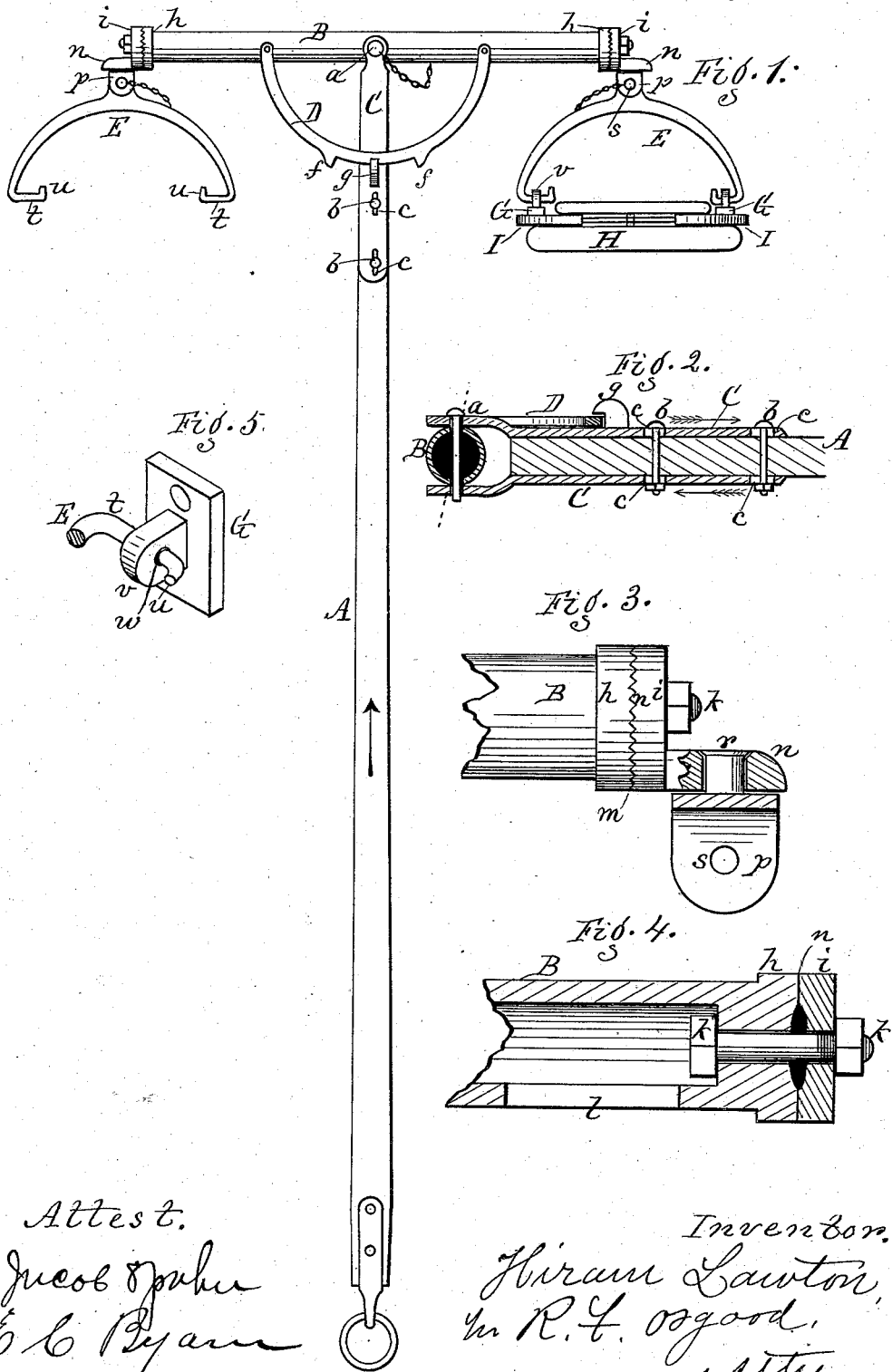


(No Model.)

H. LAWTON.
DRAFT ATTACHMENT.

No. 261,735.

Patented July 25, 1882.



UNITED STATES PATENT OFFICE.

HIRAM LAWTON, OF ROCHESTER, NEW YORK.

DRAFT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 261,735, dated July 25, 1882.

Application filed June 7, 1880. Renewed June 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, HIRAM LAWTON, a citizen of the United States, residing at Rochester, Monroe county, New York, have invented a certain new and useful Improvement in Draft Attachments; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of the attachment. Fig. 2 is a longitudinal section of the same. Fig. 3 is an enlarged view of one end of the evener. Fig. 4 is a section of the same. Fig. 5 is a perspective view of the hame attachment.

My improvement relates to draft attachments in which an evener or cross-bar is used, to which the power is directly applied without the use of tugs or traces.

The invention consists in the construction and arrangement of parts hereinafter more fully described.

A represents a draft pole or tongue, to the front end of which is pivoted, at *a*, a cross-bar or evener, B. This evener may be made of metal, wood, or other material, of any desired form, but preferably tubular, as shown.

C C are two metallic straps, secured by bolts *b b* on top and bottom of the pole at the front end thereof. The outer ends of the straps project beyond the end of the pole and form the bearings for the pivot of the evener, which lies between them. These straps are provided with longitudinal slots *c c*, through which the bolts *b b* pass, as shown in Fig. 2, by which means the straps, either or both, are capable of longitudinal adjustment, for a purpose hereinafter described.

D is a segment or bow, riveted or otherwise secured at its ends to the pole or tongue. It is provided on opposite sides with two stops, *f f*, which strike a lug, *g*, projecting up from the top of the upper strap and turning over the segment. These stops are at such a distance apart as to allow proper vibration of the evener; but yet they limit the movement of the evener and prevent it from turning too far. The lug turning over the segment holds it down and keeps the evener in place.

h h are solid heads formed on the end of the evener, and *i i* are movable heads connected therewith by bolts *k k* passing through both,

as shown in Fig. 4, or by means of headed screws, which enter from the outside. In case bolts are used, as in Fig. 4, slots *l* are made in the side of the evener near the ends, for the insertion and removal of the bolts. This form is preferable, as it enables any common workman to make repairs. Both heads, on their contiguous faces, are serrated or provided with ratchet-teeth, as shown at *m*. By the means above described it will be seen that the outer or movable heads *i i* can be turned or adjusted to any position axially and secured in that position by the bolts.

n n are flanges attached to the turning-heads *i i*, and *p p* are swivel-bearings, provided with journals *r r*, which rest and turn in said flanges.

E E are whiffletrees or yokes in the form of bows, which are pivoted at *s s* to the swivel-bearings, the latter being forked to receive them. The whiffletrees can turn horizontally on the pivots *s*, while the swivel-bearings can turn vertically on the journals *r*, thereby securing a universal-joint action. The ends of the whiffletrees are bent inward, forming horizontal bearings *t t*, and are then turned forward, forming stops *u u*. The bearings and stops are circular in cross-section.

G G are attachments to the front of the hames, having lugs *v v*, in which are sockets or holes *w w*, large enough to slip over the stops *u u*, and slide onto the bearings *t t* of the whiffletrees, as shown in Fig. 1, at the right hand. Ordinary collars, H, and hames I are used for the purpose.

The operation will be readily understood. The collars H are placed upon the horses' necks, the lugs *v v* of the hames I are slipped over the ends of the whiffletrees E E, and the hames are then buckled upon the collars. The lugs *v v* have considerable side play on the whiffletrees to allow the necessary side movement of the horses; but they are prevented from coming off by the stops *u u*. This is a simple and effective means for attaching the horses, allowing free action, and dispensing with the use of tugs or traces.

One important advantage in this invention is the longitudinal or end movement of the straps C C, either or both, by the use of the slots *c c*, one strap moving in one direction and the other in the other, as indicated by the

arrows in Fig. 2, or the same result may be produced by moving one strap only. By this means the evener B can be turned more or less on its axis in either direction, as indicated by the dotted line in Fig. 2, which shows the line of the pivot of the evener when adjusted out of a vertical position. By this adjustment the whiffletrees and evener may be placed in the best position for either sloping or upright shoulders, high or low necked animals, and in position to bring the whiffletrees and evener in line or parallel with the pole or tongue, and thus prevent cramping or leverage, also producing an even and uniform pressure on the hames, collars, and shoulders of the animals.

Another advantage of this invention consists in the separate adjustment at each end of evener independent of that at the other end, which is accomplished by the use of the turning heads *i i*, which can be so adjusted as to bring the whiffletrees in proper relative position to the evener. By this means the whiffletree on one side can be adjusted exactly to the neck or shoulder of the animal without affecting that on the other side. One whiffletree can be raised and the other lowered, if desired.

It is frequently the case that one horse will carry his head high and the other low, and while the straps C C allow equal adjustment at both ends to fit high or low necks, the turning heads at the ends of the evener allow individual adjustment to each horse.

By attaching the whiffletrees to the hames in the manner above described the pressure of

the draft is brought on the inside of the shoulder, near the neck, avoiding the hard pressure on the outer part of the shoulder which attends the use of traces. There is consequently less danger of chafing or sweeneying.

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

1. In a draft attachment, the straps C C, capable of longitudinal adjustment, the evener B, pivoted within said straps, and the segment D, as shown and described, and for the purpose specified.

2. In a draft attachment, the solid heads *h h* on the ends of the evener B, the turning-heads *i i*, engaging therewith and capable of adjustment to any position, and secured by bolts or screws, the swivel-bearings *p p*, turning in the heads *i i*, and the whiffletrees E, pivoted to the swivel-bearings, as shown and described, and for the purpose specified.

3. In a draft attachment, the whiffletrees E, provided with the bearings *t t*, and stops *u u*, and the hames provided with lugs *v v*, having sockets fitting over said bearings and capable of sliding on and off, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HIRAM LAWTON.

Witnesses:

GEO. T. FISH,
EMMETT S. RAY.