F. RICE.

Wagon Pole and Shaft.

No. 207,304. Patented Aug. 20, 1878.

Fig. 1.

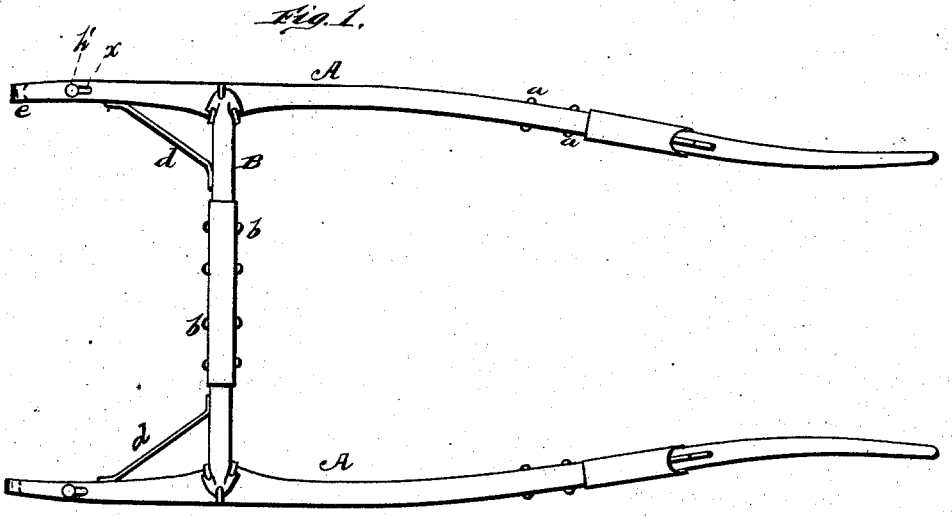


Fig. 2.

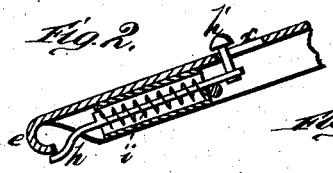
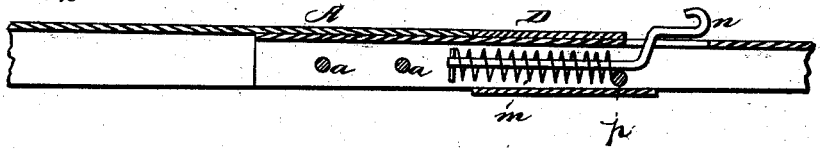


Fig. 3.



WITNESSES

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FRANCIS RICE, OF GREIGSVILLE, NEW YORK.

IMPROVEMENT IN WAGON POLES AND SHAFTS.

Specification forming part of Letters Patent No. **207,304**, dated August 20, 1878; application filed February 23, 1878.

To all whom it may concern:

Be it known that I, FRANCIS RICE, of Greigsville, in the county of Livingston and State of New York, have invented a new and valuable Improvement in Wagon Poles, Shafts, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a plan view of my wagon-shafts. Fig. 2 is a sectional detail, and Fig. 3 is a vertical section.

The nature of my invention consists in certain improvements in wagon shafts, poles, &c., as will be hereinafter more fully set forth, and pointed out in the claims.

The annexed drawing, to which reference is made, fully illustrates my invention.

A A represent the shafts or thills, made of semi-tubular or U-shaped or concavo-convex metal, each shaft being made in sections, having their ends overlapping each other, and fastened together by bolts *a a;* or, if desired, the shafts may each be made of a single piece of metal. The cross-bar B, connecting the shafts A A, is made in similar manner, and said cross-bar is secured to the shafts by cutting the sides of the shafts and bending the metal outward, so that the parts can overlap each other, and then fastened together by bolts *b b*. *d d* represent braces, secured to the shafts and the cross-bar in the same manner.

The rear end of each shaft *a* is bent to form an eye, *e*, open on the under side, to be placed over the bolt of the thill-coupling. A bolt or pin, *h*, with spring *i*, is arranged within the shaft, at the rear end, to pass under the eye *e*, and prevent the thill from coming loose. The spring-bolt *h* is provided with a head, *h'*, or slide, projecting upward through a slot, *x*, in the shaft, whereby said bolt can be easily and quickly drawn forward to release the shafts when desired.

The hollow in the shafts A and cross-bar B may be wholly or partially filled with wood, C, the metal then simply forming a covering on the top and sides of the wood. This is especially desirable where heavy draft occurs, and such wood may extend the entire length of the shaft, or only at certain points, as desired. In connection with these shafts I use a yielding draft, consisting of a spring, *m*, and a draft-hook, *n*, with its shank extending rearward through the spring and turned over to engage the rear coils of the spring. This is placed in the hollow of the shaft, with a sleeve, D, surrounding and inclosing the same, and a bolt, *p*, passed transversely through the sleeve and shaft in front of the spring to secure all in place.

The yielding draft is not necessarily fixed to any particular part of the shaft; but it may, together with its protecting-sleeve, be adjusted and secured to any place on the shaft where it is desired for the attachment of the harness. It may also be made with a staple or a snap-hook at its rear end for the attachment of the holdback-strap.

Though I have shown and described my invention as applied to shafts for a single horse, it is evident that it is equally applicable for two or more horses, with poles between them, dispensing in all cases with whiffletrees and traces.

What I claim as new, and desire to secure by Letters Patent, is—

1. The U-shaped metallic shafts, the rear ends of which are formed with eyes *e*, in combination with the bolt *h*, slide *h'*, and spring *i*, substantially as described.

2. The U-shaped metallic shafts having a yielding draft, consisting of a draft-hook, *n*, shank *m*, extending rearwardly through the spring, and bolt *p*, passed transversely through the shaft, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FRANCIS RICE.

Witnesses:

JAMES M. GRAY,

LOUISA A. GRAY.