

(No Model.)

H. DUFRESNE.
DRAFT ATTACHMENT FOR VEHICLES.

No. 435,739.

Patented Sept. 2, 1890.

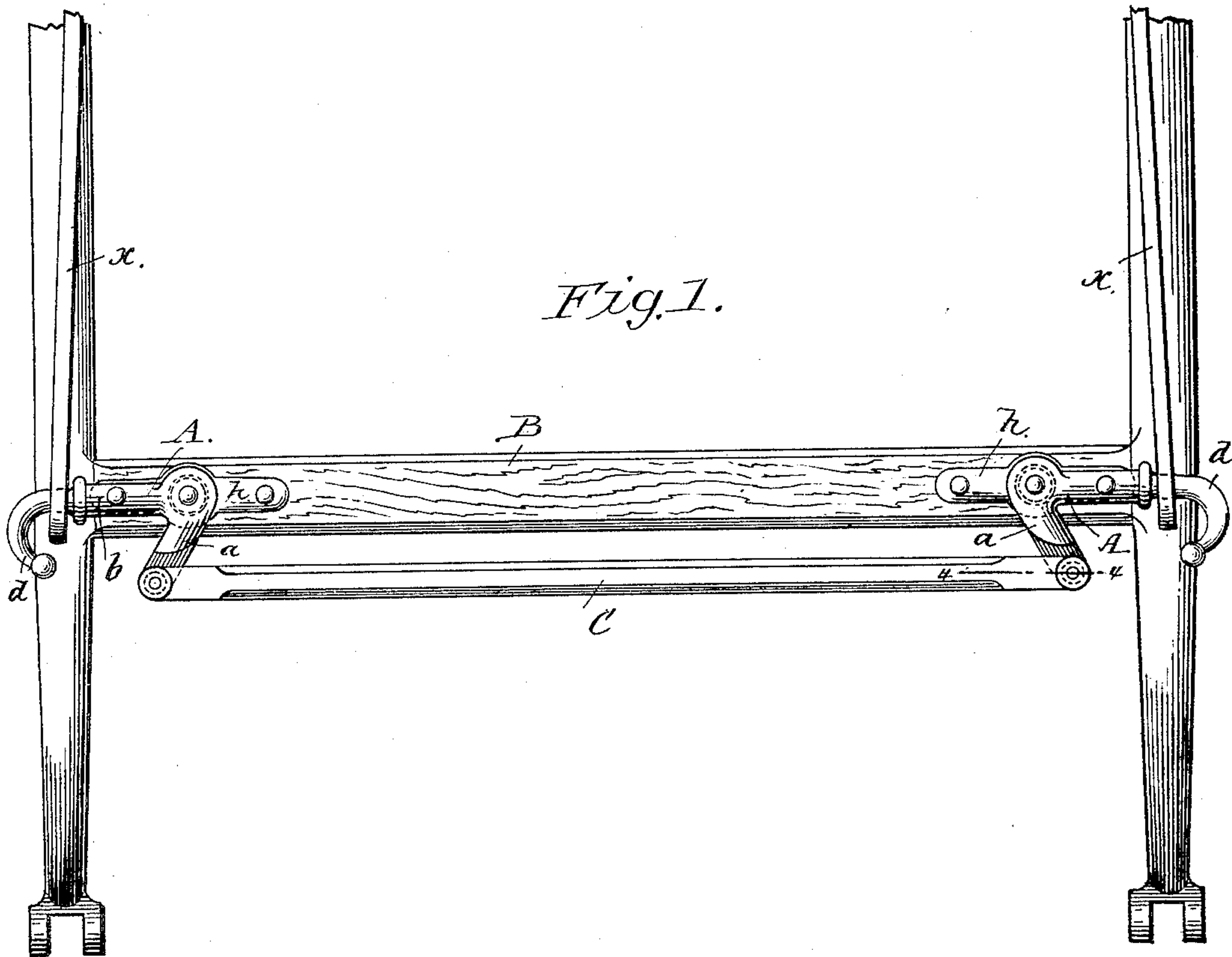


Fig. 2.

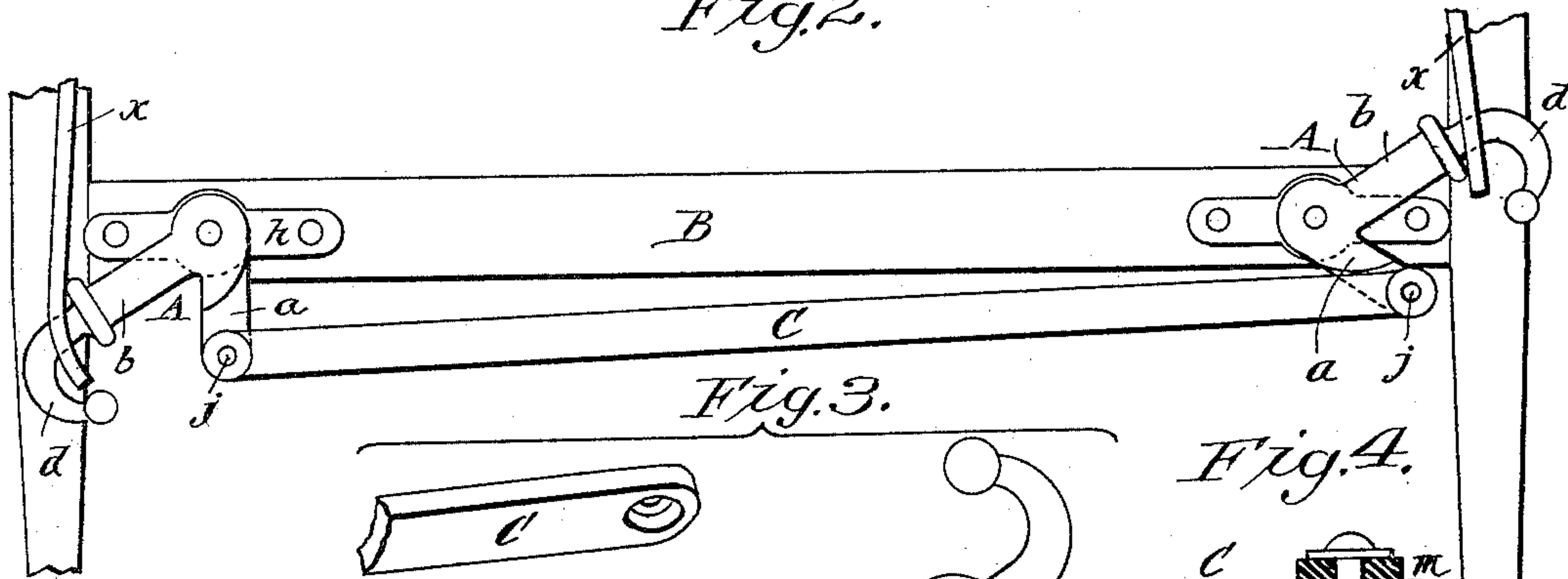
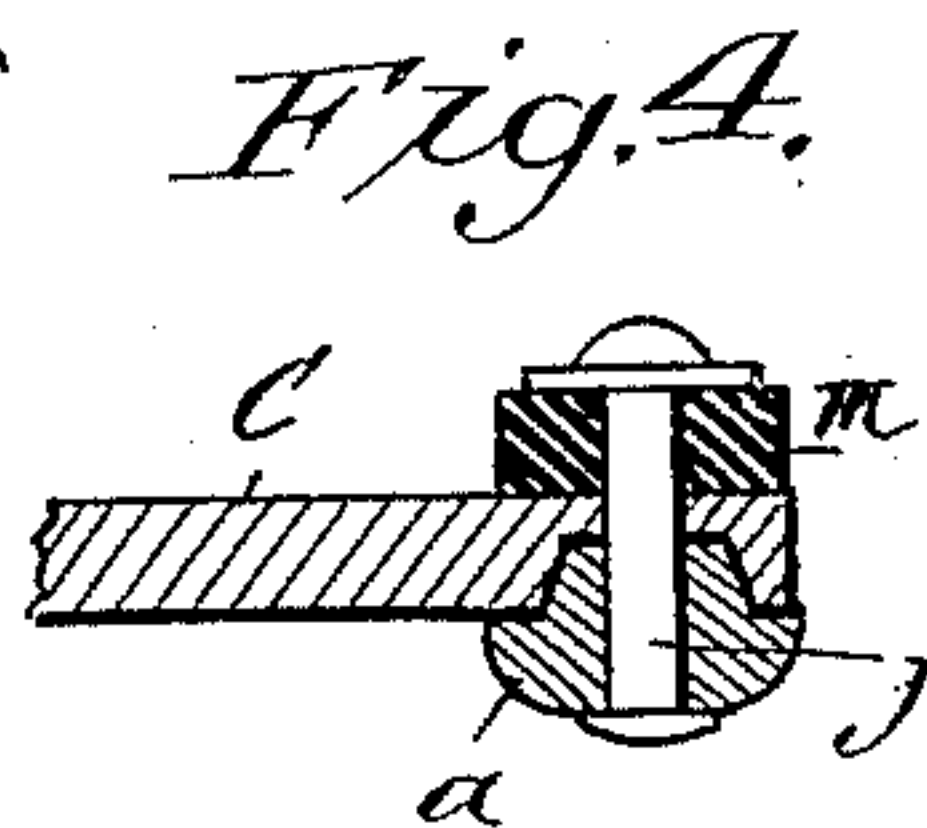
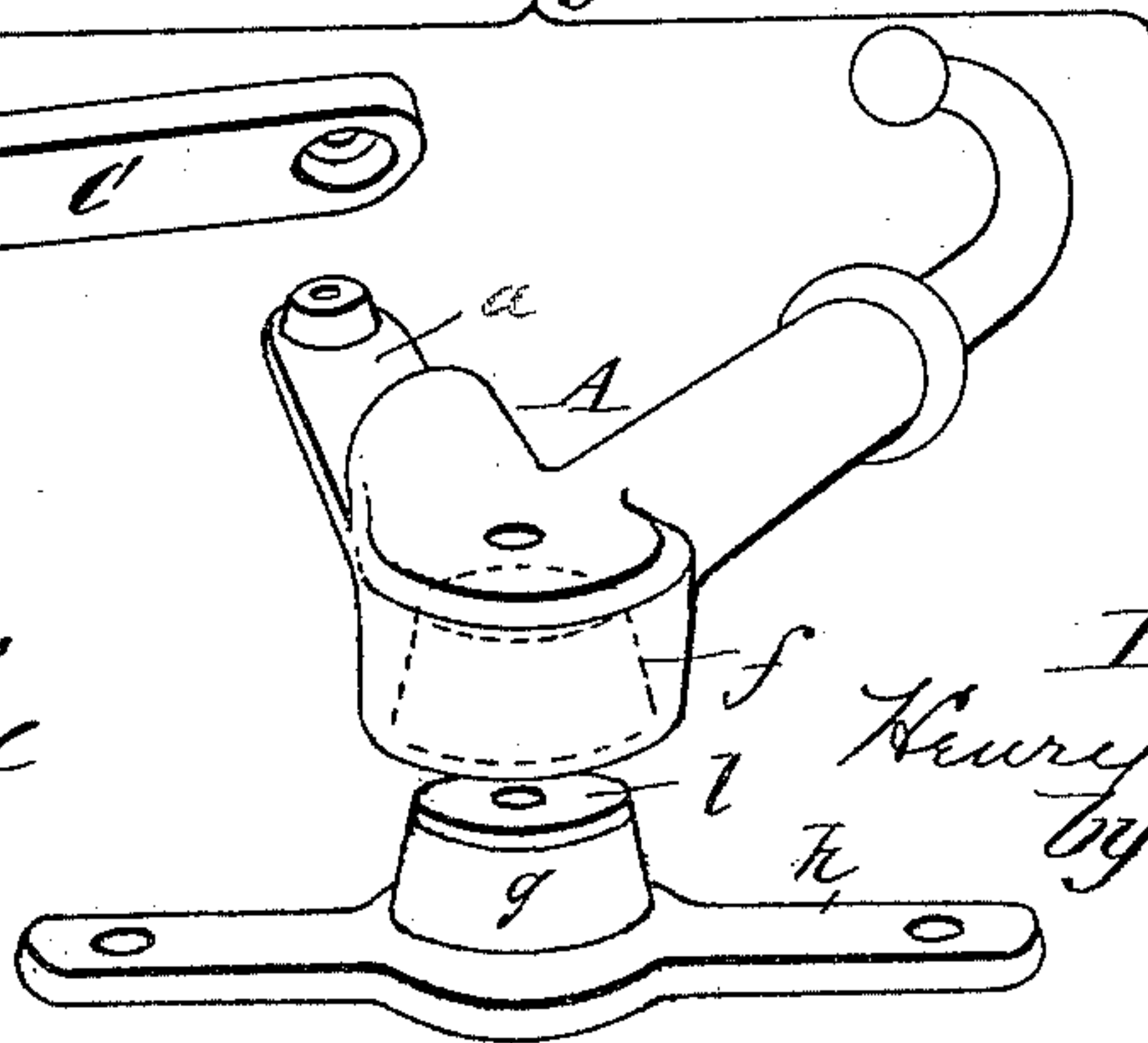


Fig. 4.



Witnesses:
J. W. Gifford
J. F. Bellong



Inventor,
Henry Dufresne
by Chapin & Co
Atty's.

UNITED STATES PATENT OFFICE.

HENRY DUFRESNE, OF NORTHAMPTON, MASSACHUSETTS.

DRAFT ATTACHMENT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 435,739, dated September 2, 1890.

Application filed February 1, 1890. Serial No. 338,843. (No model.)

To all whom it may concern:

Be it known that I, HENRY DUFRESNE, a citizen of the United States, residing at Northampton, in the county of Hampshire and State of Massachusetts, have invented new and useful Improvements in Draft Appliances for Vehicles, of which the following is a specification.

The object of this invention is to provide improved devices for vehicles which will replace the ordinary whiffletree, the result to be attained by the improved devices being greater durability and rendering more easy the repairing of the draft appliance in case of necessity therefor; and the invention consists in the construction and combination of parts, substantially as will hereinafter more fully appear, and be set forth in the claim.

Reference is to be had to the accompanying drawings, in which similar letters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view of the improved draft appliance as applied upon the cross-bar or support of ordinary buggy-thills, the traces or tugs, which are also shown, being indicated as drawing equally. Fig. 2 is a plan view of the draft appliances, the tugs being shown, however, as drawing unequally. Fig. 3 is a perspective view of parts of the device separated from each other. Fig. 4 is a detail sectional view on the line 4 4, Fig. 1.

This improved draft appliance consists of two angular levers A, each pivotally mounted upon a suitable support of the vehicle, as the cross-bar B, said angular levers being at proper distances apart corresponding to the usual length of a whiffletree, and also of a uniting and equalizing and evener bar C, which is pivotally connected by its ends to the one arm *a* of each angular lever A, the other arm *b* of each angular lever extending in a line more or less nearly at a right angle to the line of draft, and, as shown, has its extremity formed into a hook *d*, by which to engage the eye or slit in the trace *x*.

It will be seen that should there be a greater draft on the one tug than there is upon the other the angular lever drawn upon in the greatest extent will be swung, its arm *b* moving forwardly and the arm *a* moving outwardly or laterally, and through the connecting and

equalizing bar C the other angular lever will be swung to move its arm *a* laterally inward and the arm *b* rearwardly to put tension on the trace connected to said latter-named arm *b*.

As particularly shown in the drawings, Fig. 3, the angular lever has its elbow formed into a cup-shaped socket *f*, which is open at its under side, so as to fit over a boss *g*, formed on or attached to the cross-support, and a bolt passes through the top wall of said elbow-socket, through the boss *g*, and also the supporting-bar, its heads, or its head at one end and a nut at the other, confining the lever in place and against any lifting movement. The boss *g*, as shown in the drawings, is a part of a foot-plate *h*, which is secured upon the cross-support by as great a number of screws, bolts, or rivets as in the judgment of the constructor is deemed desirable. The boss *g* and socket *f* preferably have their side walls tapered to fit one another, and as the parts wear, owing to the tapered formation, such wear in the bearings may be readily taken up. In lieu of the socket being formed in the elbow of lever A such lever may have the boss and the socket may be formed in the cross-support B or a bushing-plate thereof, as obvious. The bearing being formed by the walls of the boss and socket, which parts may be readily formed of the necessary strength, a comparatively small axial bolt may be used to hold the angular lever in place, and thereby the cross-support is not materially weakened.

The draft is distributed to two parts of the cross-support in the present improved device and does away with the whiffletree, all the draft exerted upon which coming upon the center thereof, through which the king-bolt passes, and, as well known, the king-bolt, being necessarily large, weakens the whiffletree at its middle, as well also as the cross-bar B, under the usual arrangement.

It is designed to form all of the parts of malleable iron, although other kinds of iron or other metal may be employed. As is also shown in Fig. 3 and in Fig. 4, the arm *a* of the angular lever is provided with a boss and the connecting-rod C with a socket, the bolt or rivet *j* confining the one in place upon the other, and said bolt is by its one end portion extended beyond one of said parts—either

the arm *a* or bar C—so as to receive between its head and the surface of said part a rubber cushion *m*, and from this form of connection the capabilities of and between the parts
5 for rattling are precluded.

It is quite advantageous to also spring-cushion the bearing between each angular lever and its support, and this may be done by interposing a rubber block or washer *l* between
10 the extremity of the boss and the top wall of the socket, or the cushion may be applied inside the head of the bolt, but exteriorly of the boss and socket-bearing, as described, for the connection between the bar C and the end
15 of the lever-arm *a*.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with the supporting-bar
20 B and the foot-plates *h h*, secured thereon by

bolts passing through the terminal portions thereof and through said supporting-bar, and each plate centrally provided with the tapered and upwardly-extended boss *g*, of a pair of angular levers, each having its elbow of hub
25 form, provided with a vertical tapered socket opening at its bottom, but provided at its top with a closing wall, said socketed hubs fitting over said bosses *g*, a washer *l*, of compressible material, between the top of each
30 boss and the top wall of the respective lever-hub sockets, the retaining-bolt for each angular lever, and a connecting and equalizing bar by its ends secured to one arm of each angular lever, substantially as shown and de-
35 scribed.

HENRY DUFRESNE.

Witnesses:

G. M. CHAMBERLAIN,
H. A. CHAPIN.