No. 763,094. PATENTED JUNE 21, 1904.

F. L. DUNCAN.

HORSE DETACHER.

APPLICATION FILED MAR. 16, 1904.

NO MODEL.

Fig. 1.

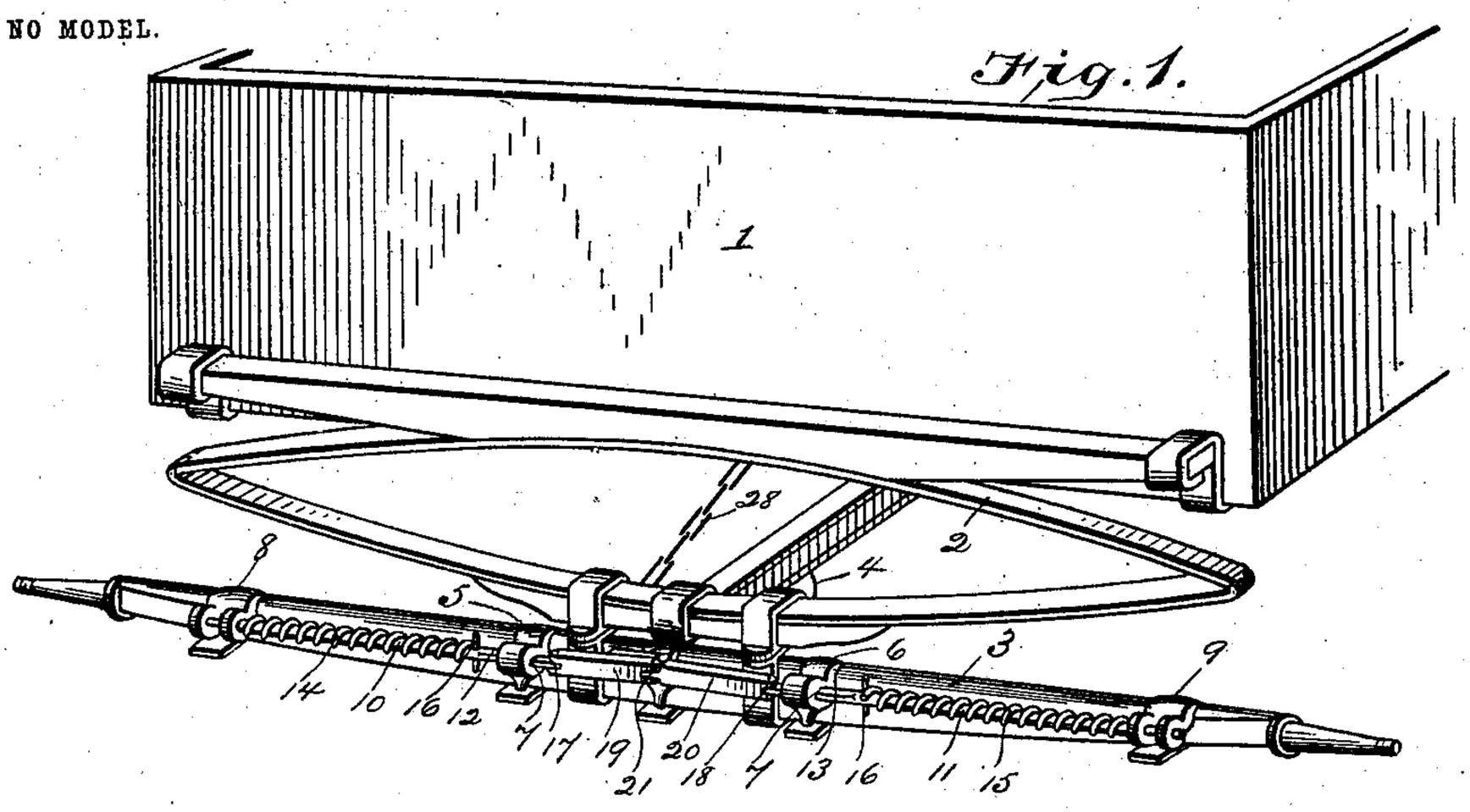


Fig. 2.

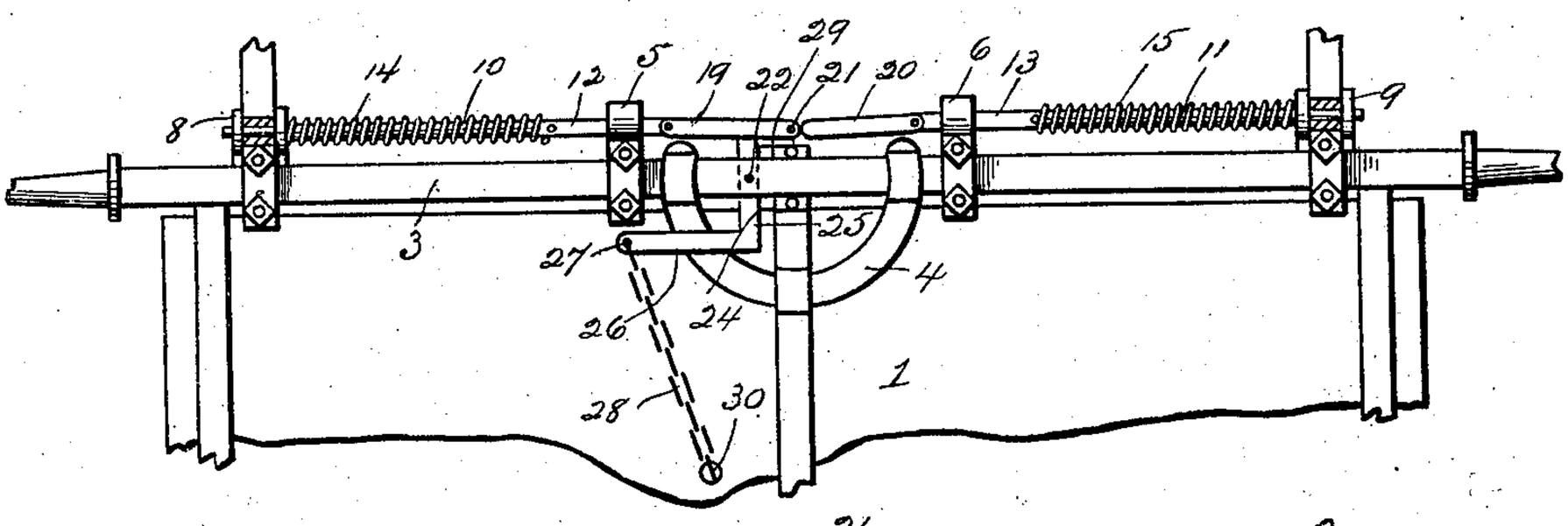


Fig. 3.

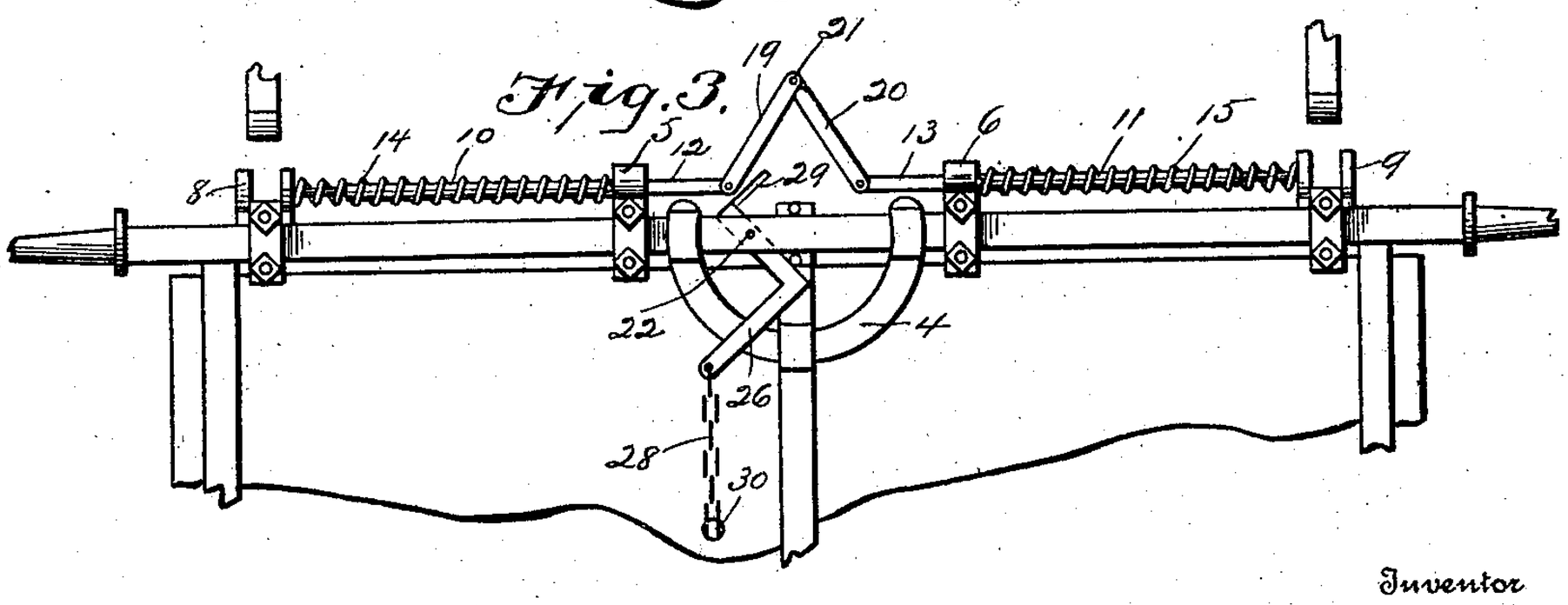
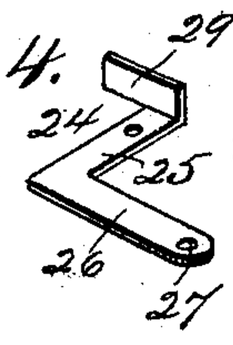


Fig. 4.



Witnesses

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No. 763,094. Patented June 21, 1904.

UNITED STATES PATENT OFFICE.

FRED LANSING DUNCAN, OF ANDREW COUNTY, MISSOURI.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 763,094, dated June 21, 1904.

Application filed March 16, 1904. Serial No. 198,349. (No model.)

To all whom it may concern:

Be it known that I, FRED LANSING DUNCAN, a citizen of the United States, residing in the county of Andrew and State of Missouri, have invented certain new and useful Improvements in Horse-Detachers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to vehicles, or more particularly to horse-detachers, and has for its object to provide a device of this class which can be instantly operated by the driver of the vehicle to release the shafts from the vehicle should the occasion require—as, for instance, when the horse is running away or is beyond control of the driver.

With this object in view my invention consists in the particular construction of the shaft-releasing means.

My invention also consists in certain other novel features of construction and in combination of parts, which will be first fully described, and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of the front portion of the body of the vehicle, showing the front axle and shaft-detaching means, the shaft being removed. Fig. 2 is a bottom plan of the same, showing the shafts in position, partly in section and broken away. Fig. 3 is a similar view showing the detaching means in position for releasing the shafts, the shafts being shown released and broken away. Fig. 4 is a perspective view of the bell-crank-operating lever.

Like numerals of reference indicate the same parts throughout the several figures, in which—

1 indicates the body of the vehicle, showing the usual spring 2, and 3 indicates the front axle, and 4 the usual fifth-wheel. Secured to the axle, as shown, are two clips 5 and 6, which are provided with preferably a square opening 7.

8 and 9 indicate the usual clips for the thill-coupling, and 10 and 11 indicate two slidable rods having their inner ends 12 and 13 formed, preferably, square to conform to the opening 7 in the clips 5 and 6, this construction preventing the turning of said rods 10 and 11. Secured on said rods 10 and 11 are springs 14 and 15, the other ends of which bear against the clips 8 and 9, and their inner ends engage suitable pins 16 in the said rods 10 and 11. Said springs have an extension-strain and exert a normal tendency to press the said rods toward each other. Pivotally connected to said rods 10 and 11 at 17 and 18 are the two levers 19 and 20, which levers are pivoted together at 21.

Pivoted in the axle at 22, as shown in Figs. 2 and 3, is the bell-crank-operating lever 24. This bell-crank is shown in perspective in Fig. 4, and it is seen that the same consists of the central portion 25 and an arm 26, extending at right angles thereto, which is provided with the perforation 27, to which is connected a chain or cable 28. Extending at right angles to the central portion 25 of said bell-crank lever is the arm 29, which is substantially parallel to the arm 26, but is bent vertically at right angles thereto, so as to present a larger surface for engagement with the lever 19. The opening 30 is made in the floor of the vehicle, through which the chain or cable 28 passes.

Having thus set forth the said parts of my invention, its operation is as follows: The springs 14 and 15 exert a normal tendency to bring the inner ends of the rods 10 and 11 together. The said levers 19 and 20, which are connected to said rods and are also connected together, are so arranged that when the device is in its normal position, as shown in Fig. 2, the said levers 19 and 20 are out of line with each other, the pivotal point 21 of said levers being on a line in rear of pivotal points 17 and 18 of said levers, which pivotal points are the points of connection between said levers and the rods 10 and 11. The lever 19 rests normally against the arm 29 of the bell-crank-operating lever 24, as shown in Fig. 2. Any tendency, therefore, toward pressing the inner ends of the rods 10 and 11 together will, on

account of the arrangement of the levers 19 and 20, tend also to press said levers back against the arm 29 of the bell-crank-operating lever 24, and the stronger the pressure of the springs 14 and 15 the harder will said levers 19 and 20 be held against the arm 29 of the bell-crank-operating lever 24 and in the position as shown in Fig. 2. Consequently an accidental movement of said levers 19 and 20 is prevented by the pressure of the springs 14 and 15. In order, however, to operate the device and to detach the shafts, the chain or cable 28 is pulled, which acts on the bell-crank-operating lever 24 and presses the arm 29 against the lever 19, which forces the pivotal point 21 to a point in front of the pivotal points 17 and 18, the pressure of the springs 14 and 15 thus acting to force the levers 19 and 20 into the position shown in Fig. 3, which allows the inner ends of the rods 10 and 11 to move toward each other, which movement of the said rods draws the outer ends thereof out of engagement with the thill-eye of the shafts and allows the said shafts to pull out of the clips 8 and 9, as clearly shown in Fig. 3. In order to again attach the shafts, the same are merely put into position in the clips 8 and 9 and the levers 19 and 20 forced back into their normal position, as shown in Fig. 2, which slides the outer ends of the rods 10 and 11 into the thill-eye on the shafts.

Having thus fully described my invention, I do not wish to be understood as limiting myself to the exact construction herein set forth, as various slight changes could be made therein which would fall within the limit and scope of my invention, and I consider myself clearly entitled to all such changes and modifications.

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

1. In a horse-detacher for vehicles, the combination with the front axle of two clips thereon, two slidable rods passing through said clips, shaft-clips secured to said axle through which clips the said rods are adapted to pass, springs of an extension strain on said rods normally tending to press the said rods together, the lever pivoted to each of said rods and pivoted to each other, the said latter pivot being out of line with the pivotal point of said levers and rods when the device is in a normal position, a bell-crank lever pivoted to said axle and adapted to engage one of said levers to force the same from the axle, substantially as described.

2. In a horse-detacher device, the combination with the front axle, shaft-clips carried thereon, slidable rods adapted to enter said shaft-clips, springs of an extension strain on said rods, levers connected to said rods and pivoted to each, a bell-crank pivoted on said axle and adapted to engage one of said levers and to force the same from the axle, substantially as described.

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

FRED LANSING DUNCAN.

Witnesses:

W. H. HODGES,

EFFIE DUNCAN.