

No. 710,232.

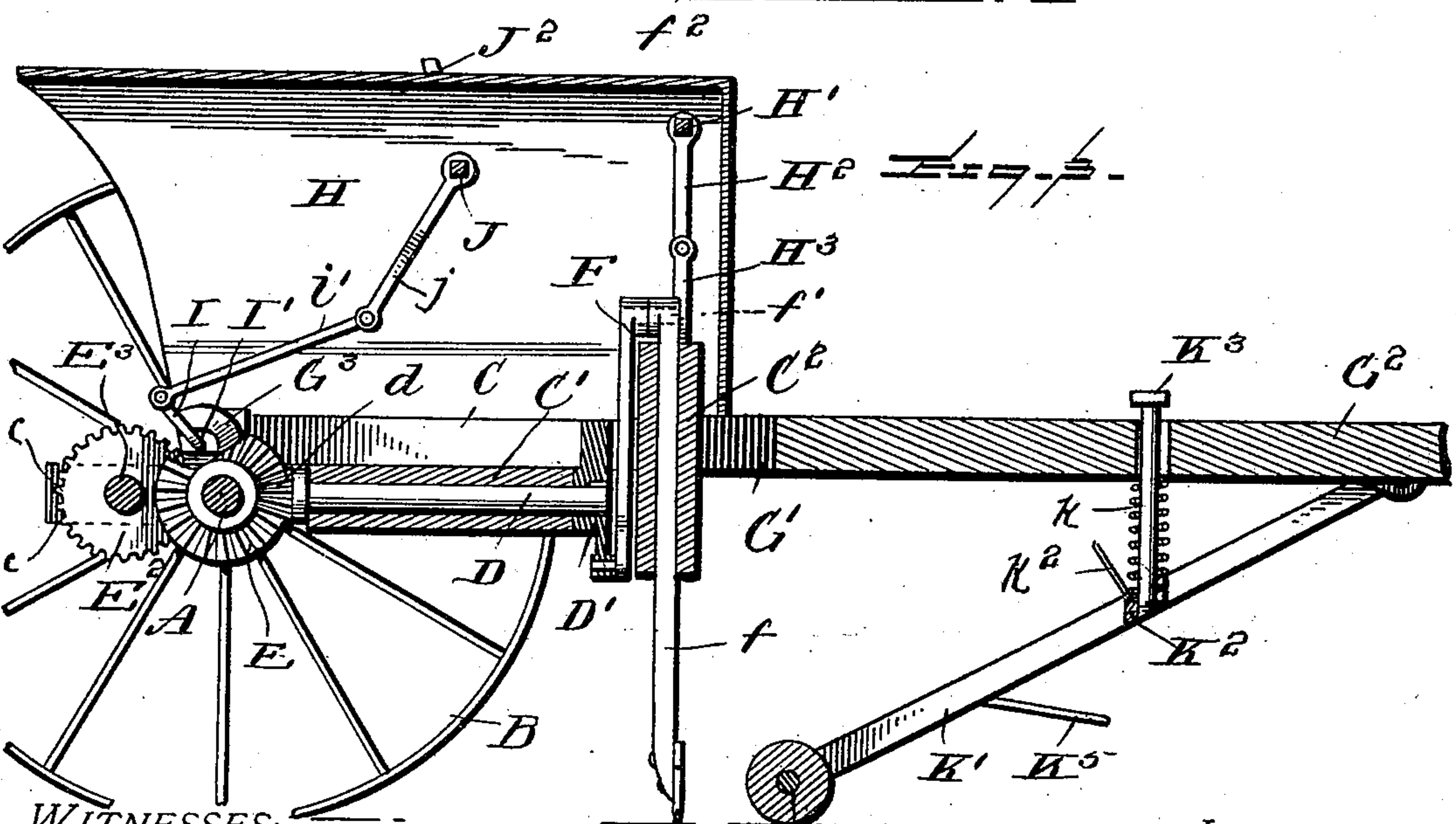
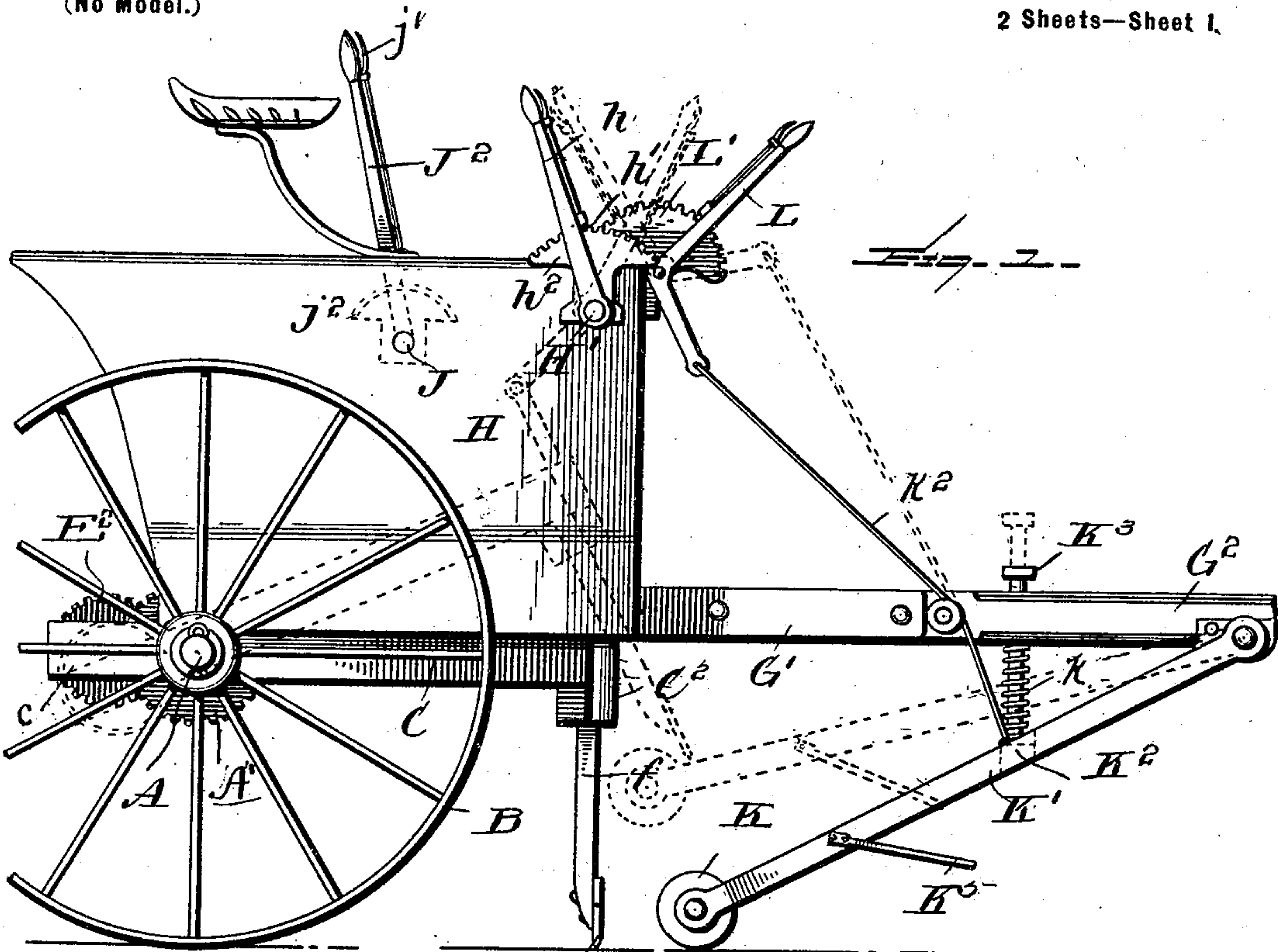
Patented Sept. 30, 1902.

W. L. ADAMSON.
STALK CHOPPER.

(Application filed July 8, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

Wm. F. Doyle.
James Mansfield.

INVENTOR
W. L. Adamson
BY Alexander F. Towell
Attorneys

No. 710,232.

Patented Sept. 30, 1902.

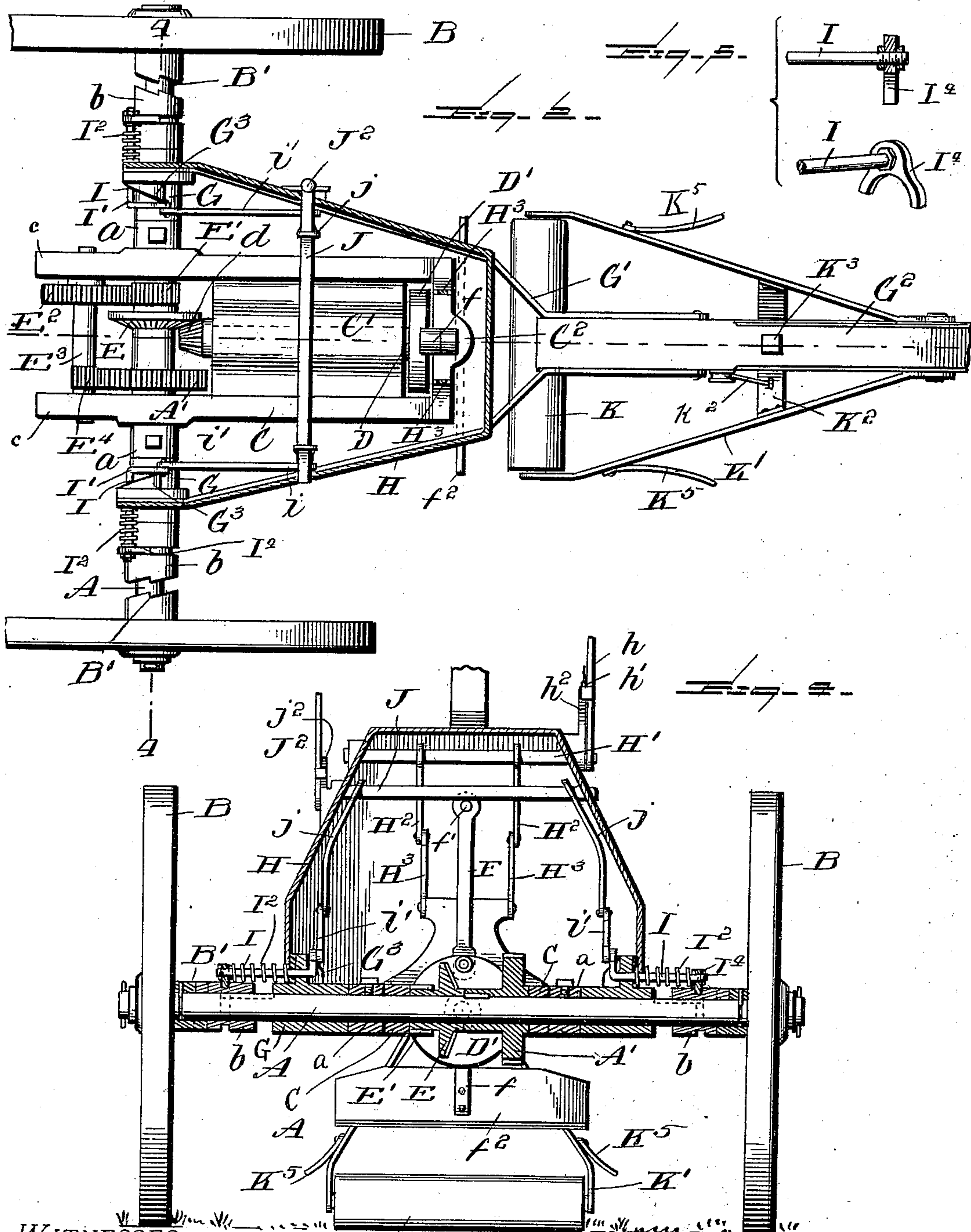
W. L. ADAMSON.

STALK CHOPPER.

(Application filed July 8, 1902.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES

W. F. Doyle.
James R. Mansfield.

INVENTOR

W. L. Adamson.
BY Alexander & Towell
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM LEVI ADAMSON, OF WESTON, TEXAS, ASSIGNOR OF ONE-HALF TO
CORSON ADAMSON, OF WESTON, TEXAS.

STALK-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 710,232, dated September 30, 1902.

Application filed July 8, 1902. Serial No. 114,790. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LEVI ADAMSON, of Weston, in the county of Collin and State of Texas, have invented certain new and
5 useful Improvements in Stalk-Choppers; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

10 This invention is an improved machine for chopping weeds, vines, and stalks which encumber the ground, so as to kill them or cut them into small pieces, so the ground can be more readily cultivated.

15 The invention consists in the several combinations of parts and constructions thereof hereinafter claimed, and the accompanying drawings illustrate a machine embodying the various features of the invention, which I will
20 now describe.

In said drawings, Figure 1 represents a side elevation of the machine; Fig. 2, a plan view thereof with upper parts removed. Fig. 3 is a longitudinal section on line 3 3, Fig. 2;
25 Fig. 4, a transverse section on line 4 4, Fig. 2. Fig. 5 is a detail.

A designates the main axle of the machine, preferably cylindrical and supported on wheels B, which are rotatable on the axle.
30 Journaled centrally upon axle A and projecting forwardly therefrom are the extensions *c* of a frame or casting C, carrying the cutting mechanism, which is capable of swinging vertically on the axle and has longitudinal bearings *C'* for a shaft D, lying at right angles to the axle, but indirectly driven therefrom by means of a bevel-pinion *d* on the rear end of shaft D, meshing with a larger bevel-gear E, loosely journaled on axle A, a small pinion
40 *E'* being fast to gear E and meshing with a larger gear *E*² on a shaft *E*³, journaled in the ends of said extensions *c* of frame C, and a small pinion *E*⁴ on shaft *E*³ meshes with a larger gear *A'*, fast on axle A, as shown, so
45 that by rotating the axle a greatly-accelerated motion is imparted to shaft D. The axle is driven by the wheels B, as hereinafter described. On the forward end of shaft D is a crank-disk *D'*, the wrist-pin of which
50 is connected by a pitman *F* to a wrist-pin *f'* on the upper end of a vertically-reciprocating

bar *f*, which is guided in vertical ways *C*² on the forward end of frame C, and to the lower end of this bar *f* is secured the transversely-disposed cutter or hoe blade *f*², as shown. 55 The frame C is kept in position on the axle by means of collars *a*, secured to the axle by set-screws or in other suitable manner, and exterior to collars *a* are short sleeves *G*, which are loose on the axle and support the rear 60 ends of bars *G'*, that extend forward beyond the forward end of frame C and are united and secured to the tongue *G*². On the bars *G'* is mounted a housing *H* of any suitable construction adapted to cover the gearing 65 and movable parts. On this housing is journaled a rock-shaft *H'*, provided with a handle-lever *h*, which has a locking-bolt *h'*, adapted to engage a sector *h*² beside the lever to lock the shaft in any position to which it is ad- 70 justed. To shaft *H'* are rigidly connected arms *H*², which depend into the housing adjacent to the forward end of frame C and are connected to the forward end of said frame by links or chains *H*³, as shown, so that by rock- 75 ing shaft *H'* the forward end of frame C, and with it the chopping apparatus, can be raised or lowered at the will of the operator. The axle may be locked to the wheels B by any suitable clutch mechanism controllable by 80 the operator. As shown, the wheels have clutch-faces *B'* on the inner ends of their hubs, which are opposed to clutch-blocks *b*, loosely splined on the axle adjacent to the wheels and movable to or from the wheels, so as to 85 engage or disengage the clutch-faces thereof. The clutch-blocks *b* can be thrown into engagement with the clutch-faces *B'* by means of slidable rods *I*, journaled in guides in sleeve *G* and having bifurcated ends engaging an- 90 nular grooves in blocks *b*, springs being interposed between the bifurcated ends of the rods and the blocks *G*, so as to force the rods and blocks *b* toward the wheels. The inner ends of rods *I* are cranked, as shown at *I'*, 95 and are adapted to bear against cam-faces *G*³ at the inner ends of sleeves *G*, so that when the cranks *I'* are moved against the cams the springs are compressed and blocks *b* moved away from the wheels, thereby unlocking the 100 axle therefrom. The cranks *I'* are connected by rods *i'* to arms *j* on a rock-shaft *J*, jour-

naled transversely of the housing, in the front side thereof, or at other convenient point on the frame, said shaft J being provided with an operating-lever J^2 , having a hand-latch j' , adapted to engage a segment j^2 adjacent thereto, so as to lock the shaft in position to either hold clutches engaged or disengaged. In front of the chopping-blade is a roller K, which is rotatably confined between the lower ends of bars K' , that extend upwardly and forwardly and are pivoted to the tongue in advance of the housing. The bars K' are connected by a cross-piece K^2 in advance of the rollers, and from piece K^2 rises a guide-rod K^3 , which plays through an aperture in the tongue G^2 and serves to prevent lateral oscillation of the roller-frame. A spring k may be interposed between the bar K^2 and the tongue to assist in holding the roller down. The roller may, however, be elevated when desired by means of a cord or chain k^2 , attached to bar K^2 and to one arm of a cranked lever L, pivoted on the housing H and provided on its longer arm with a latch or other suitable engaging device adapted to lock the lever to a segment L' , fixed on said housing H. Downwardly and outwardly bent iron fingers K^5 may be attached to the side bars K' in advance of the roller, said fingers guiding tall stalks, particularly those growing near the ends of the roller, into the path thereof.

As many well-known arrangements for locking rocking levers are known, I have merely conventionally illustrated them in the drawings and do not confine myself to any particular construction thereof; nor do I restrict myself to the particular construction of the housing or to the particular arrangement and location of the several levers and connections for adjusting the frame, roller, and clutches. These in practice should be conveniently located near the driver's seat, and may be operated by foot or hand, as may be found most convenient.

Operation: During transport of the machine or where it is not desired to operate the chopper the clutches b are thrown out of gear, so that the axle is not rotated with the wheels. The frame C, with the chopper f^2 , is also elevated and the roller H raised. Upon reaching the field and before starting across it or along a row the clutches are thrown in mesh, the roller lowered, and the chopper-frame lowered to cause the blade to chop to the proper or desired depth. As the machine moves forward the blade is rapidly reciprocated. Preferably the gearing is such as will cause a reciprocation of the blade for every two inches of linear travel of the machine. The fingers K^5 , depending from bars K' , direct the taller stalks or blades in front of the roller K, which bends them down in front of the chopper, so that the blade will sever them into short pieces, which will not interfere with subsequent plowing or cultivating operations.

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

1. The combination of the rotatable axle, the wheels, the frame swiveled on the axle, the shaft journaled in said frame, gearing for rotating said shaft from the axle, a crank on the forward end of the shaft, a reciprocating bar, a pitman connecting said crank to said bar, and a cutter on the lower end of said bar, substantially as described.

2. The combination of the axle, the wheels thereon, clutches for locking said wheels to the axle, the frame swiveled on the axle, the forwardly-extending shaft journaled in said frame, gearing for rotating said shaft from the axle, a crank on the forward end of the shaft, a reciprocating bar, a pitman connecting said crank to said bar, and a chopping-blade on the lower end of said bar, substantially as described.

3. The combination of the rotatable axle, the wheels, the frame swiveled on the axle, the shaft journaled in said frame, gearing for rotating said shaft from the axle, a crank on the forward end of the shaft, a reciprocating bar, a pitman connecting said crank to said bar, and a cutter on the lower end of said bar; with means for raising and lowering the cutter end of the frame, and means for engaging or disengaging the axle from the wheels, substantially as described.

4. The combination of the axle, the wheels thereon, clutches for locking said wheels to the axle, the frame swiveled on the axle, the forwardly-extending shaft journaled in said frame, gearing for rotating said shaft from the axle, a crank on the forward end of the shaft, a reciprocating bar, a pitman connecting said crank to said bar, and a chopping-blade on the lower end of said bar; with means for raising and lowering the cutter end of the frame, and means for engaging or disengaging the axle-clutches from the wheels, substantially as described.

5. The combination of the axle, its supporting-wheels, clutches for locking the wheels to the axle, a frame swiveled to the axle, a rotating shaft journaled in said frame and reciprocating chopping mechanism actuated by said shaft, a roller in front of the chopper, bars connecting said roller to the shaft, a spring for depressing the roller, and means for raising it, substantially as described.

6. The combination of the axle, its supporting-wheels, clutches for locking the wheels to the axle, a frame swiveled to the axle, a rotating shaft journaled in said frame and reciprocating chopping mechanism actuated by said shaft, a roller in front of the chopper, bars connecting said roller to the shaft, a spring for depressing the roller, and means for raising it; with means for throwing the clutches into or out of operation, and means for raising and lowering the cutting-frame, substantially as described.

7. In a chopping-machine, the combination

of the axle, the wheels thereon, clutches for locking the wheels to the axle, a swinging frame hung on the axle, a shaft journaled in said frame, amplifying gearing between the shaft and axle, a vertically-reciprocating bar guided in the front of the frame, a chopper on the lower end of said bar, and means for reciprocating the chopper from said shaft; with a roller hung in front of the chopping mechanism, and means for throwing the wheel-clutches into and out of operation, substantially as described.

8. In a chopping-machine, the combination of the axle, the wheels thereon clutches for locking the wheels to the axle, a swinging frame hung on the axle, a shaft journaled in said frame, amplifying gearing between the

shaft and axle, a vertically-reciprocating bar guided in the front of the frame, a chopper on the lower end of said bar, a crank on said shaft, and a pitman connection between said crank and bar; with means for raising and lowering the frame, a roller hung in front of the chopping mechanism, means for raising and lowering the roller, and means for throwing the wheel-clutches into and out of operation, all substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM LEVI ADAMSON.

Witnesses:

L. A. HANKINS,

J. D. HUDGINS.