J. P. SIMMONS.

Hold-Back.

No. 42,884. Patented May 24, 1864.

Fig. 1.

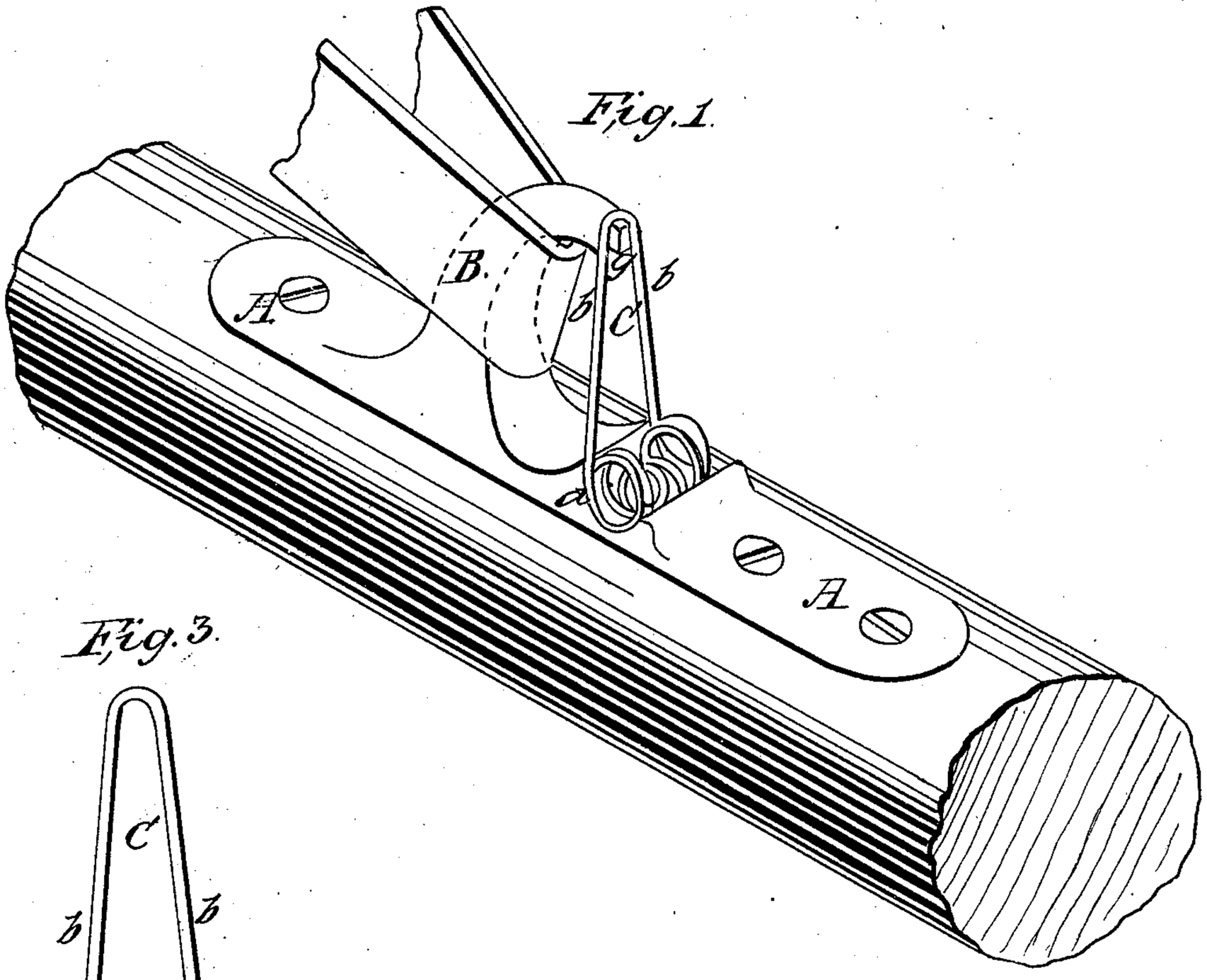


Fig. 3.

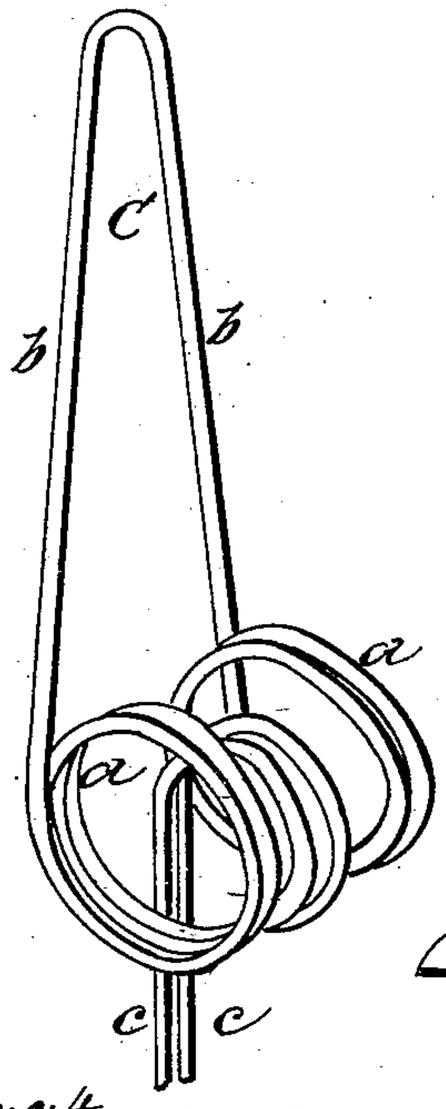
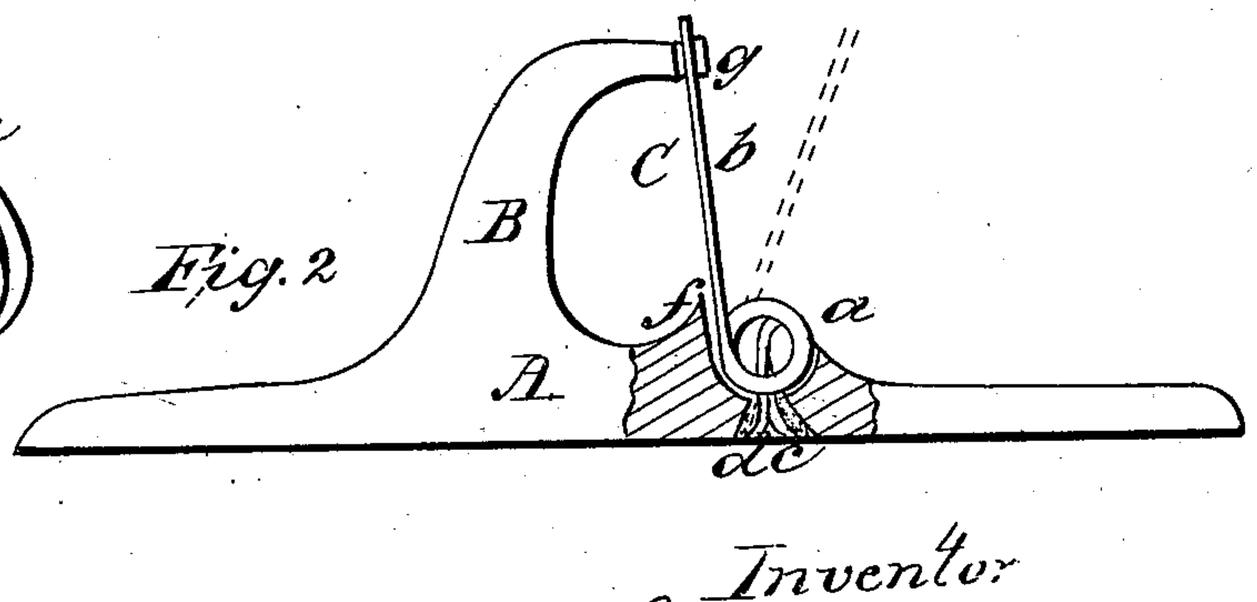


Fig. 2



Witnesses:

Chas. A. Spencer

R. F. Osgood

Inventor

J. P. Simmons

by J. Fraser Hs. attys

UNITED STATES PATENT OFFICE.

J. P. SIMMONS, OF FULTON, NEW YORK.

IMPROVEMENT IN HOLDBACK-IRONS FOR CARRIAGES.

Specification forming part of Letters Patent No. **42,884**, dated May 24, 1864.

To all whom it may concern:

Be it known that I, J. P. SIMMONS, of Fulton, in the county of Oswego and State of New York, have invented a new and useful Improvement in Holdback-Irons for Carriages; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of my improved holdback-iron applied to a thill; Fig. 2, a side elevation thereof detached; Fig. 3, a perspective view of the wire spring-lever detached from the iron.

Like letters of reference indicate corresponding parts in all the figures.

My device is of that class where the holdback-strap may become detached from the iron in case the horse becomes frightened. Various arrangements have been employed for the purpose. In one a simple spring is attached to the end of the holdback projection or hook, forming an extension thereof, which spring shuts down to inclose the strap. In another a lever is pivoted to the iron in front of the projection or hook, and shuts against it to inclose the strap, by means of a spring on the under side of the iron, which presses against the lower end of the lever projecting through. My device is constructed on this principle; but it is my object, by a special construction and arrangement of the lever, to obviate manifest defects and difficulties in the device just mentioned, which defects and difficulties are as follows: A lever pivoted as described and projecting through the iron, must rest in a mortise or passage of sufficient size for the lever to turn in. In winter this mortise becomes filled with water and snow, which freeze there and render the lever immovable, so that it cannot be opened. This difficulty has in effect rendered the device practically useless, as every one knows who has used it. The same trouble is also experienced from snow working through the mortise and freezing around the spring within, so as to obstruct its action. In summer there is a similar, though not so serious, a difficulty, occasioned by sand and dirt filling the mortise and around the spring, rendering necessary the frequent removal of the iron from the thill in order to clear it. Furthermore, the lever merely rests against the end of the holdback projection or hook, but is not supported by it in any manner against lateral strain. Any sudden action has a tendency to force the lever sidewise, and loosen it in the mortise, so that it soon makes an imperfect joint with the holdback projection, and does not securely retain the strap. I employ the ordinary holdback-iron A, secured to the thill, and provided with a projection or hook, B, for holding the strap. Instead of the pivoted lever before described, I use a spring-lever, C, made of wire, substantially of the shape represented. This wire preferably of brass, and is first cut of sufficient length for the purpose designed. It is then bent double, and then the lower portion is coiled or wound around a round rod or wire, which forms coils *a a* on either side that gradually expand the sides *b b* into an angular position, as represented. The lower ends, *c c*, of the wire project downward, straight below the coils a suitable distance to rest in a hole or opening, *d*, in the holdback-iron, Fig. 2, of sufficient size to be filled in with solder to hold the spring-lever in place. The coils *a a* form the spring, which presses the lever back against the projection or hook, and these coils rest in a depression in the iron in such a manner as to form an incline *f* in the latter that will throw the strap up over the coils when it is released, so as not to injure them. This depression also keeps the coils steadily in place at all times against the strains to which they are subject. The extremity of the projection or hook is provided with a nib, *g*, over which the end of the wire lever fits to hold the latter against lateral strain.

Among the advantages of this arrangement are the following:

First. The spring-lever C turns around the coils *a a* instead of a pivot situated in a mortise, and therefore it can never become frozen up or obstructed with snow or dirt so as to be inoperative. This is of the utmost importance in a device of this kind.

Second. The spring forms a part of the lever itself, and consisting of several coils, the turning action in each is very slight, and therefore the spring is not so liable to be broken in cold and frosty weather, as when an ordinary spring is used, which must receive considerable motion and strain.

Third. The nib *g*, fitting between the side

b b of the lever, holds the latter effectually against lateral strain, and prevents any looseness of the joint formed between the lever and the projection or hook. The relative angular position of the sides *b b*, and the situation of the coils *a a* in the groove formed in the iron, also assist in bracing the lever against side action.

Fourth. The manner of fastening the ends *c c* in the hole *d* of the iron by means of solder enables me, if the lever should become broken or need replacing, to expeditiously remove the same by merely applying a hot iron. This is far superior to the method of attaching the ordinary lever, which when broken destroys the whole device or necessitates a difficult job of repairing. I design furnishing several spring levers with a single holdback-iron, so that they may be applied at pleasure.

Fifth. It is obvious that my arrangement is much cheaper and simpler than the ordinary one, being composed of but two parts, while the latter has a much larger number, and is difficult of construction.

I do not claim, broadly, a lever resting against the projection or hook, for inclosing the strap, as I am aware that such has before been employed; but

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

The construction and arrangement of the spring-lever C, consisting of the angular sides *b*, coils *a*, and ends *c*, when the same is used in combination with an iron whose holdback-hook or horn is provided with the nib *g*, the whole constituting a new article of manufacture, substantially as herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

J. P. SIMMONS.

Witnesses:

C. O. TITUS,

F. A. TITUS.