

J. WORRELL.  
PLOW.

No. 171,205.

Patented Dec. 14, 1875.

Fig. 3.

Fig. 1

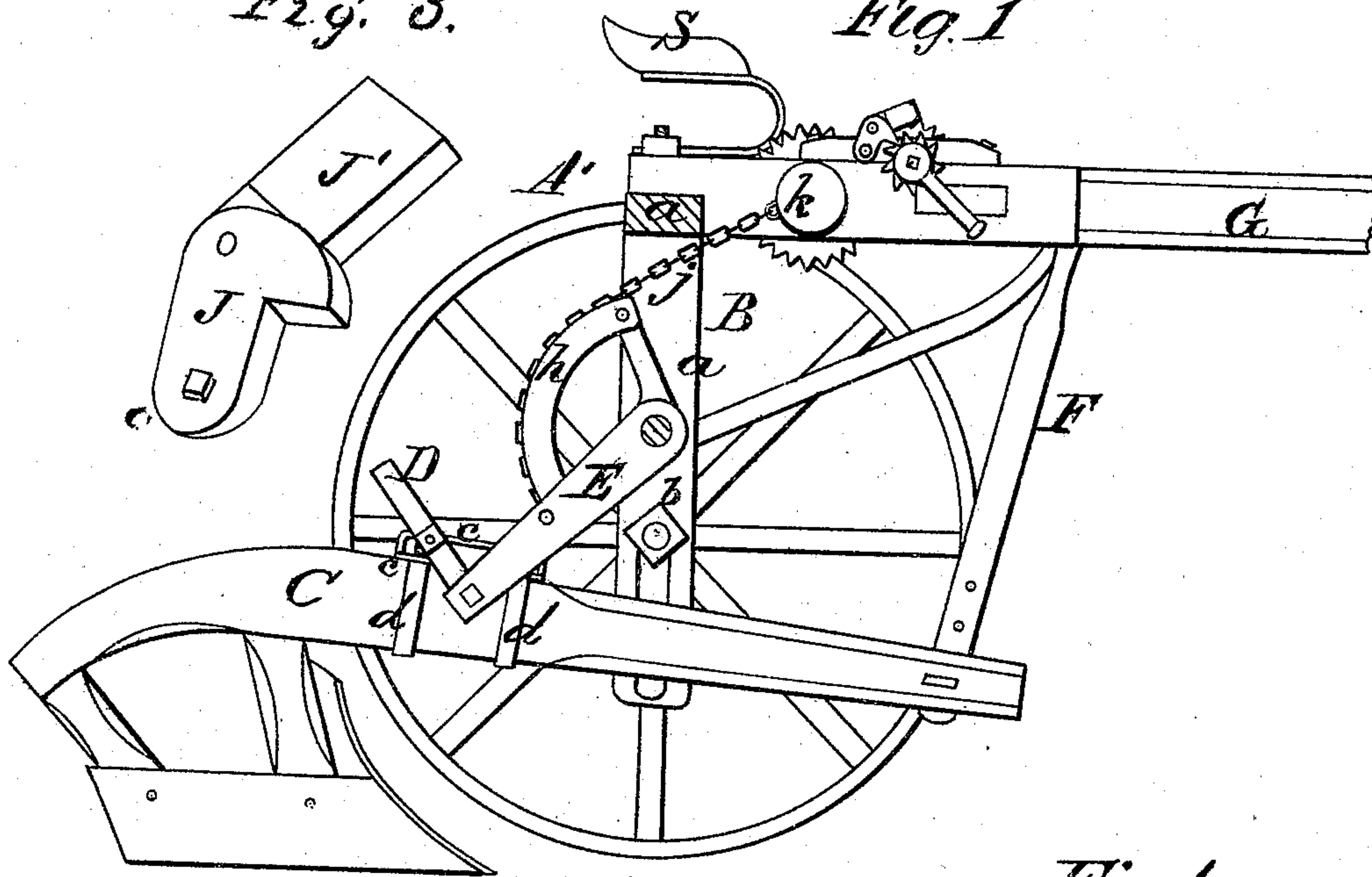
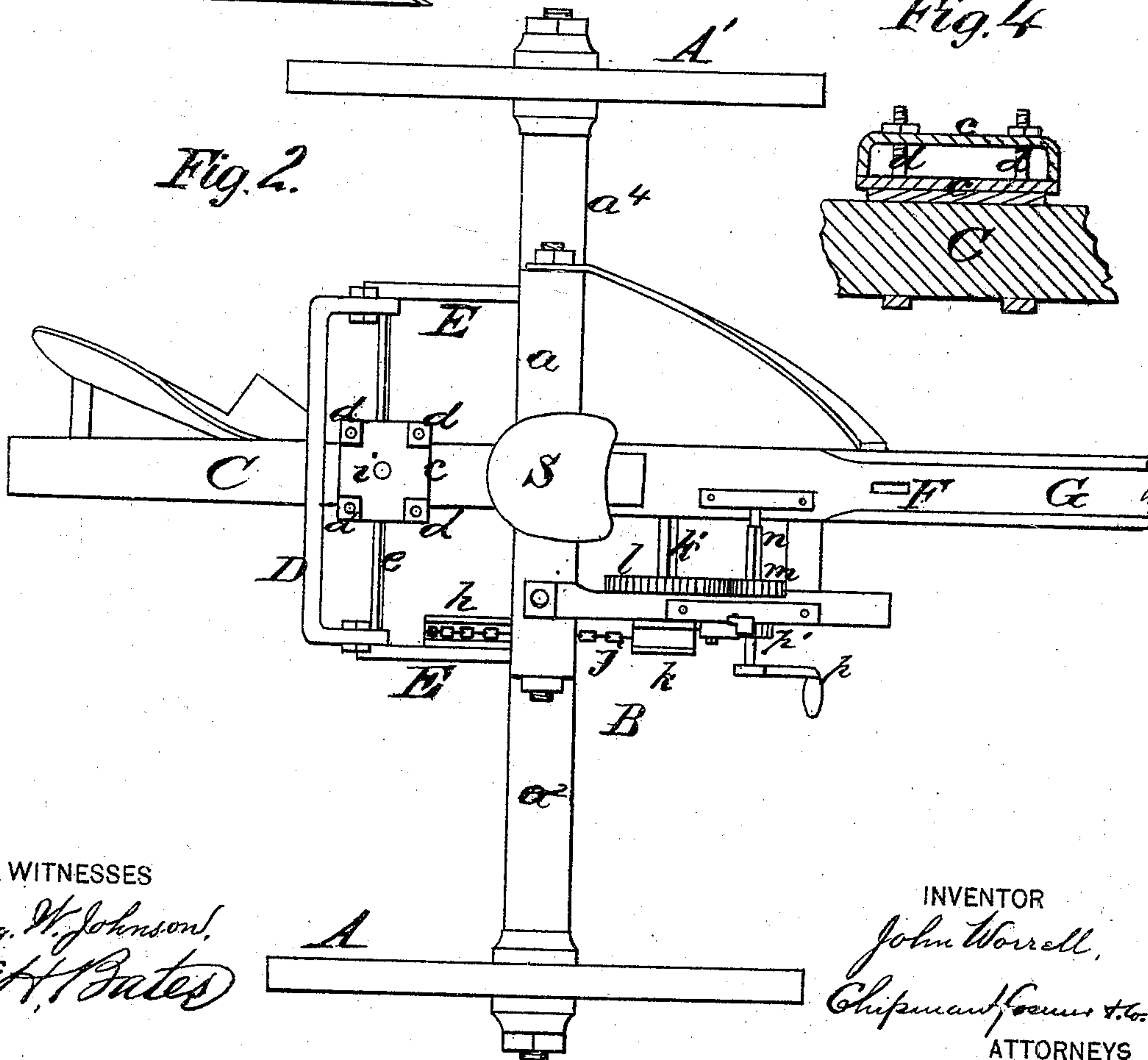


Fig. 2.

Fig. 4



WITNESSES

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Fig. 6

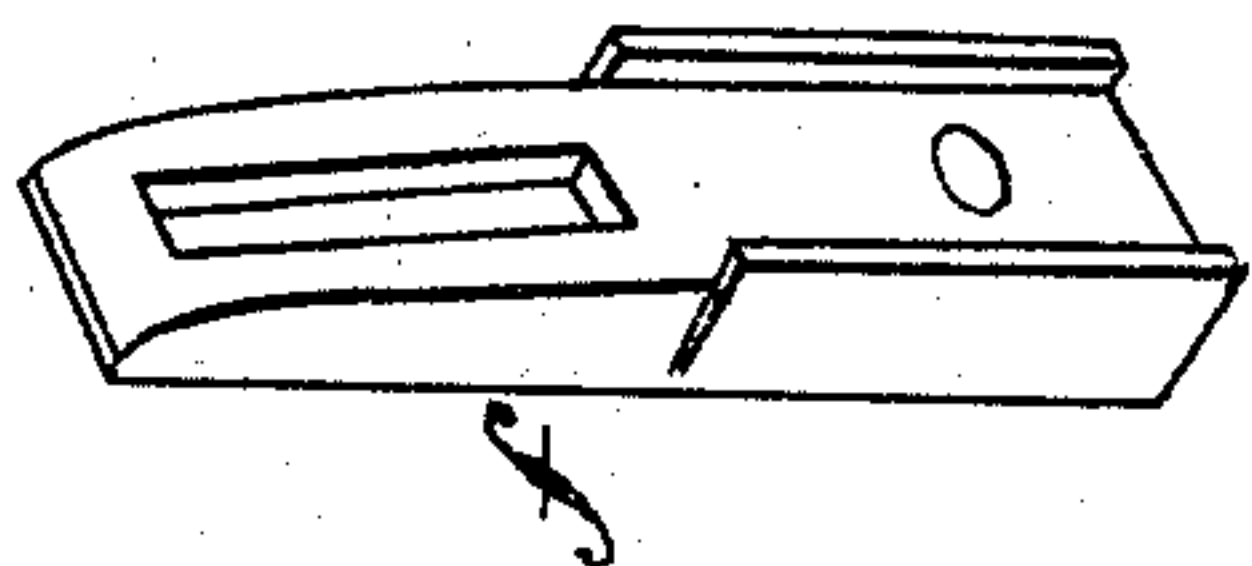
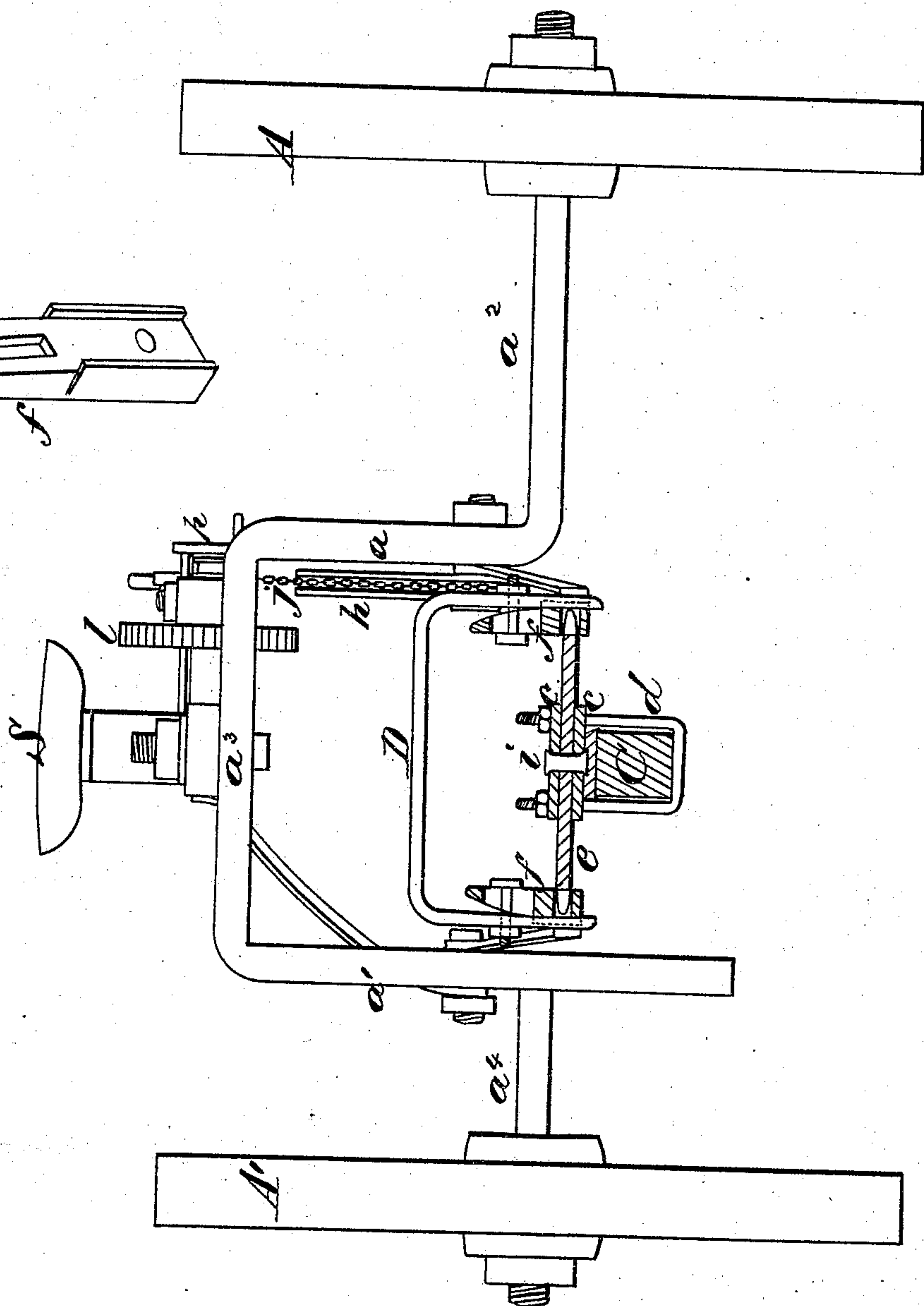


Fig. 5



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN WORRELL, OF CLAYTON, INDIANA.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **171,205**, dated December 14, 1875; application filed November 27, 1875.

*To all whom it may concern:*

Be it known that I, JOHN WORRELL, of Clayton, in the county of Hendricks and State of Indiana, have invented a new and valuable Improvement in Plows; 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 elevation of my plow. Fig. 2 is a plan view of the same, and Figs. 3 and 4 are detail views. Fig. 5 is a rear view, part sectional; and Fig. 6 is a detail view.

This invention has relation to wheel-plows, and especially to the plow for which Letters Patent of the United States were granted to me bearing date December 17, 1872, and numbered 134,121.

My invention and improvements consist in novel devices for attaching the plow to an arched axle-tree, whereby any desired degree of pitch can be given to the plow-point, and the plow is allowed to receive lateral adjustment, and the attendant, while riding on the machine, can conveniently raise the plow out of the ground, as will be understood from the following description:

In the annexed drawings, A A' designate the transporting-wheels, which turn on the ends of an arched axle, B. This axle is formed of two parts, one of which is bent so as to form three right angles, leaving two vertical portions,  $a^1$ , and two horizontal portions,  $a^2$   $a^3$ . The land-wheel A is applied on the horizontal portion  $a^2$ , which latter is of considerable length, for the purpose of having the wheels as far apart as practicable, and thus causing the machine to run steady on uneven land. The furrow-wheel A' turns on a short portion,  $a^4$ , of the axle, which portion is rigidly secured to the vertical slotted portion  $a^1$  by means of a nut,  $b$ , by loosening which the furrow-wheel can be adjusted for any desired depth of furrow. C designates the beam of a well-known kind of turn-plow, on top of which beam two plates,  $c$   $c$ , are rigidly secured by means of clasps and nuts  $d$   $d$ . Between the plates  $c$   $c$  is a space, in which a cross-bar,  $e$ , is pivoted at  $i$ . This bar has its end pivotal bearings in two slotted and flanged plates,  $f$   $f$ , the flanges on which embrace the edges of an arched cross-bar, D. These plates  $f$   $f$  are

confined to the bar D by means of bolts and nuts, by loosening which the plates with the plow are adjustable up and down. The arched bar D is rigidly secured to the rear ends of two arms, E E, which are pivoted at their front ends to the vertical portions of the axle-tree. The front end of the plow-beam C is adjustably attached to the lower end of a rod, F, which depends from the draft-tongue G, and which is pivoted to this tongue.

The adjustment of the front end of the beam C by the means described is for the purpose of changing the pitch of the plow, as circumstances require.

On one of the arms E a sector,  $h$ , is rigidly secured, to the rear edge of which a chain,  $j$ , is attached. This chain is carried forward in the groove of the sector  $h$ , and attached to the grooved periphery of a small wheel,  $k$ . The wheel  $k$  is keyed on one end of a shaft,  $k'$ , which has its bearings in the draft-tongue G, and a short bar, which is parallel to this tongue. A spur-wheel,  $l$ , is keyed on the shaft  $k'$ , which engages with a pinion spur-wheel,  $m$ , on a shaft,  $n$ . This shaft  $n$  carries on one end a crank-handle,  $p$ , and also a ratchet-wheel,  $p'$ . J designates a pawl, which is pivoted in close relation to the ratchet-wheel  $p'$ , and to which a weight,  $J'$ , is pivoted.

When weight  $J'$  is thrown forward, as shown in Fig. 1, it will hold the pawl engaged with the ratchet-wheel  $p'$ , and prevent the plow from descending when it is raised free from the ground, or when it is adjusted to run at any given depth in the ground. When weight  $J'$  is thrown back it holds the pawl J free from the ratchet-wheel.

By this arrangement of the several parts the driver sitting in his seat S can conveniently raise and lower the plow, as circumstances require.

What I claim as new is—

The plates  $c$   $c$ , secured to the plow-beam C by means of staples and nuts  $d$ , and having pivoted between them the oscillating bar  $e$ , in combination with adjustable bearings  $f$ , arched bar D, and arms E, pivoted to the vertical portions  $a^1$  of an arched axle, B, substantially as described.

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

Witnesses: JOHN WORRELL.

R. C. MOORE,  
JOHN HAMMOND.