

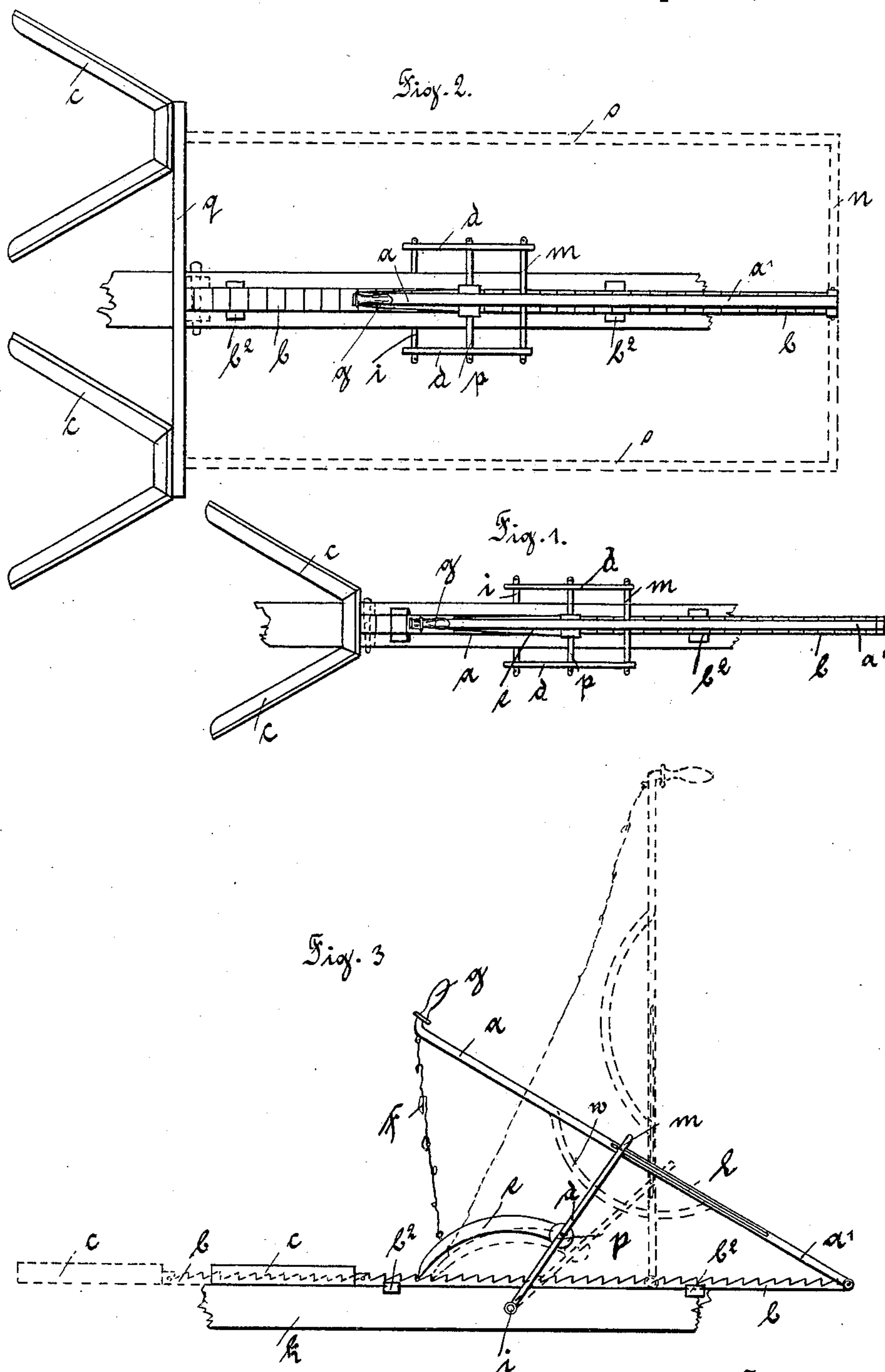
(No Model.)

2 Sheets—Sheet 1.

J. BARTHELS.
HORSE STOPPING DEVICE.

No. 451,360.

Patented Apr. 28, 1891.



Witnesses:
R. Herpich.
J. A. Fank.

Inventor:
Julius Barthels
by
A. H. Dinkel
Attorneys.

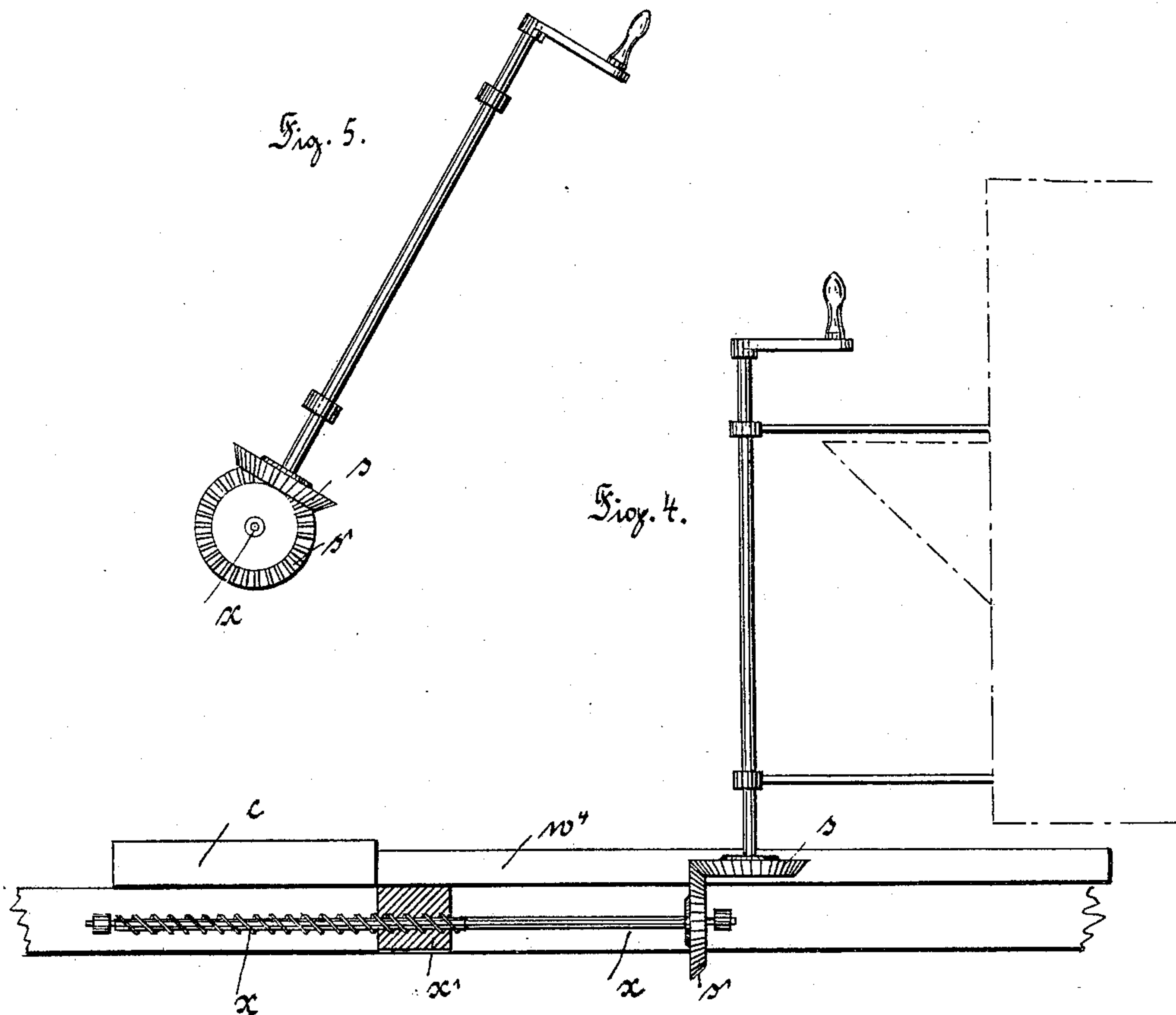
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2 Sheets—Sheet 2.

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HORSE STOPPING DEVICE.

No. 451,360.

Patented Apr. 28, 1891.



Witnesses:
R. Herpich.
J. A. Taube

Inventor:
Julius Barthels
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UNITED STATES PATENT OFFICE.

JULIUS BARTHELS, OF BONN, GERMANY.

HORSE-STOPPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 451,360, dated April 28, 1891.

Application filed November 28, 1890. Serial No. 372,944. (No model.)

To all whom it may concern:

Be it known that I, JULIUS BARTHELS, a subject of the King of Prussia, German Emperor, and a resident of Bonn on the Rhine, in the Province of the Rhine, in the German Empire, have invented certain new useful Improvements in Devices for Stopping Horses, of which the following is a full and exact specification.

My invention relates to an apparatus by means of which horses running away with a carriage may be instantly arrested in very effective manner. I attain that object by the mechanism illustrated in the accompanying drawings, in which similar letters denote similar parts throughout the several views, and in which—

Figure 1 is an upper view of a detach for one horse. Fig. 2 is an upper view of a detach for two horses. Fig. 3 is a side view of the mechanism, showing its normal position in full lines and its working position in dotted lines. Figs. 4 and 5 are modifications of the mechanism.

A rack *b*, guided by guides *b*², is loosely arranged on the thill *k*. A cross-bar *q* is firmly attached to the front end of rack *b* and carries two fork-like parts *c c*, Fig. 2, having such a position as to be directly behind the thighs of the hind legs of the horses, being, however, so distant from the horses as not to hinder them to walk or run when in normal state. The rear end of said rack is connected with a lever *a a'*, the fulcrum of which is formed by a slit *l*, in which a horizontal rod *m* may be moved up and down. Two levers *d d* are with their upper ends secured to rod *m* and are connected at their under ends by a rod *i*, which at the same time serves for fixing the levers *d d* to the thill *k*. The middle parts of levers *d d* are, moreover, connected by a third horizontal rod *p*, which holds a pawl *e*, the free end of which lies within the clearings of rack *b*. Arm *a* of lever *a a'* has a handle *g*, and is connected with pawl *e* by means of a cord or chain *f*, the latter being as long as not to permit pawl *e* to be lifted by handle *g* when lever *a a'* is in working position, as indicated by dotted lines in Fig. 3. Lever *a a'* needs not be of straight form, but

may be bent or curved according to the manner of building of the respective carriage. The handle *g* is preferably arranged so as to be at the right or left side of the carriage-box.

Now by drawing the lever *a a'* toward him the coachman effects a forward motion of the rack together with the forks, which thus are brought against the thighs of the hind legs of the horses. While pushing the rack forward the pawl slides over the teeth of the rack and prevents it from being moved back by the force of the horses. It is obvious that the horse cannot go farther when the forks are forced against it, and is compelled to stand still, be it running ever so quick.

In order to release the horses from the forks, pawl *e* is lifted by means of cord *f*, and the rack may be moved back into its normal position by moving lever *a a'* in opposite direction.

In case the substructure of a carriage be constructed so as not to allow the application of the lever-and-pawl arrangement described above the mechanism may be modified by replacing the rack by a smooth rod and by moving said rod by means of a suitable toothed wheel-work—as, for instance, shown in Fig. 4. In this construction the mechanism is worked by a crank, according to the manner of working brakes. When turning the crank, its movement is conveyed by bevel-wheels *s s'* to a spindle *x*, by means of which a nut *x'* may be moved forward or backward. Said nut is firmly secured to the smooth rod *w*, replacing the rack in the first construction. Thus the forks attached to the rod are moved, together with the latter, by the nut *x'* in the manner just described.

The forks *c c* may preferably be covered with any elastic material to prevent the horses from becoming damaged. I wish it to be understood that the movable forks are the essential part of my invention, as the mechanism for working them depends on the structures of the respective carriages, which are, as well known, of very different sorts. In certain cases the forks may be secured to the rear end of the rack or rod, and may be guided or moved separately by auxiliary rods *o o n*, as indicated by dotted lines in Fig. 2.

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

5 In a device for stopping horses, the combination, with a thill and substructure of a carriage, of a rack or rod *b*, having one or more fork-like parts *c c* secured to either its front or rear end, said rack or rod *b*, with the forks *c c*, adapted to be moved forward or backward by means of a lever *a a'* or crank for

the purpose of pressing said forks *c c* against the hind legs of the horse, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribers 15
ing witnesses.

JULIUS BARTHELS.

Witnesses:

JOSEF EFFING,

LUDWIG STEINMEISTER.