

(No Model.)

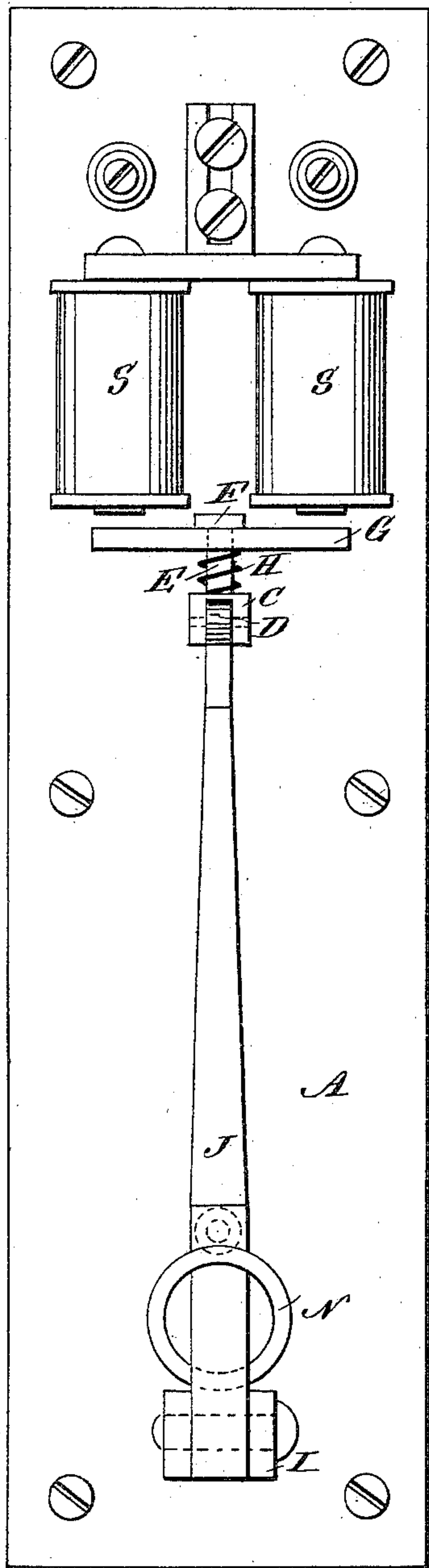
A. J. COFFEE.

ELECTRIC HORSE UNHITCHER.

No. 339,043.

Patented Mar. 30, 1886.

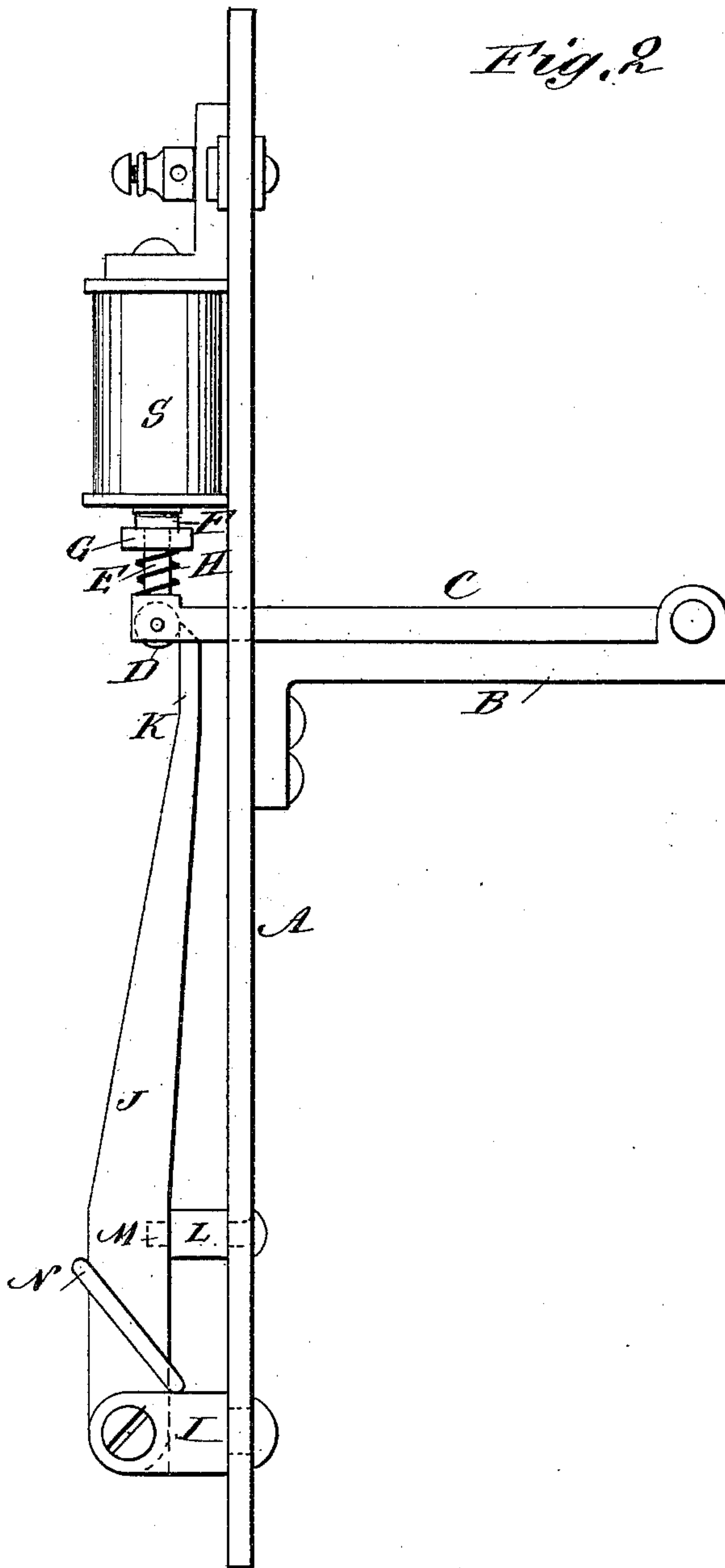
Fig. 1



WITNESSES:

C. Verneux
C. Sedgwick

Fig. 2



INVENTOR:

A. J. Coffee
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDREW J. COFFEE, OF PORTLAND, OREGON.

ELECTRIC HORSE-UNHITCHER.

SPECIFICATION forming part of Letters Patent No. 339,043, dated March 30, 1886.

Application filed November 9, 1885. Serial No. 182,307. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. COFFEE, of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Electric Horse-Unhitcher, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for automatically unhitching horses in engine and truck houses at the same time that the signal is given to go to a fire.

The invention consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a face view of my improved horse-unhitcher. Fig. 2 is a side view of the same.

The plate A is provided with the arm B, projecting from the rear side, and to the end of the said arm the lever C is pivoted and passes through a slot in the said plate, and in the outer end of the said lever C the roller D is pivoted.

From the outer end of the lever C the stem E projects upward, and is provided with the head F on its upper end, and the said stem passes through an armature, G, which is below the head F and is loose on the stem. A spiral spring, H, surrounds the stem E between the lever C and the under side of the armature G, and presses the armature against the head F.

On the lugs I, projecting from the face of the plate A, the lever J is pivoted, which has its upper end tapered, as shown, to fit in a groove or recess in the under side of the lever C at the roller D. A lug, L, projects from the front of the plate A above the lugs I, and is provided on its end with the pin M, which can be passed into an aperture in the inner edge of the lever J.

N is the ring, which is attached to the halter-strap.

S is an electro-magnet on the plate A and in the fire-alarm circuit.

The operation is as follows: The lever J is passed through the halter-ring N or through

a loop or slot in the halter-strap, and then the said lever J is swung up, and as its end strikes the roller D it forces the same upward and presses the stem E upward a short distance through the armature. The upper end of the lever J thus catches on the roller, and the said lever J is locked in the raised position, and the halter-strap is held. When the circuit is closed, as in giving a fire-alarm signal, the armature G is attracted, and thereby the end of the lever C is raised slightly, and when the horse pulls on its halter-strap the lever J is swung down and the stem E is forced upward through the armature. The horse can then pull the ring N or the halter-strap off the lever J, and is thus released. If desired, one end of the halter-strap may be fastened to the stall, the strap passed through the ring on the head-gear of the horse, and a ring secured to the other end of the strap, through which ring the lever J is passed. The horse is then released in a manner similar to the one described.

In case it is desired to operate the device on a closed circuit of a fire-alarm telegraph, a back contact-relay is placed in the main circuit, and the unhitching apparatus is operated on the local circuit of the relay with an open-circuit battery; or the unhitching apparatus may be operated by connecting the same with the small contact-points that may be operated by the armature of the gong-magnet, either on an open or a closed circuit system, by arranging the contact-points in combination with the armature of the gong-magnet in an engine or truck house, so that said contact-points will remain open when the system is at rest.

The unhitching device may be used for either one or two horses at a time.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In an electric horse-unhitcher, the combination, with an electro-magnet, of the lever C, the stem E on the same, the armature G, held loosely on said stem, the spring H, for pressing the armature upward, and the lever J, which can be engaged with the lever C, substantially as herein shown and described.

2. In an electric horse-unhitcher, the combination, with the electro-magnet, of the lever C, the stem E on the same, the armature G,

held loosely on the stem, the spring H, pressing the armature upward, the roller D in the end of the lever C, and the lever J, which can be engaged with the roller D in the lever C, substantially as herein shown and described.

5 3. In an electric horse-unhitcher, the combination, with the plate A, of the arm B on the same, the lever C, pivoted on the arm B, the electro-magnet S, the armature G, held on

the end of the lever C, and of the lever J, pivoted on the plate A and adapted to engage with the lever C, substantially as herein shown and described.

ANDREW J. COFFEE.

Witnesses:

W. T. WALLACE,
E. R. EMMS.