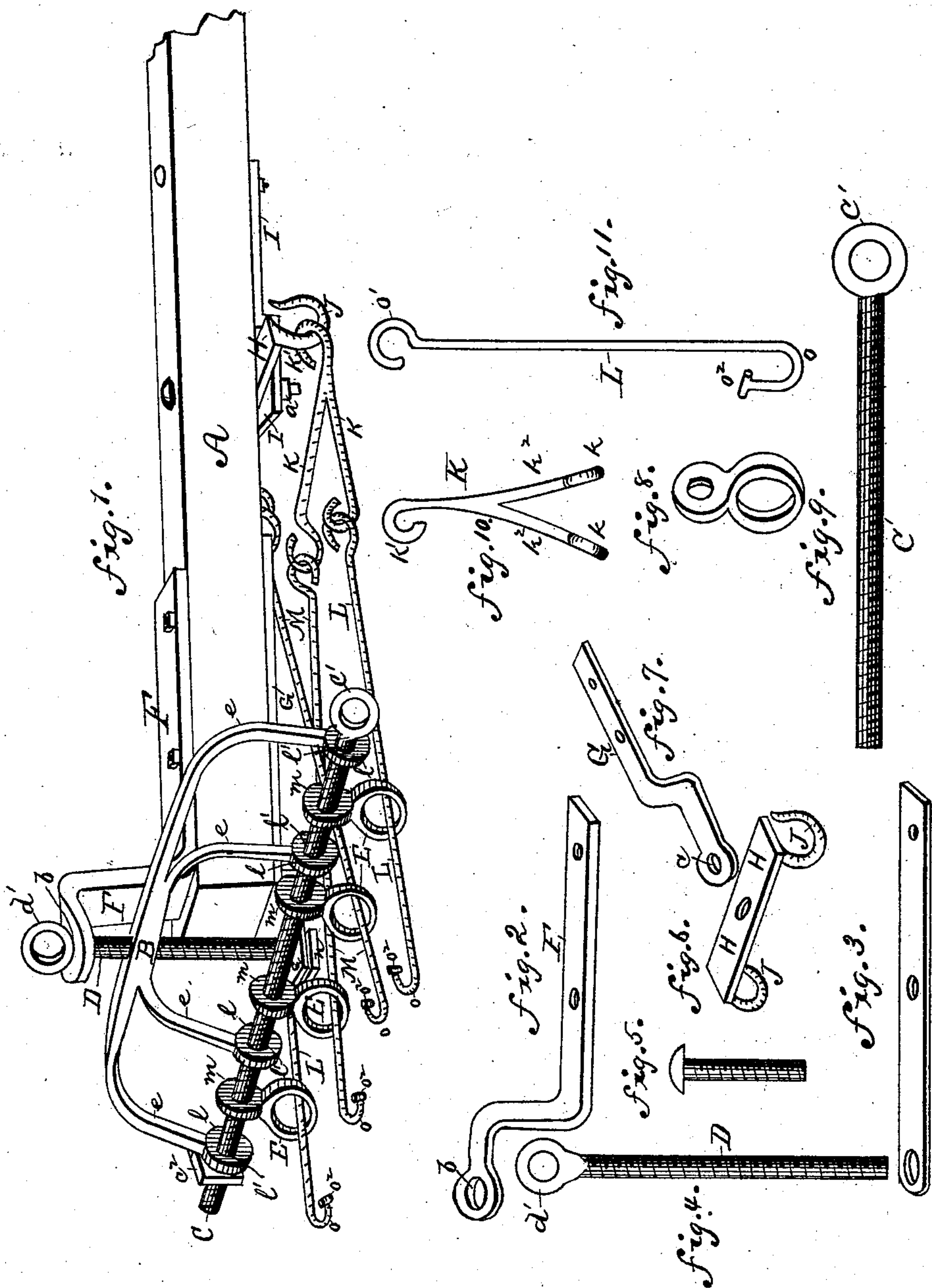


(No Model.)

H. RAATHS.
PLOW.

No. 287,720.

Patented Oct. 30, 1883.



WITNESSES:

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HEINRICH RAATHS, OF APPLETON, WISCONSIN.

PLOW.

SPECIFICATION forming part of Letters Patent No. 287,720, dated October 30, 1883.

Application filed March 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH RAATHS, a citizen of the United States, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Draft-Attachments for Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings and letters of reference marked thereon, in which—

Figure 1 represents a side view of a plow-beam with my improvements attached; and Figs. 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 are detail views of the parts of the construction.

My invention relates to improvements in draft attachments for plows; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claims.

A represents a plow-beam of ordinary construction, to the rear end of which a plow (not shown in the drawings) is secured, in the usual manner.

H represents an evener supported by means of a plate, I, and pivoted by a bolt, *a*, to the lower face of the beam A, and provided with hooks J at its ends.

F represents the upper half of the clevis, bolted to the upper face of the beam A, near its outer end, and provided with a hole, *b*.

G represents the lower half of the clevis, bolted to the lower face of the beam A, near its outer end, and provided with a hole, *c*.

B represents a frame composed of the horizontal bar *h*, provided with the threaded hole *d* at its middle, and the downwardly-bent arms *e*, each enlarged at its lower end, *l*, and provided with a central orifice, *l'*.

D represents a threaded vertical bolt, which passes through the holes *b c* in the upper and lower halves, F G, of the clevis, and also through the threaded hole *d* in the frame B, and is provided with an eye, *d'*, at its upper end, by which it may be readily turned, and a nut, *n*, at its lower end, to retain it in place.

C represents a threaded bolt provided with an eye, *C'*, at one end, by means of which it may readily be turned to the right or left when desired. The threaded bolt C is passed through the holes *l'* in the enlarged ends *l* of the arms *e*, and also through nuts *m*, and is retained in

place by the nut *c'*. Each nut *m* is enlarged at its lower end and formed into an eye, E, the plane of the eye E being at right angles to the nut *m*.

Through the eyes E pass the rods L M, the eyes supporting the rods. The rods L M are curved at their forward ends, as seen at *o*, and the end of the curve *o* is turned out at right angles to the curve *o*, as shown at *o'*, to prevent the curve *o* from slipping out of the slots in the end of the traces of the horses to which they are attached. The opposite ends of the rods L M are provided with hooks *o'*, which engage with hooks *k k*, on the bifurcated ends of the rods K, provided each, on its inner end, with a hook, *k'*, which engages with a hook, J, on one end of the evener H. If desired, the two inner rods may be crossed.

It will be seen from the above-described construction that by turning the rod C in either direction the eyes E, through which the trace-rods L L M M pass, will be moved to the right or left, as desired, thus widening or narrowing the width of the furrow-cut. By reason of the frame B being swiveled to the beam, should the plow strike an obstruction, the evener H is moved to the right or left, and with it the entire frame B, with its attachments C and E, on the threaded bolt D as a center, which changes the position of the line of draft, and thereby carries the point of the plow around the obstruction. By turning the vertical screw D to the right or left the frame B is raised or lowered, and with it the eyes E and trace-rods L M, thereby increasing or decreasing the depth of the furrow. By reason of the jointed construction of the trace-rods L L M M, the bifurcated rods K, and the hooked whiffletrees, the trace-rods can readily be removed, and the two outer nuts, *m m*, screwed by hand as far out as possible on the threaded bolt C, and the two other nuts as far in as possible on the bolt C, and the trace-rods then inserted in the eyes E, when, by attaching the weaker horse to the trace-hooks farthest out he will have less to pull, having more leverage than the stronger horse, attached to the trace-hooks brought nearer the middle of the draft attachment.

It will be observed that the nuts *m*, carrying the eyes E, can be turned up at an angle

of one hundred and eighty degrees, so that the eyes, instead of lying under the threaded bolt C, will be directly over it, when, by inserting the trace-rods in position in the eyes E, the line of draft will be materially changed, and the depth of the furrow also varied.

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

10 1. A draft-attachment consisting of the frame B, the screw-C, the eye-nuts *m* E, and the trace-rods L M, the frame being adapted to be swiveled to the end of the beam, and the rear ends of the trace-rods connected to
15 an evener on the under side of said beam, substantially as herein shown and described.

2. The combination, with the beam A, provided with a clevis, of the frame B, threaded bolt C, nuts *m*, having eyes E, and jointed
20 trace-rods L M, substantially as shown and described, whereby the width of the furrow-cut may be widened or narrowed, as set forth.

3. The combination, with beam A, having a clevis, F G, of the frame B, swiveled to the clevis, and provided with the depending arms
25 *e*, having orifices *l'* in their lower ends, threaded bolt C, nuts *m*, having eyes E, jointed trace-rods L M, bifurcated rods K, having hooks *k* *k'*, and evener H, substantially as shown and described, whereby the point of the plow is
30 carried around the obstruction, as set forth.

4. The combination, with the beam A, having a clevis, F G, of the frame B, provided with a threaded hole, *d*, of the threaded bolt
35 D, passing through said hole, and the clevis-threaded bolt C, eye-nuts *m* E, trace-rods L M, and evener H, substantially as shown and described, whereby the depth of a furrow may be varied, as desired.

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Witnesses:

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