

A. LEWIS.
RAILWAY COUPLING.
APPLICATION FILED JAN. 2, 1908.

948,765.

Patented Feb. 8, 1910.

2 SHEETS—SHEET 1.

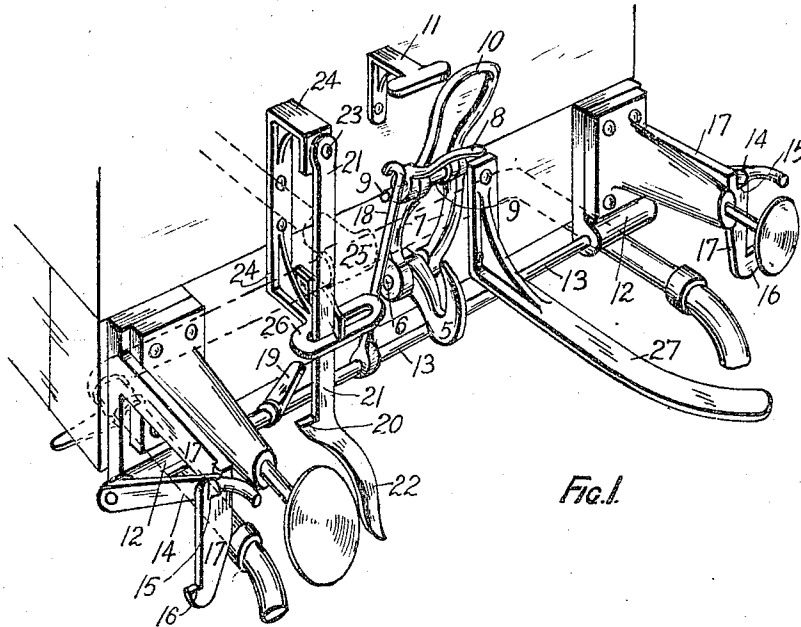


Fig. 1.

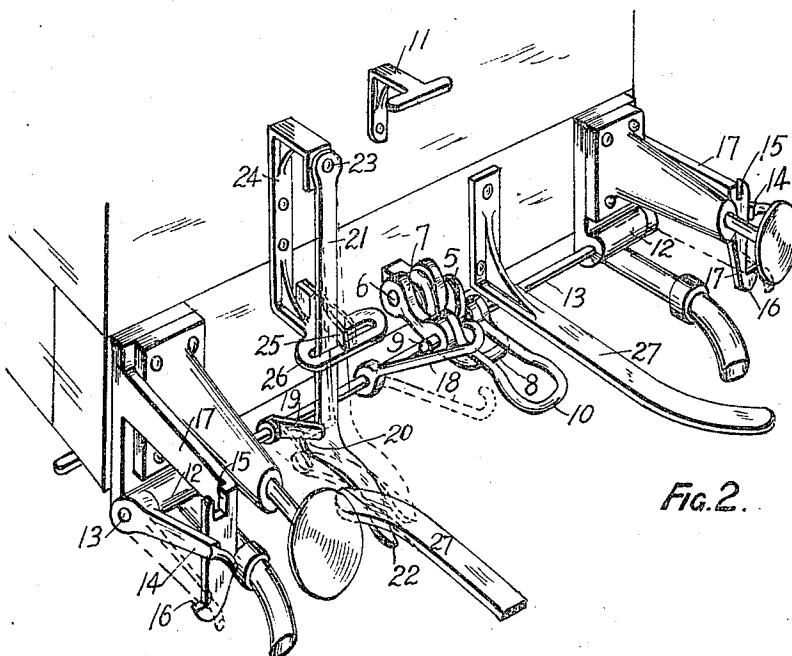


Fig. 2.

WITNESSES

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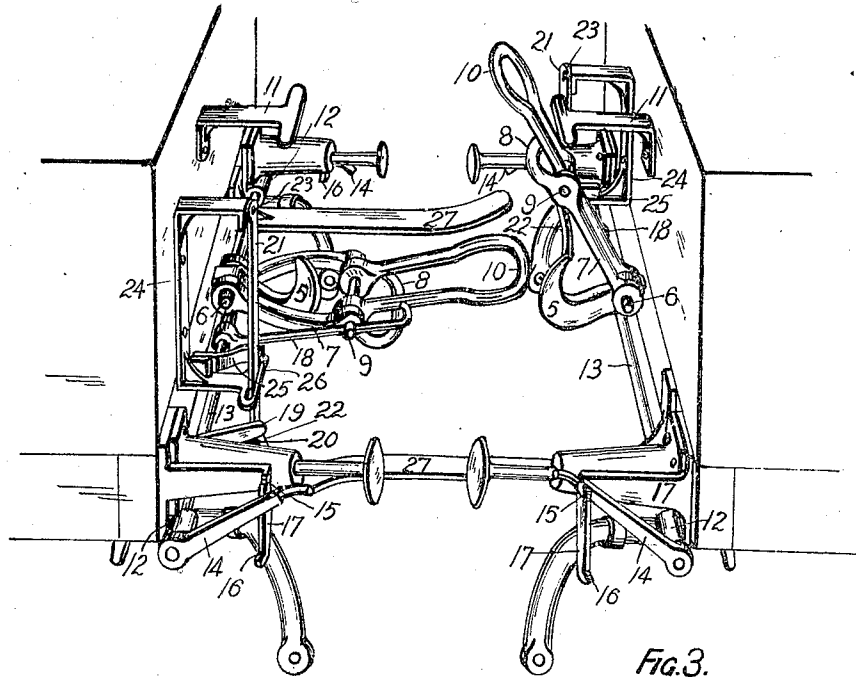


Fig. 3.

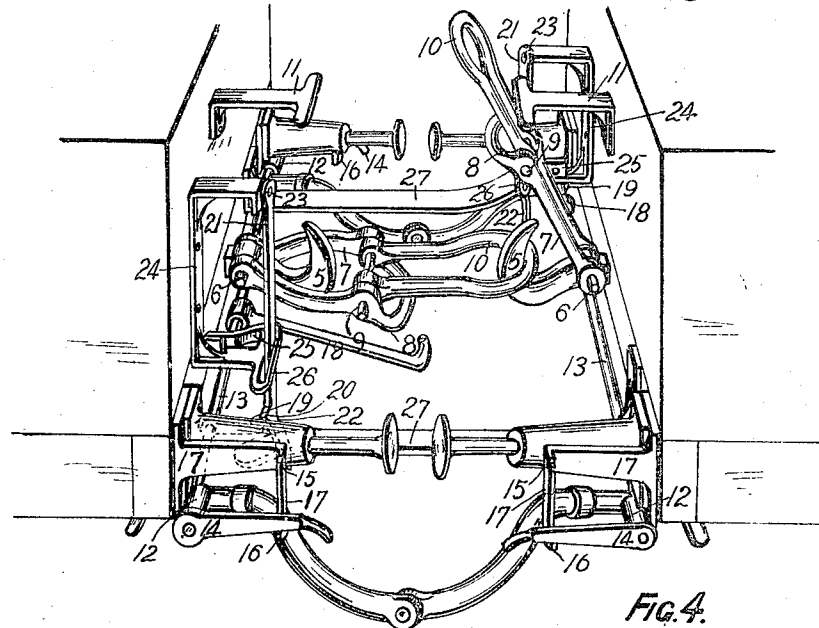


Fig. 4.

WITNESSES
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UNITED STATES PATENT OFFICE.

ARCHER LEWIS, OF LEWISHAM, NEAR SYDNEY, NEW SOUTH WALES, AUSTRALIA,
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RAILWAY-COUPLING.

948,765.

Specification of Letters Patent.

Patented Feb. 8, 1910.

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To all whom it may concern:

Be it known that I, ARCHER LEWIS, a subject of the King of Great Britain, residing at "Florence" Railway Terrace, Lewisham, near Sydney, in the State of New South Wales and Commonwealth of Australia, railway-stores clerk, have invented new and useful Improvements in Railway-Couplings, of which the following is a specification.

This invention relates to improvements in railway couplings whereby the necessity of passing between the end of railway vehicles is obviated and whereby said couplings may be released and may be placed in position for automatic engagement by attendants outside the line of vehicles.

Improvements in railway couplings constructed according to this invention have a central draw hook to which is pivoted the cradle or support of a coupling shackle adapted to take upon a similar central draw-hook on the adjacent vehicle.

The coupling shackle pivots upon a pin somewhat mid-way of the cradle and is weighted so that it normally and in every position rests on the protruding part (beyond said pivot) of the cradle or support. The pivot of this coupling shackle and cradle extends or protrudes sidewardly and normally rests against a supporting lever from a low cross spindle from side to side of the vehicle which cross spindle on either side has a hand lever with holding catches to retain the supporting lever of the cradle and shackle in an upward position or to allow in lower position the coupling-shackle to engage in and hang upon the opposite central draw hook. In the elevated position the coupling-shackle is prevented from tumbling backward over its center by a protruding guard.

While the coupling may be operated by the hand-levers before mentioned yet automatic operating devices are furnished as follows,—on the cross spindle carrying the supporting lever of the cradle and shackle is a stop bar adapted to rest upon an angle part of a depending spring lever which normally allows said angle part to find its way below said stop bar of the cross spindle. This depending lever has a downwardly extending tail adapted to be operated by a thrust piece or pointer with proper curva-

ture affixed to the adjacent vehicle. So that the stop bar is free of the angle part of the depending lever and the cradle and shackle adapted to engage with the approaching draw hook the depending levers and operating pointers are placed on opposite sides of the draw hooks so that no matter what ends of the vehicles approach one another the coupling operating mechanism if set may be operated.

In order to illustrate how this invention may be best carried out in practice these improvements in railway couplings will now be described with reference to the drawings herewith in which—

Figure 1 is a perspective view of the end of a railway vehicle on which this improved coupling is installed showing said coupling out of action. Fig. 2 is a similar view showing the coupling as prepared to engage with the draw hook of an approaching vehicle. Fig. 3 is a further perspective view showing two vehicles approaching one another and about to be coupled and Fig. 4 shows such vehicles coupled.

Draw hook 5 has a pivot 6 to which is pivoted the cradle 7 having a forward part 8 underneath the shackle 10 which is pivoted on pin 9 in said cradle 7. On a convenient part of the vehicle is the guard 11 to prevent the shackle 10 falling over upon its pivot pin 9 when it is in erect position. Below the draw hook 5 and in convenient bearings 12 is a cross spindle 13 terminating at either end in a lever 14 adapted to have spring engagement in the catch 15 or on the rest on extension piece 17 from the bearing 12. On this cross spindle 13 is a support or lever 18 taking underneath the pivot pin 9 of the cradle and shackle and adapted when the handle 14 is in the catch 15 to support the coupling shackle 10 in the elevated position as shown in Fig. 1. The lever 14 is made of springy material, whereby it may be drawn out of the vertical plane of the notch 15 so as to engage with the notch 16. And when a stop bar 19 on cross spindle 13 is on rest angle 20 of depending lever 21 to support said cradle and shackle in position to present itself to the incoming approaching draw hook 5 of another vehicle. The depending lever 21 is pivoted at 23 to a convenient bracket 24 from which extends a flat spring 25 bearing upon the edge of lever 21 so as to normally

retain the rest angle 20 under the stop bar 19 so that this stop bar will support the lever 18 thereby holding cradle and shackle in operative position as shown in Fig. 2. A convenient guide 26 is provided for lever 21. On the other side of the draw hook 5 is a thrust piece or pointer 27 curved so that it will engage with the outer or concave edge of the tail 22 and move the depending-lever 21 sidewardly so that the rest angle 20 will be removed from under the traverse of the stop bar 19 so that said stop bar may pass freely downward and so allow the shackle 10 to drop into the hook 5. On lifting the stop bar 19 by means of the lever 14 again the curvature of the tail 22 will allow the lever 21 to pass freely and return to its normal position so that rest angle 20 will be adapted to engage with the stop bar 19 once again.

In use this coupling may be operated manually in which case the parts are placed in position as shown in Fig. 1 and without going between the vehicles the attendant may operate handle 14 so as to drop the coupling shackle 10 on to the draw hook of the vehicle with which it is to be coupled. Of course when the vehicle is in coupling position the pointers 27 have moved the tail 22 of the depending lever 21 so that the rest angle 20 will not be in the traverse of the stop lever 19 to interfere with the engagement of shackle and hook and the flexibility of the same. When it is desired that the vehicles will automatically couple the parts of one coupling are placed in inoperable position as shown in Fig. 1 while the parts of other coupling are set as shown in Fig. 2 with the hand lever 14 free to drop on to rest 16 of the extension 17 and the stop bars 19 resting upon the angle 20 of the depending lever 21. Now as the pointer 27 approaches the tail 22 of this depending lever 21 it engages on the outer or concave edge thereof and thrusts the lever 21 sidewardly inwardly so that the stop bar 19 no longer rests on angle 20 and the cradle 7 and 8 drops from under the coupling shackle 10 so that the shackle will fall on to the draw hook 5 of the approaching ve-

hicle and become engaged with said draw hook as shown in Fig. 4.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. A railway coupling comprising a draw hook, a cradle pivoted thereon, a shackle carried by the cradle, a transverse spindle, a rod thereon engaging with the cradle, a stop on said spindle, a depending lever adapted to engage with said stop to hold the shackle in coupling position, and means on the approaching car for engaging the said lever to move the same away from the stop to allow the shackle to fall on to the draw hook of the approaching car.

2. A railway coupling comprising a draw hook, a cradle pivoted thereon, a shackle carried by the cradle, a transverse spindle, a bar thereon engaging with the cradle, a stop 19 on the spindle, a depending lever adapted to engage with the stop 19 to hold the shackle in coupling position, said lever having a curved tail portion, a spring for holding the lever in engagement with the stop, and the thrust bar on the approaching car adapted to engage with said tail portion to move the lever from under the stop.

3. A railway coupling comprising a draw hook, a cradle pivoted thereon, a shackle carried by the cradle, a transverse spindle, a handle on said spindle, a stop on said spindle a rod on said spindle engaging with the cradle, an upper catch adapted to engage with the handle for holding the shackle in operative position, a depending lever adapted to engage with said stop to hold the shackle in a coupling position, and means on the approaching car for engaging the said lever to move the same away from the stop to allow the shackle to fall on to the draw hook of the approaching car.

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

ARCHER LEWIS.

Witnesses:

PERCY NEWELL,
M. J. CANDRICK.