(No Model.)

J. H. McBRIDE

RIDING ATTACHMENT FOR PLOWS.

No. 284,036 Patented Aug. 28, 1883.

Fig. 1

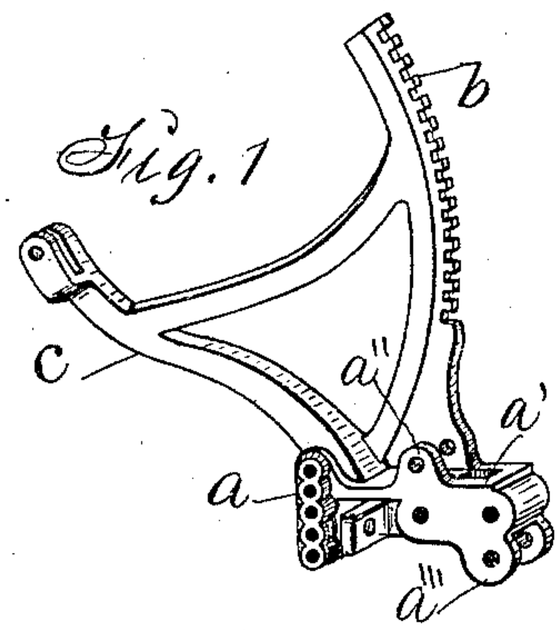


Fig. 2

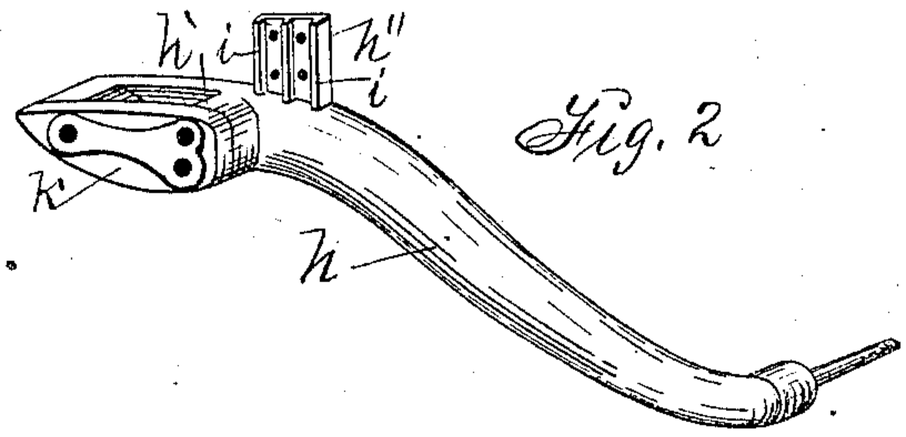


Fig. 3

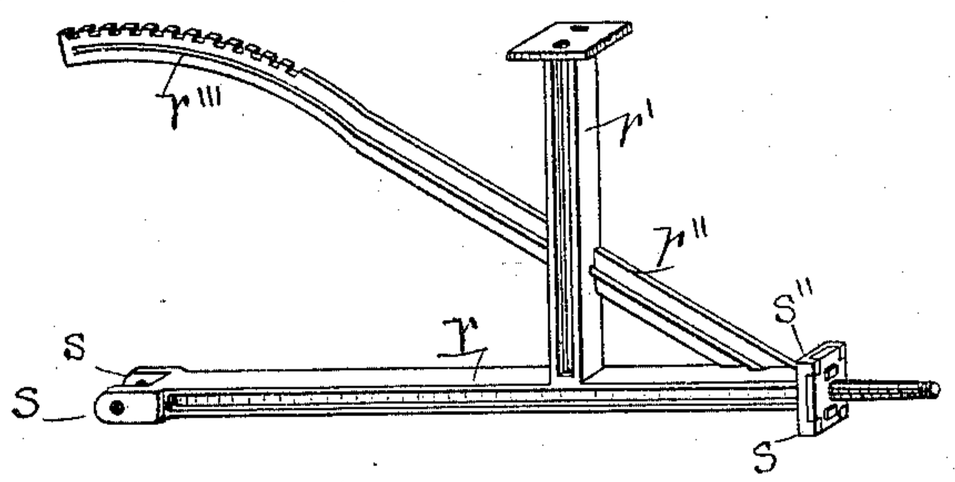
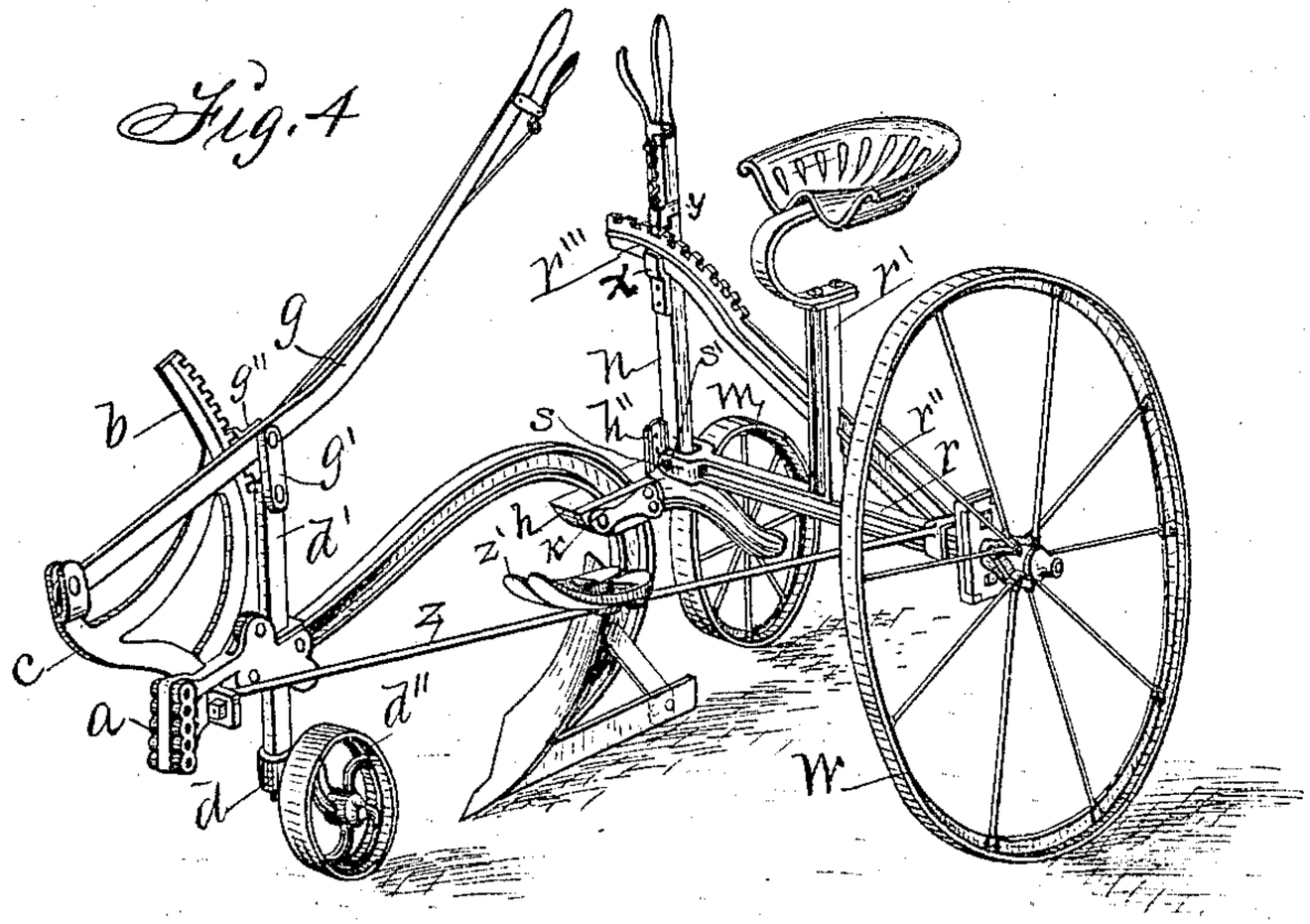


Fig. 4



Witnesses:
H. A. Stoltenberg
R. H. Orwig.

Inventor:
John H. McBride,
By Thomas G. Orwig, Atty.

UNITED STATES PATENT OFFICE.

JOHN H. McBRIDE, OF DES MOINES, IOWA.

RIDING ATTACHMENT FOR PLOWS.

SPECIFICATION forming part of Letters Patent No. 284,036, dated August 28, 1883.

Application filed June 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. McBRIDE, of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Riding Attachment and Governing Device for Plows, of which the following is a specification.

My object is to provide a simple, strong, durable carriage attachment for plows that can be more readily applied and adjusted to operate a plow steadily, and to regulate the depth and width of furrow-slices by the operator seated upon the carriage; and my invention consists in combining a clevis, a rack, and frame, and a caster-wheel with the front end of a plow-beam and a vertically-adjustable fulcrum and a lever of the first order in such a manner as to produce a compound lever for raising and lowering the point of the plow to regulate the depth of the furrow with little power, and also in the manner of forming a wheel-bearer and combining an anti-friction wheel, a lever, and a hinged axle-frame and rack adapted to support a carriage-wheel and a driver's seat with the rear end of a plow-beam to regulate the width of a furrow and to retain the plow level and steady as it advances in the ground, all as hereinafter fully set forth.

Figure 1 of my accompanying drawings shows a clevis and a rack and frame cast complete in one piece. Fig. 2 shows my wheel-bearer adapted to be clamped to the rear end of the beam. Fig. 3 shows my frame and rack cast complete in one piece, and adapted to be hinged to the lever that is fixed to the wheel-bearer at the rear end of the beam to support a carriage-wheel and a driver's seat. Fig. 4 is a perspective view, showing my complete attachment combined with a plow of common form. Jointly considered these figures clearly illustrate the construction, application, and operation of my complete invention.

a is a clevis, *b* a rack, and *c* a frame, preferably formed integral with each other by casting the same in a suitable mold.

a' is a vertical and angular bore in the rear end of the clevis, through which an adjustable fulcrum extends upward from the caster-wheel bearer.

a'' are perforated ears on the top side to serve as bearers for an anti-friction roller in front of the bore *a'*, and *a'''* are corresponding bearings on the under side and in rear of the same bore.

d is a caster-wheel bearer, and *d'* a vertical shaft and fulcrum, to the lower end of which the bearer *d* is attached by a swivel-connection. This shaft *d'* extends upward through the bore *a'*, and is flexibly connected with a lever at its top end.

g is a lever pivoted to the front end of the frame *c* to extend rearward and upward toward the driver's seat.

g' is a link pivoted to the top of the shaft and fulcrum *d'* and the lever *g* in such a manner that bearing down upon the long arm of the lever, when the caster-wheel *d''* rests upon the ground, will elevate the front end of the plow-beam and the point of the plow. Applying the lever *g* in front of the end of the plow-beam by means of the frame *c*, and utilizing the plow-beam as a lever of the second order and the heel of the plow or wheel at its rear as a fulcrum, a compound lever is produced for lifting the front of the plow, and consequently less power and labor are necessary to govern the plow as required to regulate the depth of a furrow, or to throw it in and out of the ground.

g'' is a spring-bolt connected with the lever *g* to engage the rack *b*, as required, to retain the adjustable caster-wheel *d* and the shaft *d'* at any point of elevation desired relative to the plow-beam.

h is a metal casting and bearer adapted to be clamped fast to the rear and curved portion of a metal plow-beam of common form to carry a wheel in the track of the plow.

h' is a shoulder for engaging the plow-beam. *h''* is a vertical extension provided with flanges *i i* to engage the square edges of a wooden lever. To fasten this wheel-bearer to a plow-beam I simply place the shoulder *h'* against the rear edge of the beam, and then pass screw-bolts transversely through perforations in the bearer, one or more to pass in front of the beam, and one or more in the rear of the beam and through a washer-plate, *k*, fitted to overlap the plow-beam and the shoulder of the bearer, and secure them by means of nuts to clamp all the parts rigidly together. The bearer *h* will extend rearward and downward in such position relative to the plow that the tread-

wheel *m*, of about twenty (20) inches diameter and two (2) inches tread, will be on a level with the bottom of the plow and follow in the track of the plow to relieve the heel of the plow from friction, and to aid in keeping the plow steady and making it run light and true as, required, to diminish draft and to turn a furrow evenly.

n is a wooden lever fitted and bolted at its lower end to the projection *h''* of the casting *h*.

r is the horizontal portion of my axle-frame and rack, designed to have a hinged connection with the plow-beam.

r' is a vertical branch extending upward from the central portion of the part *r* to support a driver's seat.

r'' is an arm that extends from the outer end of the axle *r* upward and inward to brace the vertical branch *r'* and to terminate in a curved rack, *r'''*.

s s are perforated ears on the inner end of the axle *r*, adapting the combined axle-frame and rack to be hinged to the lower end of the lever *n* by means of a pivotal bolt, *s'*, as clearly shown in Fig. 4.

s'' is a flange or cross-head formed integral with the outer end of the parts *r* and *r''*, to which a steel stud-axle having a corresponding flange is rigidly secured by means of bolts to support a carriage-wheel, *w*, that has a diameter of about three (3) feet.

x is a loop fixed to the side of the lever *n* to confine the rack *k'''*, that extends through it.

y is a spring-bolt attached to the lever *n* to engage the adjustable rack *r'''*, as required, to lock the hinged and adjustable axle-frame and rack rigidly to the lever and complete plow.

z is a brace that extends diagonally from the outer end of the hinged axle-frame to the clevis *a* of the front of the beam. It is pivoted to the clevis at its front end and clamped to the axle-frame at its rear end by means of a yoke in such a manner that its rear end will move up and down with the hinged and adjustable axle-frame carrying the carriage-wheel and rack.

z' is an adjustable foot-rest attached to the brace *z* in such a manner that it can readily be moved backward or forward relative to the driver's seat, as required, to suit persons of different size.

From the foregoing detailed description of the construction and function of each element and subcombination the unitary action of all the parts and the practical operation of my complete invention will be obvious to farmers and others who have practical knowledge about plowing.

I claim as my invention—

1. The clevis *a*, having perforated ears *a' a''*, the rack *b*, and the frame *c*, formed integral with each other, substantially as shown and described, for the purposes specified.

2. The clevis *a*, the rack *b*, the frame *c*, the caster-wheel bearer *d d'*, the lever *g*, and the link *g'*, arranged and combined relative to each other and a plow-beam, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

3. The wheel-bearer *h*, having a shoulder, *h'*, and vertical projection *h''*, and the lever *n*, in combination with a plow-beam, substantially as and for the purposes set forth.

4. The axle-frame *r r' r''*, having a rack, *r'''*, perforated ears *s s*, and flange *s''*, formed integral therewith, substantially as shown and described, for the purposes specified.

5. The axle-frame *r r' r'' s s*, carrying a driver's seat, the rack *r'''*, the wheel *w*, the wheel-bearer *h h' h''*, carrying a wheel, *m*, and the lever *n*, arranged and combined relative to each other and a plow-beam and plow, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

JOHN H. McBRIDE.

Witnesses:
THOMAS G. ORWIG,
C. L. NOURSE.