

E. E. SANDERS.
 HORSE DETACHER.
 APPLICATION FILED MAY 9, 1908.

912,032.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 2.

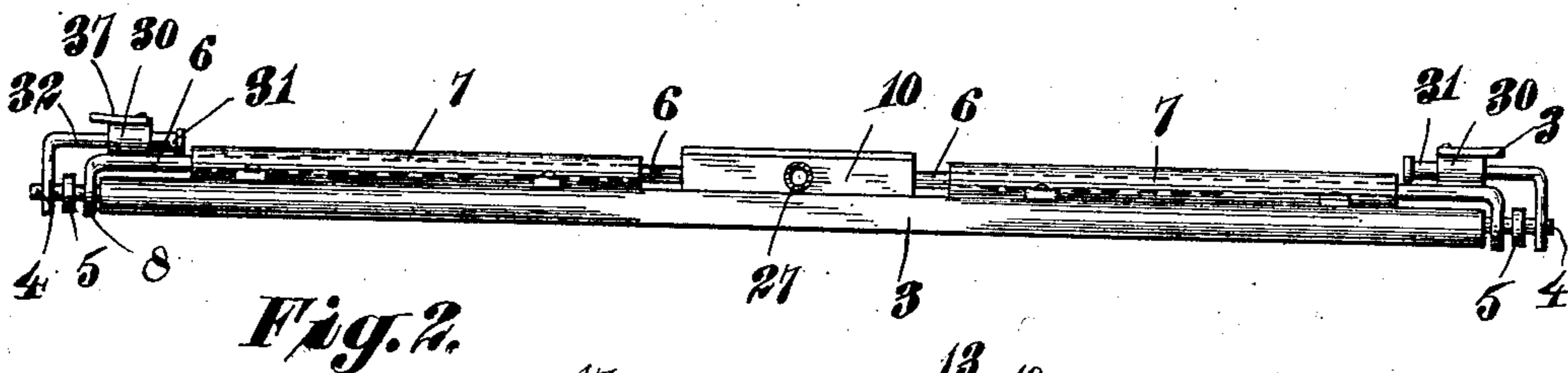


Fig. 2.

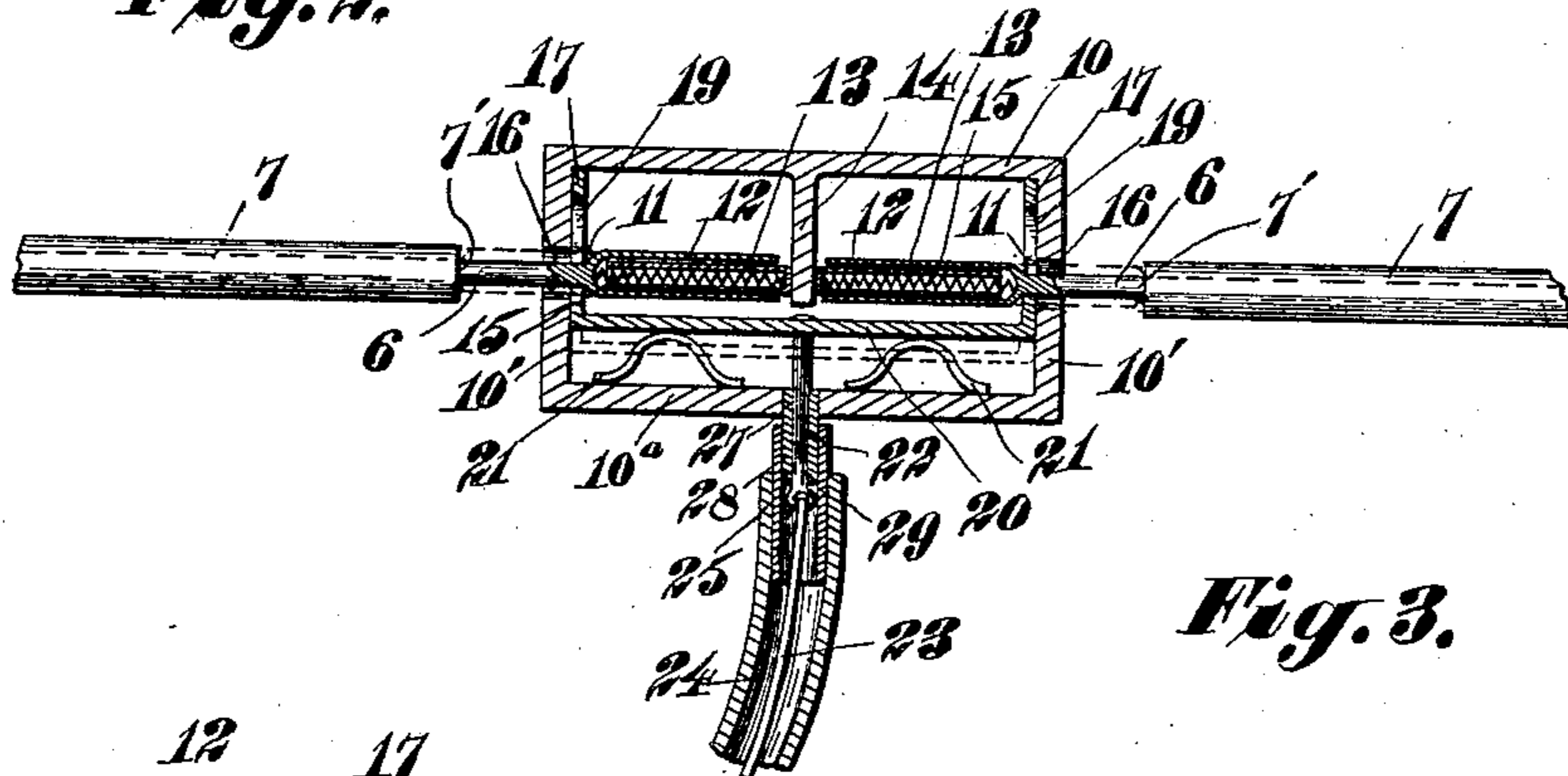


Fig. 3.

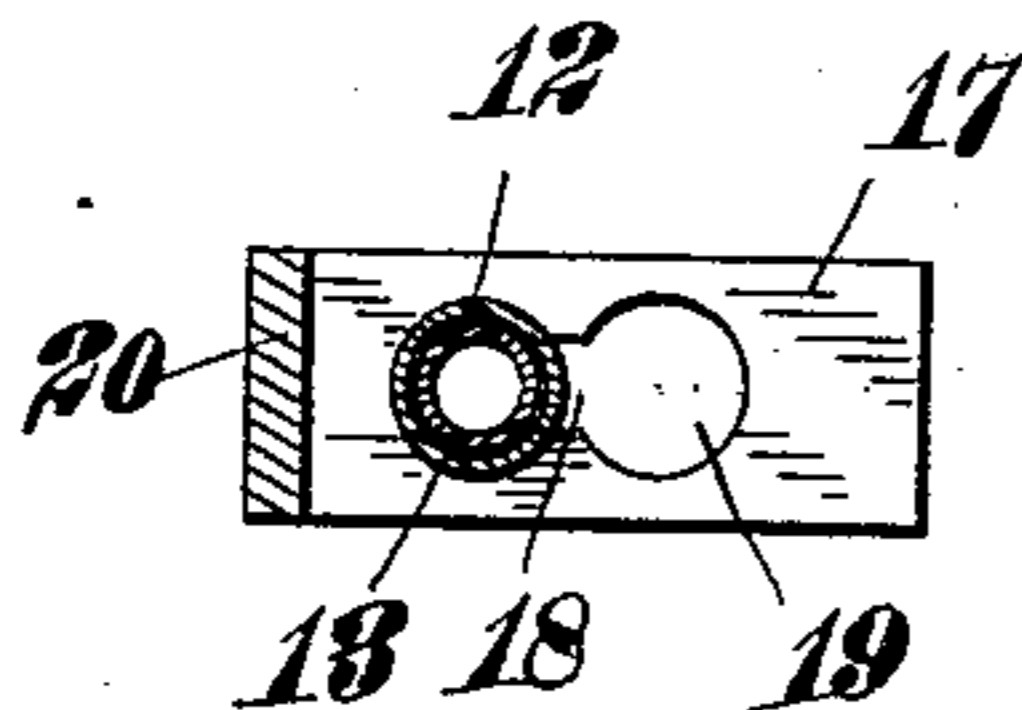


Fig. 4.

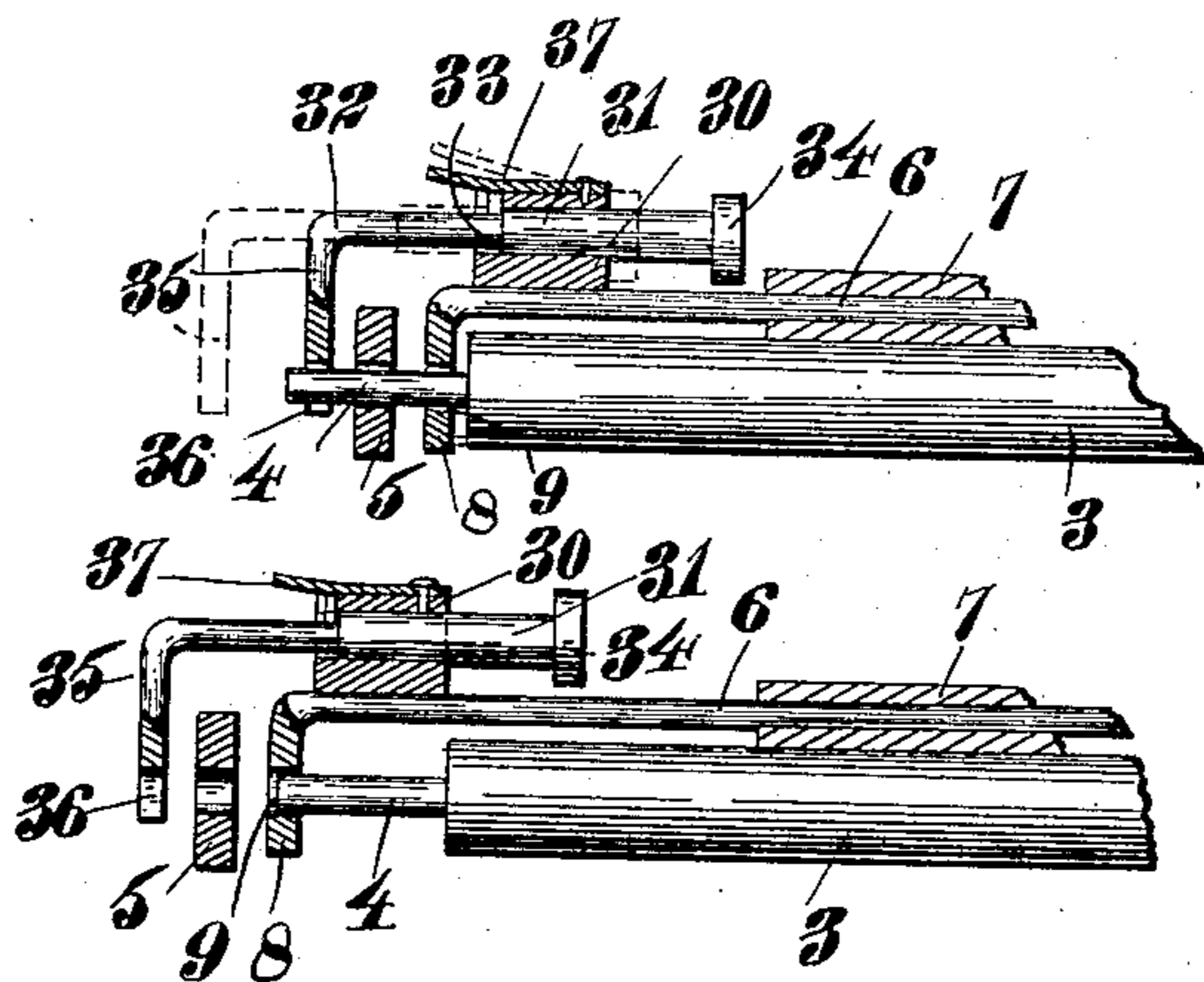


Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

EARL E. SANDERS, OF FREEPORT, ILLINOIS.

HORSE-DETACHER.

No. 912,032.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed May 9, 1908. Serial No. 431,838.

To all whom it may concern:

Be it known that I, EARL E. SANDERS, a citizen of the United States, residing at Freeport, county of Stephenson, and State of Illinois, have invented certain new and useful Improvements in Horse-Detachers, of which the following is a specification.

My invention relates to horse detachers, and the object of my invention is to provide a horse detacher which may be readily and quickly operated to instantly release the horse from a wagon or carriage in the event of a runaway.

A further object of my invention, is to provide a device of the character mentioned, which shall be of simple construction, inexpensive to manufacture and one which will not readily get out of order.

A further object of my invention is to provide a device as mentioned, of such construction as to facilitate hitching and unhitching the horse.

Other objects will appear hereinafter.

With these objects in view my invention consists generally in a swingle-tree having straight pins extending from the ends thereof to receive the trace tugs, a pair of rods slidably mounted on said swingle-tree and having their ends turned and perforated to engage said pins between the ends of the swingle-tree and the trace tugs, springs adapted to move said rods outwardly to shove the trace from the pins, means for normally holding the rods in retracted position against the tension of the springs and manually operated means for releasing the same.

My invention further consists in a device characterized as mentioned and provided with means, preferably arranged upon the outer ends of said rods to prevent accidental displacement of the tugs from the pins, said means being movable independently of the rods to permit the tugs to be readily attached to or removed from the pins.

My invention further consists in certain novel means for preventing accidental operation of the releasing mechanism and in novel means for attaching the hold-back strap and belly band to the shafts.

My invention further consists in various details of construction and arrangements of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view of a portion of the shafts and harness equipped with a horse detacher embodying my invention in its preferred form, Fig. 2 is an elevation of the swingle-tree, Fig. 3 is a detail horizontal section of the rod releasing the actuating mechanism, Fig. 4 is a detail view of one of the releasing slides, and Figs. 5 and 6 are detail views of one end of the swingle-tree illustrating the parts in different positions.

Referring now to the drawings, 1—1 indicate the shafts of a wagon, 2 the dashboard and 3 the swingle-tree. Extending from each end of the swingle-tree and in axial alignment therewith, is a straight pin 4 to receive the eye of the trace 5, and suitable means are provided for shoving the trace from the pin when desired. This comprises a pair of rods slidably mounted on the swingle-tree and having their ends turned or bent and perforated to engage the pins between the ends of the swingle-tree and the trace pins. These are equipped with means for shoving them outwardly when desired to push the trace from its respective pin.

6—6 indicate the rods which are slidably mounted in sleeves 7 fixed longitudinally to the swingle-tree and preferably upon the upper face thereof. The outer end of each rod is turned at substantially right angles and perforated, forming an eye or loop 8 to engage the pin 4, 9 indicating the perforation or aperture to receive the pin. Fixed substantially centrally on the swingle-tree is a boxing or housing 10 into which, the inner ends of the rod 6 extend. Within the housing are arranged the springs for shoving the rods outwardly, and means for normally holding the rods in retracted position against the tension of the springs. The inner end of each rod is enlarged in diameter forming a shoulder 11, and the enlarged portion is hollow constituting a sleeve 12 which telescopes over a similar sleeve 13 secured to an inner transverse wall or partition 14 formed in the housing 10.

15 indicates the spring which is arranged within the telescopic members 12 and 13. The aperture 16 in each end of the housing and through which the rods extend, are

made of sufficient diameter to accommodate the enlarged portion 12 when projected therethrough.

17 indicates slides arranged within the housing and preferably against the inner face of the end walls 10 thereof. The slides comprise vertically disposed plates apertured to receive the rod. The aperture comprises a slot 18 which is of but sufficient width to receive the rod portion 6, and a preferably circular extension 19 of sufficient size to permit the portion 12 to pass freely therethrough. The slides are normally held in position to register the portion 18 of the aperture with the hole 16, in which case the shoulders 11 abut the walls of the aperture or slot 18, thus holding the rods in retracted position against the tension of the springs. By moving the slides 17 until the portion 19 of the aperture registers with the aperture 16, the rods are released and shoved outwardly, the portion 8 pushing the trace from the pin 4 on the swingle-tree. The slides are connected by a yoke 20 between which, and the rear wall 10^a of the housing, are arranged springs 21 which normally hold the plates or slides 17 in position to hold the rods in retracted position.

22 indicates a stem extending from the yoke and to the end of which, is secured a flexible member 23 such as a cord or chain. The member 23 extends to the dashboard or other convenient place within reach of the driver. It is evident that by pulling on the member 23, the traces will be readily and quickly detached from the swingle-tree. To prevent the member 23 from being accidentally actuated, it is passed through a flexible tube 24 which is secured at one end 25 to the housing, and at the other end 26 to the dashboard or other suitable place on a carriage or wagon. The stem 22 extends through a sleeve 27 upon the rear face wall of the housing, and to the sleeve 27 is secured a sleeve 28 of larger diameter, in which the end 29 of the stem reciprocates. The sleeve 28 is of sufficient length to prevent bending of the tube 24 from interfering with the operation of the stem.

Secured to the end of the rod 6 is a sleeve 30 in which is slidably mounted the rod 31 parallel with the rod 6. The rod 31 is provided with a reduced extension 32 forming a shoulder 33 and a head 34 upon the opposite end. The outer end of the rod or the portion 32 thereof, is bent downwardly as at 35, and the end of the portion 35 is notched or bifurcated as at 36 to receive the end of the pin 4. The portion 35 is arranged outside of the trace tug and prevents accidental displacement thereof.

37 indicates a spring latch on the sleeve 30 for engaging the shoulder 33 and normally holding the portion 35 in position to lock the tug upon the pin, however it is de-

sirable in hitching and unhitching to be able to place the tug upon, or remove it from the pin, without actuating the rod 6, and it is to this end, that the rod 31 is slidably mounted upon the rod 6, the head 34 limiting its outward movement.

The rod 6 with its portion 8 is normally held in retracted position in hitching or unhitching, and the rod 31 is extended as shown in dotted lines in Fig. 5 which permits the tug to be freely placed upon or removed from the pin 4 of the swingle-tree. After the tug is in position on the pin, the rod 31 is shoved inwardly, the latch holding it in retracted position, and the portion 35 locking the tug upon the pin. In case of a runaway when the rods 6 are extended, to shove the trace from the swingle-tree, the rod 31 is moved simultaneously therewith into the position shown in Fig. 6. The outward movement of the rod 6 is limited by the inner end 7' of the sleeve 7 which forms a stop against which the shoulder 11 abuts.

The hold-back strap 38 and the belly band 39 are connected to loops or eyes 40—41 respectively formed on a sleeve 42. The sleeve 42 is slidably mounted on the shafts 1 which are preferably straight, and the backward pull thereon is received by a lug 43 secured to the underface of the shaft and against which the sleeve 42 abuts. When the traces are released to detach the horse, the sleeves 42 slip freely from the shafts completely detaching the horse from the vehicle.

Having described my invention what I claim as new, and desire to secure by Letters Patent, is:

1. In a device of the class described, a swingle-tree having straight pins extending from the ends thereof to receive the trace tugs, a pair of rods slidably mounted on said swingle-tree and having their outer ends bent to extend between the ends of the swingle-tree and the trace tugs, a shoulder formed upon the inner end of each of said rods, springs arranged behind said shoulders and adapted to shove said rod outwardly to disengage the tugs from their respective pins, slides adapted to engage said shoulders to hold the rods in retracted position and means for retracting said slides to release said rods, substantially as described.

2. In a device of the class described, a swingle-tree having straight pins extending from the ends thereof to receive the trace tugs, a pair of rods slidably mounted on said swingle-tree and having their outer ends bent to extend between the ends of the swingle-tree and the respective tugs, means for moving said rods outwardly, means normally holding the same in retracted position, and means slidably arranged upon the end of each of said rods for normally locking the tugs upon their respective pins, substantially as described.

3. In a device of the class described, a swingle-tree having straight pins extending from the ends thereof to receive the trace tugs, a pair of rods slidably mounted on said
 5 swingle-tree and having their outer ends bent to extend between the outer ends of the swingle-tree and having their outer ends for moving said rods outwardly, means for normally holding the same in retracted posi-
 10 tion, and means slidably mounted on the end of said rods adapted in one position to lock the trace tug upon its respective pin and in another to permit removal of the same there-
 15 from or attachment thereto without moving said rods, substantially as described.

4. In a device of the class described, a swingle tree having straight pins extending from the ends thereof to receive the trace tugs, a pair of rods slidably mounted on said
 20 swingle tree and having their ends bent to extend between the outer ends of the swingle tree and the respective tugs, means for moving said rods outwardly, a sleeve arranged adjacent to the end of each of said rods and
 25 fixed thereto, a rod slidably mounted therein and having its outer end bent downwardly to hold the tug upon the pin when in one

position and to permit removal of the same therefrom when in another position, sub-
 30 stantially as described.

5. In a device of the class described, a swingle tree having straight pins extending from the ends thereof to receive the trace tugs, a pair of rods slidably mounted on said
 35 swingle tree and having their ends bent to extend between the outer ends of the swingle tree and the respective tugs, means for moving said rods outwardly, a sleeve fixed to each of said rods, a rod slidably mounted in
 40 each of said sleeves and having its outer end bent downwardly to hold the tug upon the respective pin when in one position and to permit removal of the same therefrom when
 45 in another position, and a spring latch adapted to normally hold the last said rods in locking position, substantially as de-
 scribed.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EARL E. SANDERS.

Witnesses:

GEO. RUSTON,
 A. H. MILLER.