(No Model.)

3 Sheets—Sheet 1.

W. WALKER.

HORSE DETACHER.

No. 250,857. Patented Dec. 13, 1881.

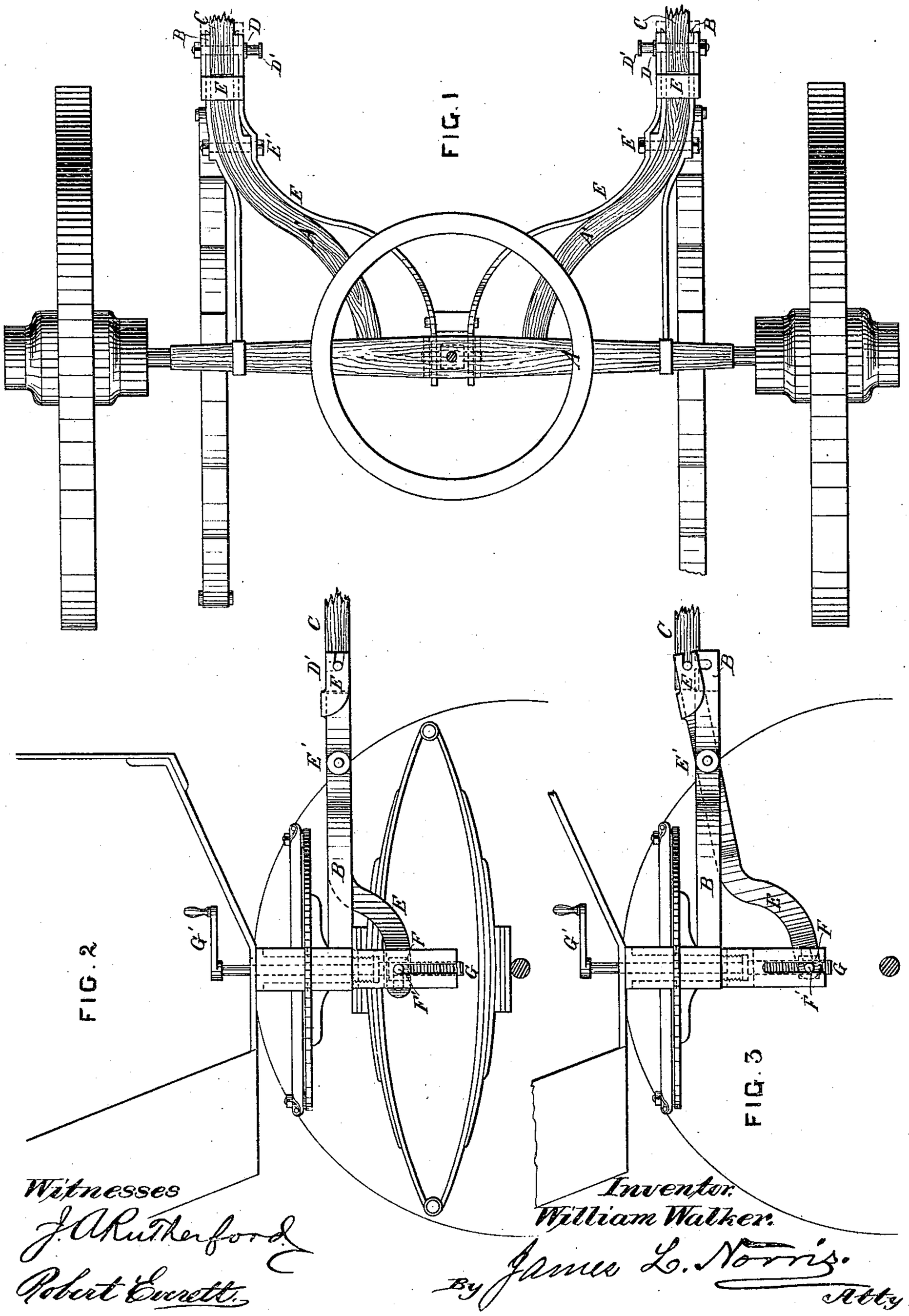

FIG. 1

FIG. 2

FIG. 3

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(No Model.) 3 Sheets—Sheet 2.

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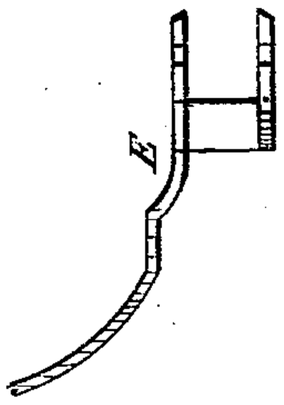

FIG. 11

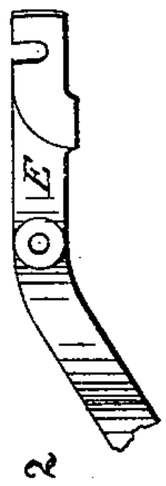

FIG. 12

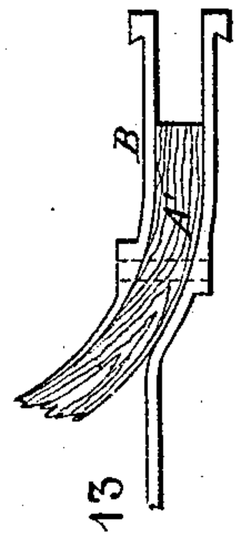

FIG. 13

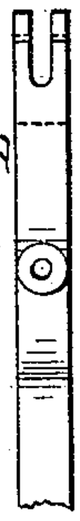

FIG. 14

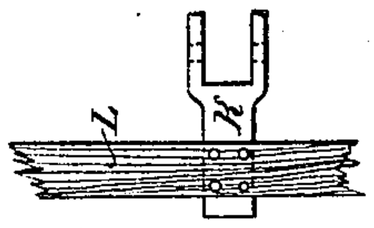

FIG. 15

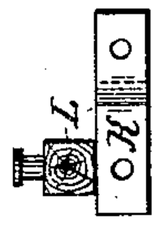

FIG. 16

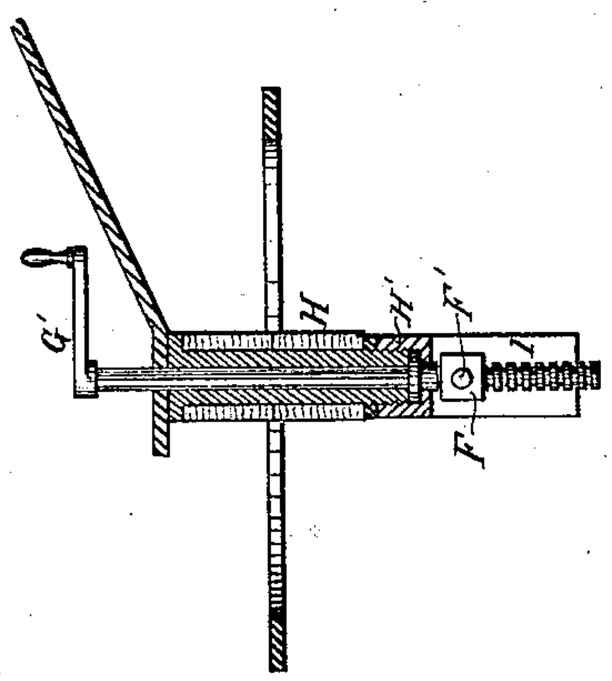

FIG. 7

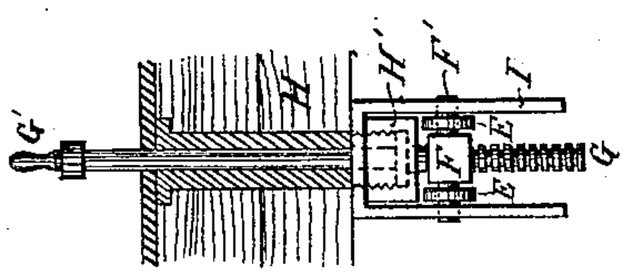

FIG. 6

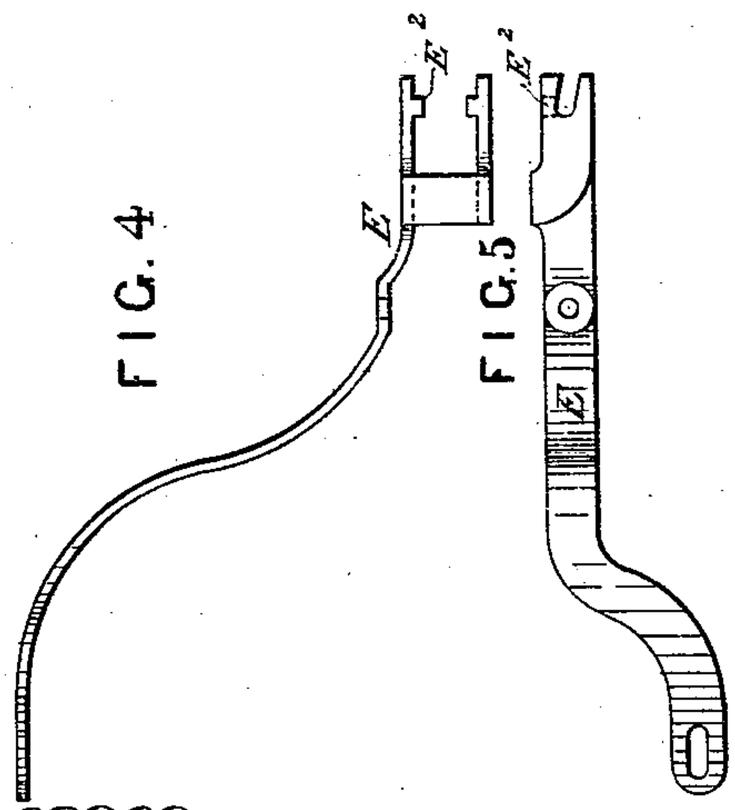

FIG. 4

FIG. 5

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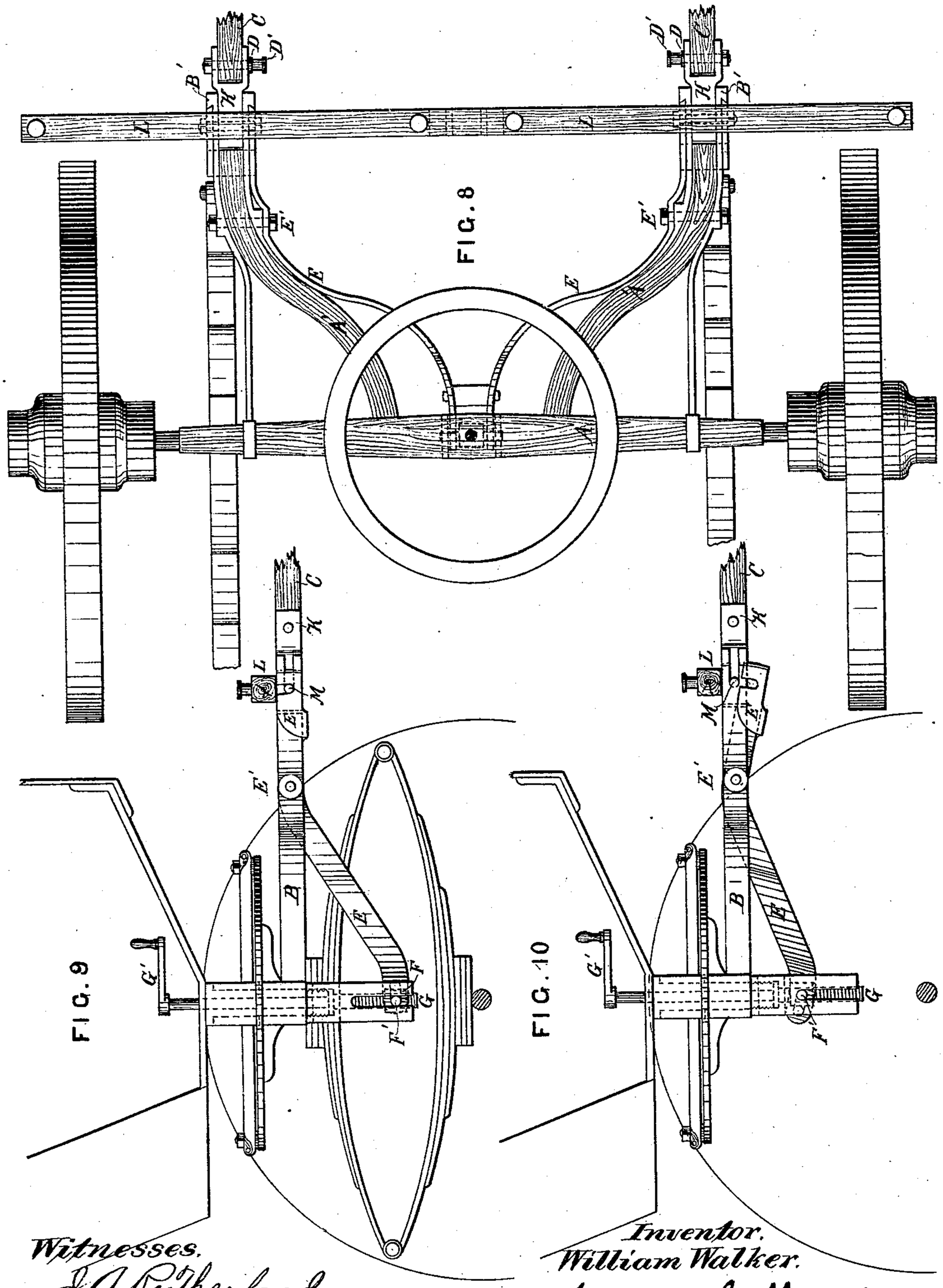

FIG. 8

FIG. 9

FIG. 10

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UNITED STATES PATENT OFFICE.

WILLIAM WALKER, OF SALTBURN-BY-THE-SEA, COUNTY OF YORK, ENGLAND.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 250,857, dated December 13, 1881.

Application filed October 8, 1881. (No model.) Patented in England August 9, 1881.

To all whom it may concern:

Be it known that I, WILLIAM WALKER, a citizen of England, residing at Saltburn-by-the-Sea, in the county of York, England, have invented a new and useful Improved Apparatus for Detaching Horses from Carriages in Cases of Accidents or of Restive or Runaway Horses, (for which I have obtained a patent in Great Britain, No. 3,444, bearing date August 9, 1881,) of which the following is a specification.

My invention has for its object the application to carriages of simple and inexpensive means whereby horses may be rapidly detached from carriages in cases of accidents or when the horses run away or become restive.

The construction of my improved apparatus will be readily understood on reference to the accompanying drawings, in which Figure 1 shows a plan of part of a carriage with my apparatus applied thereto. Fig. 2 shows a part side view of the same with the shafts and traces locked in position by the detaching-levers. Fig. 3 shows the same parts with the shafts in the act of being released by the levers. Figs. 4 and 5 show respectively a plan and side view of one of the releasing-levers detached; and 6 and 7 show two sectional views, at right angles to each other, of the central bolt of the swiveling frame, with the screw-gear for actuating the levers. Figs. 8 to 16, inclusive, are detail views illustrating modifications of my invention adapted for both single and double teams.

A A′ are the parts of the ordinary swiveling frame of the carriage, of which the parts A′ are provided with jaws B, to which the shafts C are pivoted by means of bolts D, the inner ends, D′, of these bolts serving for the attachment of the traces. The holes in the jaws B, through which the bolts D pass, are formed as open slots, as shown more clearly at Fig. 3, so that the bolts, together with the shafts C and traces, can be readily removed from the jaws by lifting them out of the slots.

To the frame A′ are pivoted, at E′, two levers, E. The front ends of these levers are forked in the manner shown more clearly at Figs. 4 and 5, so as to embrace the two sides of the jaws B, and at the ends they have open slots E^2, through which the ends of the bolts D pass, so that when the levers are in the position shown at Fig. 2 they lock the bolts, and with them the shafts, in the slots of the jaws B, the tops of these slots being closed by small projections E^2 on the levers fitting into them. The inner ends of the levers E have slotted holes, through which pass lateral pins F′ on a screw-nut, F, working on a screw-spindle, G, that passes through the hollow king-bolt H of the carriage-frame, and carries a crank-handle, G′, above the foot-board, by which it can be rotated. The spindle G is prevented from moving up or down by a collar thereon held between the king-bolt H and its nut H′, and the nut F is prevented from turning by its pins F′ being made to project into slots formed in a guide, I, fixed to the framing. Thus, on rotating the spindle G, the nut F, and with it the inner ends of the levers E, will be made to move down from the position shown in Fig. 2 into the position shown at Fig. 3, whereby the other ends of the levers E will be raised into the position shown at that figure, lifting up the bolts D out of the slots of B. In this position it will be seen that the bolts D, together with the shafts and traces, are perfectly free to be drawn out of the slots of E, so as to detach the horse from the carriage. The shafts may be as readily fixed again by inserting the bolts D in the slots of E. Then by turning the spindle G so as to lower the forks of the levers the bolts are brought into and securely locked in the jaws of B.

Figs. 8 to 16 show my above-described invention as applied to a carriage adapted for both single and double harness. The general arrangement and mode of operating are precisely the same as previously described, and the corresponding parts are designated by the same letters of reference. In this arrangement, instead of the shafts being pivoted directly to the jaws B of the framing A, they are pivoted to short pieces K, (shown detached at Figs. 15 and 16,) which, in their turn, are pivoted to the jaws B, and on which is fixed the splinter-bar L, with the trace-pins and pole-loop for the double harness, so that when the pieces K are released from the jaws B the shafts for single harness, if this is being used, are liberated, as well as the splinter-bar for the double harness when this is being used. As the splinter-bar L prevents the upward motion of the levers E for the releasing action, the arrangement of the slots and movements is the reverse of that previously described—that is to say, the hori-

zontal slots are formed in the jaws B, as shown at Figs. 13 and 14, while the vertical slots are formed in the forks of E, as shown at Figs. 11 and 12, so that for releasing the bolt M the inner ends of the levers E are raised by the screw-spindle G, as shown at Fig. 10, so as to lower their forked end, thereby leaving the bolts, together with the pieces K and the splinter-bar L, free to be drawn out of the horizontal slots of B.

In order to strengthen the ends of the forks of E against the pull put upon them by the horses, the ends of the jaws B are, by preference, formed with undercut projecting lugs B′, against which the ends of E abut with corresponding beveled edges when in the closed position, as indicated at Figs. 8 and 9. The ends of the jaws B of the first-described arrangement might be strengthened in like manner by forming inwardly-projecting lugs on the ends of the forks of E, as indicated by dotted lines in Fig. 1.

It will be evident that the arrangement described with reference to Figs. 8 to 16 might be employed without the provision of the jaws on the pieces K for the single harness.

In both the above-described arrangements it will be evident that the releasing movements of the levers E might be effected by various other known mechanical devices instead of the screw-spindle and nut, and I therefore in no wise limit myself to this contrivance.

Having thus described the nature of my invention and in what manner the same is to be operated, I claim—

1. In apparatus for detaching horses from carriages, the combination of two forks or jaws, one of which has horizontal open slots, while the other has vertical open slots, within which two sets of slots is held a bolt connected to a shaft or splinter-bar, the one jaw or fork being capable of motion relatively to the other, so as to release the said bolt from the vertical slots, and thereby leave it free to be drawn out of the horizontal slots, substantially as herein described.

2. In apparatus for detaching horses from carriages, a bolt connected to the shaft or splinter-bar, or to both, and carried in open slots formed in a jaw on the carriage-frame, and also in open slots in a movable lever pivoted to the carriage-frame, the two sets of slots being at an angle to each other, so that on moving the lever up or down relatively to the frame-jaw the bolt, being thereby released from the vertical slots, is free to be drawn out of the horizontal slots, substantially as herein described.

3. In apparatus for detaching horses from carriages, the slotted jaws B, containing the bolts D of the shafts, and operating in combination with the slotted forks of the levers E and their raising and lowering gear, substantially as described with reference to Figs. 1 to 7 of the drawings.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 16th day of September, A. D. 1881.

WILLIAM WALKER.

Witnesses:
FRED. BREWSTER,
JNO. J. DALES.