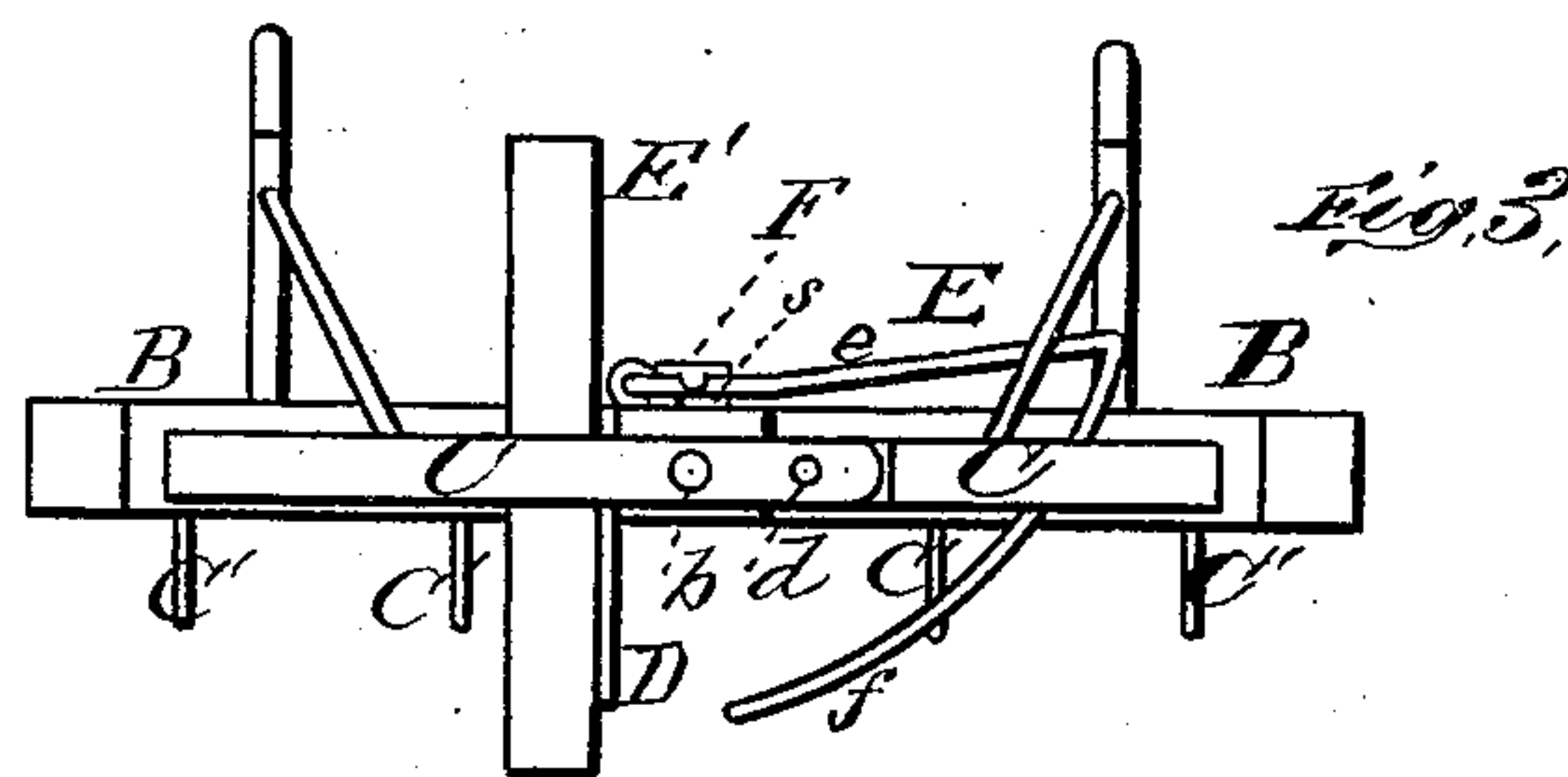
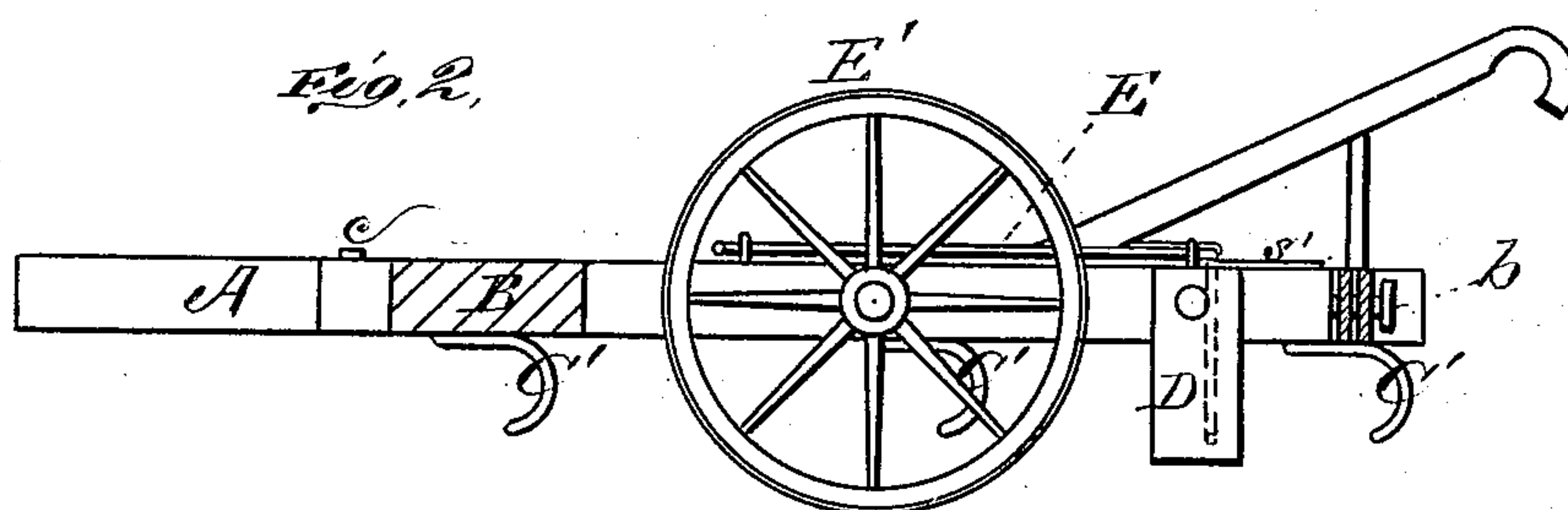
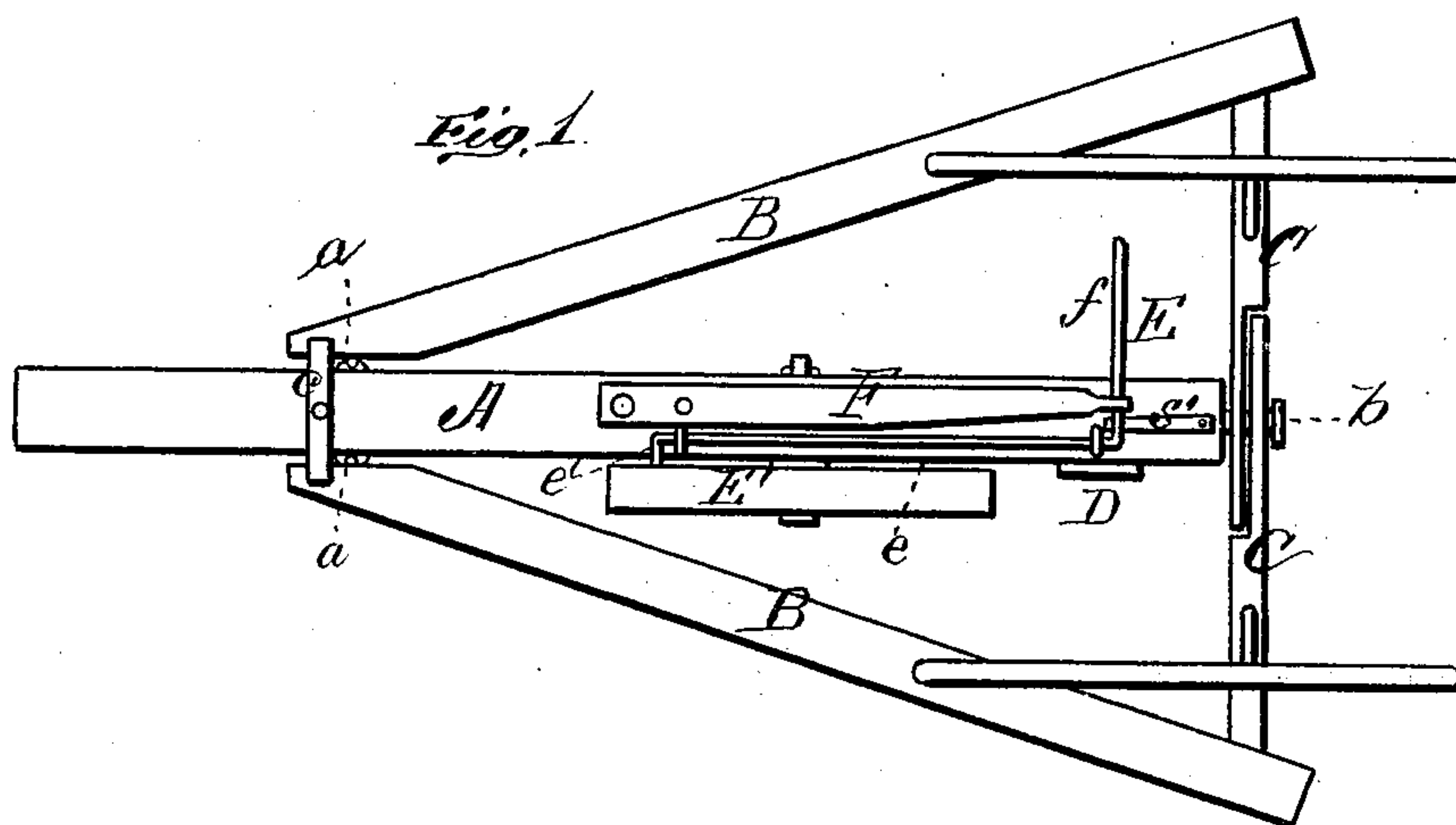


W. MULLENS.
Combined Cotton Chopper and Cultivator.
No. 206,347. Patented July 23, 1878.



WITNESSES
E. H. Bates
J. J. Masi.

INVENTOR
William Mullens
by E. W. Anderson,
ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM MULLENS, OF FLAT CREEK, TENNESSEE.

IMPROVEMENT IN COMBINED COTTON CHOPPER AND CULTIVATOR.

Specification forming part of Letters Patent No. **206,347**, dated July 23, 1878; application filed March 16, 1878.

To all whom it may concern:

Be it known that I, WILLIAM MULLENS, of Flat Creek, in the county of Bedford and State of Tennessee, have invented a new and valuable Improvement in Cotton Chopper and Cultivator Combined; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of my invention. Fig. 2 is a longitudinal section thereof, and Fig. 3 is a rear-end view of the same.

This invention has for its object the improvement of combined cultivators and cotton-choppers.

The nature of the invention will be fully set forth in the following description.

In the annexed drawings, the letter A designates the central beam of my improved cotton chopper and cultivator, having at each side flexibly jointed thereto at *a* the diverging beams B. The rear ends of these beams are connected to the contiguous end of beam A by means of the end pieces C, the ends of which overlap each other and are secured to the said beam A by means of a bolt, *b*, extending through registering perforations in the ends of the said pieces, and screwed or otherwise secured to the said beam A. The side beams B are provided with the cultivating-shovels C', of any suitable description, and adjust themselves automatically to the sides of the ridges upon the flexible connections *a* and bolt *b*. They are, however, prevented from upward vibration beyond the plane of the beam A by a cross-cleat, *c*, secured to said beam and extending over the side beams, as shown in Fig. 1. The overlapping ends of the end bars C are provided with a number of spaced perforations, *d*, that allow the rear end

of the frame to be narrowed or widened, as may be required.

D indicates a chopping-block, extending down from the beam A nearly to the ground, and E the chopper, having its bearings upon said beam, and at each stroke striking with its cutting-edge against the block D. This chopper consists of a portion, *e*, lying along the beam A, and provided with an arm, *e'*, engaging the spokes of a driving-wheel, E', in advance of its hub, and of an angular portion, *f*, at right angles to the part *e*, upon the lower end of which the cutting-blade is secured.

The chopper-rod is formed of bar-iron of suitable rigidity in a single piece by bending, and is brought down to its work, after being raised by the wheel E', by means of a spring, F, secured at one end to the beam A, and bearing with its other end upon the said rod. The strain upon the spokes of the wheel E' is greatly diminished by means of a second spring, *s'*, secured at one end to the heel of the beam A and extending under the chopper-rod aforesaid.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a combined cotton chopper and cultivator, the combination, with the central beam A, carrying the chopper mechanism, of the lateral side bars B, having cultivating-shovels, and flexibly jointed at their ends to the beam A, substantially as specified.

2. The combination, with the beam A, having the chopper mechanism thereon, of the diverging side bars B, flexibly jointed thereto, their overlapping end pieces C, and a pivot-bolt, *b*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM MULLENS.

Witnesses:

N. S. B. CONWELL,
W. K. CONWELL.