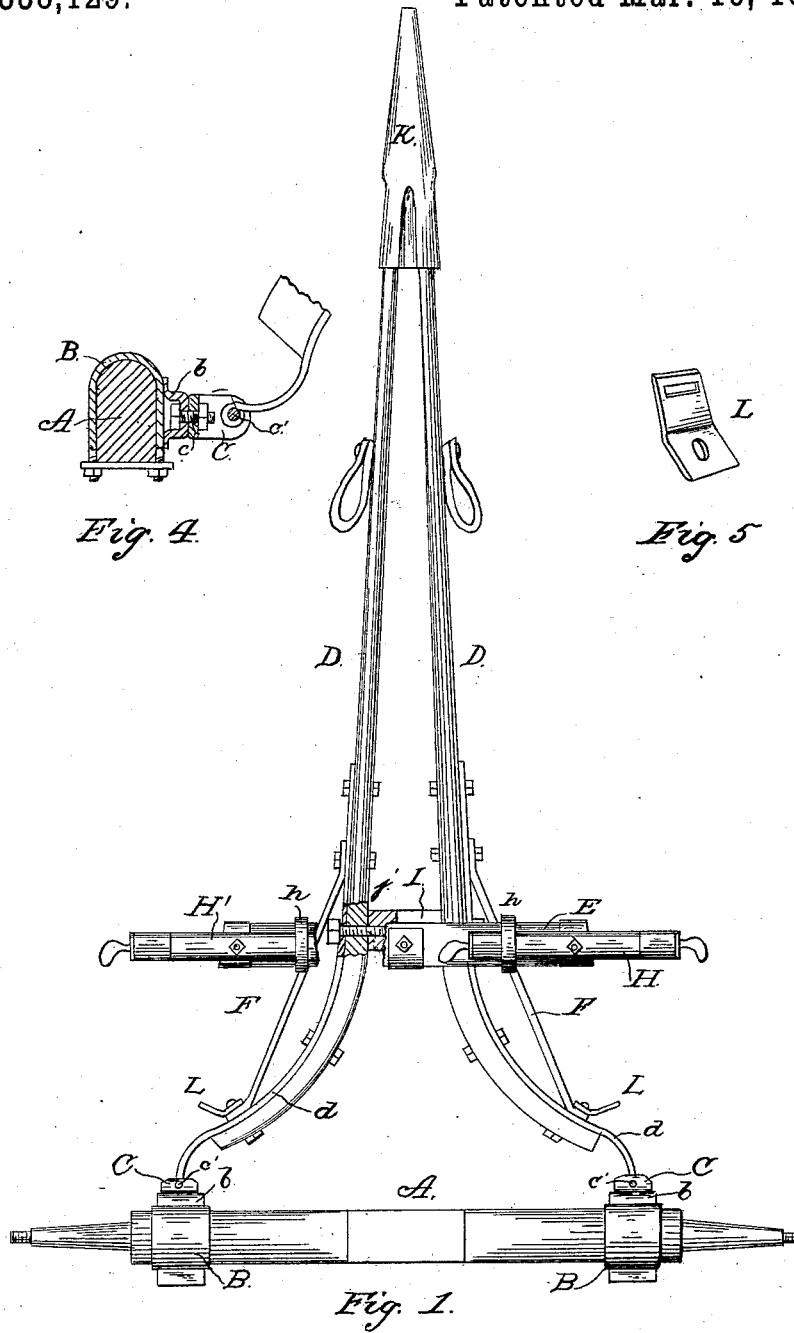


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VEHICLE THILL.

No. 338,129.

Patented Mar. 16, 1886.



Witnesses.

Susie B. Seiler
R. W. Bishop.

Inventors.

Daniel G. Zeigler
Robert Copes
By R. S. & A. P. Lacey
Attorneys.

(No Model.)

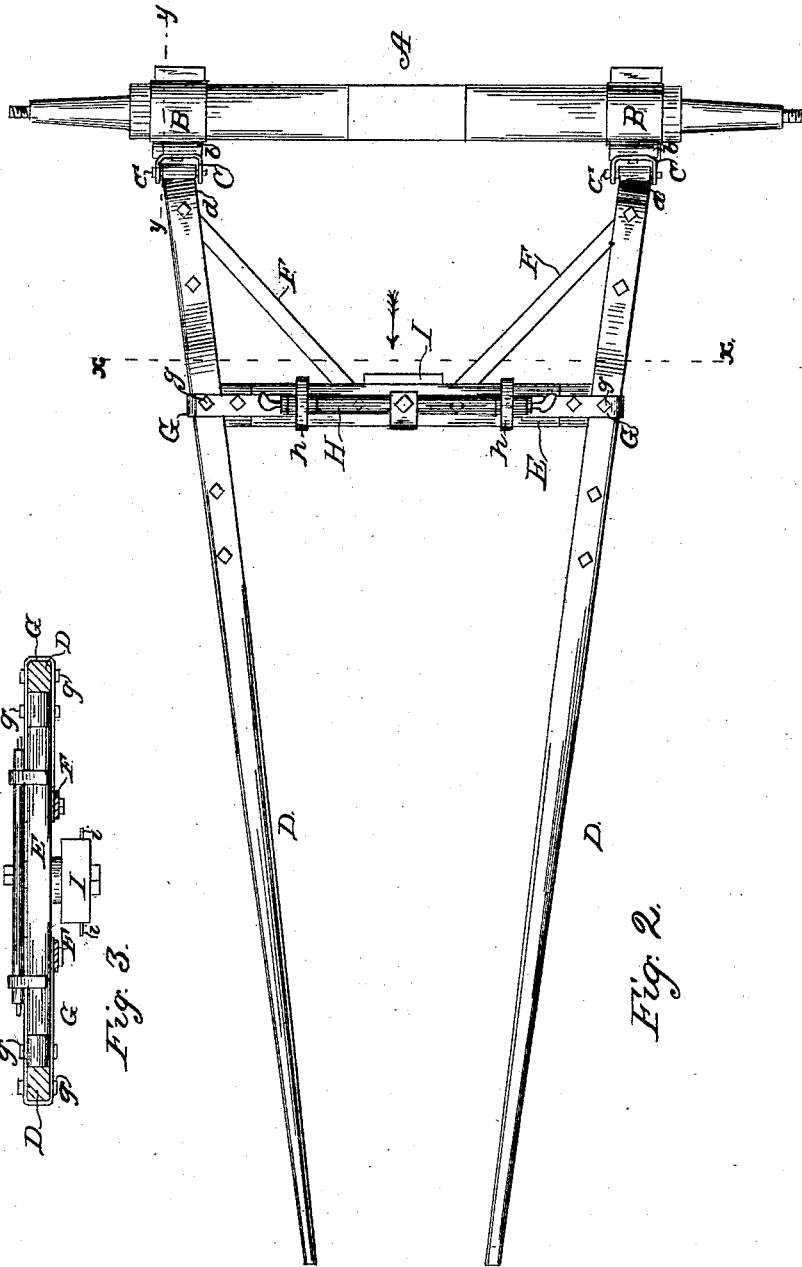
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UNITED STATES PATENT OFFICE.

DANIEL G. ZEIGLER AND ROBERT COPES, OF ORANGEBURG, S. C.

VEHICLE-THILL.

SPECIFICATION forming part of Letters Patent No. 338,129, dated March 16, 1886.

Application filed December 19, 1885. Serial No. 186,192. (No model.)

To all whom it may concern:

Be it known that we, DANIEL G. ZEIGLER and ROBERT COPES, citizens of the United States, residing at Orangeburg, in the county of Orangeburg and State of South Carolina, have invented certain new and useful Improvements in Thills; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to poles and shafts of that class in which the shafts may be converted into a pole, or vice versa, as desired; and it has for its object to simplify the construction of such devices, whereby the conversion from one to the other is facilitated.

The invention consists in the novel features shown and hereinafter set forth and claimed.

In the drawings, Figure 1 is a plan view of our improvement shown as used as a pole. Fig. 2 is a similar view showing it used as a thill. Fig. 3 is a section on the line X X of Fig. 2, looking in the direction of the arrow. Fig. 4 is a section on the line Y Y of Fig. 2. Fig. 5 is a perspective detail view of the strap-iron.

The axle A, of ordinary construction, is provided with a clip, B, near each end, having a loop, *b*, on its forward side, to which is swivelly connected a clip, C, preferably by a bolt, *c*. The end of the thill-irons *d* are pivotally secured to the clip C by bolts *c'*. The thills D are curved at their rear ends in the usual manner, and are braced by a cross-bar, E, which has its ends inclined from front to rear to correspond with the inclinations of the thills when used as a shaft. Brace-bars F extend from the rear ends of the thills forward, and are attached either to the thills just forward of the curve or to the cross-bar, as shown in Figs. 1 and 2, respectively. Clips G embrace the thills, and extend on the upper and lower sides of the cross-bar, and are secured in place by bolts *g*. These clips are used only when the thills are used as a shaft. At other times, when used as a pole, they may remain in position or detached, as found most convenient. A single-tree, H, is attached to the cross-bar in the usual manner, and limited in its movements by the loops *h*.

A block, I, is secured to the under side of the cross-bar by the bolt which secures the single-tree in place. Pins *i* project from each end of the bolt to engage openings in the thills, as more clearly shown in Fig. 3.

In practice, when it is desired to use the thills for a single horse, they are adjusted in the position shown in Fig. 2, when, for a pair of horses, the single tree is detached, the forward end of the brace-bars loosened from the cross-bar, and the clips G removed. The thills being now free are partially rotated toward each other, so as to impinge on the under side of the cross-bar. This movement brings each on an opposite side of the block I. A bolt, *j*, passing through the block and thills, secures them together. The brace-bars being adjusted in position serve to support the cross bar E, which now becomes a double-tree. The single-tree H, and a corresponding one, H', are pivoted on the outer ends of the double-tree or cross-bar E, the loops *h* limiting their movement. The forward ends of the thills are united by a single double-socketed yoke, K, of wood or cast metal. A strap-iron, L, of usual construction is pivotally connected at one end to the thill by the same bolt which secures the brace F, as clearly indicated in Fig. 1.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with an axle and a clip having a loop on its forward end, of a thill having a clip pivotally attached to its end and swivelly connected to the loop of the axle-clip, substantially as described.

2. The combination, with the convertible thills swivelly connected to the axle, of an interchangeable cross-bar provided with a block pivotally connected therewith, substantially as and for the purposes set forth.

3. The combination, with the convertible thills and adjustable brace-bars of an interchangeable cross-bar and a block pivotally connected therewith, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

DANIEL G. ZEIGLER.
ROBERT COPES.

Witnesses:

J. P. CONRAD,
L. B. SHERWIN.