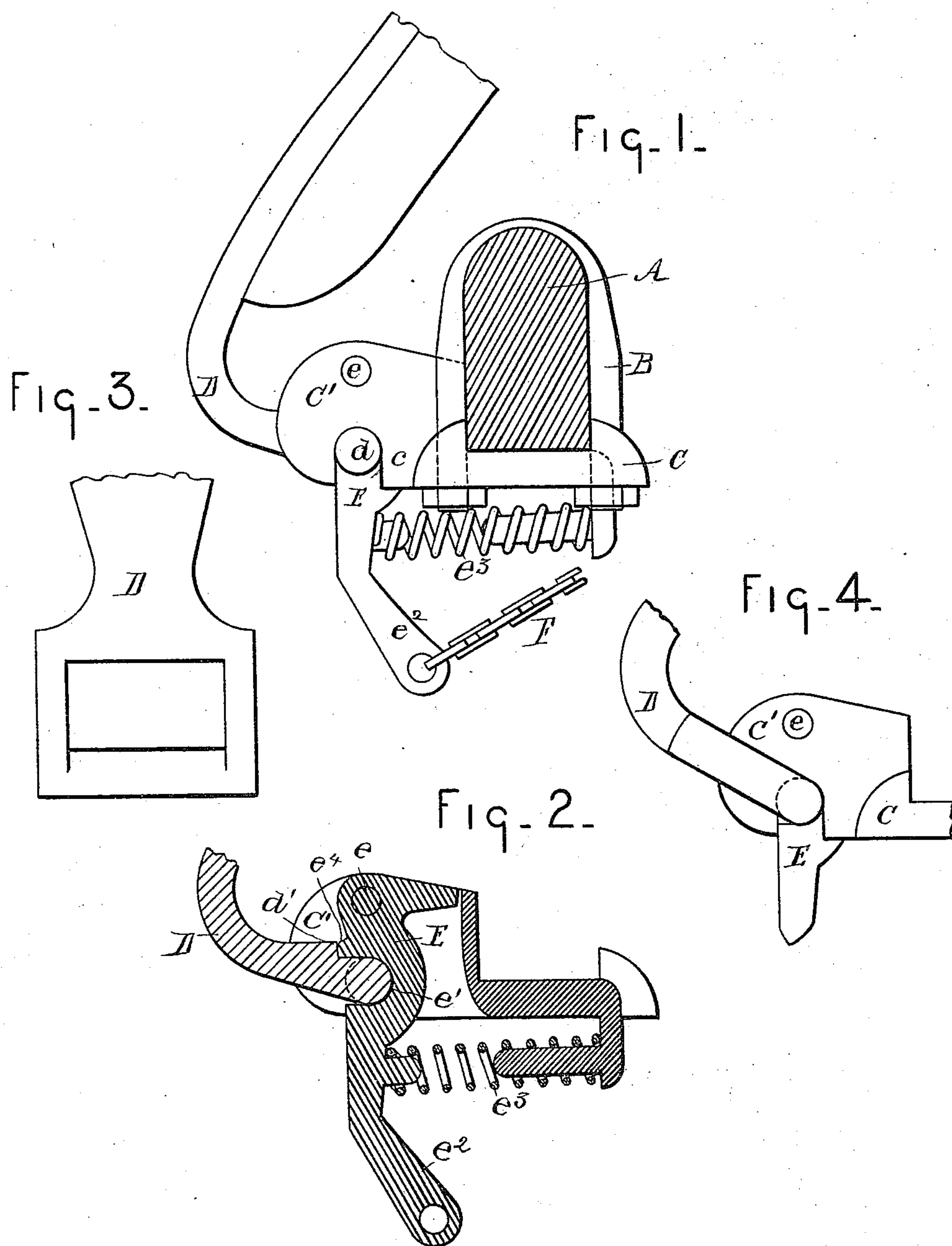


(No Model.)

G. W. BUSCH & J. W. JOHNSTON.
THILL COUPLING.

No. 441,131.

Patented Nov. 25, 1890.



WITNESSES
C. J. Shipley
F. Clough.

INVENTORS.
George W. Busch
James W. Johnston
By Wells W. Leggett & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE W. BUSCH AND JAMES W. JOHNSTON, OF WALKERVILLE, CANADA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 441,131, dated November 25, 1890.

Application filed September 13, 1890. Serial No. 364,878. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. BUSCH and JAMES W. JOHNSTON, subjects of the Queen of Great Britain, residing at Walkerville, county of Essex, Province of Ontario, Canada, have invented a certain new and useful Improvement in Anti-Rattling and Shaft-Detaching Shackles; and we 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a side elevation, and Fig. 2 is a longitudinal section, of a device embodying our invention. Fig. 3 is a separate view of a variation in the form of the shaft-iron. Fig. 4 shows the said variation as it would appear in use.

It is the purpose of our invention to produce a combined non-rattling shaft-shackle and shaft-detacher, and to provide in connection therewith facilities for holding the shafts in a vertical position when so lifted.

In carrying out our invention, A represents the axle of a vehicle.

B represents ordinary clips for holding our shackle in place on the axle.

C represents the base-plate of our shackle; C', the ears, with which the shaft-iron engages, open at c beneath.

D is the shaft-iron, with trunnions d adapted to enter the slot c.

E represents a block pivoted at e to the ears C, and having a cavity e' to accommodate the shaft-iron and come in below to lock it in place.

e² is an arm or tongue projecting below, and e³ a spring back of it, which operates to hold the block in place below the shaft-iron, and at the same time forces the block snugly forward against the shaft-iron, thus crowding it against the ears, and prevents any rattling due to wear or lost motion in the parts, and so serves to constitute an anti-rattler.

d' is a shoulder on the shaft-iron, and e⁴ a corresponding shoulder on the block. These are so located that when the shafts are raised to a vertical position after the horse is detached the shoulder d' will force back the block E, its spring e³ yielding to the necessary extent, and as it rides over the shoulder e⁴ the block will spring back again, thus holding the shafts upright.

F is a cord or connection which is engaged with the arm or tongue e², and extends up into the vehicle within reach of its occupants. It is manifest that a pull on the said cord will at once draw the block E back from beneath the shaft-iron, and the latter will drop out from the opening c, and so detach the shafts from the vehicle, and can be used at any time the horse becomes fractious or in case of a runaway.

In Figs. 3 and 4 is shown a variation in the form of the shaft-iron, it being in the form of a loop instead of in the form of trunnions, at the place of its engagement with the ears C.

What we claim is—

1. The combination of the ears C, having open slots c in their lower edges, the latch-block E, pivoted at its upper end to the ears, provided at a point below its pivot with a locking-cavity e' to receive and lock the shaft-iron, and having a pendent arm e², a spring e³ acting on the pendent arm to press it forward, and a connection F, leading from the latch-block to draw the latter rearward, substantially as described.

2. The combination of the shaft-iron with a shoulder d', and the spring-actuated block E, with shoulder e⁴, whereby the shafts may be held upright, substantially as described.

In testimony whereof we sign this specification in the presence of two witnesses.

GEORGE W. BUSCH.

JAMES W. JOHNSTON.

Witnesses:

W. H. CHAMBERLIN,

M. A. REEVE.