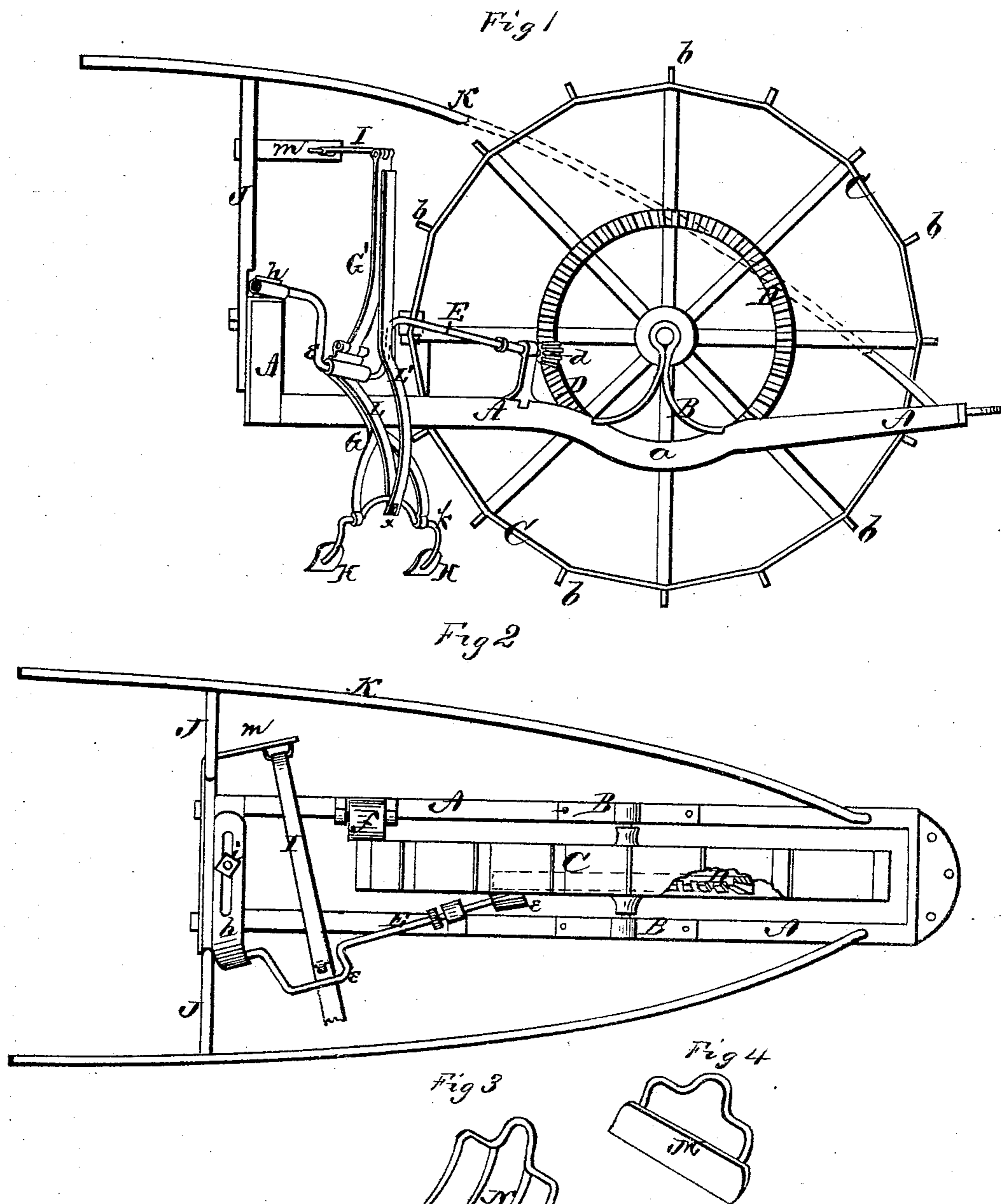


J. COSTON.
Cotton-Choppers.

No. 145,849.

Patented Dec. 23, 1873.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN COSTON, OF BOWDON, GEORGIA.

IMPROVEMENT IN COTTON-CHOPPERS.

Specification forming part of Letters Patent No. **145,849**, dated December 23, 1873; application filed July 17, 1873.

To all whom it may concern:

Be it known that I, JOHN COSTON, of Bowdon, in the county of Carroll and in the State of Georgia, have invented certain new and useful Improvements in Cotton-Chopper; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a single-wheel cotton-chopper, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, and Fig. 2 a plan view, of my cotton-chopper. Figs. 3 and 4 show other implements that may be substituted for the hoe shown in Fig. 1.

A represents the frame of my machine, having a downward curve at *a*, upon or in which are secured the forked standards B B. In the upper ends of these standards the shaft or axle of the wheel C has its bearings. By this low hanging of the frame A the center of gravity is lowered, thereby steadying the wheel. The wheel C is a common spoke-wheel of suitable diameter, and provided with a broad angular rim, having, at each corner or angle, a projecting blade or barb, *b*. On one side of the wheel C is secured a cog-wheel, D, having its cogs on the side, and beveled inward from the outer end. In this beveled cog-wheel D gears a beveled pinion, *d*, upon the front end of a shaft, E, which is provided with a crank, *e*. The cogs of the wheel D being inclined in the manner described, and the pinion *d* gearing with the same, the crank-shaft will necessarily have a certain inclination, and, in consequence of such inclination, the hoe is made to cut square across the row. On the opposite side of the wheel C, at the rear portion, is placed a roller, *f*, upon a suitable axle or journals connected with the main frame A, said roller

bearing against the edge of the rim of the wheel, and forming a rolling brace to support and steady the wheel. The front bearing of the shaft E is stationary, but is made slightly larger than the shaft, while its rear bearing is formed in a slotted bar, *h*, adjusted, at pleasure, out and in by means of a set-screw, *i*, passing through the slot into the rear part of the main frame A.

It will be understood that the gear-wheels D *d* are sufficiently broad and the bearing for the front end of the shaft sufficiently large to allow the wheels to gear as the rear portion of the shaft is moved out and in; otherwise the movement of the shaft E would be thrown entirely out of gear. By this means the inclination of the crank-shaft E can readily be regulated.

H H represent the two blades of the hoe connected by a rod, *k*, which has an upward bulge or crank in the center. The hoe thus constructed is, by a handle, G, connected with the crank *e* on the shaft E, and the inner or upper end of said handle G is, immediately above the crank, jointed to the lower end of an upper handle, G', the upper end of which is jointed to a bar, I. The other end of this lever is jointed to an arm, *m*, which projects from the handle-supports J J, said supports being attached to the rear end of the frame A, and supporting the handles K K, the front ends of the handles being attached to the frame A at or near its front end. To the lower handle G is attached a spring, L, the lower end of which passes under the crank of the hoe, and has a hook, *x*, formed at the extreme end. To the upper handle G' is attached another spring, L', which passes over the crank, and has a slot in its end, through which the hook *x* is inserted, thus connecting the two springs, and confining the crank of the hoe between them. The bar I controls the upper end of the handle, and the spring L controls the set of the hoe.

In lieu of the hoe H, I may use a long narrow or shallow hoe-blade, M, or a rake, N, both being provided with the curved or bowed rod *k*.

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

1. The combination of the wheel C, cog-wheel D, pinion *d*, crank-shaft E, slotted bar *h*, and set-screw *i* with the main frame A, all substantially as set forth.

2. The combination of the hoe H, or its equivalent, springs L L', jointed handles G G',

crank-shaft E, and bar I, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of July, 1873.

JOHN COSTON.

Witnesses:

W. T. COLQUITT,
J. R. HOOD.