* of Fig. 2. Fig. 4 is a partial vertical section, on line *XX* of Fig. 2, just in front of the snapping-rollers. Fig. 5 is an end elevation in dotted lines of the snapping-roller and cutter. Fig. 6 is a detail view of the feed and snapping rollers. Fig. 7 is a detail in outline of the relative position of the main operative parts. Fig. 8 is a cross-section of the feed and snapping rollers. Fig. 9 is a detail in elevation showing the construction of the spiral cutter.

A is the frame of the machine, supported for convenience upon four carrying-wheels.

B is a feed-table from which the fodder is fed between two transverse feed and snapping rollers C and D, placed parallel with each other, and one above the other transversely of the machine, one of which rollers is yielding. These rollers, which we have somewhat improved, are shown distinctly in Fig. 6, the view there being of the inner or exit side of said rollers. The lower roller C

is provided on its periphery with the longitudinal grooves *a*. The upper roller D is provided on its periphery with three species of ribs, to wit: spiral ribs *b*, and annular transverse ribs *c*, and the longitudinal ribs *d*.

The function of the rollers C and D is to feed the fodder from the feed-table B to the cutting or chopping mechanism, and in the transmission to crush the feed and stalks and break or snap from the stalk the ear and permit the latter to drop back upon the husking-rollers, which are below the snapping-rollers and at right angles thereto. The purpose of the spiral ribs *b* is to draw the fodder through with a continuous spiral action. In this operation the fodder, if so permitted, would be carried toward one end of the rollers, and therefore be delivered to the cutting mechanism largely at one end of the latter. To prevent this lateral massing of the fodder annular transverse ribs *c* are interposed at proper intervals in the path of the spiral ribs *b* and serve to check the lateral drawing of the fodder beyond the location of the ribs *c*, and thereby the rollers deliver the fodder in an even and uniform manner to the cutting mechanism. The function of the longitudinal ribs *d* is to further assist in causing the progress of the fodder between said rollers.

The rollers C and D are rotated by means of a gear-wheel E on the end of the axle of the roller C, to which power is applied in any suitable manner. Between the gear E and the frame A on the shaft of the roller C is a fixed pinion F, which intermeshes with the like pinion F' on the axle of the roller D. The adjacent surfaces of rollers C and D rotate in the direction from the feed-hopper B. An opening in the bottom of the feed-table B, just in front of the rollers C and D, permits the ears, when broken from the stalk by said rollers, to drop down upon the husking-rollers G and H, located beneath said feed-table. These latter rollers G and H can be of any of the usual conformations for the purpose intended. Our preference is to have the roller G provided with spiral ribs G' and longitudinal ribs G². At certain intersections of said ribs are inserted short teeth G³, extending slightly beyond the apexes of said ribs. The roller H is of a plain surface, except small recesses H' in its periphery,

to permit the passage of the teeth G^3 on the roller G. The husking-rollers G and H are driven by means of the counter-shaft I, having an external gear-wheel J, which engages the pinion F, the husking-roller G being provided with the bevel-gear G^5 , which engages and is actuated by a corresponding bevel-gear I' on the shaft I. Twin intermeshing gear-wheels H^2 on the axles of the rollers G and H communicate rotation from the roller G to the roller H, and keep said rollers in certain mutual relation, whereby the radial teeth G^3 of the roller G are insured entrance into the recesses H' on the roller H. These teeth perform the usual function of engaging the husk of the ear and drawing the husk between the rollers G and H while the latter pull the husk from the ear.

The outer ends of the husking-rollers being lower than the inner ends, the corn when husked is dropped off the lower end of said rollers upon the corn-elevator K, which, being seated in any suitable way at the lower end of said husking-rollers and driven in any suitable mode, deposits the husked corn into a wagon or any suitable receptacle, as may be desired. The husks are drawn down by and between the husking-rollers aforesaid, and fall upon the endless husk-apron L, located beneath said rollers and longitudinally thereof, and are by the apron L carried forward and deposited with the cut fodder on the elevator M, and carried by the latter into whatever receptacle may be selected for storing the chopped feed.

As the fodder is being carried through between the feed and snapping rollers C and D, the forward ends thereof are supported on a horizontal chopping-table N, placed a little below the point of contact of the rollers C and D, and as the fodder is pushed over the table N by the mutual revolution of the rollers C and D the portions of the fodder projected beyond the edge of the table N is instantly cut off by the spiral knives e , arranged in the periphery of the cutting or chopping wheel O, which is caused to rotate with great rapidity by suitable gearing. The knives e are attached to and carried upon the radial arms or spokes f of the cutting-wheel O. The latter rotates in such direction that the side thereof next the table N passes downward closely to the adjacent edge of said table N, the latter serving to hold the fodder against the cutting action of said knives e . The latter are seated spirally, in order to obtain the advantage of a shearing cut.

As the fodder is cut or chopped by the ac-

tion of the wheel O, it drops by its own gravity upon the elevator M, and is by the latter, together with the husks, deposited on said elevator by the apron L, carried upward and discharged into a wagon-box, shed, or any storage apartment, from which it can be fed as desired. By thus crushing and chopping the fodder, the latter is not only rendered suitable for convenient handling by shovels or baskets, but is crushed and cut fine, and thus the whole is in a condition to be more easily consumed by the stock. In such comminuted and crushed condition a great advantage is obtained in having the material in a condition to be stored in sheds or buildings, and thus protected from being bleached or having its nutriment diminished from exposure to the weather.

What we claim as our invention, and desire to secure by Letters Patent of the United States, is—

1. In a corn-husker and fodder-chopper, and in combination with the corrugated roller C, the roller D, provided with the spiral annular and longitudinal ribs, substantially as set forth.

2. In a corn-husker and fodder-chopper, the combination of the corrugated roller C, the roller D, provided with the spiral annular and longitudinal ribs, as set forth, with the feed-table B, the chopping-table N, placed on the side of the roller opposite to the table B and a little below the point of contact of said rollers and the cutting-wheel O, substantially as described.

3. In a machine, as described, the combination of the feed-table B, the corrugated roller C, the roller D, provided with the spiral annular and longitudinal ribs, with the husking-rollers G and H, placed below them and transversely to the machine, substantially as set forth.

4. In a corn-husker and fodder-chopper, the combination of the frame A, husking-rollers G and H, table N, chopping-wheel O, fodder-elevator M, corn-elevator K, the corrugated roller C, and the roller D, provided with the spiral annular and longitudinal ribs, substantially as set forth, and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS A. GALT.
GEO. S. TRACY.

Witnesses:

GEORGE H. DRAKE,
WALTER D. REYNOLDS.