I. ELLIS.

Harness.

No. 128,377. Patented June 25, 1872.

Fig. 1.

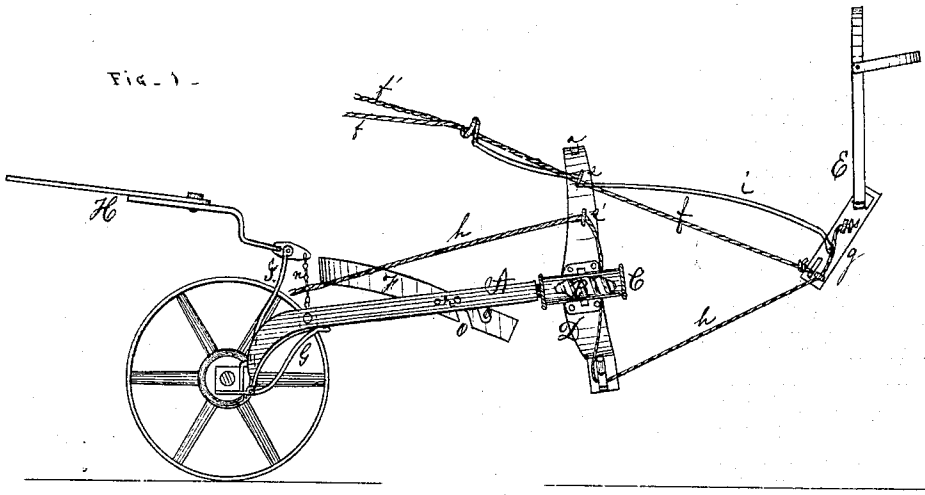


Fig. 2.

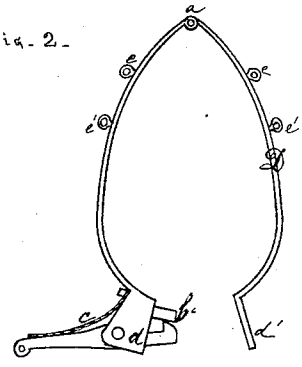
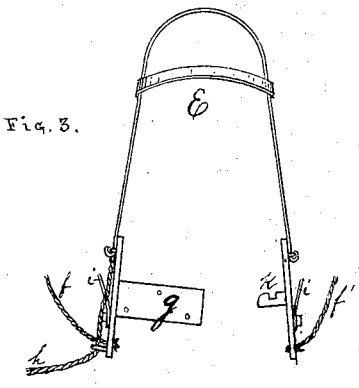


Fig. 3.



WITNESSES.

H. A. Fentress

E. H. Levy

INVENTOR

Ira Ellis

UNITED STATES PATENT OFFICE.

IRA ELLIS, OF TYLER, TEXAS.

IMPROVEMENT IN HARNESS.

Specification forming part of Letters Patent No. 128,377, dated June 25, 1872; antedated June 15, 1872.

Be it known that I, IRA ELLIS, of the town of Tyler, county of Smith, and State of Texas, have invented an Improved Harness; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing whereon is exhibited all that I claim as pertaining to my invention, and which must be taken as a part of this specification.

The improvements embraced in my device involve simplicity and economy of construction, and great facility with which the same can be attached to or detached from the draft animal upon which it may be employed, besides possessing the important characteristic of great elasticity in all parts which are most likely to be subjected to a sudden and heavy strain.

Upon the drawing, to which reference must now be made, is shown at Figure 1 my improvement as connected with the shafts and forward wheels of a wagon. Fig. 2 is a front view of the collar, detached from the shafts, and unlocked at the bottom thereof. Fig. 3 is a front view of the bits, as detached from the other parts of the harness.

The similar letters refer to the corresponding parts of my improved harness, hereinafter more fully described.

To the outer ends of the shafts A are attached the spiral metal springs B, inclosed within the metal barrels or cylinders C. To the inner sides of the said metal cylinders C are rigidly secured the two sides of the collar D. The outer parts of the said collar D are made of metal in two parts with the inner sides thereof properly padded with any suitable, flexible material, as horse-collars are usually constructed. The outer metal parts of this collar are connected at the top by a hinged or pivoted joint, *a*, and when adjusted to the neck of the draft animal are connected at their bottom or lower ends by the pin *b* and spring-catch *c* passing through and locking their lower downward-projecting extremities *d d'*.

The collar aforesaid is furthermore provided upon its outer side with the rings *e e'*, through which pass the lines *f f'* from the bridle-bits *g* and the line *h*, which latter is designed to subserve the purpose of enabling the driver at his pleasure to unlock the spring-catch *c* aforesaid. It will be perceived that the bridle E is connected to the collar D by the metal rods *i*, and the two sides of the said bridle are detachable at the bits by a spring and lock-catch within the said bits. The bridle, at Fig. 3, is shown unlocked, and one catch is shown at *k*, while the proximate catch with spring is inclosed between the bit-plates, and neither is, therefore, visible on the drawing. F is a breech-band, likewise of metal, with the inner sides thereof suitably padded. The forward ends of this band pass through an oblong mortise or groove in the shafts, and are made adjustable to any ordinary-sized draft animal by simply placing the slots O therein forward or backward upon the pins *m*. G is a spring-plate, with the rear end rigidly secured to the forward axle of the wagon, and with its opposite end passing under the cross-bar of the shafts. This spring-plate is to assist, to some extent, in supporting the forward ends of the shafts and of the harness connected therewith, and thereby relieve the draft animal of the burden of sustaining so much weight as would otherwise be imposed upon him. The same object is furthermore accomplished by the driver placing his foot upon the lever H, having its fulcrum upon the end of the bar I, and its lower extremity connected by the chain *n* with the cross-bar of the shafts.

It will now be plainly perceived that the simple harness above described, as connected with the wagon-shaft, is complete and at all times ready to be quickly adjusted to the draft animal simply by raising the shafts and the harness therewith connected, and by backing the animal under them, whereupon the said shafts and harness are lowered, the collar upon his shoulders and neck and the bridle upon his head. The lower part of the collar and bits are then locked, as hereinbefore described, and the operation of harnessing the animal and of attaching him to the wagon are thus complete. Unlocking the bits and collar complete the operation of unharnessing, and thereby of detaching the draft animal from the wagon.

Having described my invention, what I desire to secure by Letters Patent is the following claims:

1. The collar D having a pivot or hinged

joint, *a*, and the lower end thereof secured by the spring-lock catch, above described, when the said collar is rigidly attached to the springs B B′, placed upon the shafts A A′, substantially as described, and for the purposes set forth.

2. The breech-band F, constructed with the slots O, and made adjustable upon the pins *m*, as described, for the purposes set forth.

3. The bridle E, when constructed with the lock-bit *g*, as described, for the purposes set forth.

4. The harness herein described, when connected with the shafts of a wagon, substantially as herein described, and for the purposes set forth.

IRA ELLIS.

Witnesses:
H. N. JENKINS,
E. H. LEVY.