

W. H. Benham,

Rein-Snap,

N<sup>o</sup> 73,432.

Patented Jan. 21, 1868.

Fig. 5.

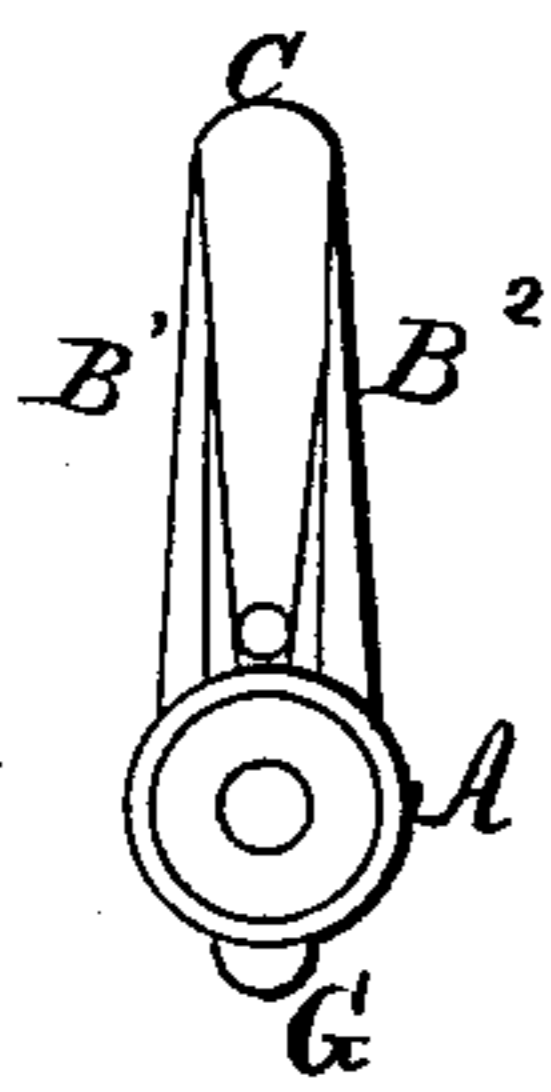


Fig. 1.

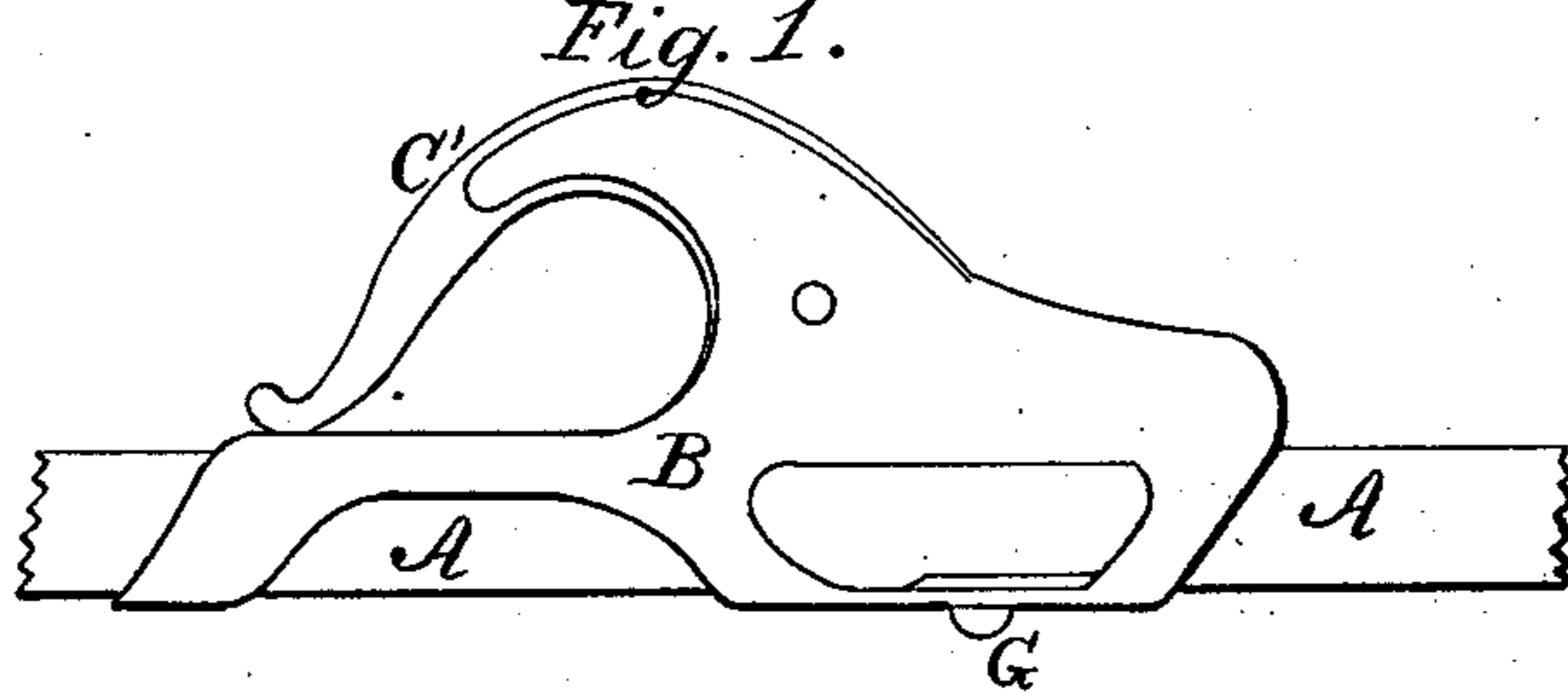


Fig. 3.



Fig. 4.

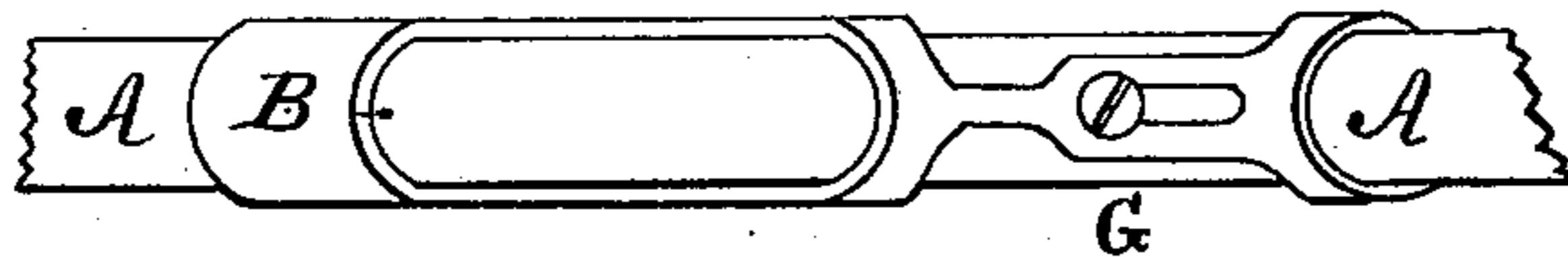
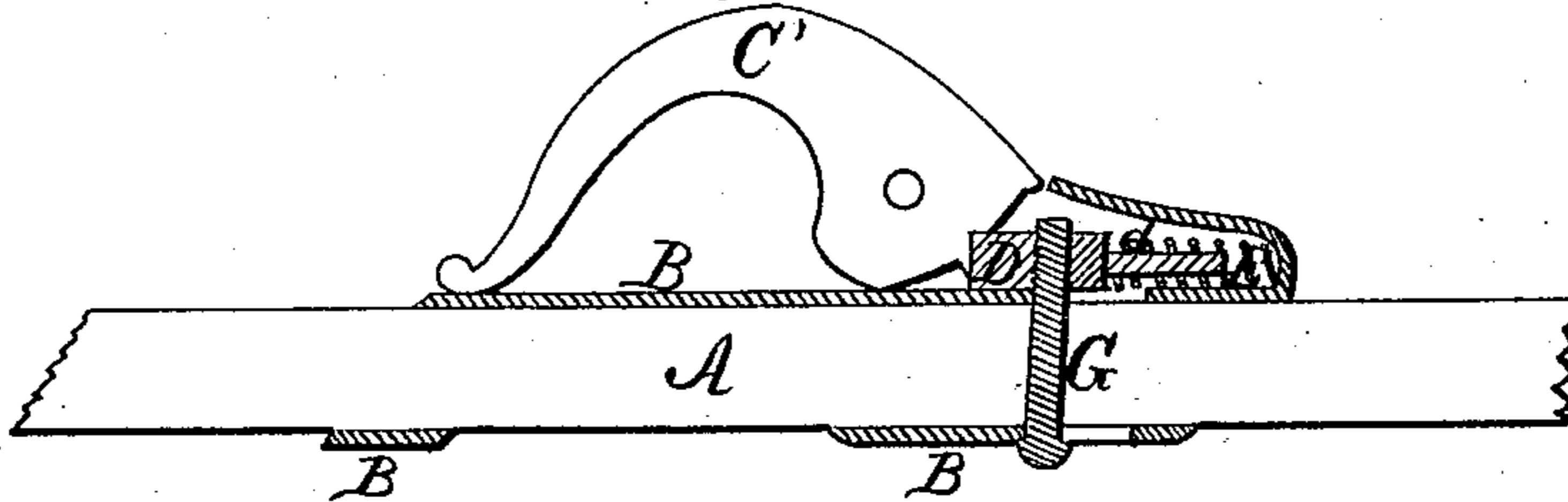


Fig. 2.



Witnesses  
W. C. Dey  
C. C. Livings

Inventor  
W. H. Benham  
Thos D. Stinson. atty.

# UNITED STATES PATENT OFFICE.

WILLIAM H. BENHAM, OF NEW HAVEN, CONNECTICUT.

## IMPROVED REIN-SNAP.

Specification forming part of Letters Patent No. 73,432, dated January 21, 1868.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BENHAM, of New Haven city, and county of New Haven, State of Connecticut, have invented certain new and useful Improvements in Detaching Hooks or Harness-Snaps, to facilitate hitching and unhitching; and I do hereby declare that the following is a full and exact description thereof.

I will first describe what I consider the best means for carrying out my invention, and afterward designate the points which I believe to be new. The accompanying drawings form a part of this specification.

Figure 1 is a side elevation of my invention. Fig. 2 is a central vertical section through the same. Fig. 3 is a view from above, and Fig. 4 is a view from below, and Fig. 5 is an end elevation.

Similar letters of reference indicate like parts in all the figures.

A is that portion of the bridle or rein which is between the bit and the girding-rings. It is represented as round. Many reins are made round at this point, but flat or any other form of rein may be used with my invention, provided the other parts are made to correspond. B is a tube or hollow case, of brass or other suitable material, and B<sup>1</sup> B<sup>2</sup> are stout hooks, firmly affixed thereon, at a little distance apart, and parallel to each other, as represented. C is a movable hook or arm, turning on the pivot *c*, between the hooks B<sup>1</sup> B<sup>2</sup> before mentioned. D is a rectangular piece of steel, having a tail or slender arm, *d*, extending from its rear face, as represented. This piece *d* is free to slide to a limited extent backward and forward in the cavity represented in the casing, and is acted on by the coiled spring E, tending to thrust it forcibly forward. The rectangular piece D is adapted to fit nicely against and act upon the rear of the lever C, as will be presently described. G is a screw extending through the casing B into the rectangular piece D. The casing B is slotted, as represented, to allow the pin G and its attachments to move forward and backward within certain limits. The rein A is not slotted, but receives the screw G tightly in the hole extending diametrically through it, as represented.

In the use of my invention, the lever C' is opened, and the ring, or staple, or other fixture provided for the purpose on the hitching-post, is slipped under the lever C, and is received under the hooks B<sup>1</sup> B<sup>2</sup>. On liberating the device, the lever C closes tightly against the casing B by the force of the spring E, which drives the rectangular piece D forward, and acting upon the incline represented on the rear of the lever C', acts on the lever C'. The horse or other animal may now be safely secured. If he pulls with ever so much force on the rein, the force is resisted by the strong hooks B<sup>1</sup> B<sup>2</sup>. If he slacks the rein and shakes it ever so much, the snap will never become disengaged from the staple on the hitching-post, because it is retained by the lever C', which remains fast against the casing B.

When it is desired to unhitch the animal, it is necessary simply, first, to pull the rein A backward through the snap. This motion, by acting on the piece D through the pin G, contracts the spring E, and by thus drawing the piece D out of contact with the rear part of the lever C', leaves the lever at liberty to swing out from the casing B, and thus to allow the detachment of the device. The staple slips readily out between the end of the arm C' and the casing B. While in this condition, so long as the rein is slack, the spring E causes the parts to assume a rigid position, and the device remains closed until it is again wanted for use.

One great advantage of my device lies in the fact that the unhitching may be effected by simply pulling the rein backward. This is the natural movement in gathering up the reins to start. It will be readily understood, that, after getting into the carriage, the driver takes the reins into his hands, and giving a firm pull on the left rein, or the one, whichever it may be, by which the horse is attached to the post by means of my improvement, the drawing of the rein backward through the device causes its liberation from the post, and the animal is now free to be driven in the ordinary manner.

In case a part only of my device is employed, it may be made of some utility. Thus, for example, the lever C may be mounted

and arranged without the hooks B<sup>1</sup> and B<sup>2</sup>, or with only one of these; but I prefer the two fixed hooks guarding the lever C' on each side, and relieving it from the severe strain due to the pulling of a strong and vicious animal. In case the rein A be flat, it is necessary simply to adapt the parts to those within, by making the case A of a corresponding form.

I do not confine the attachment of the rein to the rectangular piece D by the screw G, but it may be fastened by any other way for the purpose herein set forth. For example, it may be fastened by a thumb-screw. This would allow of moving the device from one part of the rein to another, and avoid weakening it by a hole.

I do not confine myself to brass as a material, but propose to make the device in some instances of malleable cast-iron, tin, or japan, and in others to make the parts of silver, or of strong, thin metal plated with silver or gold. I can employ any material of sufficient strength.

Having now fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is as follows:

1. The spring-snap described, having a lever or arm, C, actuated by a spring, E, and liberated by pulling on the rein, adapted to serve in the manner and for the purpose herein set forth.

2. In connection with the above, the employment of one or more fixed hooks, B<sup>1</sup> B<sup>2</sup>, arranged relatively to the casing B, arm C, spring E, and the locking-piece D, substantially in the manner and for the purpose herein set forth.

3. In combination with the driving-rein or its equivalent, the employment of the spring-snap, substantially of the character herein represented, and adapted to be liberated by the movement of the rein or its equivalent, substantially in the manner and for the purpose set forth herein.

WM. H. BENHAM.

Witnesses:

J. W. COLLINS, Jr.,  
JAMES OLMSTEAD.