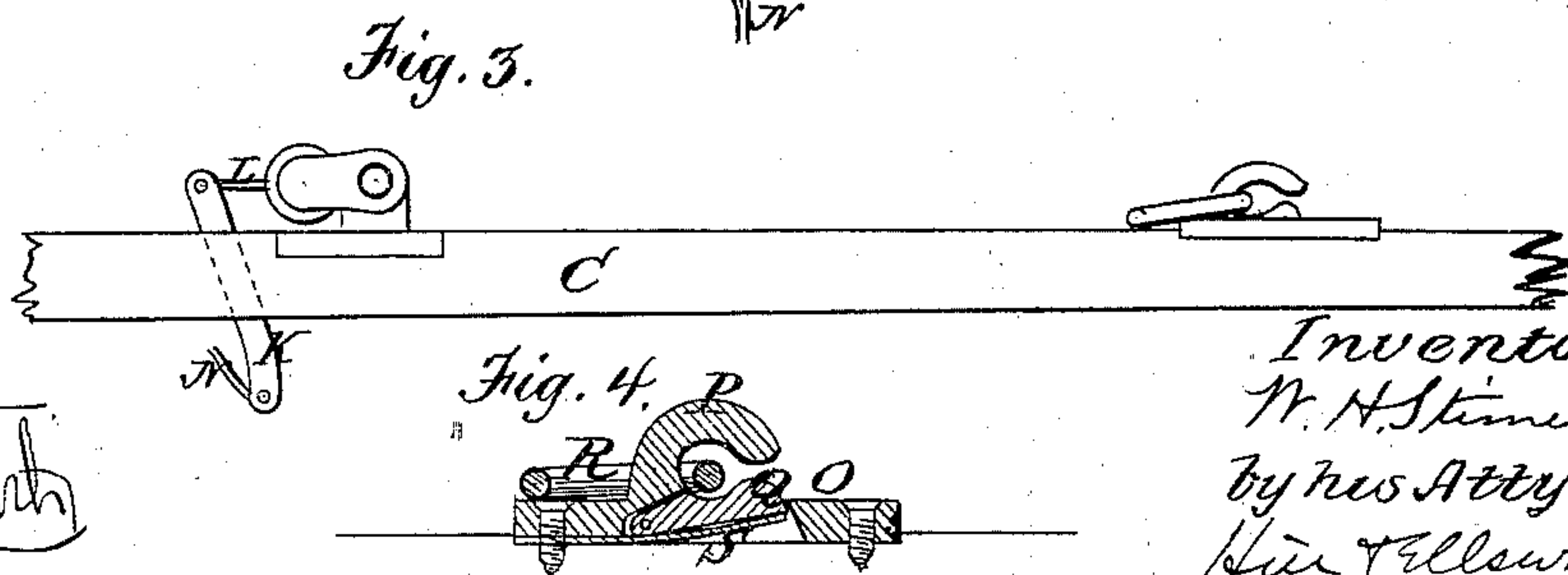
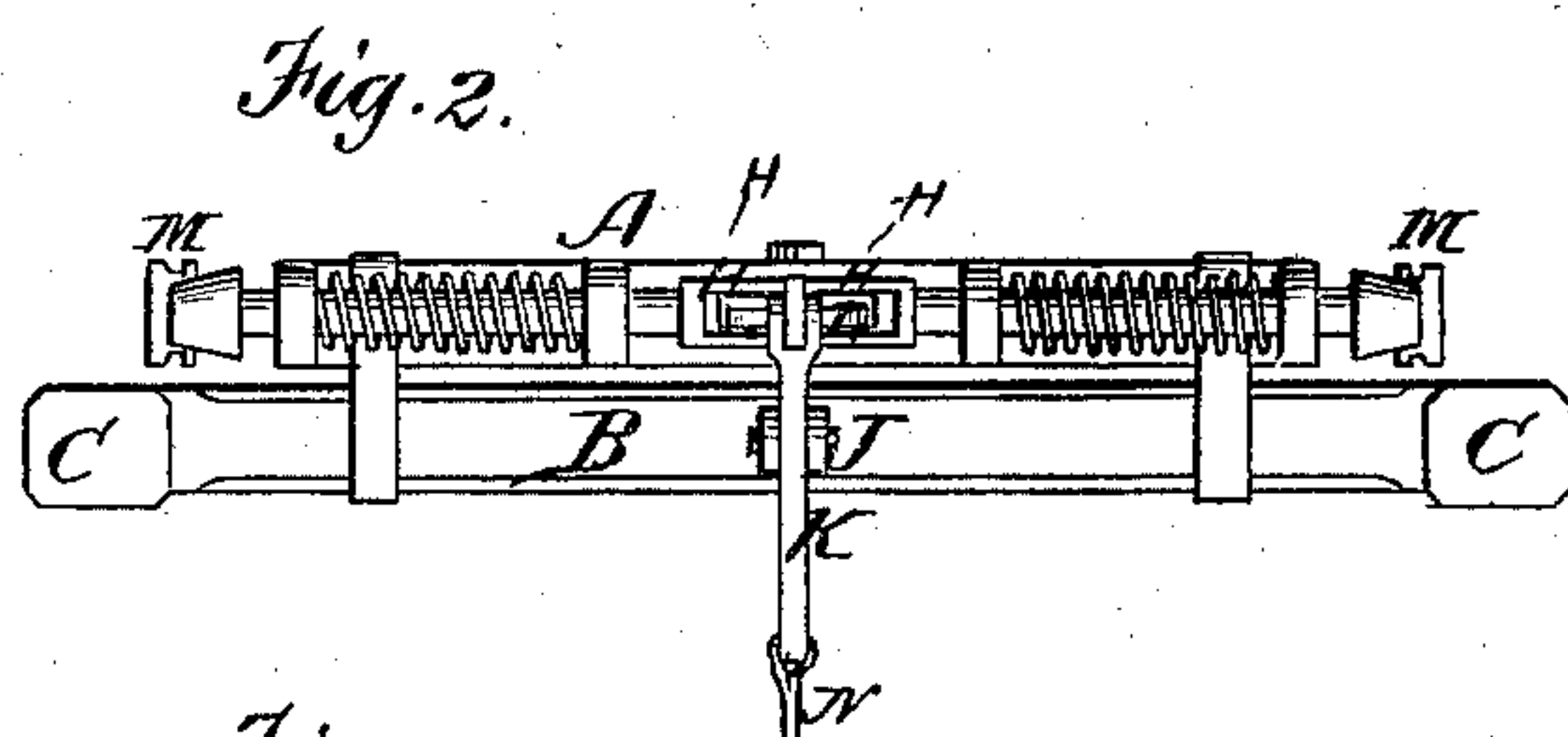
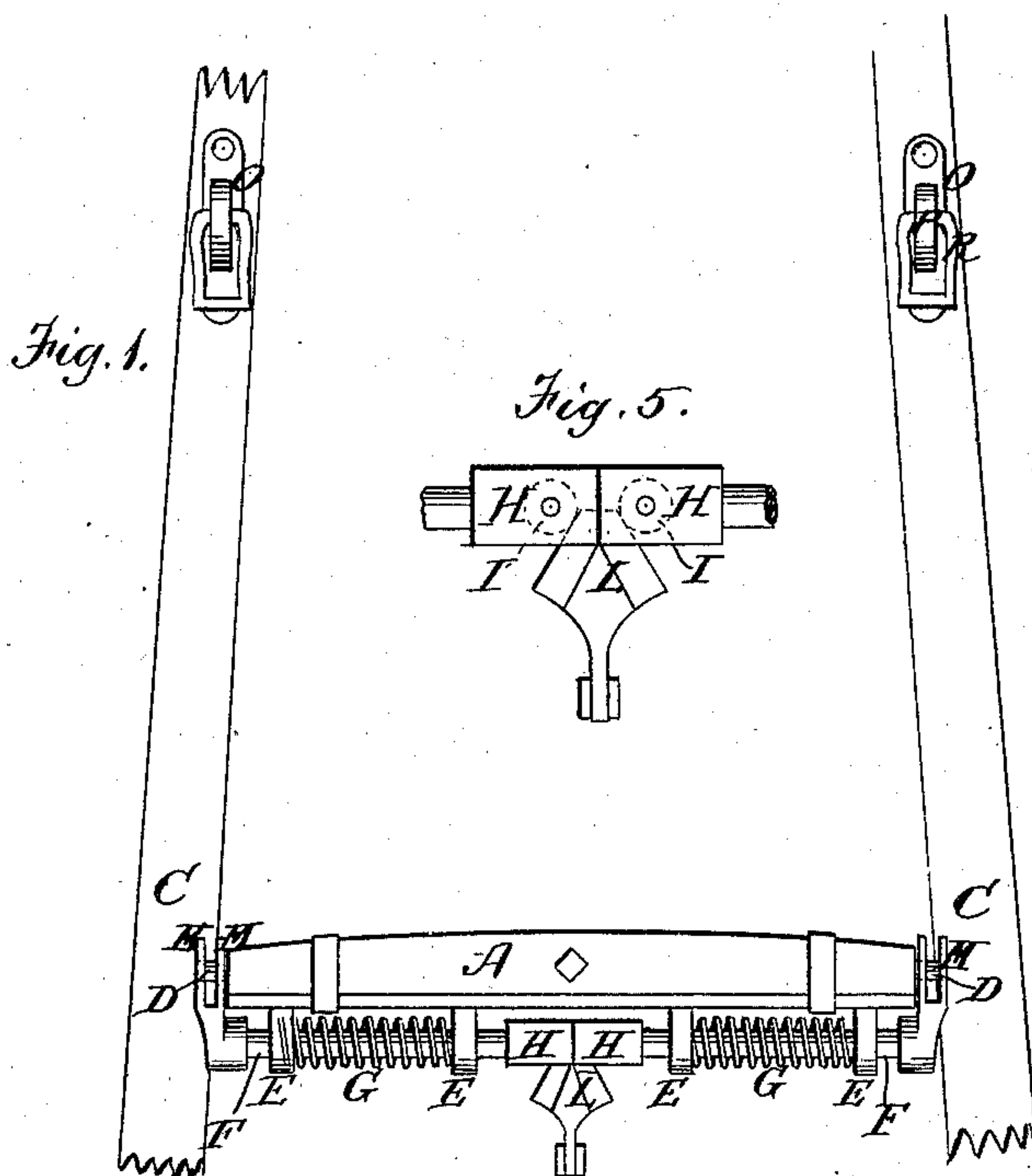


W. H. STIMELY.  
Trace-Detachers.

No. 138,706.

Patented May 6, 1873.



Witnesses.

*C. F. Bunn*  
*Dr. Ellsworth*

Inventor.  
W. H. Stimely  
by his Attys.  
*Wm. Fellows*

# UNITED STATES PATENT OFFICE.

WILLIAM H. STIMELY, OF BUCHANAN, ASSIGNOR OF ONE-HALF HIS RIGHT  
TO WILLIAM H. DOYLE, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN TRACE-DETAACHERS.

Specification forming part of Letters Patent No. 138,706, dated May 6, 1873; application filed  
March 18, 1873.

*To all whom it may concern:*

Be it known that I, WILLIAM H. STIMELY, of Buchanan Post Office, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Trace-Detachers; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a plan view of my invention. Fig. 2 is an end view. Fig. 3 is a side elevation; and Figs. 4 and 5 views of parts detached.

Similar letters of reference in the accompanying drawing denote the same parts.

This invention has for its object to enable the occupant of a carriage to instantaneously detach the traces from the whiffletree and the holdback-straps from the holdback without getting out of the carriage, and while it is moving at any possible rate of speed, thus insuring his own safety in case one of the traces breaks or the horse becomes, from any cause, ungovernable. To this end the invention consists in the combination of parts which I will now proceed to describe.

In the accompanying drawing, A represents an ordinary whiffletree, pivoted, in the usual manner, to the cross-piece B that connects the thills C. At each end of the whiffletree are four parallel lugs, E, of equal size and at regular intervals, two at each side of the pivot. In these lugs are placed two rods, F, one to each pair of lugs, inclosing which rods, and between the two lugs of each rod, are springs G, which press the rods toward each other. On the proximate ends of the rods F are bifurcated heads H; and, between the forks of each head, is a friction-roller, I. J is an arm, extending backward from the cross-piece B directly in rear of the pivot of the whiffletree. To the rear end of this arm is jointed a lever, K, working at right angles to the cross-piece, the upper end of said lever coming directly in rear of the line of contact between the two heads H, and having jointed to it a spear-head, L, whose point enters the recesses of both heads H, and rests between the friction-rollers I. On the outer ends of

the rods E are elbows M with forked extremities, which fit over the pins D at the ends of the whiffletree. A cord, N, passes from the lower end of the lever K back through the bottom of the carriage to a point within reach of the driver. O are the holdback-plates, screwed to the upper side of the thills. P are the holdbacks, springing from the plates O. In slots in the said plates and holdbacks, beneath the ends of the holdbacks, are tongues Q, pivoted to the holdbacks, and having projections on their outer ends, which rest on springs S placed in said slots beneath said tongues, by means of which springs the tongues are held nearly in contact with the ends of the holdbacks. R are rings, with which the holdback-straps are connected, and which are passed into the holdbacks, the tongues Q yielding to allow them to enter the holdbacks, and springing back after they have passed, and serving to prevent the rings from working out of the holdbacks.

### *Operation.*

The horse, with his harness on, being backed between the thills, the elbows M are to be drawn out by hand or otherwise, so that the ends of the traces can be inserted between the forks of the elbows, so that when the elbows are returned they may slip the holes in the traces upon the pins D, thus securely fastening the traces to the whiffletree. When it becomes desirable for the driver, for any cause, to detach the traces from the whiffletree, he has only to pull the cord N, which, through the instrumentality of the lever K, forces the spear-head L forward between the friction-rollers I. This forces outward the rods F, and causes the elbows M to slip the traces off from the pins D. Thereupon the traces are free to be drawn out of the elbows M, when the horse can run forward, leaving the carriage behind. As soon as he has gone in advance of the carriage far enough to turn the holdback-straps forward of the holdbacks the tongues Q yield and allow the rings R to slip out of the holdbacks. The horse is then entirely free from the carriage, and can depart, leaving the carriage behind in safety.



Having thus described my invention, what I claim as new is—

1. The combination of the whiffletree A, sliding rods F, slotted heads H, slotted elbows M, spear-head L, lever K, cord N, springs G, and friction-rollers I, substantially as and for the purpose specified.

2. The combination of the holdback plate

O, holdback P, tongues Q, spring S, and thill C, substantially as and for the purpose specified.

WILLIAM H. STIMELY.

Witnesses:

PHILIP HOERR,

JOHN BRADLEY.