

G. HUBBARD.

Detaching Horses.

No. 17,376.

Patented May 26, 1857.

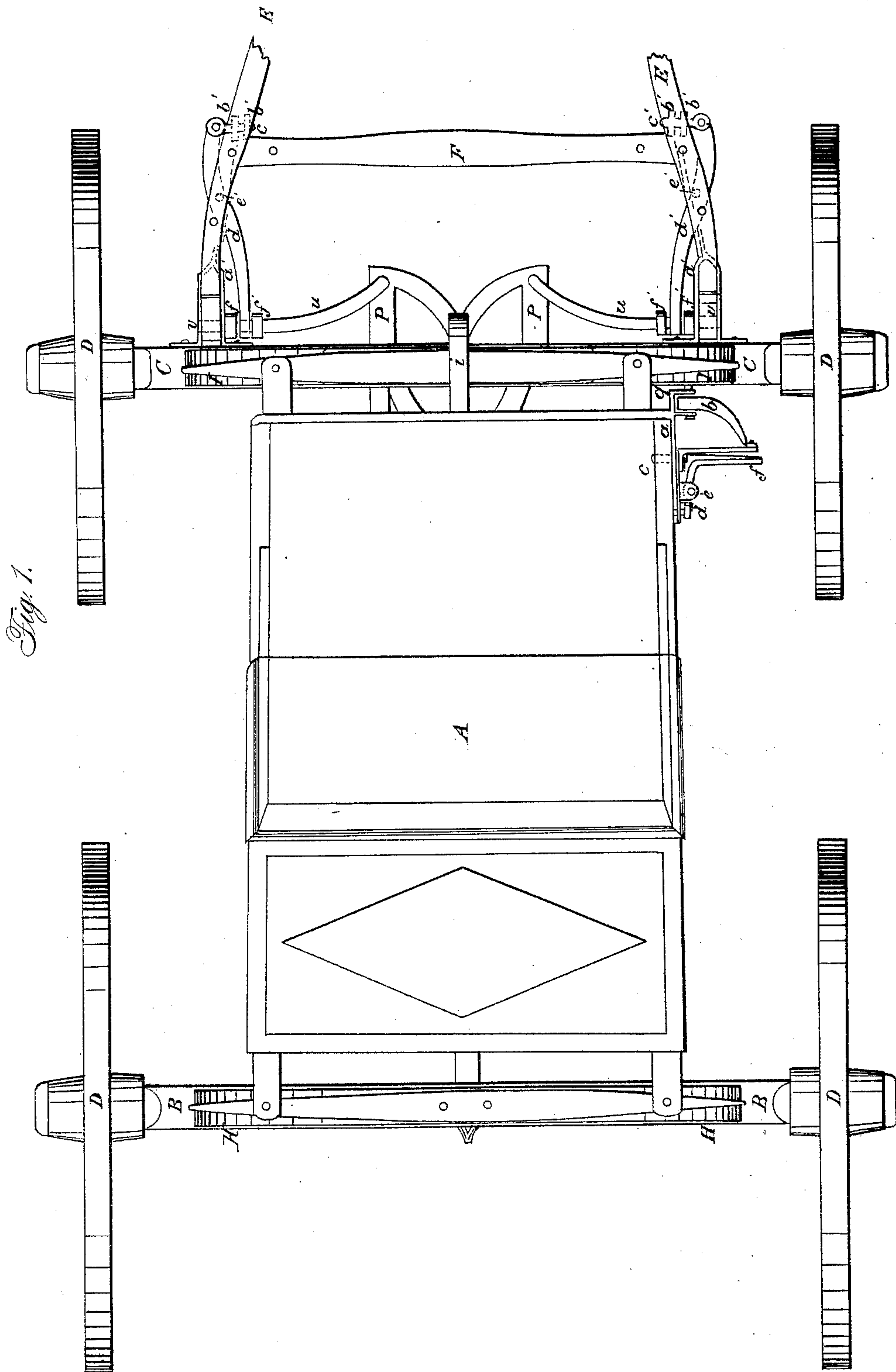


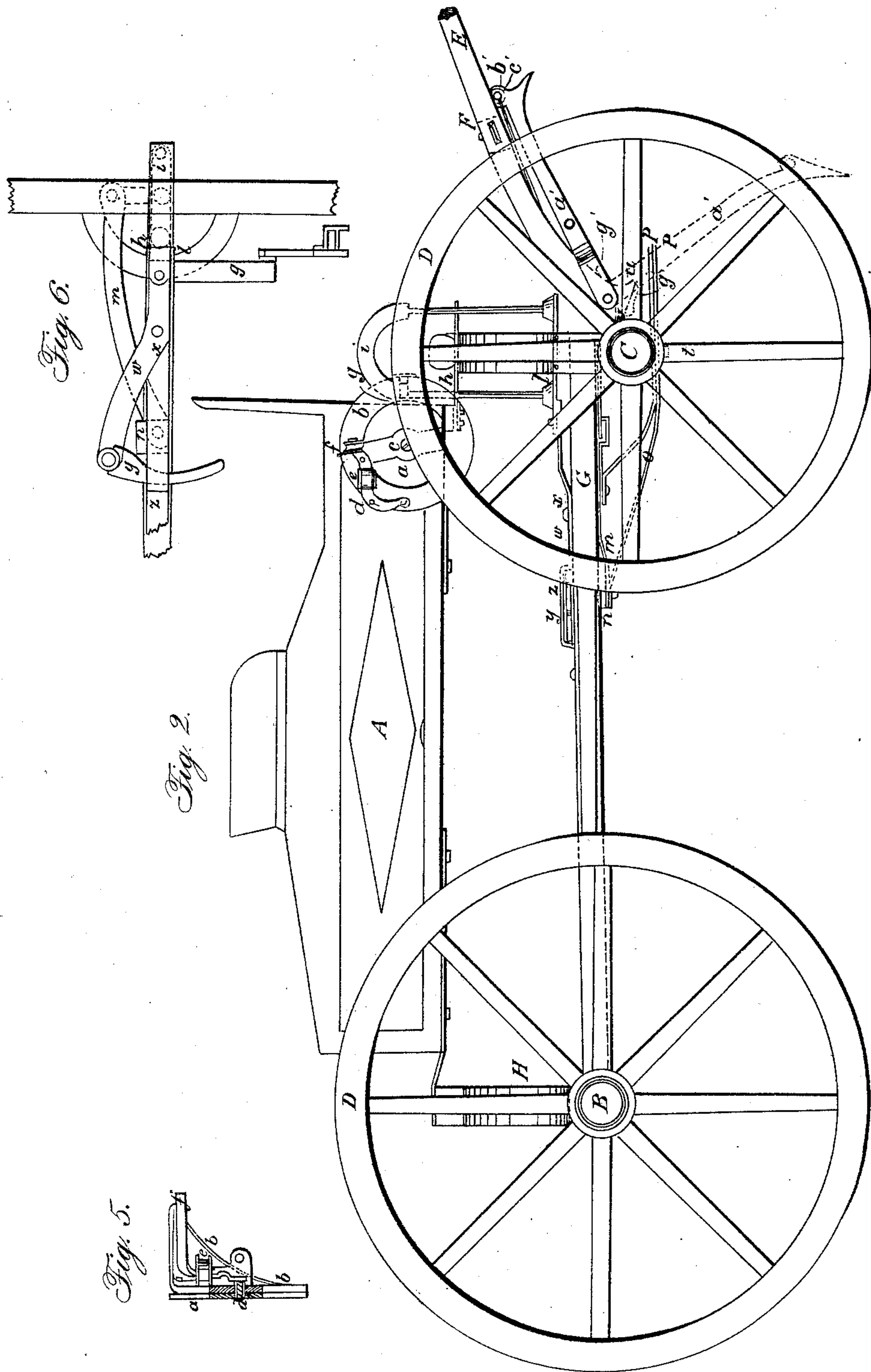
Fig. 1.

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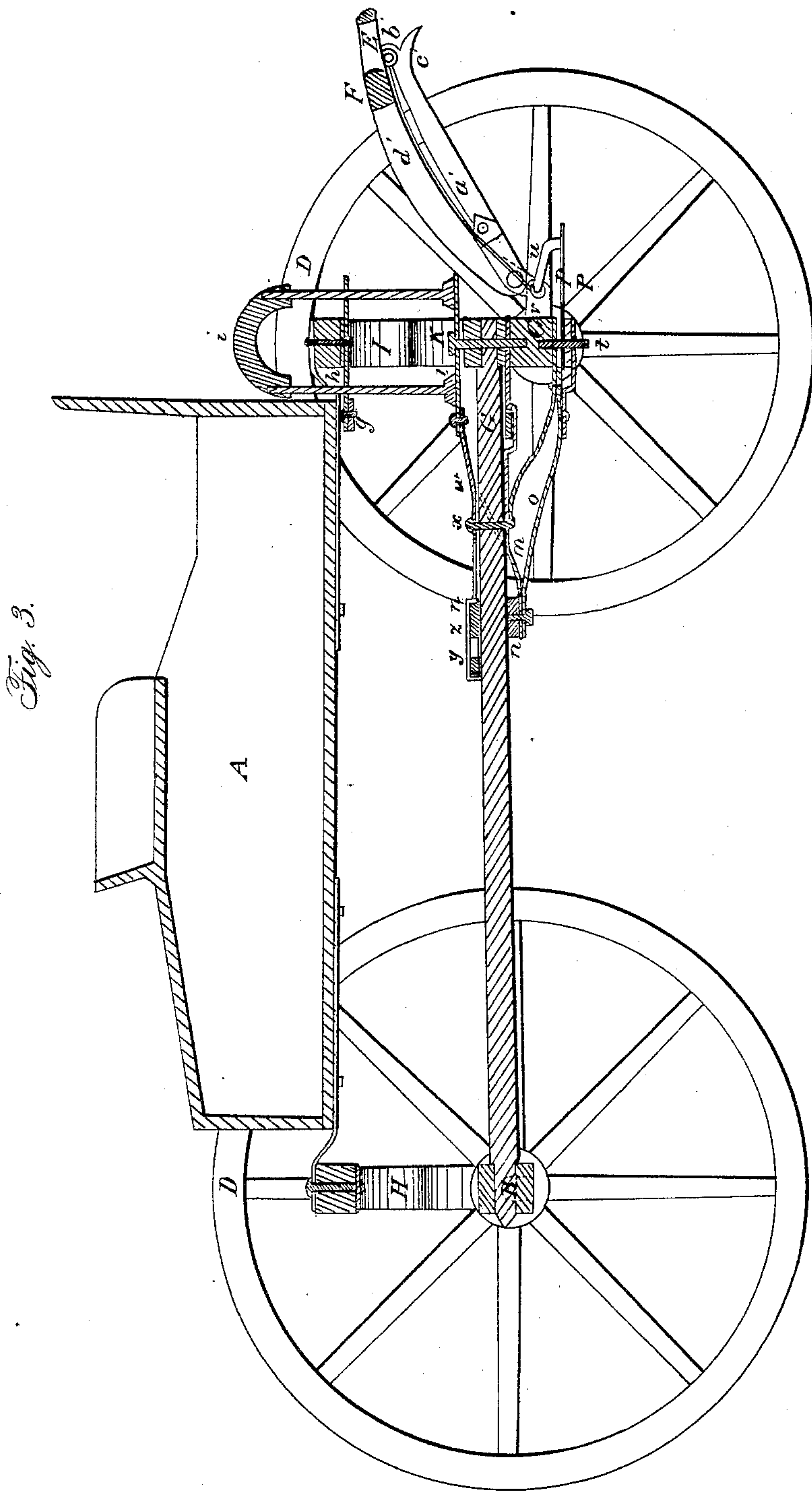
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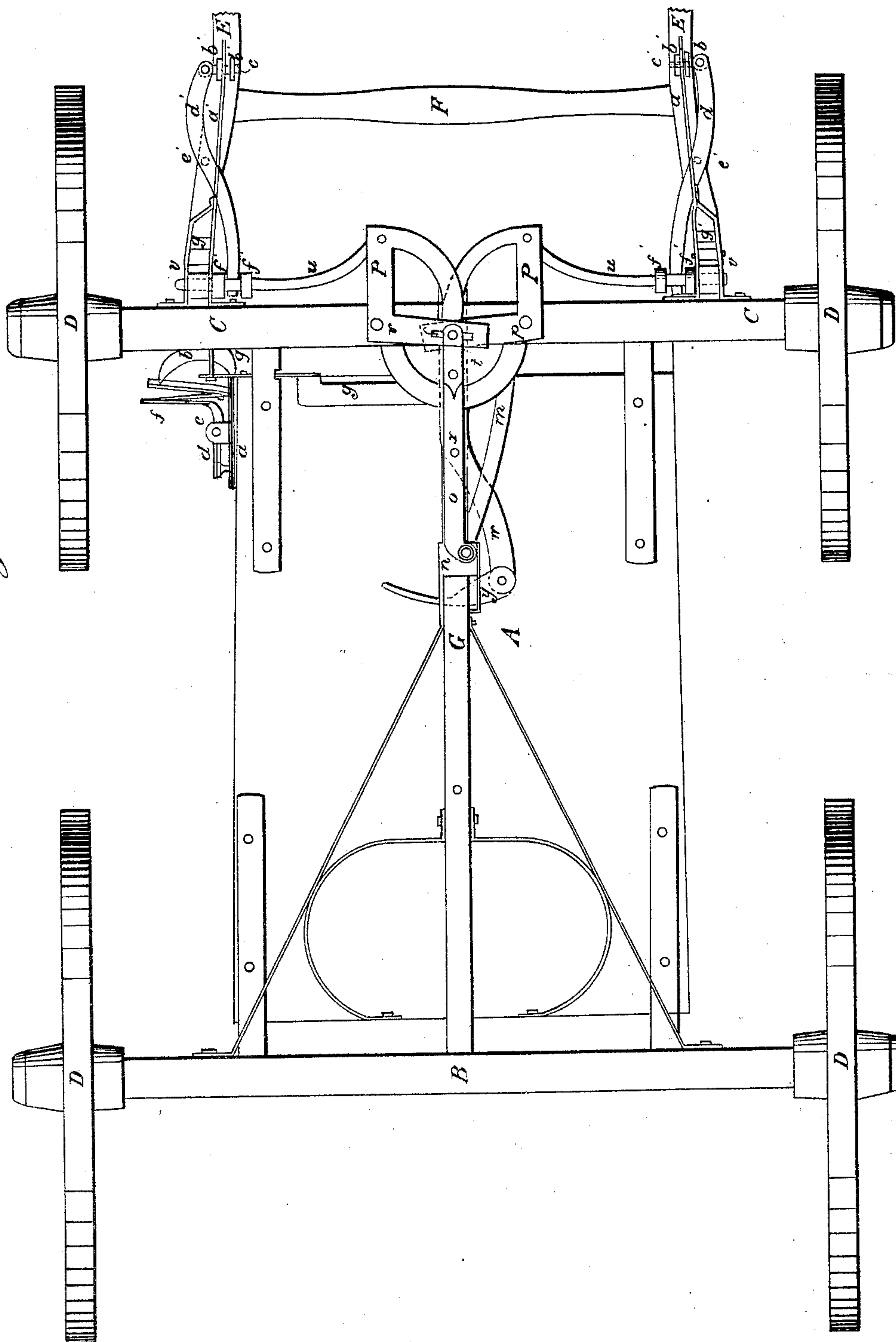


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Fig. 4.



UNITED STATES PATENT OFFICE.

GILBERT HUBBARD, OF SANDERSFIELD, MASSACHUSETTS.

APPARATUS FOR DISCHARGING HORSES AND SHAFTS FROM CARRIAGES.

Specification of Letters Patent No. 17,376, dated May 26, 1857.

To all whom it may concern:

Be it known that I, GILBERT HUBBARD, of Sandersfield, in the county of Berkshire and State of Massachusetts, have invented a new and useful or Improved Apparatus for Discharging Horses and Shafts from Carriages; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a top view of a carriage having my invention applied to it. Fig. 2, a side elevation of it. Fig. 3, a vertical, central and longitudinal section of it. Fig. 4, is an underside view of it.

The object of my invention is to enable a person, who may be in a carriage with which a horse is running away, to free the body and wheels, or running parts, from the shafts and horse. Also to provide the shafts with a means by which, when they are detached from the carriage, their rear ends may be maintained at such a height above the ground, as to prevent their cross bar from falling on the horse's hind legs and doing injury thereto.

In the drawings, A, represents the body of the carriage or wagon; B, the rear axle; C, the front axle; D, D, D, D, the wheels; E E, the shafts, connected in the usual way by a transverse bar F; G, is the perch; H, I, the springs, they being applied in the usual manner to the carriage body and the perch, while the latter is fixed in the ordinary way to both the axles.

Against the front part of one side of the carriage body is a metallic plate, *a*, against which a rotary foot cam *b*, is placed and made to turn on a fulcrum, *c*. This foot cam formed as shown in the drawings carries a spring lever latch *d*, arranged as shown in Figs. 1, and 2, such turning on a fulcrum at *e*, and having a stud or pin to project through the cam and into a hole made in the plate, *a*, the same being as shown in Fig. 5, which is a sectional view of said parts, a latch, stationary plate and the cam plate.

When a person pushes his foot forward against the tail arm, *f*, of the latch, he will move the latch so as to enable the cam to revolve on its fulcrum, the latch serving to lock the cam in position at other times. The cam bears against or passes through the outer end of a slider, *g*, whose inner end is jointed to an arm, *h*, extended from a turning lever frame, *i*, formed and arranged

as shown in Figs. 1, and 3, and made to rotate on the king bolt, K, on which the front axle turns. The arm, *h*, slides freely up and down on two upright rods of the lever frame, in order that the body of the carriage may be free to play on its springs.

From the lower part of the lever frame, an arm, *l*, is extended laterally, as shown in Fig. 6, which is a top view of the front part of the perch, and the mechanism applied thereto. To the outer end of the arm, *l*, a bar, *m*, is jointed, and extends to a slider or block, *n*, which slides freely on the perch and lengthwise of the same. This slider is fastened to a strut, *o*, which extends forward from it and is made to embrace two sectoral levers or sectors, *p*, *p*, turning on fulcrum *r*, *r*, projecting from the underside of the front axle and arranged as shown in Fig. 4. These sectors lap on one another, each being furnished with a slot as seen at *s*, and to receive a pin, *t*, which passes through the slots and the strut and joints the strut to the sectors. A locking bolt, *u*, is jointed to the outer corner of each of the sectors and extends through one of the shafts, and its hinge connections *v*, *v*, of the axle, the said bolts being shown in Figs. 1, and 4. A lever, *w*, is also jointed to the turning frame, *i*, and is placed on the upper edge of the perch and turns horizontally on a fulcrum, *x*, extended therefrom. This lever carries a locking cam, *y*, which is jointed to its inner end and extends through the perch or a clasp or staple attachment, *z*, arranged thereon as shown in Fig. 3.

The cam works against the slider block, *n*, and prevents it from being retracted until the lever frame is turned on its fulcrum far enough to move the cam laterally sufficiently to permit the slider to be moved backward. By such means, the bolts of the shaft connection, are maintained in place until such time as the foot cam, *b*, is put in movement on its fulcrum by a person in the carriage.

By pressure of the foot forward against the tail of the lever latch, *d*, the foot cam, *b*, may be unlatched and moved so as to cause the bolts to be withdrawn from the shaft connections in such manner as to separate the shafts from the forward axle. The shafts when attached to the carriage turn up and down on such bolts.

Each shaft has a turning rest or leg *a'*, hinged to its rear bed or part and so that it

may be turned from vertical position up to the shaft and between projections b' b' extended from the shaft. A pin or bolt, c' , jointed to a lever, d , plays through
 5 the leg and the parts, b , b . This lever turns on a fulcrum, e' , and has its rear arm resting between two shoulders, f' , f' , fixed on the bolt u . The retraction of the said bolt, u , will so move the lever, d' , as to cause
 10 the bolt, c' , to be drawn back in such manner as to allow the leg to drop into a vertical or nearly vertical position as exhibited by dotted lines in Fig. 2. As there is a leg to each bolt, u , both of said legs will drop
 15 simultaneously, and when their feet rest on the ground, a cross bar or shoulder, g' , on each, will fetch up against the rear end of the adjacent shaft so as to maintain the leg in position and enable it to support the
 20 shafts or prevent their cross bar from dropping down on the hind legs of the horse to the injury of the animal.

In case the horse should run away with the carriage, the person who may be in said
 25 carriage, can readily separate the shafts from the body and wheels, the same being accomplished by pressure of his foot against the foot cam as described.

Having thus described my invention what I claim, is as follows:

1. I claim the shaft rests or legs in combination with the shafts and bolting apparatus, and operated thereby substantially in manner and for the purpose of supporting the shafts after their detachment from the
 35 carriage as described.

2. I also claim the combination and arrangement of mechanism for attaching the shafts to, and detaching them from the axle connections as specified, such combination
 40 consisting of the bolts, u , u , the sectors, p , p , the turning lever frame, i , and the rotary foot cam, b , connected and made to operate together substantially as hereinbefore explained.

3. I also claim the combination of the lever, w , and holdfast cam, y , with the turning pawl, i , and the slider, n , connected with the latter substantially as specified.

In testimony whereof I have hereunto set
 50 my signature.

GILBERT HUBBARD.

Witnesses:

D. K. STRICKLAND,
 JAS. OTHIEK.