2 Sheets—Sheet 1.

J. K. UNDERWOOD.

ROTARY GANG-PLOW.

No. 169,499. Patented Nov. 2, 1875.

Fig. 1

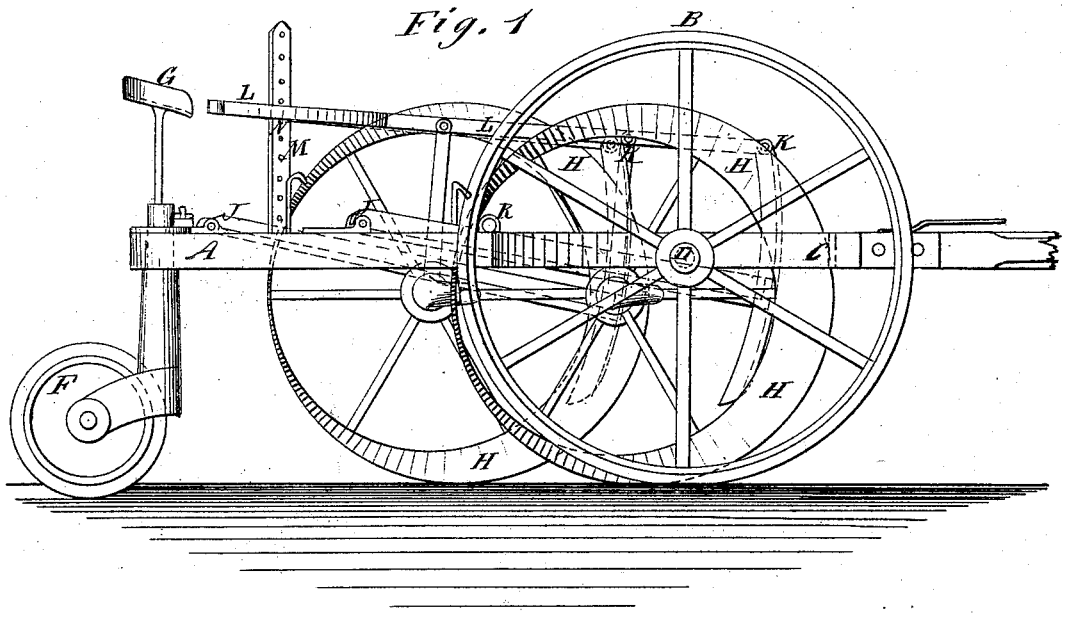
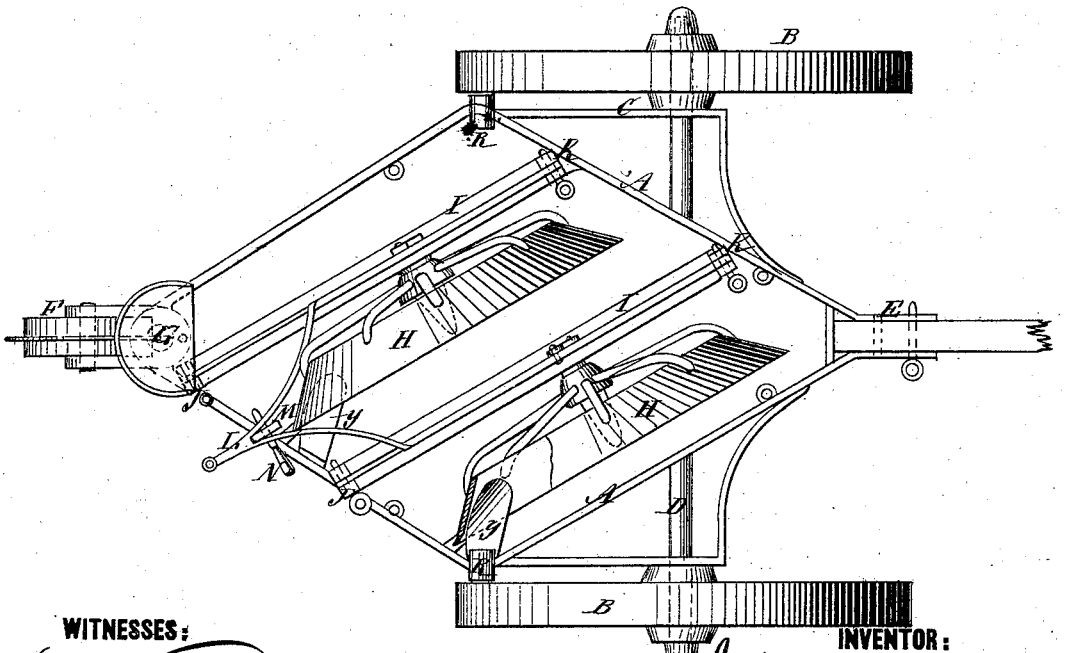


Fig. 2



WITNESSES:

C. Neveux

A. F. Terry

INVENTOR:

John K. Underwood

BY

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

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Fig. 3

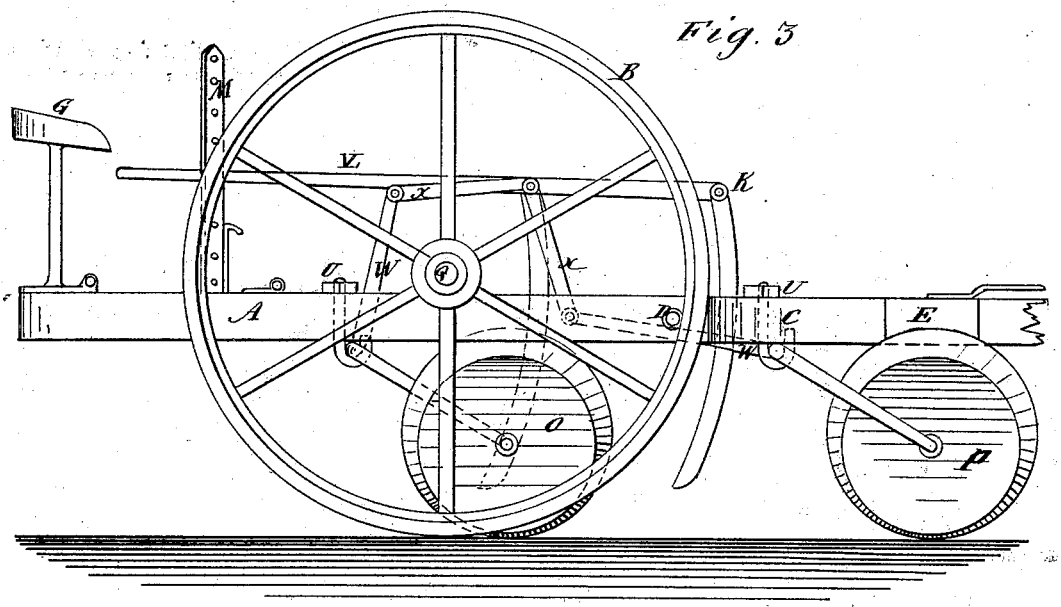
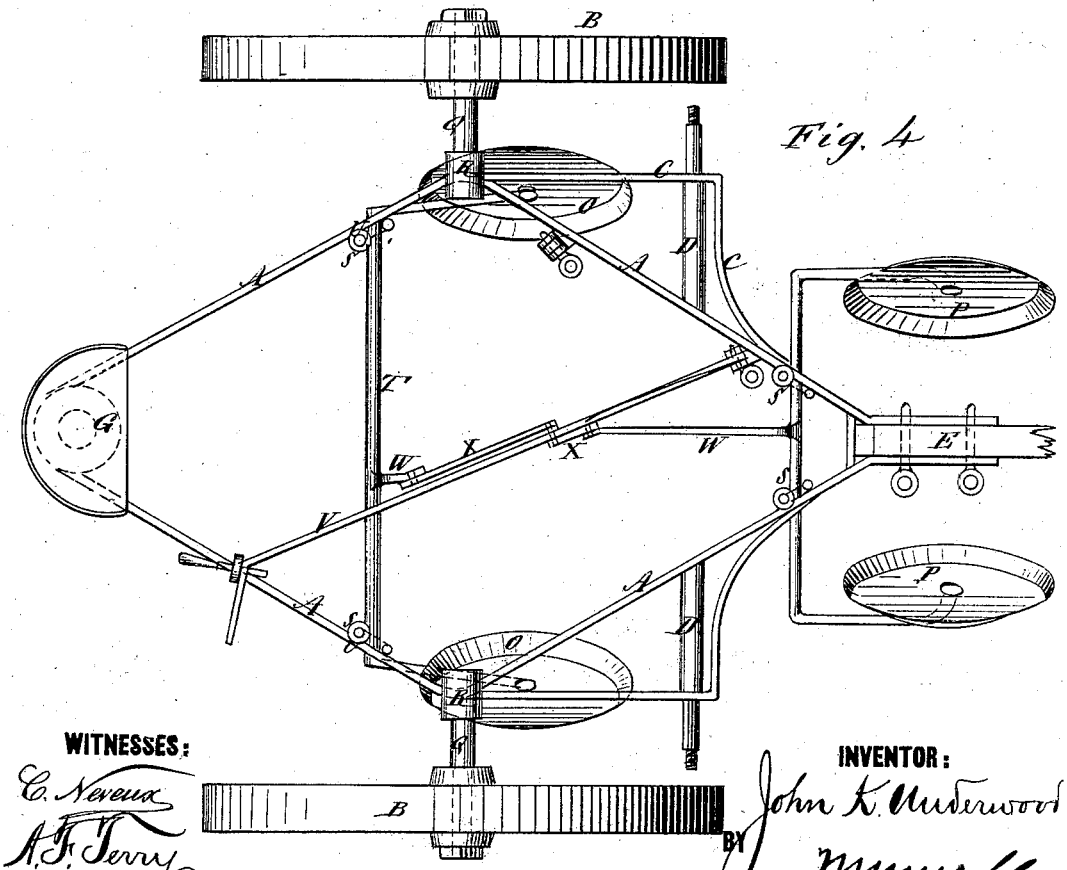


Fig. 4



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UNITED STATES PATENT OFFICE.

JOHN K. UNDERWOOD, OF SAUK CENTRE, MINNESOTA.

IMPROVEMENT IN ROTARY GANG-PLOWS.

Specification forming part of Letters Patent No. **169,499**, dated November 2, 1875; application filed July 31, 1875.

To all whom it may concern:

Be it known that I, JOHN K. UNDERWOOD, of Sauk Centre, in the county of Stearns and State of Minnesota, have invented a new and Improved Rotary Gang-Plow, of which the following is a specification:

The invention will first be described in connection with drawing, and then pointed out in the claims.

Figure 1 is a side elevation of my improved plow. Fig. 2 is a plan view. Fig. 3 is a side elevation with the cultivator attachment applied, and Fig. 4 is a plan of Fig. 3.

Similar letters of reference indicate corresponding parts.

A is a kind of diamond-shaped frame, mounted on the truck-wheels B by the frame C and axles D, and having the tongue E attached at one end and the caster-wheel F at the other end of its largest diameter, and over the caster-wheel is the seat G. H represents the dish-shaped rotary plows, which are mounted on the beams I, with the front edges inclined to the land-side, as shown, to press into the ground and turn over the furrows as they rise up at the rear and throw them off. The beams are pivoted to the frame at J, and at the front end they swing up and down in the keepers K, to be held in place and to vary their height for regulating the depth of furrows. They are adjusted and held in the required position by the forked lever L, standard M, and pin N, which are so arranged relatively to the seat that the driver can make any needed adjustment while sitting in his seat, and the lever is pivoted to the keepers at its front ends. By these means, also, the plows are lifted up and supported above the ground when being moved to or from the field to be plowed. O and P represent the cultivator-plows, of similar construction, but of smaller size, to be used instead of the large ones for cultivating, the large ones and the caster being removed, and the wheels B being shifted back along the machine onto the axles Q, which connect detachably with the frame A at the corners R. The front cultivator-wheels are mounted on the short cranked axle S, and the others on the long hind cranked axle T, to run in different lines. These axles are detachably connected to the frame A by the hook-headed bolts U and the cranked axles; and connected to the lever V by an arm, W, and connecting-rod X, so as to be fastened high or low on the standard M, in the same manner that the plows H are, the lever being pivoted at the front to one of the keepers. Y represents scrapers for cleaning the plows as they revolve.

Plows of this description will turn wider furrows with a given force than those of other forms, and the width may be raised by inclining the caster-wheel right or left, for which it is contrived, and has a fastening device to hold it in any required position.

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

1. The frame A C, having two sets of axles, D R, hook-bolts U, standard M, and keepers K, adapted to receive rotary plows or cultivators, in the manner described.

2. The combination, with rotary plows H, of beams I, pivoted upon the frame at J, and swinging in keepers K, the forked lever L, the bars O, standard M, and pin N, as and for the purpose specified.

JOHN K. UNDERWOOD.

Witnesses:

IRA M. CARPENTER,

A. G. MATTISON.