(No Model.)

W. A. WRIGHT.

Machine for Disintegrating Corn Husks, &c.

No. 238,472. **Patented March 1, 1881.**

Fig. 1.

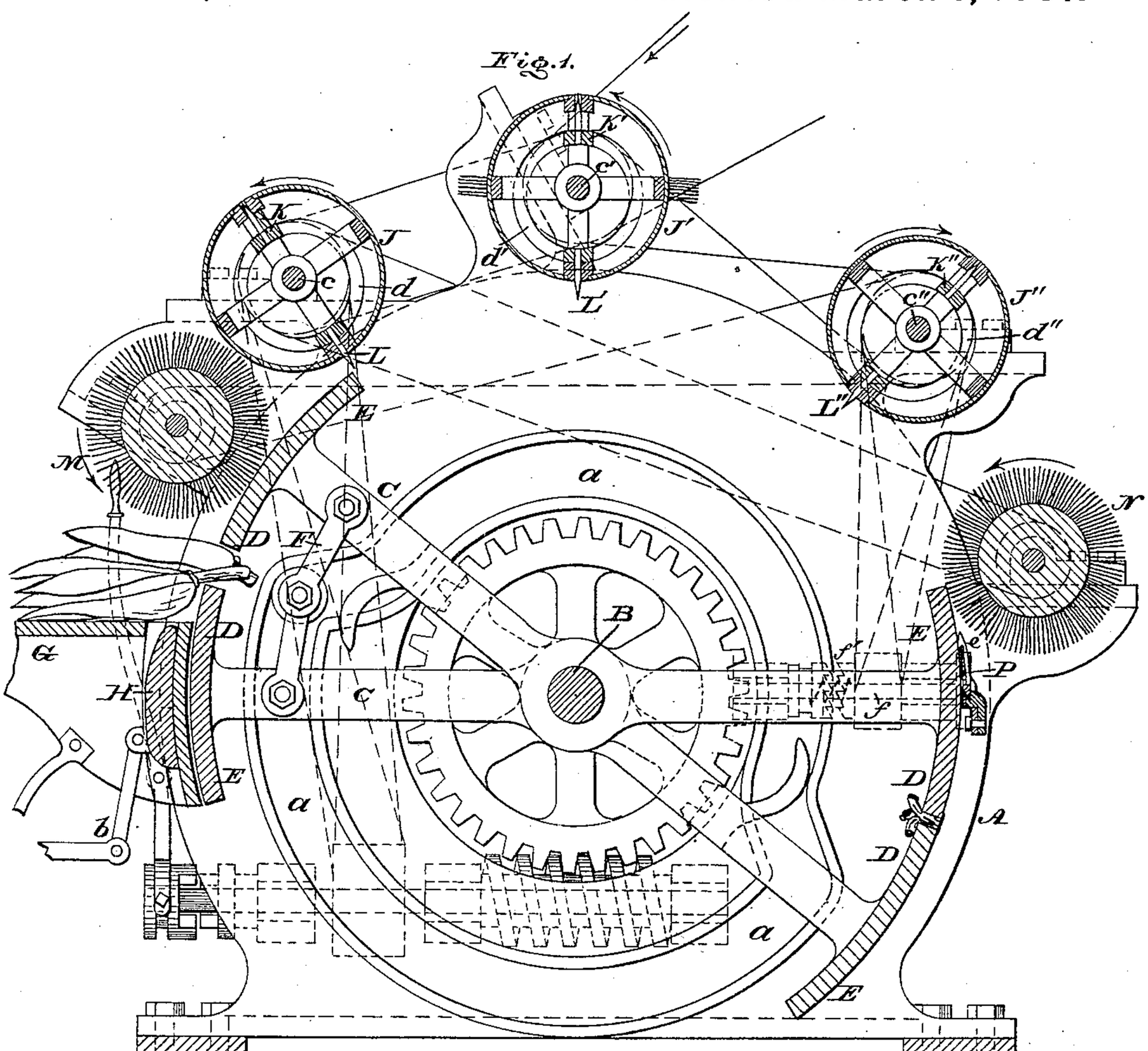

Fig. 2.

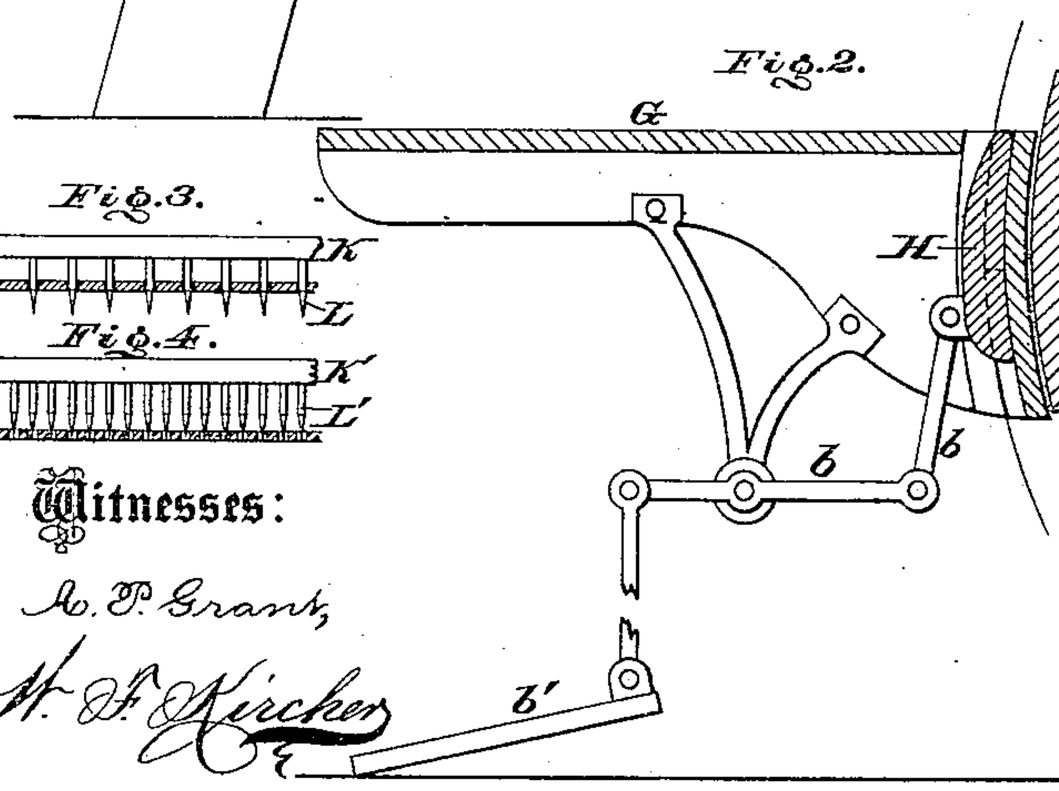

Fig. 3.

Fig. 4.

Fig. 5.

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MACHINE FOR DISINTEGRATING CORN-HUSKS, &c.

SPECIFICATION forming part of Letters Patent No. 238,472, dated March 1, 1881.

Application filed February 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. WRIGHT, a citizen of the United States, residing at Centreton, in the county of Burlington, State of New Jersey, have invented a new and useful Improvement in Machines for Disintegrating Corn-Husks, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the machine embodying my invention. Fig. 2 is a section of a detached part. Figs. 3, 4, and 5 are views of detached parts.

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

My invention consists of a machine for disintegrating corn-husks, &c., having jaws which grasp the husk and carry it to the cutters, support the husk while being cut, and open to release the stub or end that remains.

It also consists of a device for elevating the husk so that it is caught or acted on by brushes or fingers, which straighten out the husk preparatory to cutting.

It also consists of means for cutting opposite sides of the husk.

It also consists of a knife for severing the disintegrated husk from the stub.

Referring to the drawings, A represents a frame in the form of two heads, for supporting the working parts of the machine.

B represents a shaft, which is mounted on the heads A, and carries one loose and one firmly-secured arm, C C, each bent or angular, and having their outer ends constitute jaws D D, which are extended in the direction of rotation of the arms, so as to form bearing-pieces E E, preferably segmental, the arms and jaws moving between the heads A.

Pivoted to the arms C C, at one or both ends, are devices for opening and closing the jaws or jaw portions D, said devices consisting, in the present case, of a toggle lever or levers, F, the axial pins of which carry rollers adapted to enter cam-grooves *a*, formed on the inner faces of the heads A, so that at certain times the toggle-levers are folded, thus closing the jaws D, and at other times unfolded, thus opening the jaws.

G represents the feed-table, which is properly supported on the frame or heads A, and at the inner end of which is fitted a finger, H, which is raised and lowered by the action of suitable devices—in the present case levers *b* and a treadle, *b'*.

J J' J'' represent reels or arms, which are mounted, respectively, on shafts *c c' c''* on the upper portion of the heads A, and provided, respectively, with sliding bars K K' K'', which carry teeth, knives, or cutters L L' L'', and have their ends project into eccentric grooves in stationary heads *d d' d''*, which are properly supported on the heads A, whereby, when the shafts *c c' c''* are rotated, and the arms J J' J'' rotate therewith, the bars K K' K'' are moved, first to advance or present the cutters L L' L'' beyond the outer edges of the arms J J' J'', and next to withdraw said cutters. The cutters L' are more numerous or closely arranged than the cutters L, as seen in Figs. 3 and 4, and the shafts *c c'* rotate in one direction and the shaft *c''* in the opposite direction, motion being imparted to said shafts, and also to the shaft B, by means of belts, gearing, &c., suitably operated by the power employed.

M represents a rotary brush mounted on the heads A above the feed-table G, and N represents a rotary brush mounted on the heads on the side opposite to said brush M.

Fitted in transverse guides *e*, connected to the heads A, and located beneath the brush N, is a horizontally-arranged cutter or blade, P, which receives motion, intermittent in the present case, by means of a crank-shaft, *f*, provided with clutch mechanism *f'*, which latter is opened and closed by a cam or swell on one of the arms C, or other proper moving member of the machine.

The operation is as follows: The machine is set in motion and a number of corn-husks placed on the table G, with their stub ends toward the jaws D, the latter then closing and grasping the stubs. The finger H is raised and serves to push the husks toward the brush M, which, rotating in the direction of the arrow, lays the husks on the advance bearing E. The jaws advance and the cutters L act on the husks from their outer ends to the stubs, thus

slicing the husks, and the cutters L′ act similarly, only slicing the husks more closely or finely. The sliced husk then reaches the cutters L″, the shaft *c″* of which rotates in the direction opposite to the shafts *c c′*, as has been stated, and the husk is overturned and sliced or cut on the side which was below on the advance bearing E, the bearing E which follows now supporting the sliced husk, the cutting thus being fully accomplished through the husk. The brush N now straightens out the sliced husk or fiber, and the latter is then presented to the knife, which severs the fiber from the stub, the former then dropping into a place of collection or deposit. The jaws next open and release the stubs, which drop into a place of collection or deposit intended for them independently of the fiber, and it will be noticed that the jaws on the opposite side of the machine now open and then grasp a fresh supply of husks, the other operations being repeated.

The arms C need not necessarily be angular or bent, so that when the jaws of one end close, those of the other end open, for they may be constructed so that each pair of arms is independent of the other arms, in which case a toggle will connect each pair of arms. Numerous pairs of arms may be employed, whereby the feeding operation is more frequently occasioned.

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

1. A disintegrating-machine provided with jaws which automatically grasp the husk, &c., to be disintegrated, present it to cutters, and automatically open to release the stub or end of the husk, &c., substantially as and for the purpose set forth.

2. A disintegrating-machine provided with jaws formed with extended bearing portions E, substantially as and for the purpose set forth.

3. A disintegrating-machine having an elevating device, whereby the husk, &c., may be presented to brushes or fingers, which straighten out the same preparatory to cutting, substantially as and for the purpose set forth.

4. A disintegrating-machine having rotary cutting devices which rotate in opposite directions, whereby the husk, &c., may be cut on one side, overturned, and cut on the opposite side, substantially as and for the purpose set forth.

5. The combination of the series of cutters L L′, the cutters L′ being finer or more closely arranged on their head or bar K′ than the cutters L on their head K, substantially as and for the purpose set forth.

6. A disintegrating-machine having brushes M N in advance and rear of the cutters, substantially as and for the purpose set forth.

7. A machine for disintegrating husks, &c., provided with a knife or blade, P, arranged and operating substantially as set forth, whereby the fiber as produced is severed from the stub or end of the husk, &c., substantially as and for the purpose set forth.

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