

S. BRYAN.
GANG-PLow.

No. 173,264.

Patented Feb. 8, 1876.

Fig 1.

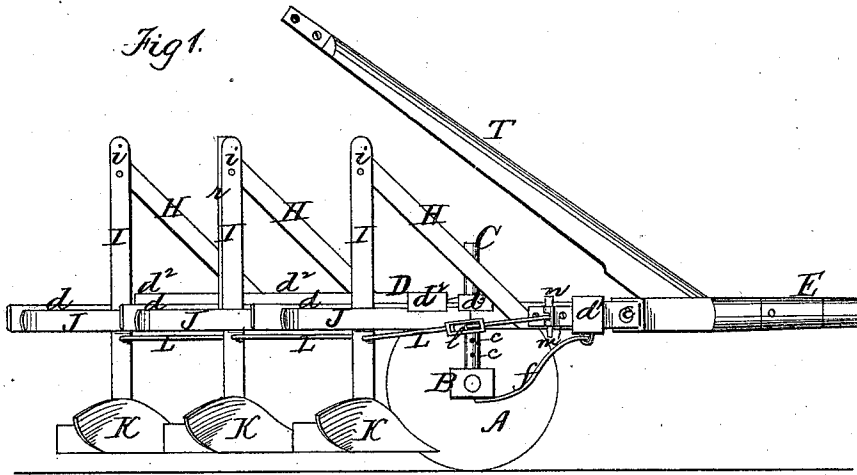
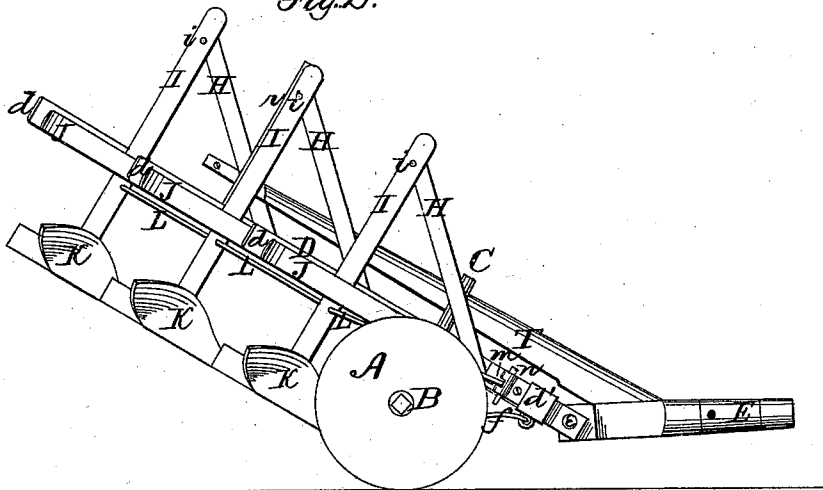


Fig. 2.



WITNESSES

McLurch
F. McKenny.

INVENTOR

Saml. Bryan
By Hiel V. Belmont
His Attorneys,

S. BRYAN.
GANG-PLOW.

No. 173,264.

Patented Feb. 8, 1876.

Fig. 3.

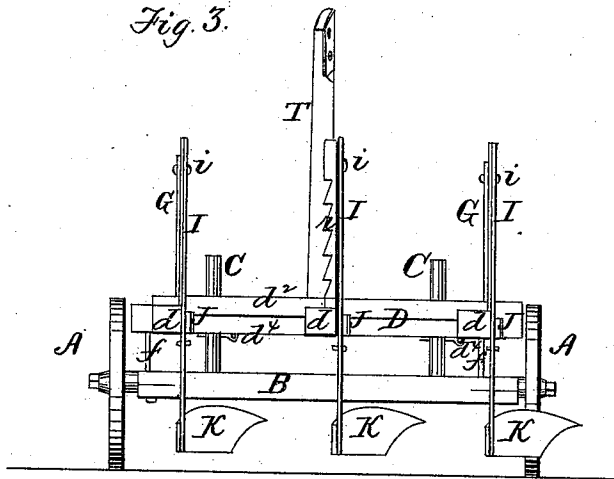
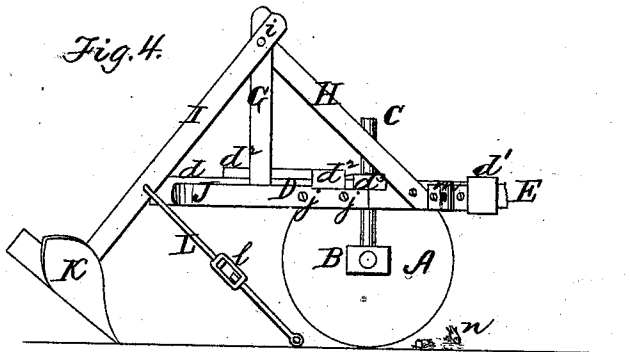


Fig. 4.



WITNESSES

M. Church
F. M. Kenny

INVENTOR

Saml. Bryan
By Hie T. Allsworth
Hie's Attorneys

UNITED STATES PATENT OFFICE.

SAMUEL BRYAN, OF TWIN GROVE, WISCONSIN.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. **173,264**, dated February 8, 1876; application filed July 13, 1875.

To all whom it may concern :

Be it known that I, SAMUEL BRYAN, of Twin Grove, in the county of Greene and State of Wisconsin, have invented certain new and useful Improvements in Gang-Plows; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, showing the plows lowered and ready for operation, the right draft-wheel being removed to reveal the construction of the other parts more clearly. Fig. 2 is a side elevation, showing the plows raised and ready to be moved from the field. Fig. 3 is a rear elevation, showing the plows in the same position as in Fig. 1; and Fig. 4 is a side elevation, showing how the plow is relieved when it encounters an immovable obstacle.

Similar letters of reference in the accompanying drawings denote the same parts.

The invention consists in the mode of connecting the plows to the frame, and providing for an independent lateral movement of any one of them that may happen to encounter an immovable obstacle obliquely athwart its path.

In the drawings, A A' are the draft-wheels, mounted loosely on an axle, B, from which rise two stout standards, C C, having a vertical series of holes, *c c c*. D is the main frame, composed of two, three, or more longitudinal beams, *d d*, one stout cross-beam, *d¹*, in front, one oblique cross-beam, *d²*, near their rear end, and one intermediate stout cross-beam, *d³*, directly over the axle B. The standards C extend up through suitable holes made in the cross-beam *d³*, so that the horizontal elevation of the main frame can be adjusted by means of keys or pins *d⁴* in the holes *c c*, for the purpose of enabling the plows to cut more or less deeply into the ground when at work. The front cross-beam is connected to the lower side of the axle by means of stout metal rods or chains *f*. The tongue or draft-pole E is attached to a roller, *e*, mounted in suitable bearings projecting from the front side of beam *d¹*, and the draft is communicated to the axle and wheels mainly through the flexible rods or chains *f*, but to some extent also through the standards C. G

G G are upright spring-steel standards attached to the beams *d d d*, near the rear ends of the latter, and connected at their upper ends to spring-steel straps or bars H H H, extending forward and downward to the sides of said beams. I I are the plow-standards, connected to the spring-steel standards by suitable bolts *i i*, so that they can swing back upon said bolts as pivots. J J are spring-clasps, attached to the right side of the several beams *d* by means of suitable screws or rivets *j j*, and extending past the plow-standards, their function being to hold the plow-standards normally in place, but to yield whenever the plows on their land side run against any oblique object that forces them to the right, and to return the plows to their proper position after the object is passed. K K are the plows. L L are draft-rods, swiveled, as shown at *l*, to enable their lengths to be adjusted, and serving to connect the plow-standards with the front ends of the beams at *m m*, where their forward extremities extend into metal sockets, and are secured by wooden pins *n*, that will ordinarily hold the plow, but will break and liberate any plow when it encounters an immovable obstacle. To one of the spring-steel standards G is attached a vertical ratchet-plate, *r*, and to the rear end of the draft-pole is firmly fixed a stout lever, T, which extends backward and upward in such a position that when depressed sufficiently it will engage with the ratchet-plate, and thereby lock the main frame to its rear end. The tongue being then brought to, or nearly to, a horizontal position, as shown in Fig. 2, the plows will be raised out of the ground, and will remain suspended until the lever is again disengaged from the rack, when the plows will drop to the position shown in Fig. 1. The right-hand plow is arranged to run behind, and directly in line with, the right draft-wheel, so that both wheels can be driven upon the unplowed land, thereby dispensing with the necessity of making the right wheel larger than its mate.

The structure of the whole apparatus, it will be observed, is exceedingly simple and compact, yet strong and durable. The draft is applied in nearly direct lines from the tongue. All the parts can be readily and easily adjusted; and while for all ordinary purposes the

plows are held rigidly to their work, yet when they encounter such obstructions as are liable to break them or damage any part of the apparatus, they yield either sidewise or directly backward, as represented in Fig. 4, and thereby are preserved from harm.

The mode of supporting the plows and relieving them from undue strain may be applied to a single plow, in distinction from a gang of plows, if desired, the single beam taking the place of the frame D, and the other parts working as herein set forth.

I claim as my invention—

1. The plow-standards I, extending up through the plow-frame, and pivoted to the top of the standards G H above said frame, substantially as and for the purpose described.

2. The spring-clasps J, combined with the beams d, long spring-metal plow-standards I, and standards G H, substantially as and for the purpose described.

SAMUEL BRYAN.

Witnesses:

F. T. SUMMERIL,
M. H. PENGRA.