2 Sheets—Sheet 1.

A. C. ROSENCRANZ.

Wheel-Plow.

No. 220,426. **Patented Oct. 7, 1879.**

Fig. 1.

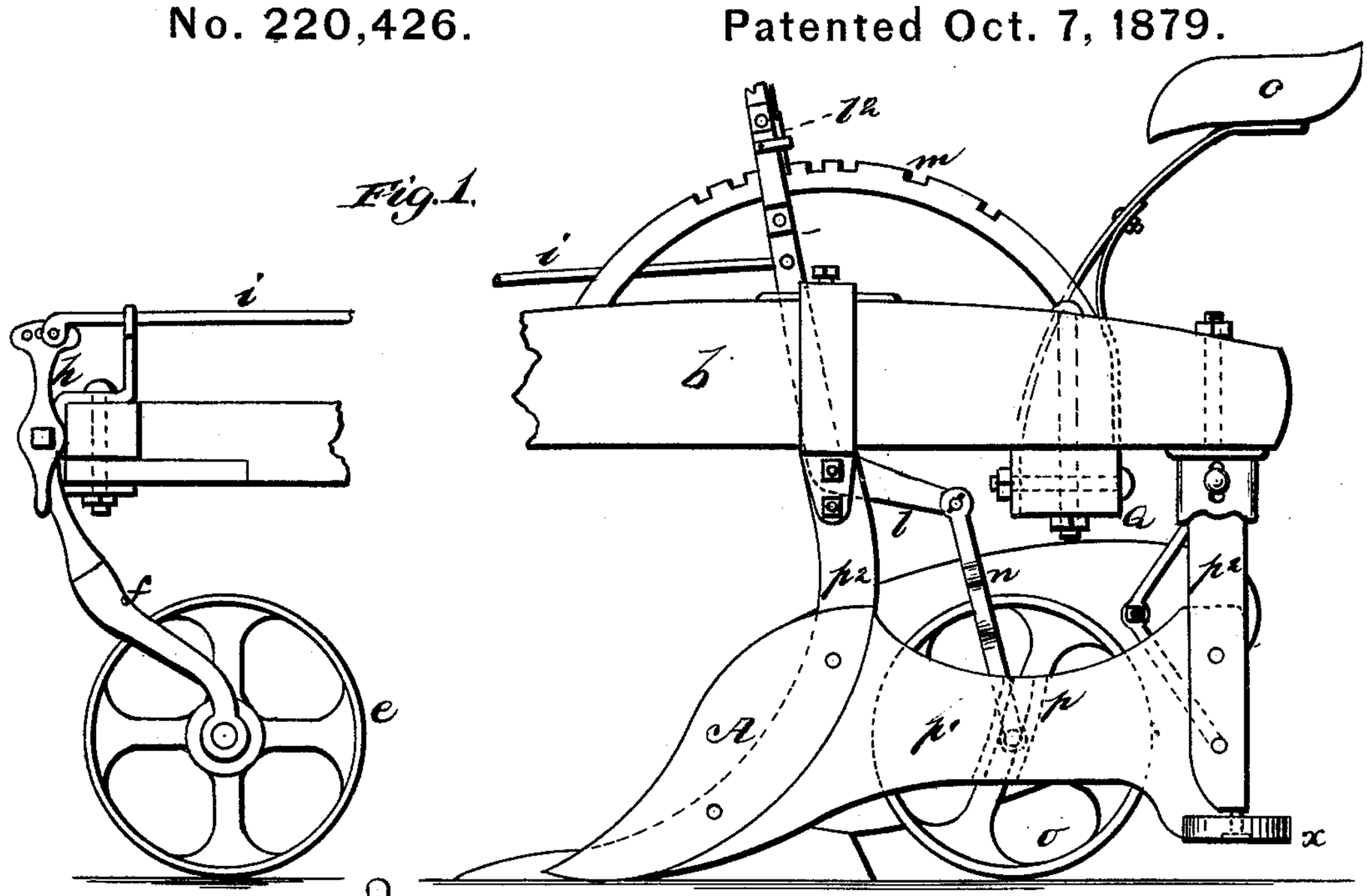
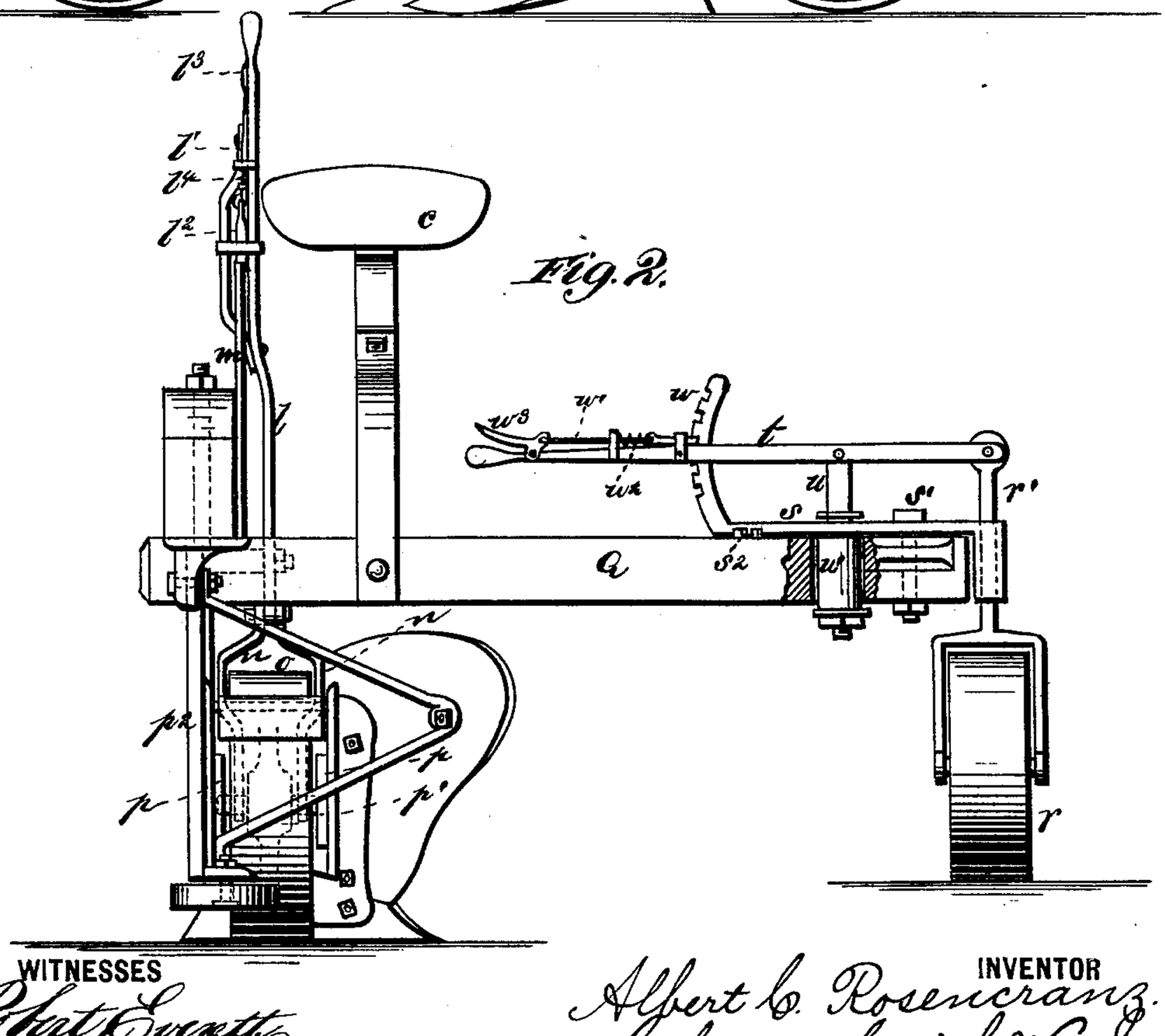


Fig. 2.



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2 Sheets—Sheet 2.

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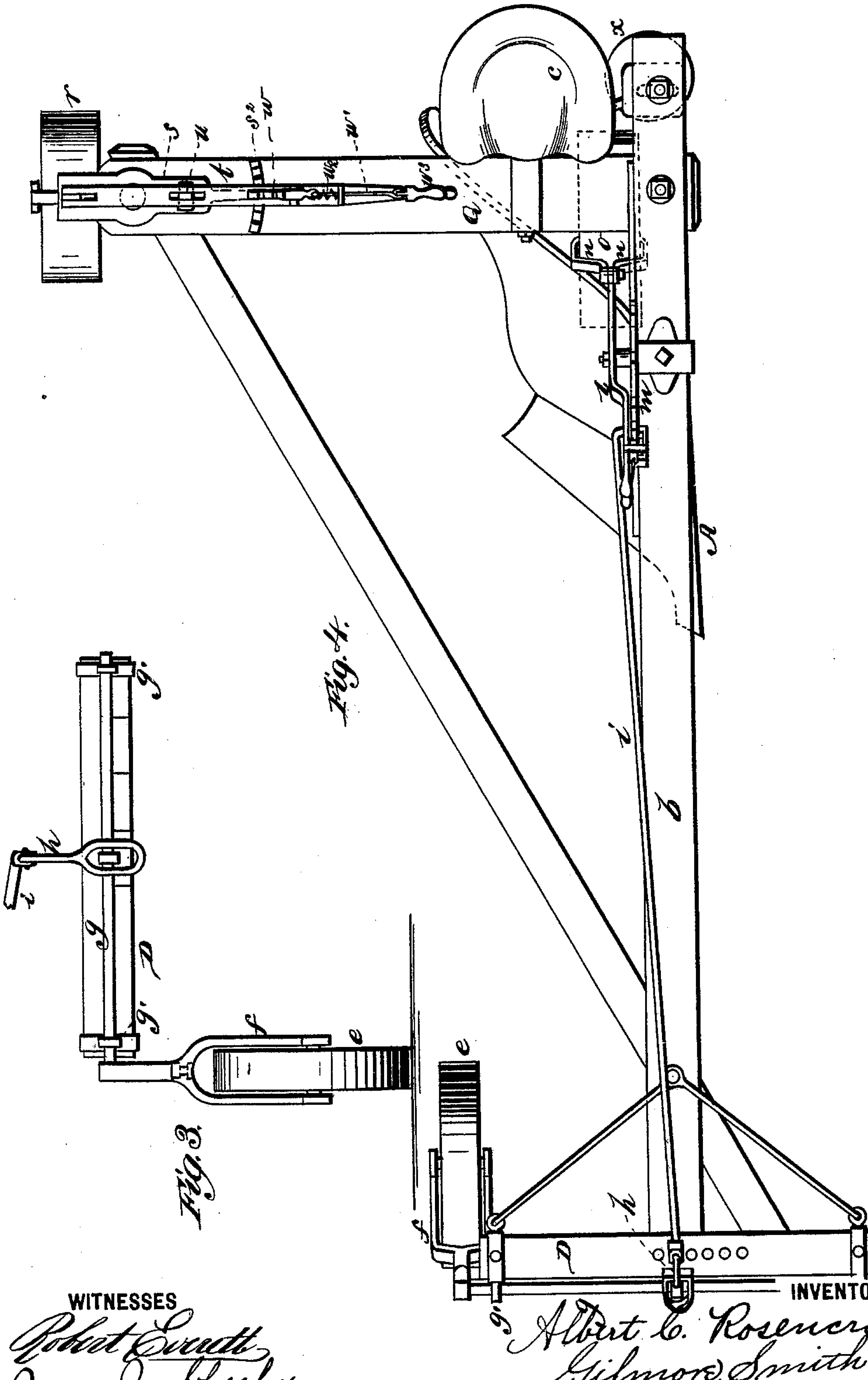

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UNITED STATES PATENT OFFICE.

ALBERT C. ROSENCRANZ, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN WHEEL-PLOWS.

Specification forming part of Letters Patent No. **220,426,** dated October 7, 1879; application filed August 30, 1879.

To all whom it may concern:

Be it known that I, ALBERT C. ROSENCRANZ, of Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Wheel-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 drawings is a representation of a side elevation of my plow. Fig. 2 is an end view, and Fig. 3 is a plan view.

The nature of my invention consists in certain improvements in wheel-plows, as will be fully set forth in the following specification, and particularly pointed out in the claims.

In the drawings, A designates the plowshare, *b* the beam, and *c* the usual elevated driver's seat. D designates a cross-bar secured upon the forward end of the beam, and *e* a wheel having its bearings in a swinging standard, *f*, which is supported upon the cross-bar D by means of a horizontal rod or arm, *g*, arranged to turn in suitable bearings *g' g'* upon the cross-bar, as herein shown.

Upon the rod *g* is secured a clevis-shaped lever, *h*, its lower end being adapted for connection with the clevis of a double-tree, and its upper end being provided with a series of openings, through which a bolt is passed for the purpose of connecting therewith a rod, *i*, which extends back to the bell-crank lever *l*. The upper arm of this lever is provided with a sliding rod, l^1, having a catch, l^2, upon its lower end for engagement with the teeth of a curved rack-bar, *m*. This rod is operated by means of a thumb-lever, l^3, and the catch forced into engagement with the teeth by a spring, l^4. To the lower arm of the bell-crank lever is pivoted a bar, *n*, which is forked at its lower end, so as to embrace the wheel *o*, the extremities of its forked ends being formed so as to constitute bearings for the axle of the wheel. This wheel is designed to have a vertical adjustment, and hence the ends of its axle are arranged to work in the slots *p*. (Shown by dotted lines in Fig. 1.) These slots are formed in the plates p^1, which are secured to the standards p^2 p^2.

Q designates a bar, which extends laterally from the plow-beam, and which carries the mechanism for controlling the adjustment of a side wheel, *r*. The wheel *r* is mounted in the lower forked end of a bar or standard, *r'*. This bar passes upwardly through a hollow arm of the plate *s*, and is pivoted to the outer end of a lever-bar, *t*. The plate *s* is pivoted upon the bar Q by means of a bolt, s^1, so as to oscillate in a horizontal plane, and thereby change the position of the wheel *r* for guiding purposes. The plate *s* is also adapted to engage with the rack-bar s^2 upon the bar Q, whereby it may be adjusted and its movement controlled.

Passing through a slot in the plate *s* and through the bar Q is a standard, *u*, upon which is pivoted the lever-bar *t*, by means of which the wheel *r* is adjusted vertically. A coiled or rubber spring, *u'*, is arranged upon this standard *u* between the plate *s* and a suitable nut and washer, so as to relieve the parts from the jar incident to the passage of the wheel over rough ground.

Upon the inner end of the plate *s* is a curved rack-bar, *w*, and upon the lever-bar is a rod, w^1, provided with a catch for engagement with the teeth of the rack-bar. This catch is forced into engagement with the rack-bar by means of a spring, w^2, and withdrawn from the same by a short lever, w^3, which is pivoted upon the bar *t*.

It will be observed that the thumb-lever w^3 is arranged above the bar *t*, so that the said bar may be readily grasped underneath by the hand of the operator and raised, together with the plate and rack-bar, without disengaging the catch of the rod w^1.

By the above arrangement of devices the operator may easily raise the wheels *e* and *o* simultaneously by releasing the catch from the rack-bar *m* and throwing forward the handle end of the bell-crank lever *l*. A reverse movement of the said lever will lower these wheels, and by means of the spring-catch and rack-bar they may be adjusted and held at the required height.

As hereinbefore stated, the clevis of the double-tree is connected with the lower end of the clevis-shaped lever *h*, and hence the draft thereon will have a tendency to throw back the

rod *i* and lever *h*, so that when the catch is disengaged this will materially aid the driver in lowering the wheels, and therefore raising the plow from the ground. The side wheel, *r*, is raised or lowered by means of the lever *t*, and swung around by disengaging the plate *s* from the rack-teeth s^2, and turning the same around its pivotal bolt.

Y designates a wheel or roller, which runs alongside of the furrow and aids in guiding the plow.

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

1. The side wheel, *r*, having its supporting-standard passed through the socket of a swinging plate or bar and pivoted to the adjustable lever *t*, whereby the wheel may be adjusted to level the plow and to regulate the side draft upon hill-sides, substantially as set forth.

2. The combination of the wheel *r* with the standard *r'*, pivoted plate *s*, lever *t*, bar Q, rack-bars s^2 *w*, and spring-catch upon the lever *t*, substantially as set forth.

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

ALBERT C. ROSENCRANZ.

Witnesses:

CHAS. G. PAGE,

JAMES J. SHEEHY.