T. J. WILLIAMS.

HORSE RELEASING DEVICE.

APPLICATION FILED SEPT. 4, 1908.

916,816. Patented Mar. 30, 1909.

Fig. 1.

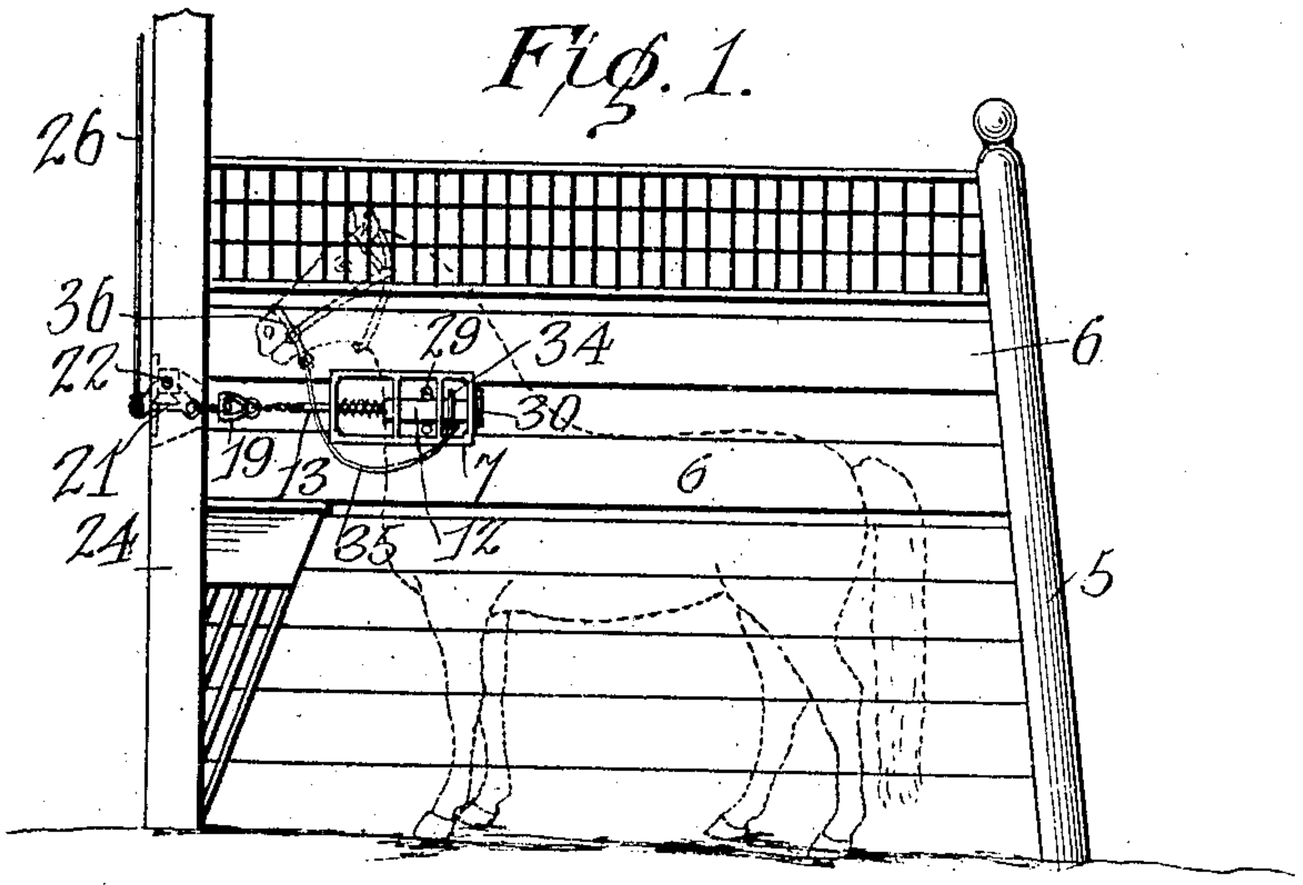


Fig. 2.

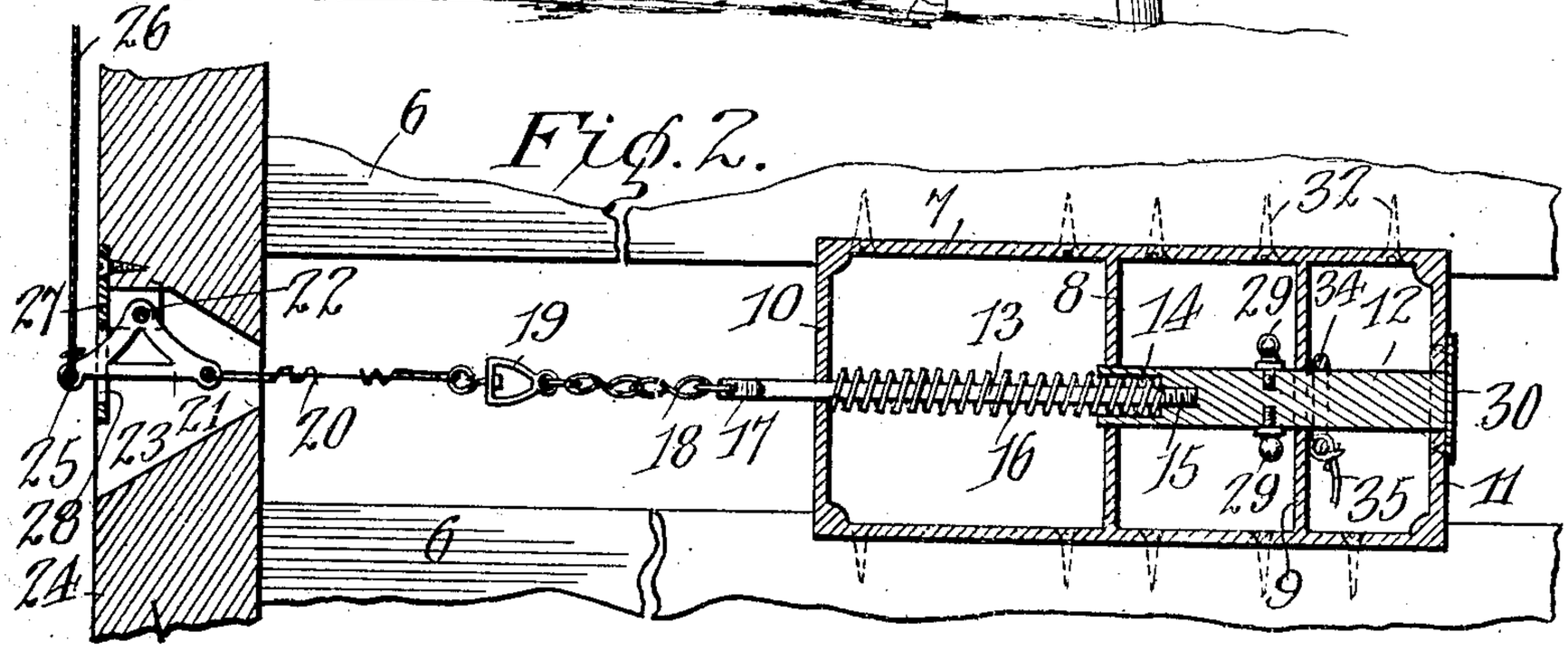
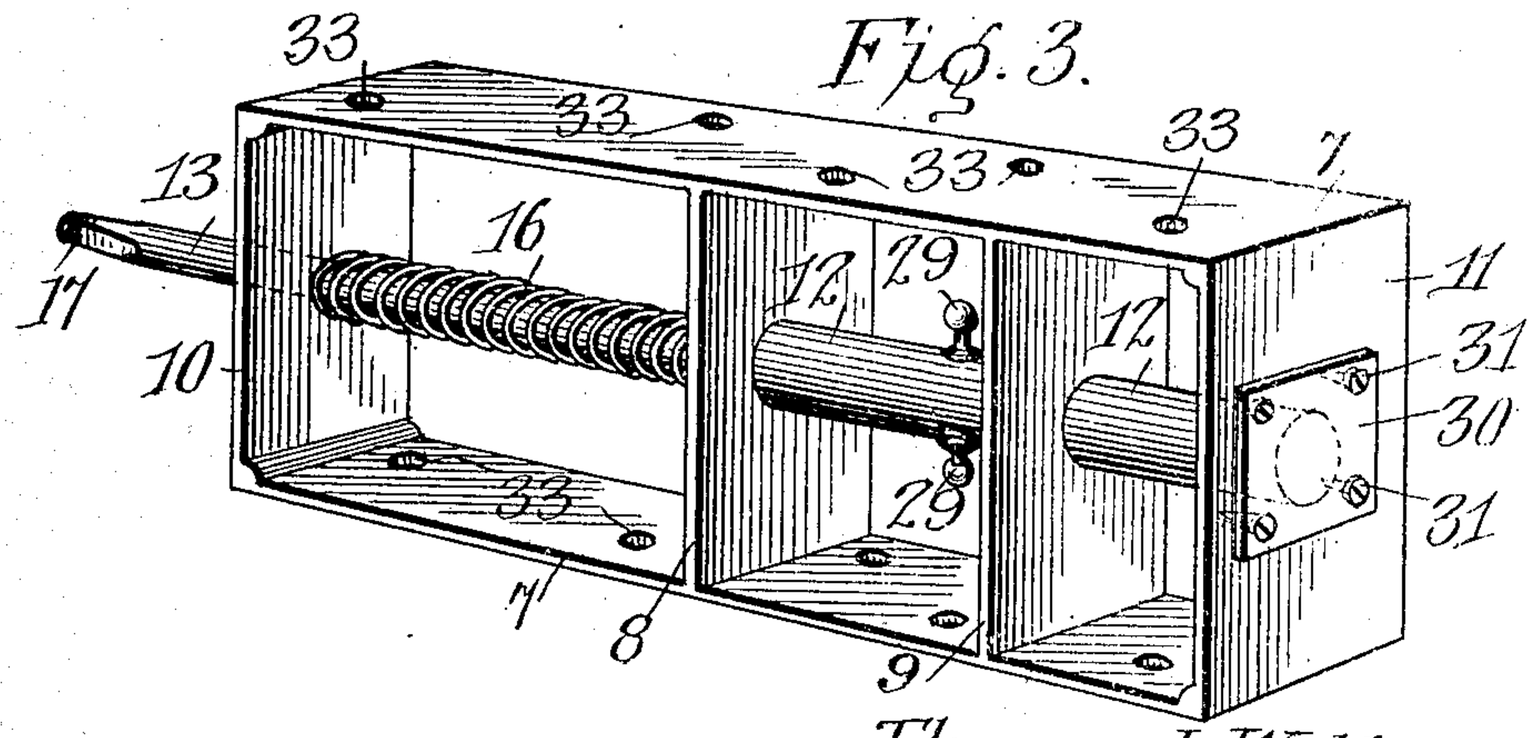


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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HORSE-RELEASING DEVICE.

No. 916,816. Specification of Letters Patent. Patented March 30, 1909.

Application filed September 4, 1908. Serial No. 451,736.

To all whom it may concern:

Be it known that I, THOMAS J. WILLIAMS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Horse-Releasing Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to releasing mechanisms designed for use in engine houses of a fire department of a village, town or city to automatically liberate the horses when an alarm of fire is sent in so they may quickly take their places under the harness preparatory to being hitched.

One of the objects of the invention is to provide a device of the character described which when properly incorporated in a stall will serve as a common releasing means for two horses, thus avoiding the necessity of securing a releasing device in each stall.

Another object contemplated by the invention is the provision of a horse releasing mechanism which involves the elements of simplicity, durability, and cheapness.

The invention is further directed to promote the positive and efficacious actuation of devices of this character, and thus preclude any possibility of its component parts becoming deranged.

With these and other objects in view, the preferred embodiment of my invention resides in that construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and embraced within the scope of the appended claims.

In said drawings:—Figure I is a side elevation of a stall with the improvement attached thereto. Fig. II is a vertical section of the horse releasing mechanism partially embedded in the apposed cross beam of the stall, and Fig. III is a perspective view of the frame and its appurtenances.

Referring more particularly to the drawings for a detail description of my invention, the numeral 5 designates any conventional form of stall equipped with the usual cross bars or beams (6). The releasing mechanism comprises essentially a metallic frame (7), preferably of rectangular contour, although it may obviously be of any quadrilateral, or other suitable form that convenience dictates. The said frame is open on opposite sides and is provided with the integrally formed transversely extending partitions (8) and (9), the said partitions, taken conjunctively with the end portions (10) and (11), having horizontally alined and medially disposed apertures for the reception of the plunger (12) and the connecting rod (13) therefor, the said openings having circumferences which are congruent to the circumferences of the said plunger and connecting rod, respectively. The plunger (12) is designed to move freely with respect to the partitions (8) and (9) and the juxtapositioned end (11), the inner distal end thereof having a cylindrical bore (14) which extends for a short distance along the horizontal extent of said plunger and is reduced and its reduced portion provided with screw threads for engagement with the complementary screw threads 15 of the terminal of the connecting rod (13), the larger portion of the bore (14) being adapted to accommodate or seat one end of a coil spring (16), which encircles said rod, the other end of said spring bearing against the inside portion of the frame end (10). By providing the enlarged bore in the plunger it will be evident that I attain the maximum degree of tensility of the spring in a minimum space. The other terminal of the rod (13) is rabbeted at 17, and connected through the medium of the jack-chain (18), turn buckle (19), and the wire (20) to one terminal of the bell crank lever (21), which is pivoted, as at 22, within the conoidal shaped orifice (23) in the post, or rear wall of the stall (24), the other terminal of the bell-crank lever having attached, as at 25, the pull chain or rope (26). To complete this organization a plate (27) is secured flush with the post (24) and depends in the orifice (23), an opening (28) being formed therein for the guidance of the outer end of the bell crank lever. I prefer the employment of the jack-chain, in contradistinction to the well known types of chains, the peculiar construction of the links *per se* and their mutual arrangement and coöperation permitting considerable torsional latitude. The plunger (12) is provided with a pair of diametrically disposed detachable lugs or projections (29) which serve a dual function, in that they assist materially in setting the device, as will presently appear, and limit the backward movement of the plunger by contacting with

the inner surface of the partition (8). The outer end of the plunger (12) is adapted to normally rest contiguous to the plate (30), removably secured to the end (11), of the frame (7) by the screws or other equivalent fastenings (31), so as to occlude the hereinbefore mentioned opening in said end portion, the said plate (30) serving in all respects as a buffer.

In the installation of the device the opposed sides of the cross beam (6) are preferably cut away in order that the frame (7) may be seated therein and securely fastened by the screws (32), screw holes (33) being provided on the corresponding opposite side of the frame for that purpose.

The ring (34) which is carried by the strap (35), the latter in turn being connected to the halter (36) of the animal, is manually adjusted upon the outer proximal end of the plunger (12). This operation is accomplished by grasping the projections (29) and exerting sufficient pull thereon to overcome the stress of the coil spring (16), whereupon the ring (34) is slipped over the terminal of the plunger (12), and the hold on the latter is released, causing the same to resume its normal locked position. As an alarm is sounded the pull cord (26) will be simultaneously operated, and through the instrumentality of the connections hereinbefore described, pull the plunger (12) a sufficient distance to permit the release of the ring (34) at which time the animal will instinctively depart from the stall. It will be pointed out in this connection that the frame (7) is open on opposite sides, and by virtue of such construction and arrangement two animals may be hitched and simultaneously released, the frame obviously being interposed between the two stalls,and the mechanism contained therein being always readily accessible from either side.

It is to be noted that the aperture in the end 11 of the open-sided frame or casing together with the stop 30 constitutes a socket or recess in which one end of the plunger is normally positioned, by reason of the pressure exerted on the plunger by the spring 16.

It is to be noted that the handles or grips 29 can be readily engaged by the fingers of the operator being positioned upon opposite sides of the plunger and these grips perform the function of stops when they engage the partitions for limiting sliding movement of the locking means, constituted by plunger 12.

What is claimed is:—

1. In a device of the character described, the combination with a stall formed with partitions provided with spaced beams or boards, of a releasing-device interposed between a pair of contiguous beams, said releasing-device comprising a frame having a top and a bottom and ends, fastening means extending through portions of the top and the bottom and into the beams for securing said frame thereto, said frame provided with open sides, and a horse-releasing mechanism within said frame, whereby animals may be secured at opposite sides of the frame.

2. In a device of the character described, the combination with a stall formed with partitions provided with a plurality of spaced beams or boards, of a horizontal frame interposed between said beams, said frame provided with open sides, means extending through the top and bottom of said frame and securing said frame to the beams, a horse-releasing mechanism movably mounted in the open-sided frame, whereby animals may be secured at opposite sides of the partition.

3. In a device of the character described, the combination with a substantially rectangular frame comprising a top, bottom and ends, said frame provided with open sides, said frame provided with a plurality of partitions, a plunger slidably mounted in said partitions, said frame provided, at one end, with means for receiving one end of said plunger, a grip secured to said plunger between said partitions and adapted to limit movement of said plunger upon said partitions in one direction, and means for normally holding said plunger, near one end, in engagement with one end of the frame.

4. A device of the character described, comprising a rectangular frame provided with transverse vertical partitions, said frame open at opposite sides, said frame provided with a socket at one end, fastening means movably mounted upon the partitions and having a portion normally positioned in said socket, and means carried by said fastening means and adapted to engage one of the partitions for limiting movement of the fastening means in one direction.

5. A device of the character described, comprising an elongated casing open at opposite sides, said casing provided with a plurality of transverse partitions, a slidable locking-member extending through one end of said frame and through all of the partitions, grips secured to the locking means between two contiguous partitions and adapted to limit the sliding movement of said locking means when the same is moved in one direction and the grips engage a partition.

6. A device of the character described, comprising a substantially rectangular frame, comprising top, bottom and ends integrally connected, said frame provided with a pair of transverse partitions between its ends, said frame provided, at one end, with means forming a socket, a plunger slidably mounted in the partitions and having one end normally seated in the socket, a detachable grip or knob secured to the plunger between the partitions and said grip adapted to engage one of the partitions for limiting sliding

movement of the plunger upon said partitions, said plunger provided with a socket, a rod extending through the opposite end of the frame and secured in the socket and end of the plunger, a coil spring engaging, at one end, the same end of the frame through which said rod extends, and at its opposite end seated within the socket of the plunger, and said top and bottom provided with apertures for receiving means for securing the frame between and to contiguous spaced beams of a stall partition.

7. In a device of the character described, the combination with a standard and two contiguous spaced beams or boards of a stall formed with partitions, of a horizontally-positioned frame or casing interposed between the beams and having its top and bottom in engagement therewith, fastening means engaging the top and bottom for securing the frame to only the beams, said frame provided with open sides, a sliding plunger operable from either side and mounted in the frame, and means attached to one end of said plunger and extending between the beams and through a portion of the standard for actuating the plunger.

8. In a device of the character described, the combination of a stall formed with partitions provided with a standard and contiguous spaced beams or boards, said standard provided with an opening or orifice registering with the spaces between said beams, a frame provided with a horizontal top and bottom, positioned between and contiguous to the contiguous faces of the beams, sliding fastening means positioned in the frame and having a portion extending beyond one end thereof and between the spaced-beams, and means positioned between said spaced-beams and in the orifice of said standard and connected to the sliding fastening means for actuating the same.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

THOMAS J. WILLIAMS.

Witnesses:
WILLIAM BUCKINGHAM,
FREDERICK W. LEARHARDT.