

J. P. LUNATI.
HORSE DETACHER.
APPLICATION FILED JAN. 12, 1911.

1,010,284.

Patented Nov. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

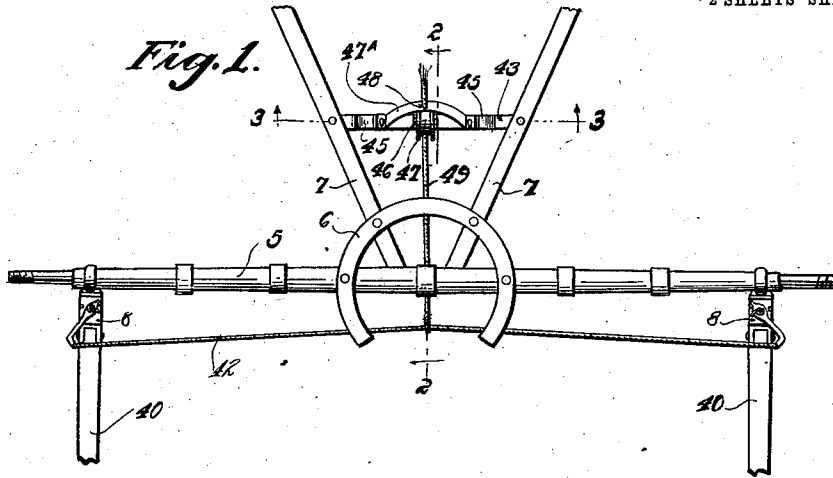


Fig. 2.

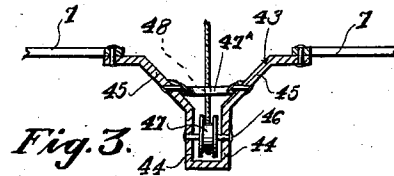
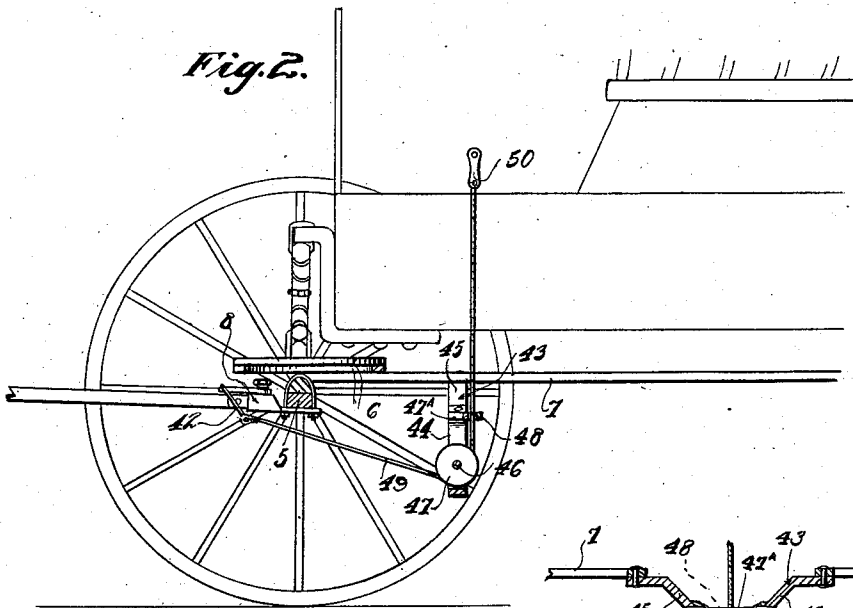


Fig. 3.

Inventor

John P. Lunati.

Witnesses

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By *[Signature]* Attorney

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2 SHEETS-SHEET 2.

Fig. 4.

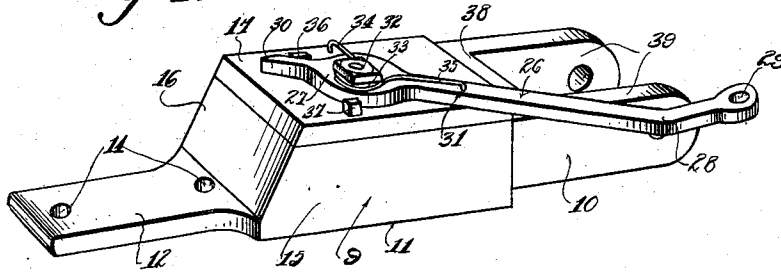


Fig. 5.

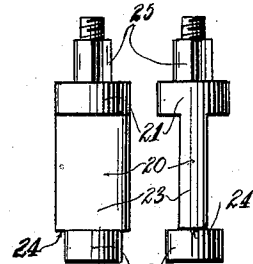
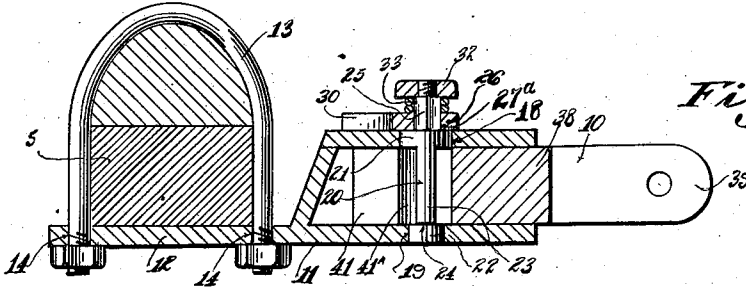


Fig. 7.

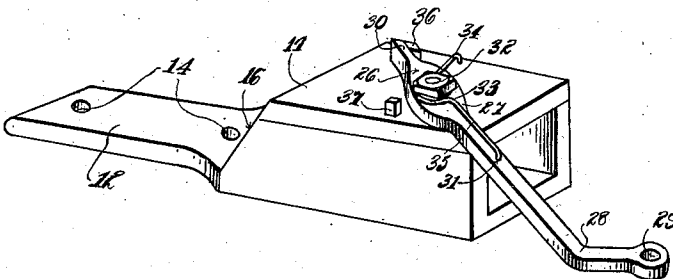
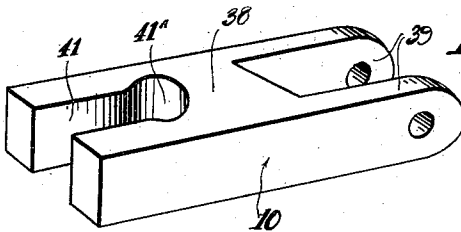


Fig. 6.



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HORSE-DETACHER.

1,010,284.

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Application filed January 12, 1911. Serial No. 602,281.

To all whom it may concern:

Be it known that I, JOHN PETER LUNATI, a citizen of the United States, residing at Memphis, in the county of Shelby, State of Tennessee, have invented certain new and useful Improvements in Horse-Detachers; and I do hereby 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.

This invention relates to an improvement in horse detachers and has for its principal object to provide a device for the purpose described by means of which the shafts and consequently the horse can be readily released from a vehicle whenever it is deemed necessary.

Another object of the invention is to provide an improved detachable coupling between the shafts and the axle.

A further object of the invention is to provide a device of the character described which is in the nature of an attachment for vehicles so that the same may be applied to any vehicle without any undue alterations thereof.

A still further object of the invention is to provide a device of the character described which is composed of a minimum number of parts, is simple in construction and is therefore cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim here-to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a top plan view of a portion of a vehicle running gear showing my improved horse detacher associated therewith. Fig. 2 is a detail side elevation, partly in section, showing my invention applied to a vehicle, Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1, Fig. 4 is a perspective view of my improved detachable coupling, Fig. 5 is a longitudinal sectional view through the same, Fig. 6 is a perspective view of the detachable elements of the coupling, and Fig.

7 is a view showing different elevations of the coupling pin.

Like reference characters indicate corresponding parts throughout the several views.

Referring to the drawing the numeral 5 designates an axle which is supported upon a fifth-wheel 6 and connected by means of reach bars 7—7. This construction is all in common use and I make no claim thereto.

My invention comprises a pair of detachable couplings which are respectively designated by the reference numerals 8—8. Each of these members are exactly alike and therefore a description of one will suffice. Each of these couplings consists of a stationary or fixed member 9 and a detachable member 10. The fixed member 9 consists of a base portion 11 having its rear end 12 connected to the vehicle axle by a U-bolt 13, said bolt having its ends extending through openings 14 formed in the said rear portion, as will be readily understood. Integral with the base portion 11 and extending upwardly therefrom are side walls 15—15 and a rear wall 16 which are united by a top 17. These walls and top form a casing having an open front end. Formed in the top 17 and the bottom 11 are centrally disposed circular openings 18 and 19 respectively. Rotatably mounted within the said openings is a coupling pin 20. This coupling pin is provided with rounded upper and lower bearing portions 21 and 22 respectively and an intermediate flat portion 23. The bearing portion 21 rotates in the opening 18, while the bearing portion 22 rotates in the opening 19, the last mentioned bearing portion having a diameter less than the width of the connecting portion 23 so as to form shoulders 24—24. These shoulders coact with the bottom 11 and thereby limit the downward movement of the said coupling pin. Projecting above the bearing portion 21 is a squared shank 25.

The invention further comprises a lever arm 26 for rotating the said coupling pin. This arm is provided with a head 27 having an angular opening 27^a formed therein and adapted to be positioned over the said shank 25 of the pin. Projecting from the head 27 is an arm 28 and the free end thereof is provided with an aperture 29. Laterally projecting from the head 27 is a lug 30, and formed in the arm 28 is a seat 31.

A nut 32 or any other suitable fastening means is secured to the upper end of the

shank 25 above the head 27 of the lever. Disposed intermediate the said nut and head is a coil spring 33, one end 34 thereof being downwardly bent and fixedly secured to the top 17 of the member, and the other end 35 thereof being downwardly bent and positioned in the seat 31 of the lever arm. This spring 33 tends to hold the flat portion 23 of the pin parallel with the open end of the fixed member 9, and the lever arm 28 projects outwardly substantially at an angle of 45 degrees to the shaft when the pin is in this position. In order to limit the movement of the lever arm and consequently the pin, stops 36 and 37 are respectively secured to the top 17 and are disposed at such points as to be engaged by the lug 30 when the lever arm reaches the limit of either of its movements.

The detachable coupling member 10 consists of a substantially oblong body portion 38. One end thereof is bifurcated to form spaced ears 39—39, in which the rear end of the shaft 40 is pivoted by any well known means. Formed in the opposite end of the member 10 is a key-hole slot 41. The distance between the walls of this slot is sufficient to permit of the same sliding by the flat portion 23 of the coupling pin when that portion has been turned in alinement therewith. The turning of this pin is made in the head 41^a of the said slot. In practice the flat portion 23 is turned until the same is in alinement with the key-hole slot 41 of the detachable coupling member 10. This member is then inserted in the casing and upon releasing the lever arm 28 the same will be returned to its normal position by means of the coil-spring 33. Simultaneously with the movement of the lever the coupling pin will be moved so that the flat portion 23 thereof will be disposed at right angles to the key-hole slot 41. Thus it will be seen that the two members are securely locked in position.

The free ends of the lever arms 28 are connected by a chain 42. Secured to the reach bars 7 and depending therefrom is a bracket 43. This bracket is bent at its central point to form spaced walls 44 and a connecting portion 45, the latter constituting a guard. The ends 45 of the bracket extend upwardly and outwardly from the walls 44 and are respectively connected to the reach bars by any suitable fastening means. Journaled in the walls 44 is a pin

46 and upon which is rotatably mounted a pulley 47. Connecting the end portions 45 of the bracket is a brace 47^a which is centrally provided with an aperture 48.

A chain 49 or other suitable connection is passed through the opening 48 of the said brace under the pulley 47 and has one end connected centrally to the connecting chain 42. The other end of the chain 49 extends upwardly through an aperture in the bottom of the vehicle and is provided with an operating handle 50.

From the foregoing it will be observed that when the driver deems it necessary to release the horse from the vehicle he has only to pull on the handle 50 whereby the chain 49 will pull the connecting chain 42 and thus both arms 28 will be rotated against the tension of their springs. Then, as has been heretofore explained, the coupling pins will be likewise rotated to a position to permit the detachable members 10—10 to be quickly disengaged.

What is claimed is:—

In combination with a vehicle running gear including an axle, reach bars and shafts, of fixed coupling elements carried by the axle, said elements each comprising a casing having a bottom, top and an open end, said top and bottom respectively having alined openings formed therein, a locking pin journaled in said openings, said pin being provided intermediate its ends with a flat body portion adapted to normally lie in a plane parallel with the plane of the open end of the casing, a lever-arm fixedly secured to said pin, stops projecting from the top of the casing for limiting the movement of said lever-arm, detachable coupling elements carried by the shafts, said elements and locking pins being adapted to interlock in one position of the latter, means for normally holding the pins in operative positions, each means consisting of a coil spring surrounding the pin above the lever-arm and having one end connected with said arm and the other end connected to the casing, and means connected to said lever arms for operating the same to release the said coupling elements.

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

JOHN PETER LUNATI.

Witnesses:

T. N. BRETT, Jr.,

E. B. CRENSHAW.