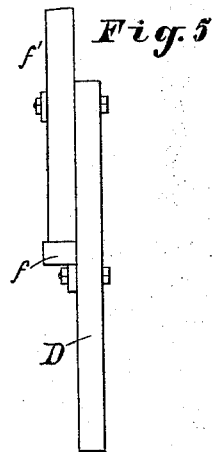
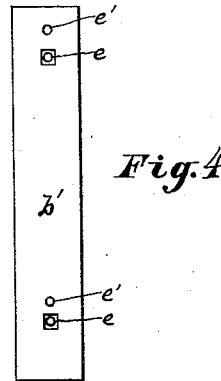
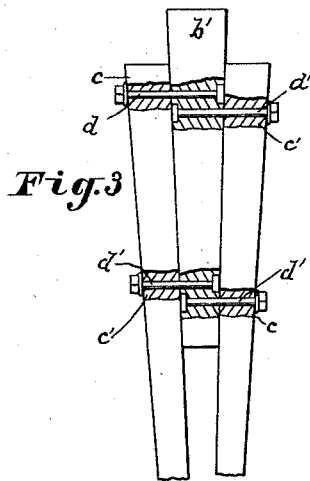
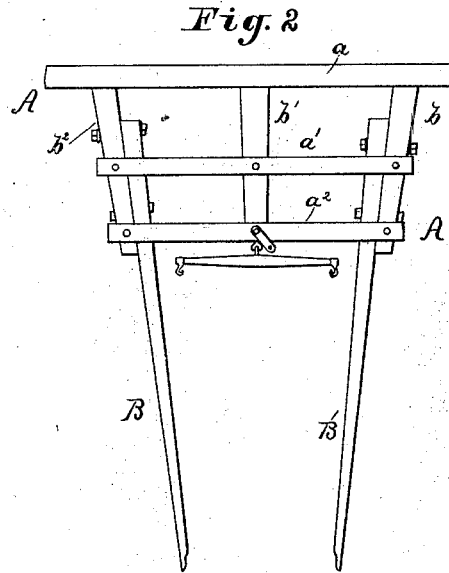
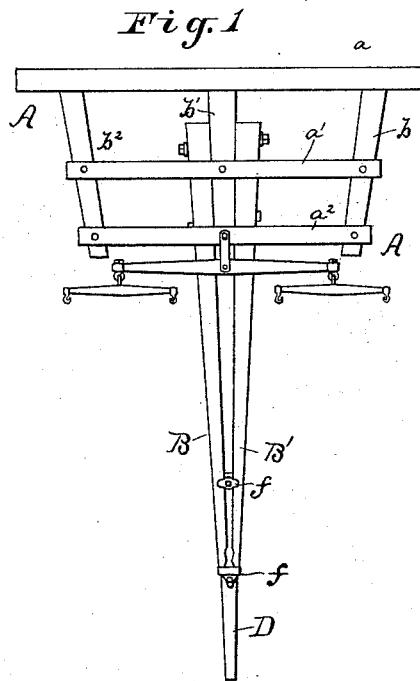


(No Model.)

J. H. THOMAS.
CONVERTIBLE POLE AND THILL.

No. 421,451.

Patented Feb. 18, 1890.



Witnesses

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Chas. J. Welch.

Inventor
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UNITED STATES PATENT OFFICE.

JOHN H. THOMAS, OF SPRINGFIELD, OHIO.

CONVERTIBLE POLE AND THILL.

SPECIFICATION forming part of Letters Patent No. 421,451, dated February 18, 1890.

Application filed October 23, 1889. Serial No. 327,926. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. THOMAS, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Convertible Poles and Thills, of which the following is a specification.

My invention relates to a convertible pole and thills especially adapted for use with hay-rakes; but is also applicable for any other purpose to which it may be applied.

The object of my invention is to provide a simple and economical construction by means of which the same parts of the vehicle may be readily changed to either a pole or thills, so as to be used with either a single or double team.

My invention consists in the constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a plan view of a device embodying my invention shown in use as a pole. Fig. 2 is a plan view of the same device in use as thills. Fig. 3 is a plan view, partly in section, of the rear portion of the thill and pole pieces and a portion of the frame when connected to form a pole. Fig. 4 is a side view of the connecting-pieces to which the pole is attached. Fig. 5 is a side elevation of the front end of the pole, showing the manner of attaching the extension thereto.

In the said drawings, A A represent a frame such as is generally used in that class of vehicles for which this invention is particularly adapted. It consists in the longitudinal pieces $a a'$ and the transverse connecting-pieces $b b'$.

B B' are the pole or thill pieces, each provided near the rear ends with suitable openings $c c'$, adapted to receive fastening-bolts $d d'$. These fastening-bolts $d d'$ are made of sufficient length to pass through the thill-pieces B B' and the connecting-pieces $b b'$. The openings $c c'$ in the respective thill-pieces are so placed that when the rear ends of the thill-pieces stand in line with each other the openings in one thill-piece are slightly in advance of the openings in the other thill-piece. Each of the connecting-pieces $b b'$ is provided with openings corresponding with the open-

ings $c c'$ in the respective thill-pieces. The connecting-piece b' is provided with double the number of openings, having one opening to correspond with each of the openings in the respective thill-pieces, so that when said thill-pieces are placed against the said connecting-piece with their rear ends in line the openings in the respective thill-pieces correspond each with an opening in the connecting-piece b' . These openings $e e' e e'$ in said connecting-piece b' are each countersunk, the openings $e e$ being countersunk on one side of the connecting-piece b' and the openings $e' e'$ being countersunk on the other side. The center connecting-piece b' is formed on a taper, being smaller in front than at the rear.

In converting this device from thills to a pole the fastening-bolts $d d'$ are removed, thus removing said thill-pieces. The said fastening-bolts are then placed in the openings $e e'$ in the connecting-piece b' , so as to extend in opposite directions therefrom, with their heads countersunk on the opposite sides of the said connecting-piece. The thill-pieces are then moved transversely across the frame A A until they rest against the sides of the connecting-piece b' in the same position with reference to the front and rear of said frame as they occupy with reference to the connecting-pieces $b b'$. The thill-pieces are then secured in this position by means of the clamping-bolts $d d'$.

In order to form a pole of sufficient length when the thill-pieces are thus connected, I use an extension-piece D, provided with a socket f , adapted to fit over the ends of the thill-pieces, and a clamping-bolt f' , passing through said extension and between said thill-pieces B and B', as shown in Figs. 1 and 5. By this construction it will be seen that the parts may be readily converted from thills to pole and pole to thills, as desired, without any additional parts other than the extension-piece D. In either position the thill-pieces occupy the same relative positions with reference to the front and rear of the frame A A. The fastening-bolts $d d'$, when in use in connection with the pole, each has its head countersunk and concealed by the thill-pieces, giving the appearance of a single bolt extending entirely through said thill-pieces and their connecting-piece. No extra bolts are used to

become lost or misplaced, and the parts may be readily changed at any time with no other tool than an ordinary monkey-wrench.

Having thus described my invention, I
5 claim—

1. The combination, with the frame having side and center connecting-pieces, of thill-pieces secured to each of said side connecting-pieces by two or more independent connecting-bolts, the bolts in one of said thill-pieces
10 being arranged slightly in advance of the bolts in the other, and openings in said center connecting-piece countersunk on opposite sides thereof, as described, and placed opposite
15 to the bolts in said side connecting-pieces to receive said connecting-bolts, and thus attach the thill-pieces to said center connecting-pieces in line with each other, substantially as specified.

20 2. The combination, with the side and center connecting-pieces, of the thill-pieces

adapted to be connected thereto, said thill-pieces and side pieces being each provided with a set of openings, one set of openings being slightly in advance of the other set, two
25 sets of openings in said center piece, one set being placed opposite the openings in each of the side pieces, each set of openings in said center piece being countersunk on opposite
30 sides thereof, connecting-bolts adapted to pass through the respective openings and attach the said thill-pieces to the side or center pieces, as desired, and a pole-piece to form an extension for said thill-pieces when used
35 as a pole or tongue, substantially as specified.

In testimony whereof I have hereunto set my hand this 21st day of October, A. D. 1889.

JOHN H. THOMAS.

Witnesses:

AUGUSTUS N. SUMMERS,
GEORGE A. BEARD.