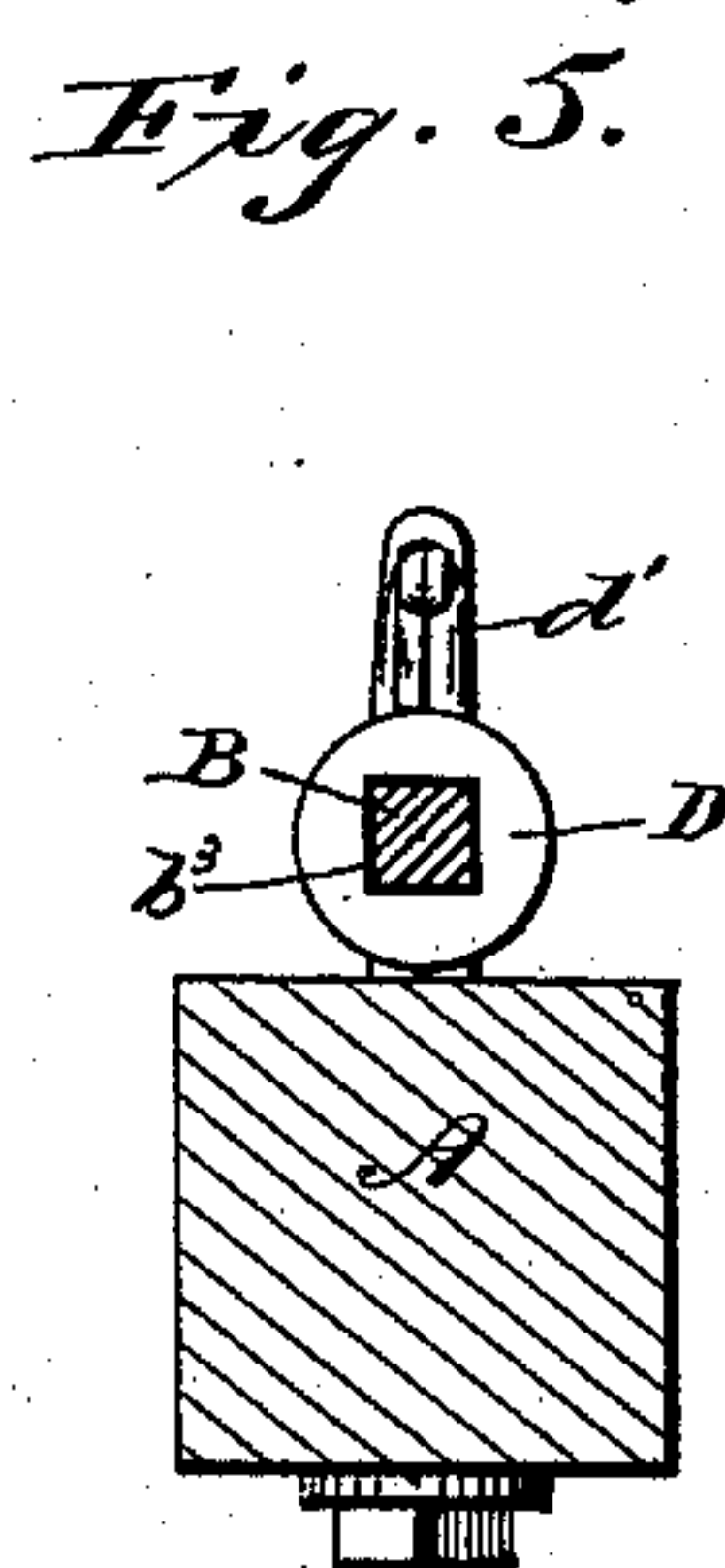
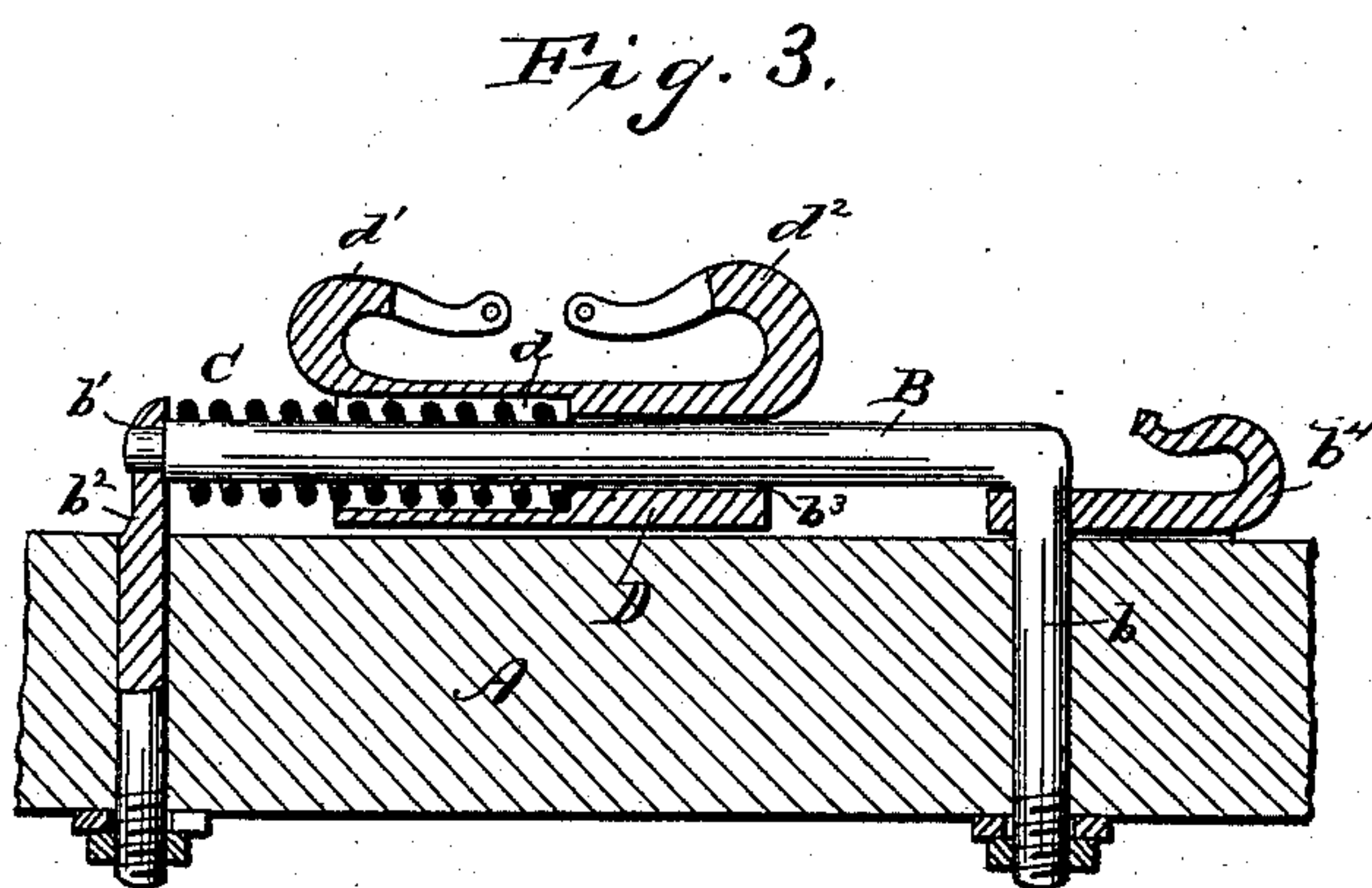
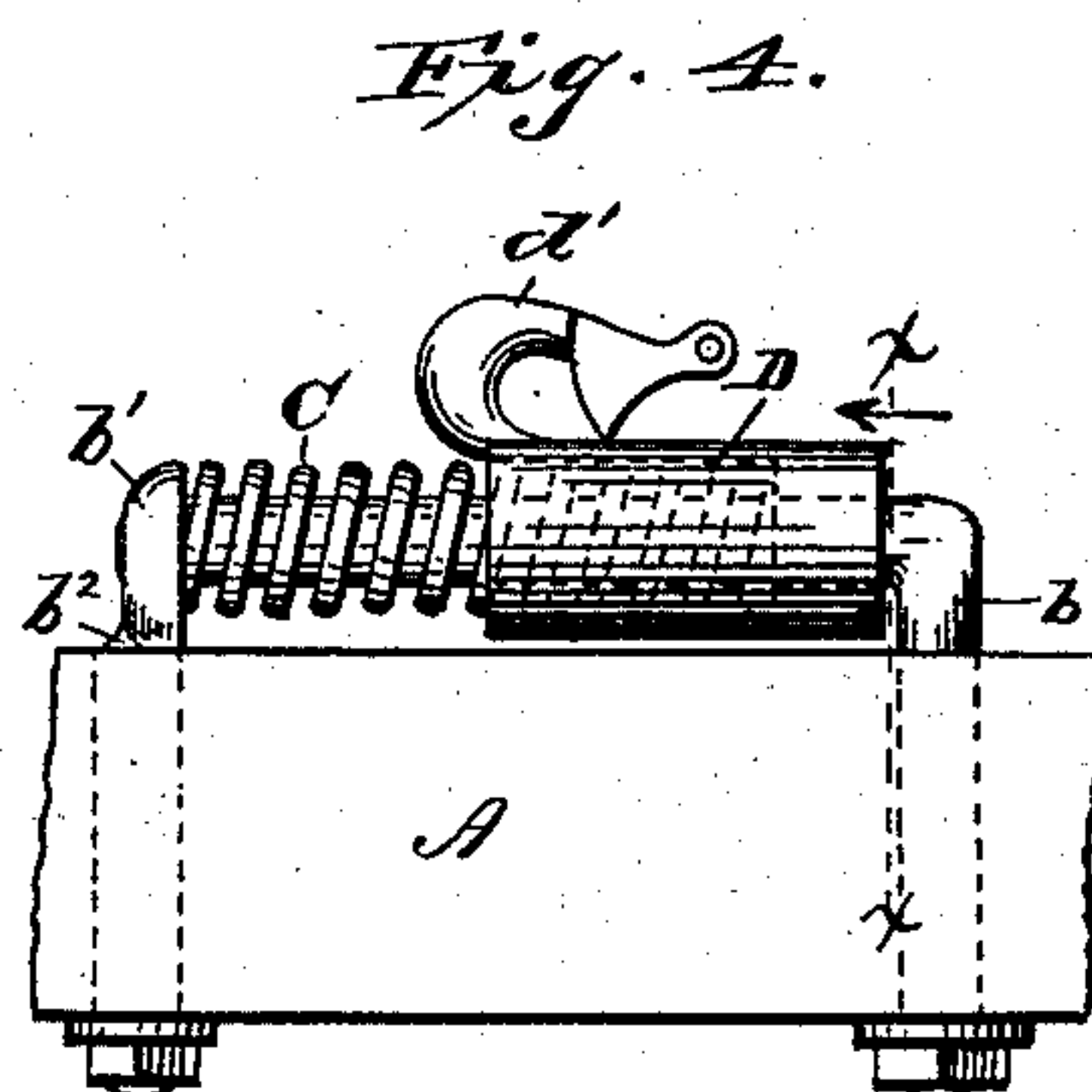
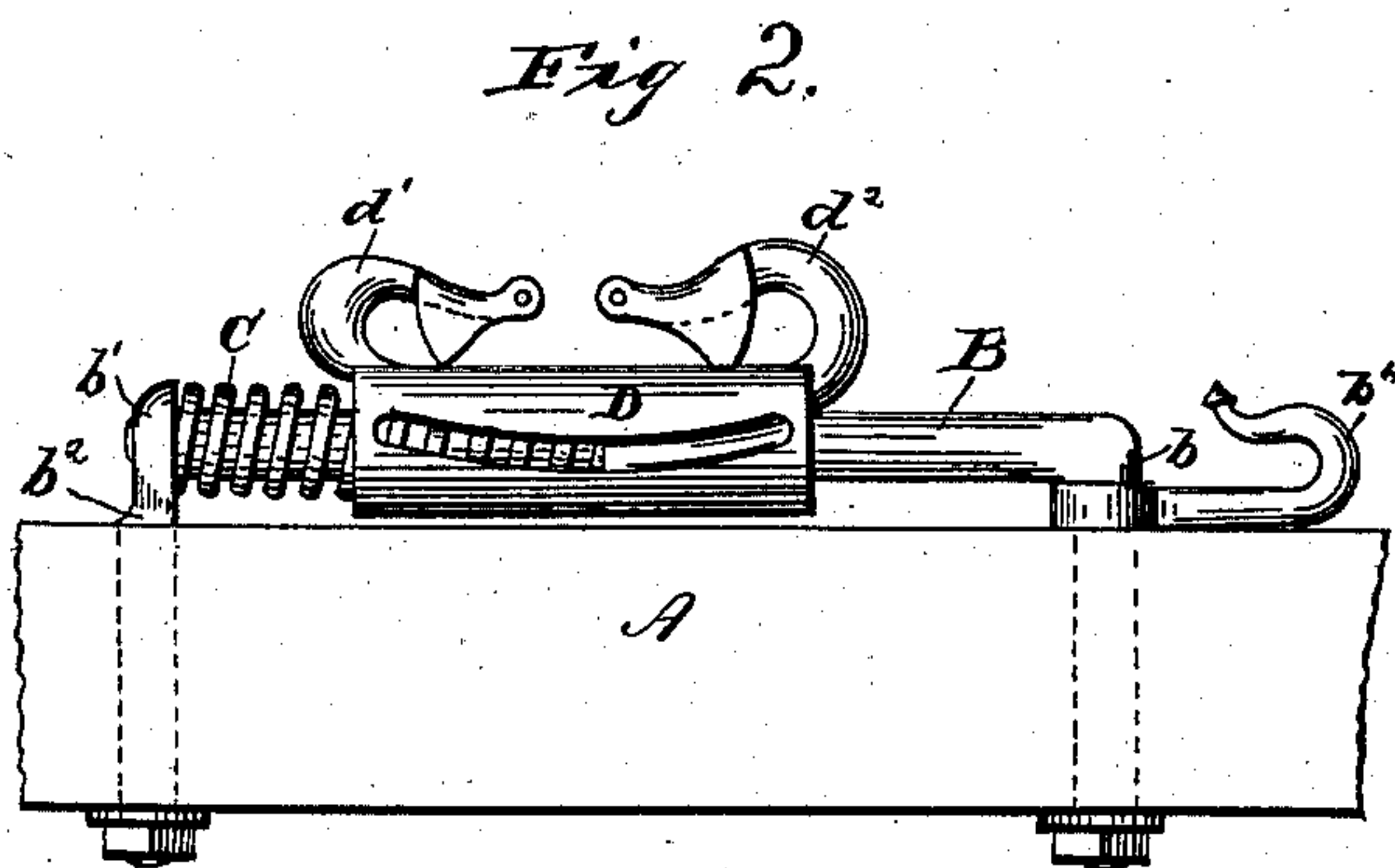
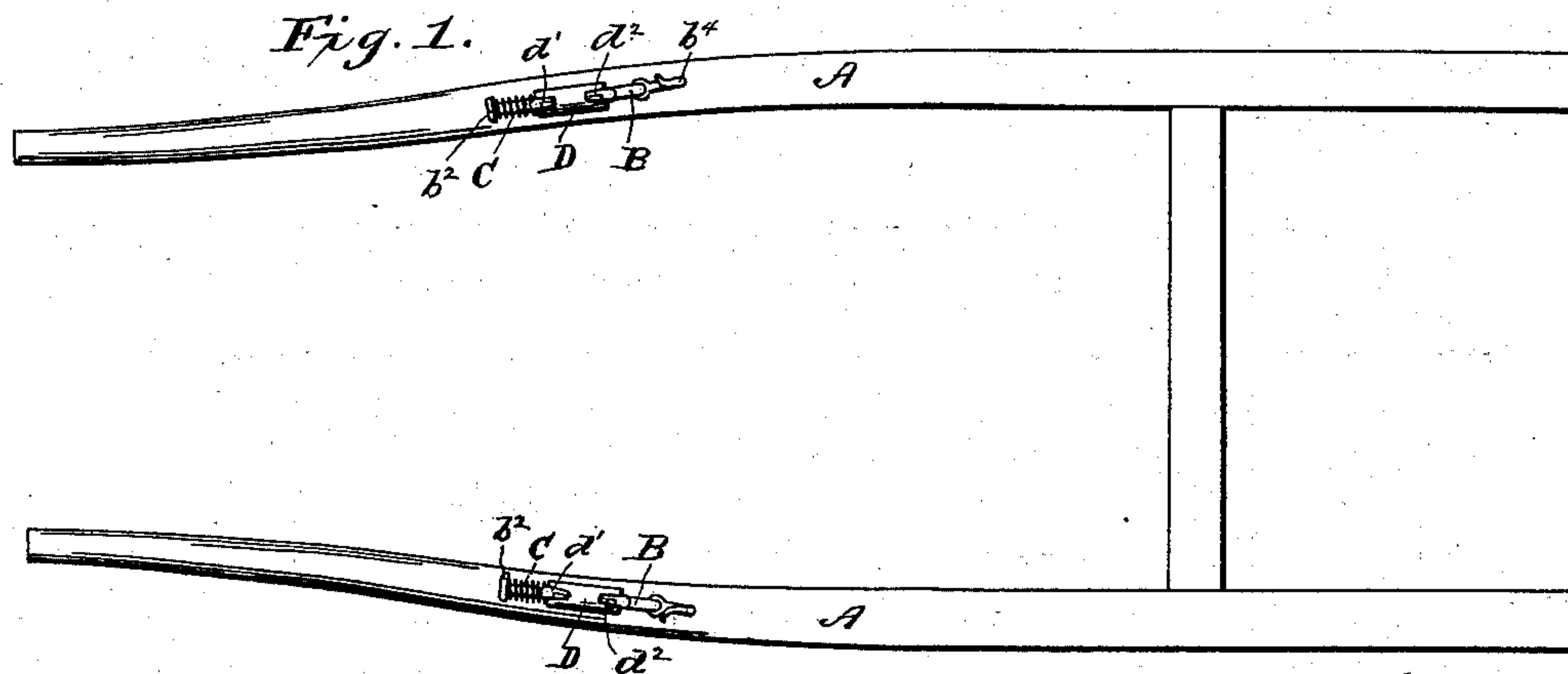


(No Model.)

J. D. MILLER.
DRAFT ATTACHMENT FOR VEHICLES.

No. 406,755.

Patented July 9, 1889.



Witnesses.
Thomas Durant
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UNITED STATES PATENT OFFICE.

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ONE-HALF TO JOHN A. BAKER, OF SAME PLACE.

DRAFT ATTACHMENT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 406,755, dated July 9, 1889.

Application filed January 4, 1889. Serial No. 295,461. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. MILLER, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Draft Attachments for Vehicles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to that class of vehicle or draft attachments wherein the strain in starting the same is materially lessened by the interposition of a spring located in such a manner as that the animal drawing the vehicle will not be subject to the jerk necessary in starting a load, but by compressing said spring will ease up the load and start the same gradually, and in which the back-chain which holds up the shafts will be kept at all times in such a position as not to cramp the saddle and gall the back of the animal drawing said load.

Referring to the accompanying drawings, Figure 1 is a top plan view of a pair of shafts with my invention applied thereto. Fig. 2 is a side view of one of the shackles. Fig. 3 is a vertical longitudinal section. Figs. 4 and 5 are views of a modification.

Similar letters of reference in the several figures indicate the same parts.

Mounted upon each of the shafts A, and rigidly secured thereto, is a bar B, one end of which is bent down, as b , at right angles to the rest of the bar. This end is passed through the shaft and is secured beneath the same by means of a nut or in any approved manner. The other end of the bar B is passed through an eye b' in a short perpendicular bar b^2 , and rigidly secured thereto by riveting. This bar b^2 is also passed through the shaft and secured beneath the same in a manner similar to the bent end b of bar B.

Upon the bar B is mounted a spiral spring C, which takes a bearing against the eye b' of bar b^2 at one end, and the other end takes its bearing in a socket d formed in the slide D. This socket passes about half-way through the slide, and a hole b^3 , just large enough to

accommodate the bar B, upon which said slide is also mounted, passes the balance of the way through the same.

Upon the slide D and each end thereof is mounted a hook, the forward one d' for attachment to the draft-chain which is attached to the hames, and the rear one d^2 for attachment to the chain which goes over the back of the animal to support the shafts. In the ends of these hooks are pivoted gravitating pawls, arranged in such a manner that when a link of a chain is attached to one of the hooks the pawl will allow it to enter and then drop down and retain the same when it is in position, so that it cannot come loose from any jar that may be caused, but at the same time the link can be readily released by lifting the pawl with the finger. If it be found desirable that the link should not be released from the hook, the pivot of the pawls after the chain has been hooked on could be riveted up tight, thus substantially making an eye of it.

It will now be seen that as the draft-hook and back-chain hook are arranged upon the same slide it must necessarily follow that when the draft is brought to bear upon the spring the compression will cause both hooks to advance with the animal drawing the load and thereby effectually prevent any liability to gall its back, as is the case with shackles now largely used. It will also be seen that the strain in starting—a loaded cart, for instance—is greatly lessened. As every one knows, the hardest part in drawing a load is in starting, and my invention is designed to lessen the strain that comes at that time as far as possible.

The operation of my invention is as follows: The animal which is to draw the loaded vehicle is attached to the same by connecting the back-chain to the hook d^2 , the draft-chain to the hook d' , and the breeching-chain to the hook b^4 . The animal is then started, the draft-chain draws upon hook d' , and through the medium of the slide D compresses the spring C against the bar b^2 , and also carries forward the hook d^2 , to which the back-chain is attached. When the spring is partially compressed, the load will begin to move and

with much less strain than would be required to start the same load with any other shackle now in use.

5 In the modifications shown in Figs. 4 and 5 it will be seen that my invention can be applied to vehicles where a back-chain is not needed, and it is only necessary to lessen up the strain in starting. Consequently the hook for attachment to the back-chain is dispensed
10 with and the hook d' only left remaining. It, however, is found necessary that the hook d' should retain an upright position, and this is done by making the bar B square in cross-section and forming the hole b^4 to fit the same.

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

1. In a draft attachment for vehicles, the combination, with the horizontal bar rigidly attached to the shaft, of the slide mounted on
20 said bar with the draft-chain or trace-hook mounted directly thereon, and the spring interposed between said slide and the forward end of the horizontal bar through which the draft is transmitted to the shaft, substan-
25 tially as described.

2. In a draft attachment for vehicles, the combination, with the horizontal bar rigidly attached to the shaft, of the slide mounted on said bar and having the socket in the forward
30 end, the draft-chain or trace-hook mounted on said slide, and the coil-spring within the

socket through which the draft is transmitted to the shaft, substantially as described.

3. In a draft attachment for vehicles, the combination of a slide carrying hooks for at- 35
tachment to the draft chain or trace and the back-chain, said hooks having pivotally attached to them pawls for retaining the links of such chains in position, and a spring interposed between said slide and the forward end 40
of a horizontal bar upon which all these parts are mounted, and which bar is rigidly attached to the shafts of a vehicle, substantially as described.

4. In a draft attachment for vehicles, the combination, with a slide containing a socket 45
for the accommodation of a spiral spring, and having upon it hooks for attachment to the draft chain or trace and the back-chain, said hooks having gravitating pawls for retaining 50
in position said chains, a spring interposed between said slide and the forward end of a horizontal bar, upon which all these parts are mounted, and which bar is rigidly attached to the shafts of a vehicle, of a hook for at- 55
tachment to the breeching-chain, said hook mounted upon the rear depending end of said horizontal bar, substantially as described.

JOHN D. MILLER.

Witnesses:

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