

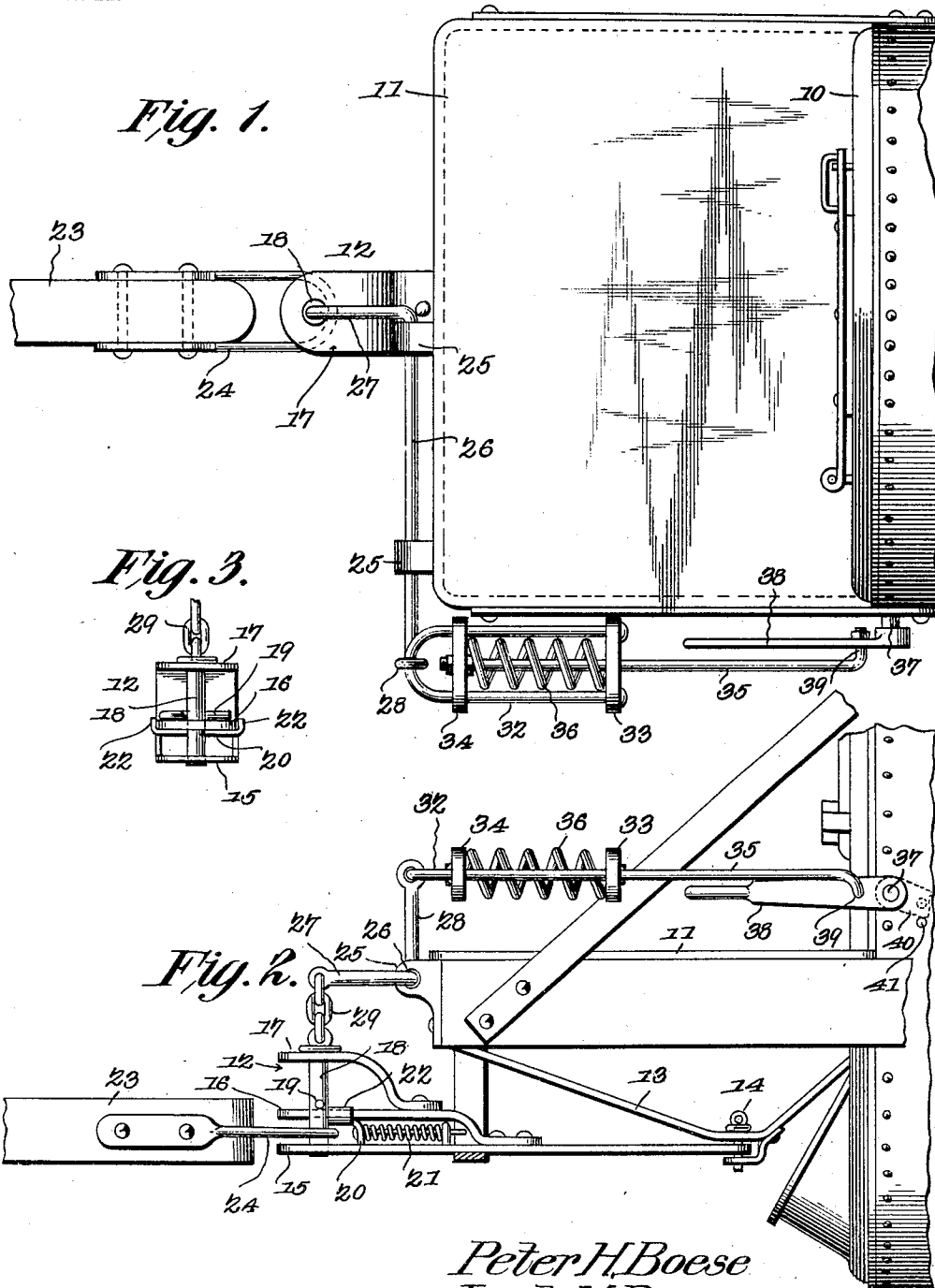
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P. H. & J. H. BOESE.
UNCOUPLING DEVICE.

APPLICATION FILED JUNE 30, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER H. BOESE AND JACOB H. BOESE, OF INMAN, KANSAS.

UNCOUPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 773,537, dated November 1, 1904.

Application filed June 30, 1904. Serial No. 214,834. (No model.)

To all whom it may concern:

Be it known that we, PETER H. BOESE and JACOB H. BOESE, citizens of the United States, residing at Inman, in the county of McPherson and State of Kansas, have invented a new and useful Uncoupling Device, of which the following is a specification.

This invention relates to traction-engines for coupling and uncoupling threshing-machines and other apparatus, and has for its object to produce a simply-constructed and efficient device under the control of the engineer whereby the trailing apparatus may be quickly coupled and uncoupled manually and also capable of automatic uncoupling when under strain.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claim made therefor.

In the drawings thus employed, Figure 1 is a plan view of the rear portion of a traction-engine with the improved device applied. Fig. 2 is a side elevation of the same. Fig. 3 is a rear view of the draw-head detached.

In operating traction-engines for transporting threshing-machines and other apparatus it is essential that a quickly and easily adjusted coupling means be provided between the same, and it is also essential that this coupling means shall be operative from the engineer's platform and fully under his control at all times.

Another desirable feature of the coupling is that it shall be capable of being rendered quickly and easily releasable automatically when under strain to avoid the necessity for "slacking up" the engine before the trailing apparatus can be released.

The improved device may be attached to the engineer's platform or to the fuel and water tender, when one is employed, of any of the various forms of traction-engines manufactured and for the purpose of illustration is shown applied to a conventional form of an ordinary traction-engine, in which a portion of the boiler 10 and the engineer's platform 11 are shown.

The improved apparatus consists in a draw-head, represented as a whole at 12 and connected to swing beneath the platform 11, as by a hanger-bracket 13 and center-pin 14 or by any other approved manner.

If a fuel or water tender is employed, the draw-head will preferably be similarly coupled to the same; but as the tender is not a part of the present invention and as the construction is so well understood it is not deemed necessary to illustrate it in the present application.

The rear or swinging end of the draw-head is formed with three members 15 16 17, spaced apart and having the coupling-pin 18 movable through all three parts, but limited in its movement, as by a transverse pin 19, operating between the central member 16 and upper member 17. By this means the coupling-pin cannot be entirely withdrawn from the draw-head, but can be withdrawn from the space between the members 15 and 16.

Mounted for longitudinal movement between the members 15 and 16 is a stop member 20, adapted to be projected across the path of the pin 18 by a spring-controlled bolt 21 to bear beneath the pin when the latter is in its elevated position and hold it poised and releasable only by displacing the stop-plate. The stop-plate is formed with spaced guide-ribs 22, bearing against the sides of the member 16 to prevent lateral displacement.

The tongue of the machine to be coupled—for instance, a threshing-machine, a portion of which is represented at 23—is provided

with a loop 24, adapted to enter the space between the members 15 and 16 and receive the pin 18 when in its depressed position. When the pin 18 is elevated to release the tongue, the plate 20 will be caused to follow it up by the action of the spring-rod 21, and thus automatically lock the pin in its elevated position, and which may be automatically released when the loop 24 is again "entered" to couple the tongue 23. A self-coupling device is thus produced, which materially lessens the labor of connecting the apparatus.

Mounted for rotation, as by bearings 25, upon the rear of the platform 11 is a shaft 26, having lateral arms 27 28 extending from its ends and at right angles to each other and to the shaft, the arm 27, connected by a section of chain 29 to the coupling-pin 18, and the arm 28, loosely connected to a U-shaped bar 32. Rigidly connected to the free ends of the bar 32 is a transverse plate 33, and slidably disposed upon the same bar is a similar plate 34. Passing loosely through the rigid plate 33 and connected to the slidable plate 34 (preferably by adjusting-nuts) is a rod 35, having a spring 36 surrounding the same between the plates 33 34. Projecting from the boiler 10 is a stud 37, to which a lever 38 is pivoted, and to which lever the free end of the rod 35 is pivoted, as at 39. The lever will be so disposed that when thrown to its rearward position, as in full lines in Figs. 1 and 2, the arms 27 28 will be in their rearward position, with the chain 29 slack and the pin 18 free to fall into operative position or to be released manually without reference to the rod 35 or lever 38. Thus before coupling up the tongue 24 it is only necessary to see that the lever 38 is thrown into its rearward position and the pin 18 elevated, and after that it is only necessary to back the engine slightly to press the stop-plate 20 against the entering loop 24 on the tongue 23 to release the pin 18 and complete the action, as above described.

If it is desired to uncouple the tongue 23 when no strain is applied, the throwing forward of the lever 38 into the position indicated by dotted lines at 40 in Fig. 2 will accomplish this result by actuating the rock-shaft 26 and causing the arm 27 to elevate the pin 18 through the connecting-chain 29, the spring 36 performing no function when no strain exists between the engine and trailing apparatus being drawn thereby.

If it is desired to uncouple the tongue when a strain is applied, the lever 38 is thrown over forward in the same manner; but as the rearward strain of the trailing apparatus will prevent the pin 18 being drawn upward this ac-

tion of the lever will compress the spring 36, as will be obvious, and impart an upward strain upon the chain and pin, and the moment the strain on the tongue becomes lessened even to a slight degree the force of the spring will instantly and automatically elevate the pin and release the tongue.

A stop-pin 41 is provided to limit the forward movement of the lever 38, and this pin will be so located that when the lever is thus thrown forward the pivot-point 39 will be below the line of the stud 37 to provide a "lock" means to hold the spring 36 in its depressed position and maintain the strain on the chain 29 and pin 18 for obvious reasons.

The tongue may be slacked up in many ways, either by slightly and suddenly reducing the speed of the engine, when the momentum of the trailing apparatus will produce the required degree of "slack," or the necessary slacking will occur at the first slight depression or irregularity in the road into which the wheels of the trailing apparatus run, or the requisite slacking may be produced in any other desired manner.

The device is very simple in construction, can be easily adapted to any of the various forms of engines manufactured, and will be found very convenient and efficient for the purposes described.

We claim—

In a device of the class described, a draw-head having a coupling-pin movable transversely therethrough, a rock-shaft having spaced crank-arms one of which is coupled as by a section of chain to said coupling-pin, a U-shaped member movably connected to the other of said arms, said U-shaped member having a transverse member slidable thereon and with a transverse member rigidly connected to its free ends, a rod rigidly connected to said movable transverse member and slidable through said rigidly-connected transverse member, a spring disposed between said transverse members, and a lever-arm pivoted near one end to said rod and likewise pivoted by its shorter end to a stationary support in position to cause the movable pivot-point to pass beyond the stationary pivot-point and compress said spring and lock the rock-shaft yieldably in one position.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

PETER H. BOESE.
JACOB H. BOESE.

Witnesses:

MAITLAND MILLIKEN,
JOHN D. MILLIKEN.