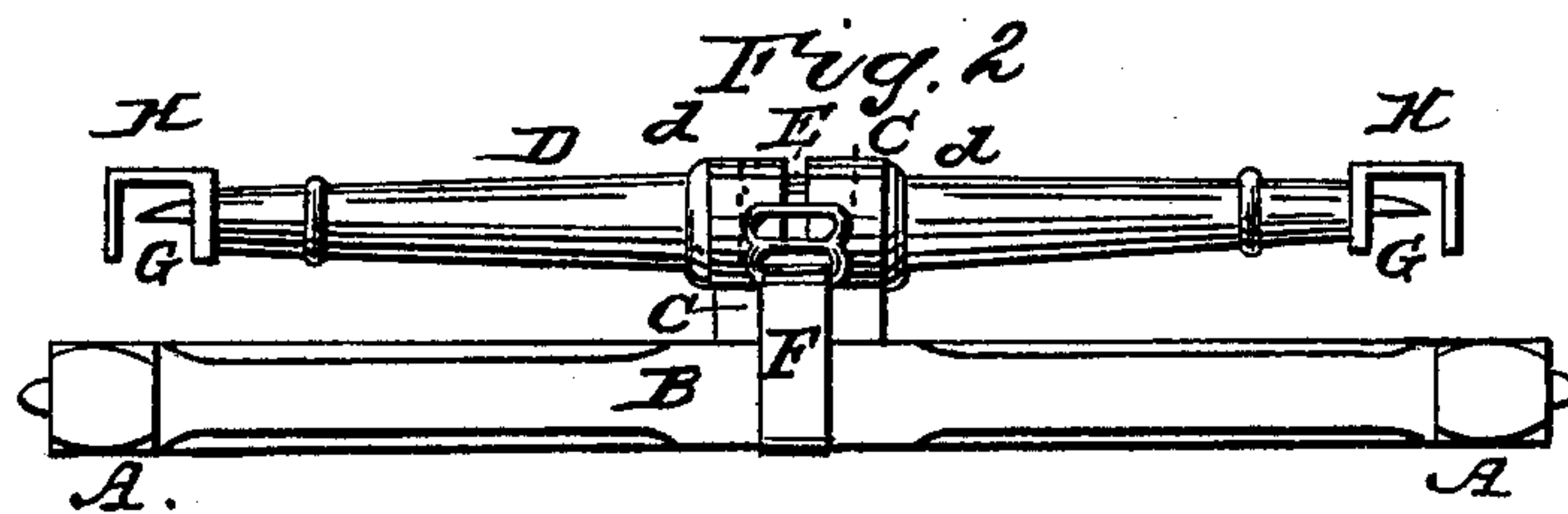
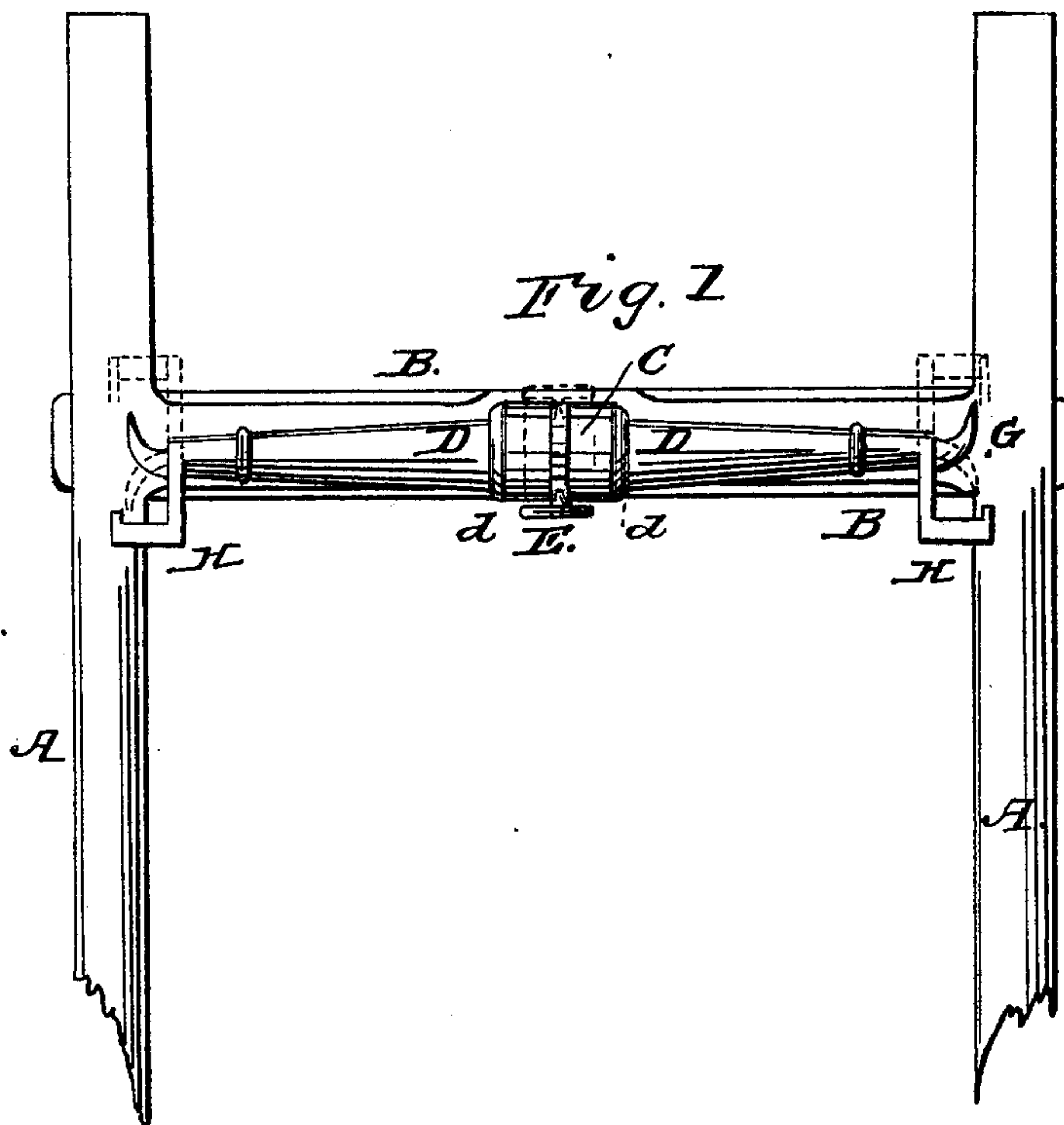


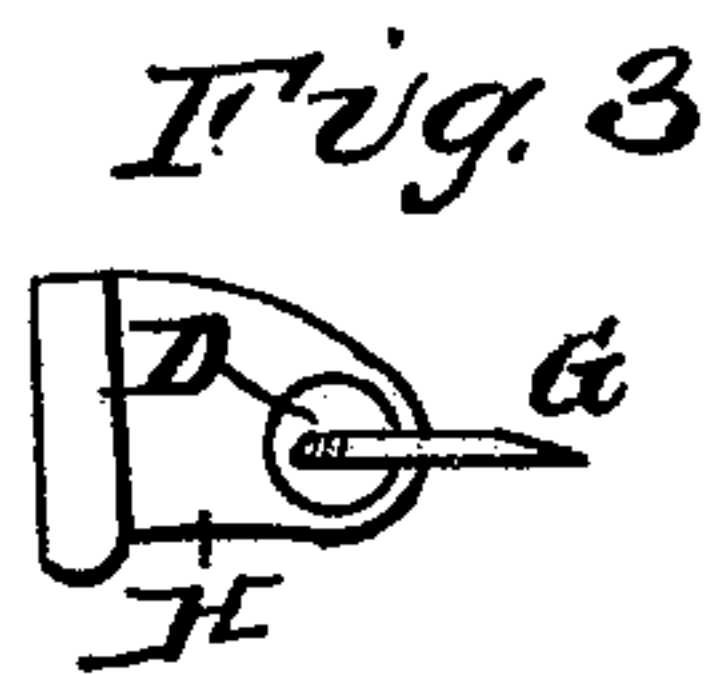
S. KEPNER.
Detaching Horses.

No. 91,346.

Patented June 15, 1869.



WITNESSES
Chas. H. Starnes
Geo. D. Read



INVENTOR
Solomon Kepner
by Brindle & Lynde
attys

United States Patent Office.

SOLOMON KEPNER, OF POTTSTOWN, PENNSYLVANIA, ASSIGNOR TO JOHN E. MEISTER AND JOHN F. EVANS, OF SAME PLACE.

Letters Patent No. 91,346, dated June 15, 1869.

APPARATUS FOR DETACHING HORSES FROM CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SOLOMON KEPNER, of Pottstown, in the county of Montgomery, and State of Pennsylvania, have invented an Improvement in Apparatus for Detaching Horses from Carriages; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a plan view;

Figure 2 is a front elevation, and

Figure 3 is an end view of the single-tree, showing the hook for attaching the traces, and the guard for holding the same in place.

Letters of like name and kind refer to like parts in each of the figures.

My invention belongs to a class of devices having for their object attachment of horses to carriages in such a manner as to allow of their instantaneous disengagement therefrom at the will of the driver, and is an improvement upon an invention for this purpose, for which Letters Patent, No. 30,972, were granted to me on the 18th day of December, 1860; and consists of the peculiar form and construction of the hook upon which the traces are secured, the guard for holding said traces in place, and the bearings for supporting the single-tree, and in which it revolves.

It also consists of the form and construction of the loop to which the strap for revolving the single-tree is secured, and in the addition of a second loop, and in connection therewith a band of rubber, by means of which said single-tree is retained in a proper position to keep the traces hooked, except when revolved by said strap.

In the annexed drawing—

A A represent the shafts, and

B the cross-bar, connecting the same in the usual manner.

Secured upon the upper side of said cross-bar, at its centre, lengthwise, is a box, C, of metal, having an oblong base, upon which rests a hollow cylinder, c, with the line of its bore parallel with said bar.

A round single-tree, D, passes through the box C, in which it rests by means of two collars, d d, which are each provided with a thimble or short cylinder, fitting into the end of said box, the collars being secured to and revolving with said single-tree.

A slot, x, is made laterally through the centre of the cylinder c, through which passes a bolt, and is screwed into the single-tree, the outer end of said bolt being provided with a double loop, E.

A strap is secured to the upper or rear loop, and passes backward and enters the body of the carriage immediately in the rear of the dash-board, to which it is secured, while to the front or lower loop is attached one end of a rubber band, F, having its opposite end

secured beneath the cross-bar B, so as to retain the single-tree in the position shown by the black lines in figs. 1 and 2, except when revolved backward by means of the strap.

G G represent two hooks, secured to or within the ends of the single-tree, for the purpose of attaching thereto the traces.

These hooks are curved sharply to the rear, (as seen in fig. 1,) so as to retain the traces, except when the single-tree is revolved, in which event they assume the position shown by the red lines in fig. 1, and permit said traces to slip off.

In order that the traces may not become unhooked when slackened, as in descending a hill, or when the speed of the horse is suddenly checked, a guard, H, consisting of a right-angled bar, secured to and forming a part of the ferrule upon the end of the single-tree, passes over the top of the trace and downward below the hook, a little in advance of the single-tree.

By this arrangement, so little side or lateral motion is allowed to the traces as to render it impossible for them to become accidentally unhooked, while the single-tree retains the position shown by the black lines in fig. 1; but when said single-tree is reversed, (as shown by the red lines of same figure,) the guards are thrown to the rear of said single-tree, and present no obstacle to the disengagement of the traces.

There are many advantages possessed by this invention, among which are—

First, while affording a simple, cheap, and durable means for attaching a horse to a carriage, it furnishes means whereby said horse can be instantly liberated therefrom, should occasion require.

Second, by means of the collars secured to the single-tree, and working in the box C, all wear is taken from said single-tree, and a durable bearing furnished for the same.

Third, the construction of the box C, and its position upon the upper side of the cross-bar B, allow it to be pivoted thereon, so as to permit the single-tree to swing horizontally, so as to accommodate itself to the motion of the horse.

Fourth, the elastic band secured to the loop E, retains the single-tree in a position to retain the traces, unless said single-tree is caused to revolve by the driver.

Fifth, the form and position of the guards afford perfect security against the accidental unhooking of the traces, except when the single-tree is revolved backward, in which event they leave said traces entirely free to become disengaged from the hooks.

Having thus fully set forth the nature and merits of my improvement,

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

The box C, and collars d d, in combination with the

single-tree D, substantially as and for the purpose shown and described.

Also, the bolt and double loop E, secured to the single-tree, and connected with the rubber band F, and the strap for operating said single-tree, substantially as shown and for the purpose specified.

Also, the guards H H, secured to and forming a part of the ferrules upon the ends of the single-tree, in combination with the hooks G G, and single-tree D, substantially as and for the purpose shown.

Also, the rubber band F, secured to the cross-bar B and loop E, and operating through said loop upon the single-tree D, substantially as shown, and for the purpose set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 19th day of February, 1869.
SOLOMON KEPNER.

Witnesses:

L. H. DAVIS,
A. Y. EDELMAN.