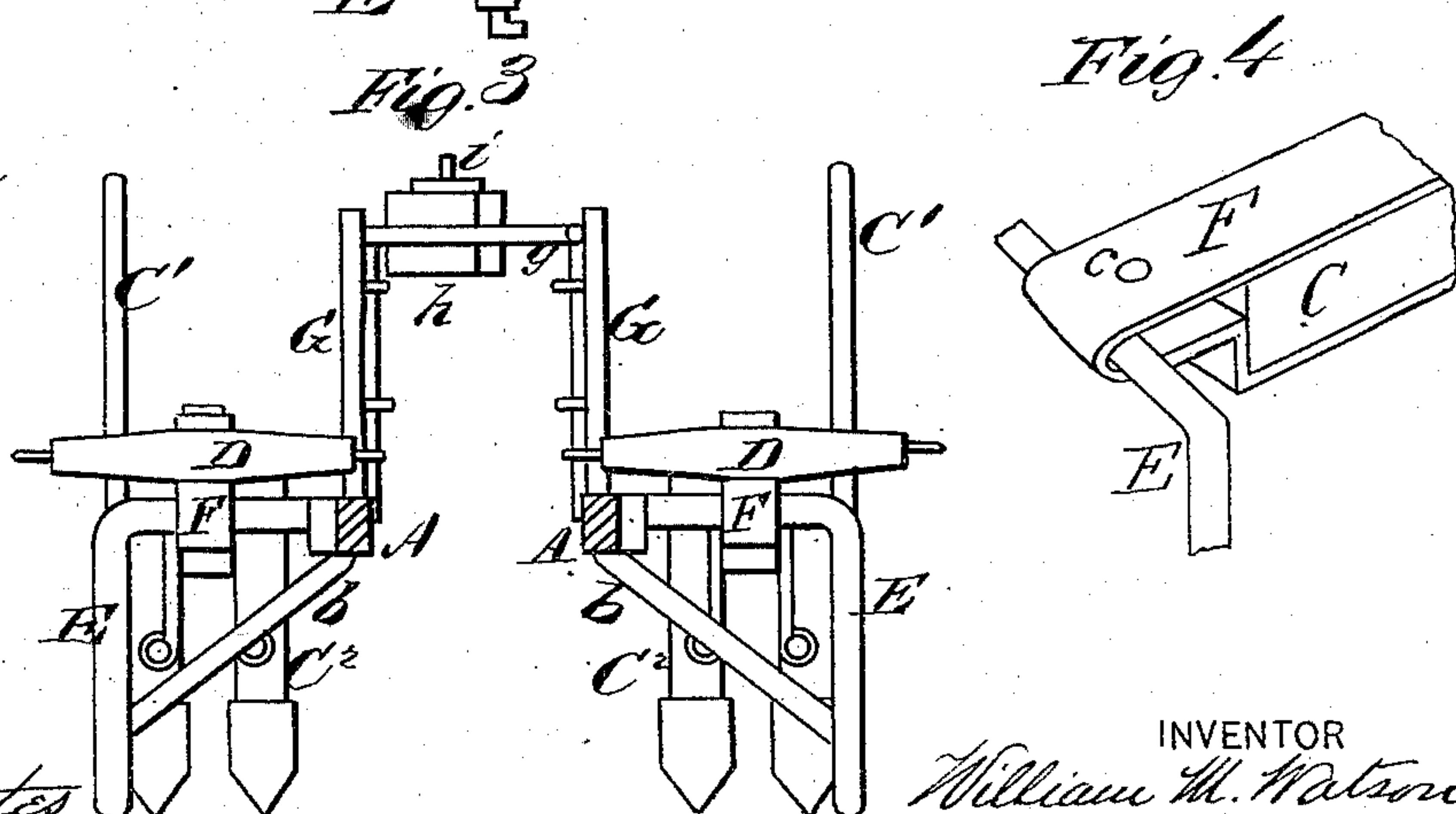
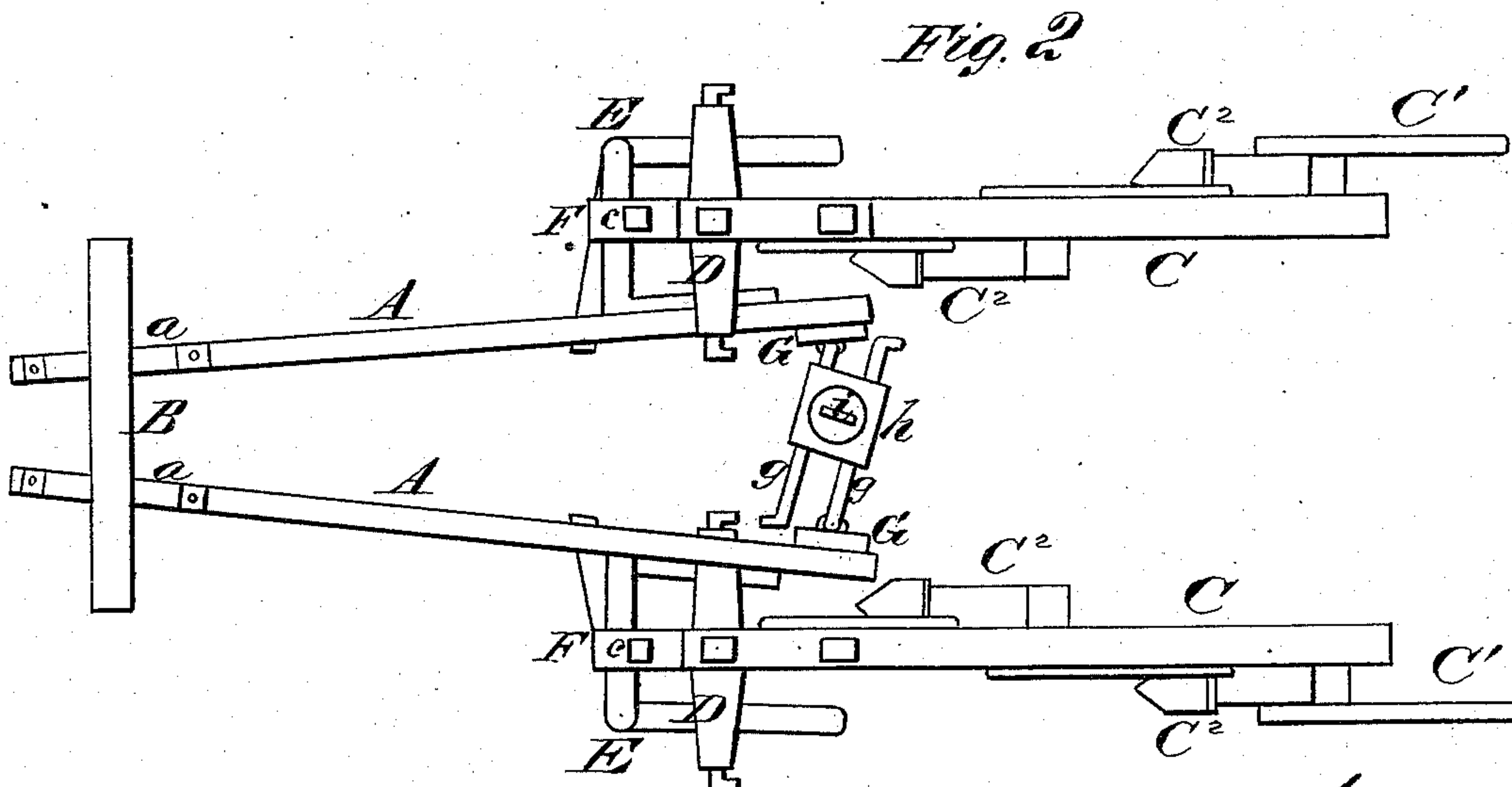
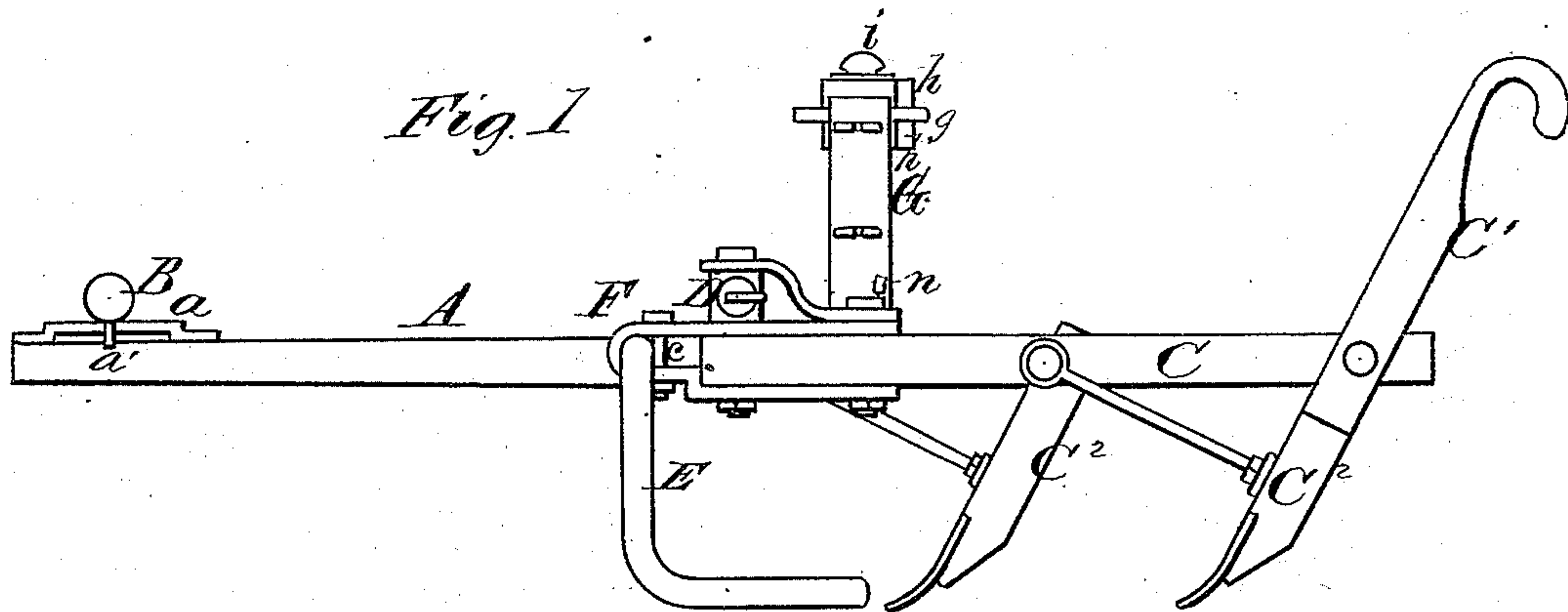


W. M. WATSON.
Cultivators.

No. 157,895.

Patented Dec. 15, 1874.



WITNESSES
E. H. Bates
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UNITED STATES PATENT OFFICE.

WILLIAM MEDD WATSON, OF TONICA, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **157,895**, dated December 15, 1874; application filed September 26, 1874.

To all whom it may concern:

Be it known that I, WILLIAM M. WATSON, of Tonica, in the county of La Salle and State of Illinois, have invented a new and valuable Improvement in Cultivators; 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 drawing is a representation of a side view of my cultivator. Fig. 2 is a top view, Fig. 3 is a front view, and Fig. 4 is a detail view, of the same.

This invention has relation to improvements on the cultivator for which Letters Patent were granted to me bearing date on the 9th day of June, 1874; and it consists in mounting the rear parts of the draft-tongues upon sled-runners, which are secured to the outer sides of these tongues, and have connected to them, by means of clevises, the shovel-carrying beams, which clevises will allow lateral as well as vertical movements to be given to the beams by the plowman.

In the annexed drawings, A A designate two draft-tongues, which are loosely connected together at their front ends by means of a yoke, B, substantially as described in the schedule annexed to my Letters Patent above referred to—that is to say, by means of oblong staples *a a'*. C C designate shovel-carrying beams, which have secured to them handles *C¹ C¹* and shovel-standards *C² C²*. To the front portions of these beams C C single-trees D D are jointed, so that the horses are hitched on the outer sides of the tongues, between the single-trees and the yoke. The front end of each beam C is connected to the laterally-extended portion of a sled-runner, E, which runner is rigidly secured to a tongue, A, and strengthened by a brace, *b*. I use a clevis, F, for attaching each beam C to its sled-runner, through which clevis a bolt, *c*, passes vertically, and bears against the lateral portion of the runner, so as to allow free lateral vibration to the beam. The clevis F is flat and broad, to prevent the beam from

tilting laterally, and to allow the beam to be vibrated vertically. I thus allow a universal motion to be given to the two shovel-carrying beams, and sustain them against tilting. The runners E are angular bars, and they sustain the rear ends of the draft-tongues A and front ends of the shovel-carrying beams C. G G are two standards, which are rigidly and perpendicularly secured to the rear ends of the tongues A. These standards have angular rods *g g* connected to them, so as to vibrate freely, and the horizontal portions of the rods are connected together by means of clamping-blocks *h* and a screw, *i*.

By loosening the blocks *h*, the shovel-carrying beams can be adjusted at any desired distance apart, according to the height of the corn.

The vertical portions of the rods *g g* being pivoted to the standards, the tongues are allowed free endwise play.

It is important, in connection with my cultivator, mounted on runners E, to employ hooks *n n*, and to locate these hooks at the rear ends of the tongues, in such positions that they will sustain the beams free from the ground when the machine is not in operation.

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

The tongues A A, jointed together at their forward ends, and capable of a rearward or forward movement independently of each other, in combination with the runners E E, to the upper horizontal parts of which are jointed, by the clevis F, the plow-beams C C, by which the latter are capable of a forward or rearward movement with the tongues A A, a lateral movement toward or from each other on the horizontal parts of the runners, and also a vertical movement on the same, substantially as described.

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

WILLIAM MEDD WATSON.

Witnesses:

ELIAS W. WOOD,
G. G. PRATT.