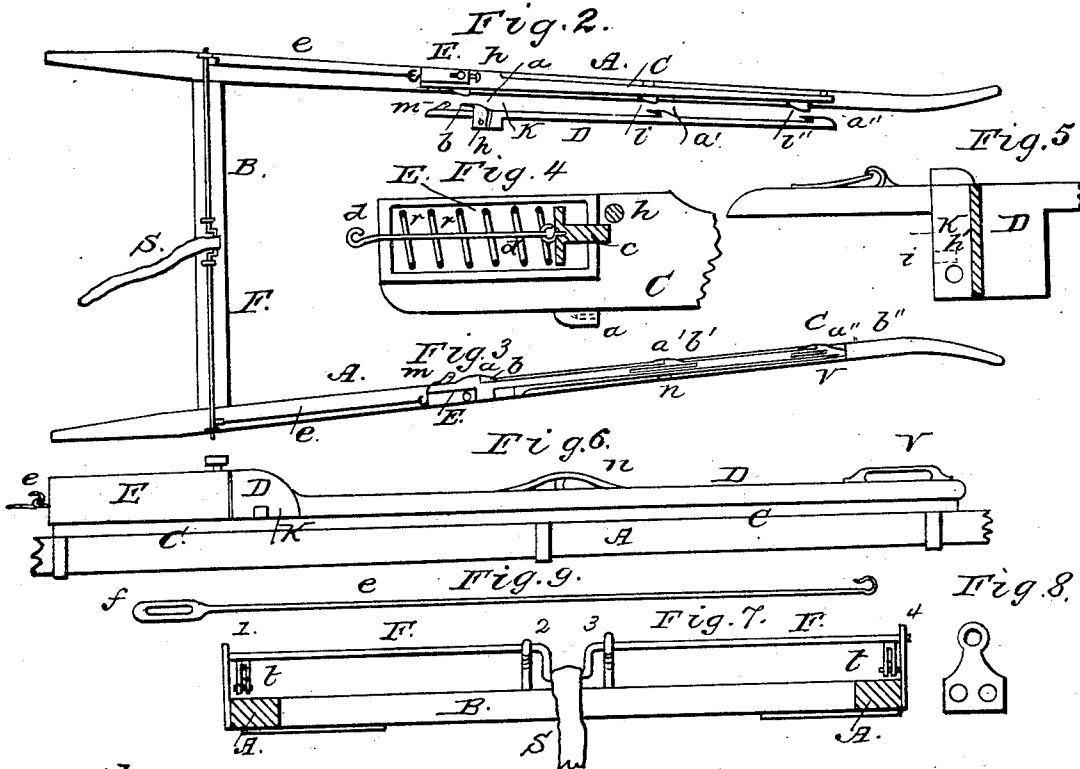
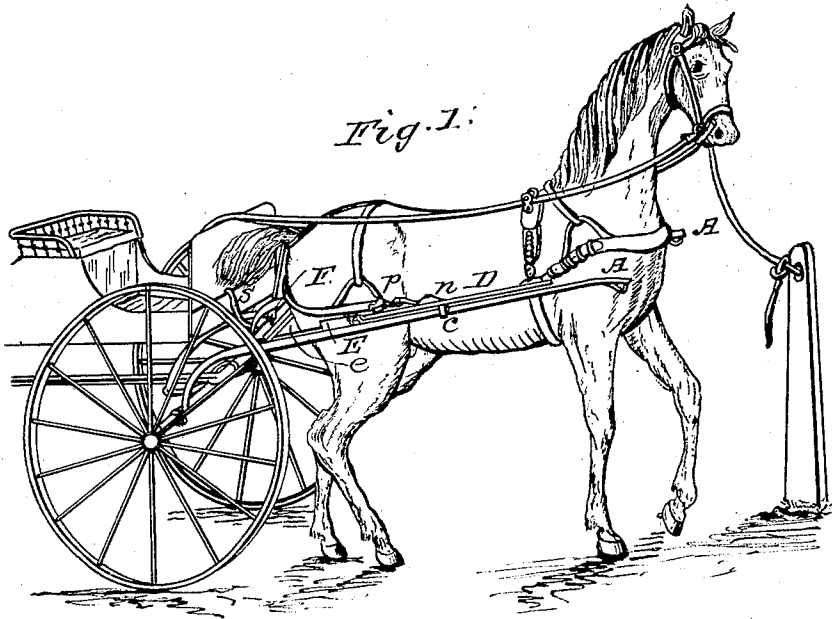


G. GABRIEL.
Detaching Horses.

No. 82,217.

Patented Sept. 15, 1868.



Witnesses

Philip Weinberger
Francis Clark

Inventor
George Gabriel.

United States Patent Office.

GEORGE GABRIEL, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND PHILIP WISENBERGER, OF SAME PLACE.

Letters Patent No. 82,217, dated September 15, 1868.

IMPROVED APPARATUS FOR DETACHING HORSES FROM CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE GABRIEL, of the city of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a new and improved Shaft for Buggies, Carriages, Wagons, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 shows the manner of using my shaft.

Figures 2 and 3 form together a top view of my shaft, fig. 2 showing the bar, which is fastened to the harness, as disconnected with the shaft, fig. 3 showing the same when connected to the shaft, as when the horse is attached to the vehicle.

Figure 4 is a sectional view of the lock.

Figure 5, the lower end of the bar, which is attached to the harness, and on which the lock operates.

Figure 6, side view of the shaft, with the several parts in position, as when the horse is attached to the carriage.

Figure 7, cross-bar and lever-bar which opens the lock.

Figure 8, standard which supports the lever-bar.

Figure 9, rod which connects the lever-bar with the lock.

Similar letters of reference in the drawings indicate like parts.

My invention consists in so constructing and arranging my shaft that the horse can be instantly detached from the vehicle by a person within the same, either in case of accident, or at any other time, and in dispensing with the single-tree and long trace, the whole being so arranged that the horse can be detached from the carriage and unharnessed by opening a single buckle.

To enable others skilled in the art to make and use the same, I will proceed to describe its construction and operation.

Fig. 1 shows my shaft in use.

A A are the wooden shafts, of the usual shape.

B, cross-bar of the same.

On the upper side of the shaft is secured a metal plate, C, figs. 2, 3, and 6, on the inner edge of which are the three eyes or sockets, *a a' a''*, into which the hooks *b b' b''*, on the bar D, figs. 2, 3, and 6, fit.

The lock E, at the end of the plate C nearest the carriage, is shown in section in fig. 4; it consists of a box of a convenient shape, containing a coiled spring, *r*, which pushes the bolt *e* out. The rod *d* passes through the back end of the lock and ends in a hook to which the connecting-rod *e* is attached. An enlarged view of this rod is given in fig. 9. This connecting-rod is fastened to a short arm or lever, *t*, which projects from the bar F, by a pin which passes through the slot *f* in the end of the rod.

The bar F is supported by the standards 1, 2, 3, and 4, (the standards 1 and 4 being wide, and protecting the levers *t t* from being displaced,) and turns freely. In its centre it is bent in the shape of a crank, and to this crank a broad leather strap is attached, the end of which passes through the dash-board in the front of the carriage. By pulling this strap, the bolt *e* of the lock is drawn back.

Just in front of the lock, fig. 4, there is a pin, *h*, which fits into the hole *h'*, fig. 5. This figure shows the lower end of the bar D, which is permanently attached to the harness. The portion shown in fig. 5 is much thicker than the rest, and fits against the lock E, the bolt *e* of the lock fitting into the hole *i* indicated in that part of the bar D which fits against the lock. The spring *k* throws the bar D up when the bolt *e* is withdrawn.

The bar D is attached to the harness by the trace, which is half the usual length, and which is hooked into the trace-hook *m*. A short strap, *o*, passes from this hook to the ring *p* on the harness. The hold-back strap is fastened to the ring *p*, from which it passes to and through the iron loop *n* in the middle of the bar D. The upper end of the bar D is fastened to the saddle of the harness by a strap passed through the loop *v*.

Operation.

The horse being placed between the shafts, they are raised, and the hooks *b b' b''* on the bar *D* guided into the eyes or sockets *a a' a''* on the shaft. The bolt *c* is then drawn back by the knob which projects from the top of the lock, and the bar *D* turned so that the pin *h* in the plate *C* fits into the hole *h'* in the bar *D*, and the bolt *c* of the lock slides into the hole *i* in the bar *D*, keeping the bar securely in its place. The slot *f* in the end of the connecting-rod *e* allows the bolt *c* to be pushed back without moving the bar *F*, to which both connecting-rods are attached, thereby allowing one side to be secured at a time, without unfastening the other. When the bar *D* is in this position, figs. 1, 3, and 6, the carriage is drawn by the pin *h*, which fits into the hole *h'*. The hooks *b b' b''* take the strain when the horse is backed.

When it is desired to detach the horse, the strap attached to the crank-part of the rod *F* is pulled; this causes the bar *F* to turn slightly, which, acting through its levers *t t* and connecting-rods *e e*, withdraws the bolts *c c* from the holes *i i* in the bars *D D*. The instant the bolts are withdrawn, the springs *k k* on the lower sides of the bars *D D* throw them up, so that the pins *h h* no longer catch in the holes *h' h'*.

As the horse moves forward, the hooks *b b' b''*, &c., are drawn out of the eyes *a a' a''*, &c., and the shafts fall to the ground. The bent pieces of iron on the ends of the shafts prevent them from running into the ground, when the horse is unhitched, while the carriage is in motion. The strap *S* is left slack so that it may not be in the way.

This is not intended as a mere safety-attachment, to be used only to avoid accident, but for every-day use, avoiding the unpleasantness of handling wet and muddy traces, and allowing the harness to be removed by unbuckling the belly-band only.

The bars *D D* prevent the harness from getting tangled or disarranged.

Claims.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The plate *C*, having the lock *E*, pin *h*, and eyes *a a' a''*, substantially as described.
2. The combination of the plate *C*, the bars *D* and *F*, constructed and operating substantially as described.

GEORGE GABRIEL. [L. S.]

Witnesses:

FRANCIS L. CLARK,
J. DONALDSON.