J. VAN DYNE.

Car Coupling.

No. 40,966. Patented Dec. 15, 1863.

Fig. 1.

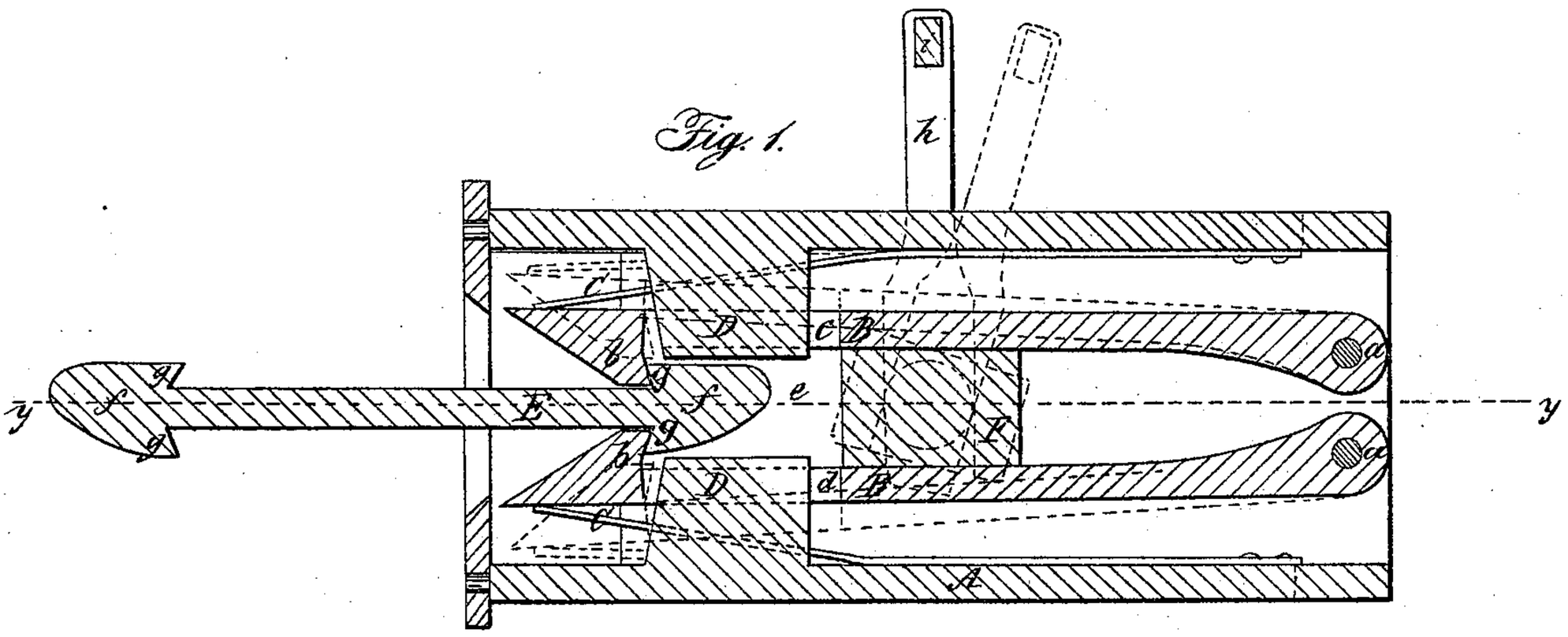


Fig. 3.

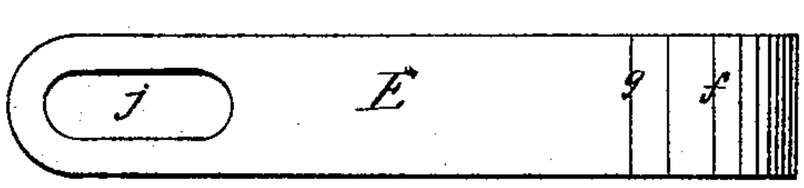
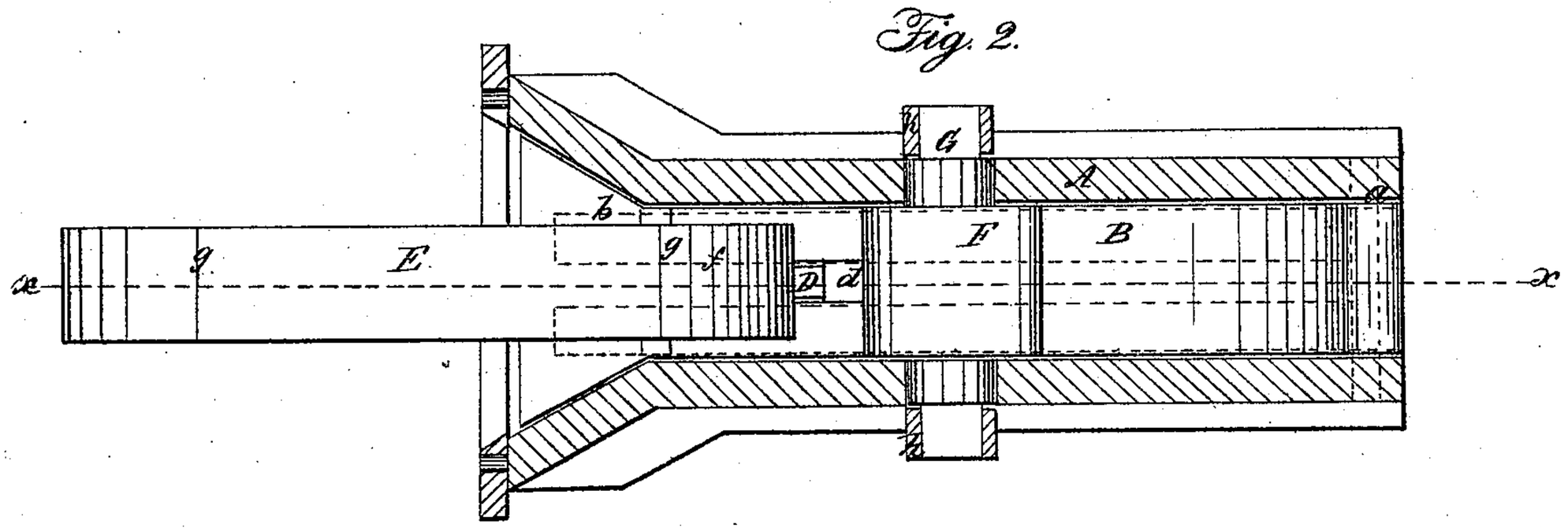


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN VAN DYNE, OF CRUM ELBOW, NEW YORK.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **40,966,** dated December 15, 1863.

To all whom it may concern:

Be it known that I, JOHN VAN DYNE, of Crum Elbow, in the county of Dutchess and State of New York, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2. Fig. 2 is a horizontal section of the same, taken in the line *y y*, Fig. 1; Fig. 3, a detached view of a link or shackle pertaining to the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in a car-coupling for which Letters Patent were granted to A. C. Baker and John Van Dyne, the Letters Patent bearing date September 2, 1862.

The object of the within description is to simplify the aforesaid patented car-coupling by dispensing with certain parts thereof, and at the same time render the coupling more efficient than it originally was.

To this end the invention consists in the employment or use of two jaws, having springs acting against them and a cam placed between them, the shaft of the cam having a lever-frame attached, and the draw-head provided with shackle-guides, all arranged as hereinafter fully set forth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a draw-head, which may be of the usual or any proper form; and B B are two jaws, the back ends of which work on two rods, *a a*, in the back part of the draw-head. The front ends of the jaws B B are pointed and made in hook-form, as shown at *b* in Fig. 1, and each jaw has a spring, C, bearing against its outer surface, said springs having a tendency to press the front ends of the two jaws toward each other. One of these springs is attached to the upper and the other to the lower part of the draw-head, as shown clearly in Fig. 1.

D D represent two guides, one of which is attached to the upper part of the draw-head, and extends vertically down therefrom, and passes through a slot, *c*, in the upper jaw, B. The other guide projects vertically upward from the lower part of the draw-head, and passes through a slot, *d*, in the lower jaw, B. These guides perform two functions—to wit, they keep the jaws B B in a proper working position, and also serve to retain the link or shackle, so that the latter may be withdrawn from the draw-head when the jaws B B are forced apart. The upper ends of the guides D D, it will be seen by referring to Fig. 1, have a horizontal position, and the space *e* between them is sufficiently wide to admit of the head of the shackle passing between them.

The shackle E is provided with V-shaped heads *f*, having shoulders *g* at their back ends, which, when the shackle is secured in the draw-head, catch behind the hooks of the jaws B B, as shown in Fig. 1, the guides D D holding the shackle in a horizontal position, so that its outer and disengaged end may enter the draw-head of an adjoining car, the guides also preventing the shackle from falling in the draw-head when the jaws B B are forced apart to release the shackle.

F represents a cam, which is of square form, and is fitted between the two jaws B B. The shaft G of this cam projects through the sides of the draw-head, and has a lever, *h*, attached to each end of it, the upper ends of said lever being connected by a cross bar, *i*.

The cam F performs three functions—to wit, it keeps the jaws B B at a suitable distance apart, serves as a stop for the shackle E to strike against, and also serves as a means for forcing the two jaws apart in order to release the shackle.

The device, it will be seen, is self-coupling, as the shackle in entering the draw-head will force the two jaws B B apart, the latter being forced down by their springs C C when the shoulders *g* of the head *f* of the shackle have passed the hooks *d* of the jaws.

I would remark that the shackle E at one end may be provided with a hole, *j*, as shown in Fig. 3, so that the ordinary pin-coupling may be used on one car. Shackles of this kind may be kept on hand, so as to be applied when necessary.

When all the cars of a train are provided

with my invention, the shackles are of course provided at both ends with the V-shaped head *f*.

Having thus described my invention, I claim and desire to secure by Letters Patent, as an improvement upon my patent of September 2, 1862—

The arrangement of the cam F, jaws B, and and springs C with the guides D D, head A, and shackle E, in the manner herein shown and described.

JOHN VAN DYNE.

Witnesses:
ABM. DOTY,
JOHN W. VINCENT.