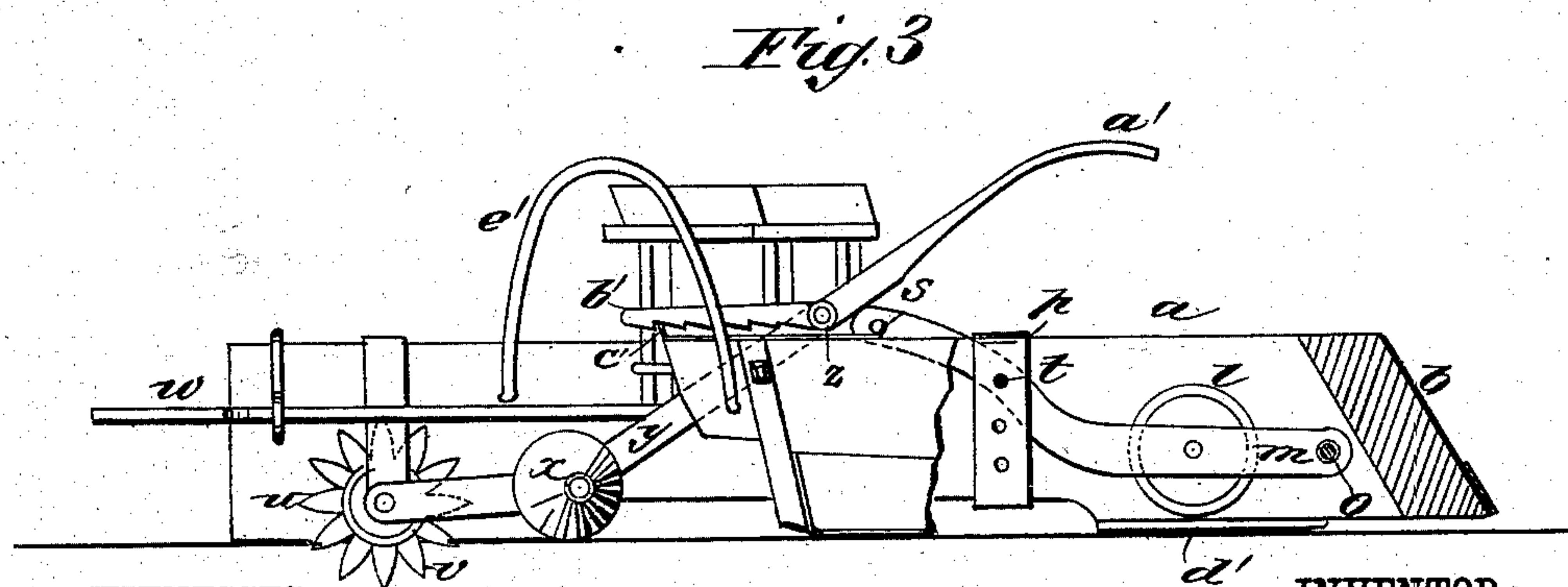
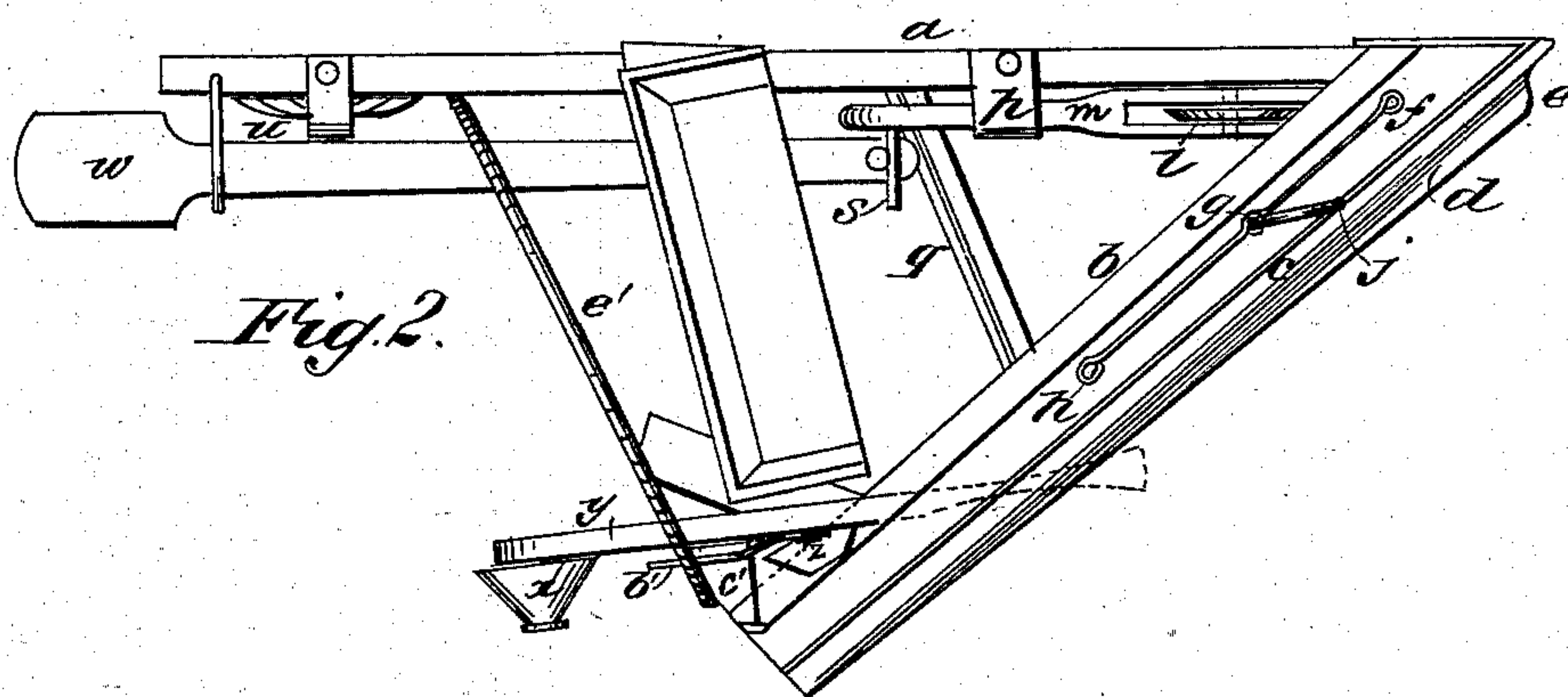
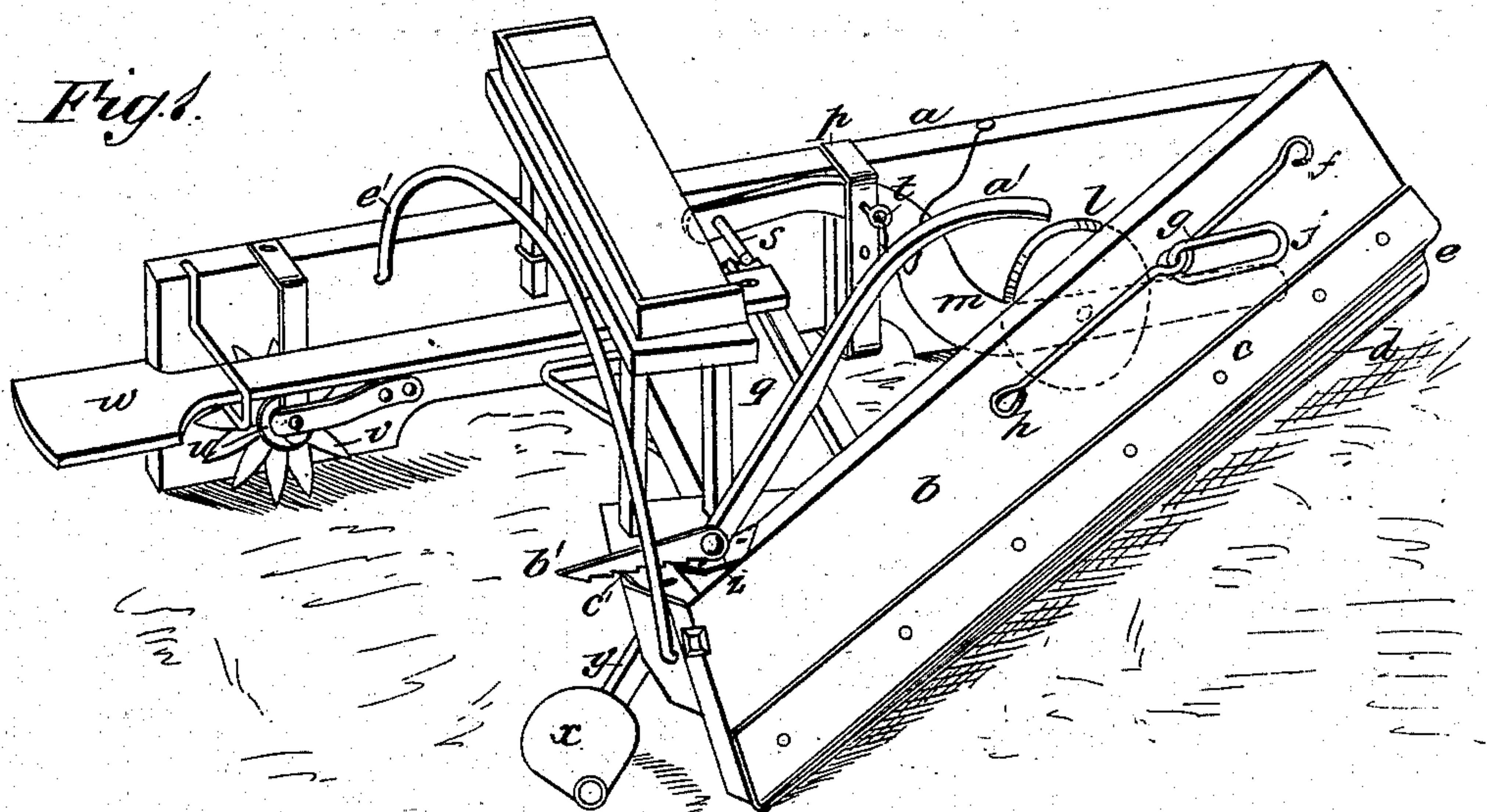


(No Model.)

A. L. GRIFFITH.
ROAD GRADER AND SCRAPER.

No. 276,393.

Patented Apr. 24, 1883.



WITNESSES:

Francis McAvale
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UNITED STATES PATENT OFFICE.

ALEXANDER L. GRIFFITH, OF BEALLSVILLE, OHIO.

ROAD GRADER AND SCRAPER.

SPECIFICATION forming part of Letters Patent No. 276,393, dated April 24, 1883.

Application filed October 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER L. GRIFFITH, of Beallsville, in the county of Monroe and State of Ohio, have invented a new and Improved Grader and Scraper, of which the following is a full, clear, and exact description.

My invention relates to grading and scraping machines to be employed for road-scraping, ditching, and for leveling ground generally; and it consists of improvements in the construction and arrangement of several of the details of such machines, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a grader and scraper as improved by me. Fig. 2 is a plan view, and Fig. 3 is a side elevation with a part of the mold-board cut out.

a represents the landside, and *b* the mold-board or scraper. I propose to apply a share-plate, *c*, to the front side and lower edge of the mold-board, having its lower edge, *d*, curved forward of the plane of the upper portion, the said curved portion being wider at the point than the rest and gradually diminishing in width to the heel, and, together with said curved edge, I construct the point of said share in the curved form represented at *e*, the same being substantially like a gouge with a beveled end, whereby it takes off uneven places left in the bottom of the ditch by the plow better and makes the draft lighter, and the greater width of the share at the point enables it to shear off the strips of the bank left by the plow and pass under the earth better, and also enter it better at the start, besides making the scraper run easier and enabling it to make the bank smoother.

In order to control the direction of the scraper by the draft, I propose to employ an eye or staple, *f*, located near the point, to hitch on the team when it is desired to have both sides of the scraper incline alike, or nearly so, to the line of the draft; and for gaging it to cause the landside *a* to run along the furrow to throw the earth to one side only by the mold-board *b*, I have another hitching eye or staple, *g*, located at a suitable distance along the mold-board from the point—say about midway be-

tween the middle of the mold-board and the point—to give such inclination, and beyond that, and near the middle of the mold-board, I locate a third eye or staple, *h*, to which the team is to be hitched when the mold-board is to be used as a scraper for hauling the earth directly ahead of it. When hitching to the middle eye, *g*, a long link, *j*, will be employed to allow the whiffletrees to swing clear of the point of the scraper. These eyes may consist of a rod or bar bent at the center of its length to form an eye, and its ends bent to form eyes, and then secured to the board, as shown in the drawings; or separate eyes or staples may be used.

Near the front end of the landside I have arranged a roller, *l*, in a lever, *m*, pivoted to said side at *o*, and ranging along through the guard *p* and over the cross-bar or foot-board *q* of the frame, where it can be pressed down by the foot of the driver on the arm *s* to raise the scraper on the roller for loosening up the point when it becomes wedged hard in solid ground and to carry the point around above ground when desired. The lever may be fastened in different positions by the pin *t* when desired.

Near the rear end of the landside is a dished spur-wheel, *u*, with teeth or spurs *v* to enter the ground for a guide to control the direction of the machine, and also for a carrier to that part of the machine when not pressed into the ground, which it is intended to be at times, when required, by the weight of an attendant sitting on the spring-board seat *w*, provided for the purpose, and also serviceable as a means of lifting up the side *a* when it may be required for turning the machine and otherwise adjusting it. The wheel *u* is pivoted to the side of the landside, and its teeth are pointed by beveling them from the opposite side toward the landside, besides beveling them between each other, thus insuring points that will enter the hardest ground to some extent, and such that with the aid of the weight of the attendant on the seat *w* will insure the running of the board *a* on the ground.

The roller *x*, at the rear of the mold-board *b*, is mounted on a lever, *y*, pivoted at *z*, and having a handle, *a'*, extending upward suitably for the driver to raise the mold-board with his right hand at the same time that he raises the point of the scraper by his foot, and

in order to hold it in position to carry the mold-board for a time a ratchet-pawl, *b'*, is pivoted to it to engage the catch *c'*.

5 Under the front portion of the landside *a*, I arrange a shoe, *d'*, of metal, for a wearing-plate, the same being a narrow plate or bar projecting below the edge of the scraper and mold-board to form and run in a groove below the surface scraped over by the scraper.

10 The yoke *e'* is a rod attached to the landside and mold-board for employment in shifting the machine about by hand.

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

1. The combination of hitching-eyes *f*, *g*, and *h* with a scraper, *a b*, eye *f* being located near the point of the scraper *g*, midway from said point to the middle of the mold-board and
20 *h* at the middle of the mold-board, or thereabout, substantially as specified.

2. The combination, with the landside *a* and the foot-board *q*, of the spur-wheel *u*, journaled to the rear end of the landside, and the spring-seat *w*, having its forward end secured to the
25 said foot-board and its rear end projecting beyond the landside, substantially as herein shown and described.

3. The combination, with the landside *a* and mold-board *b*, of the wheel *l*, journaled in the
30 lever *m*, pivoted to the forward end of the landside, the spur-wheel *u*, journaled to the rear end of the landside, and the roller *x*, journaled in the lower end of the lever *y*, pivoted to the rear end of the mold-board, substan-
35 tially as herein shown and described.

ALEXANDER L. GRIFFITH.

Witnesses:

J. E. DIXON,
J. W. REED.