E. F. WELLS.

Car Coupling.

No. 45,288. Patented Nov. 29, 1864

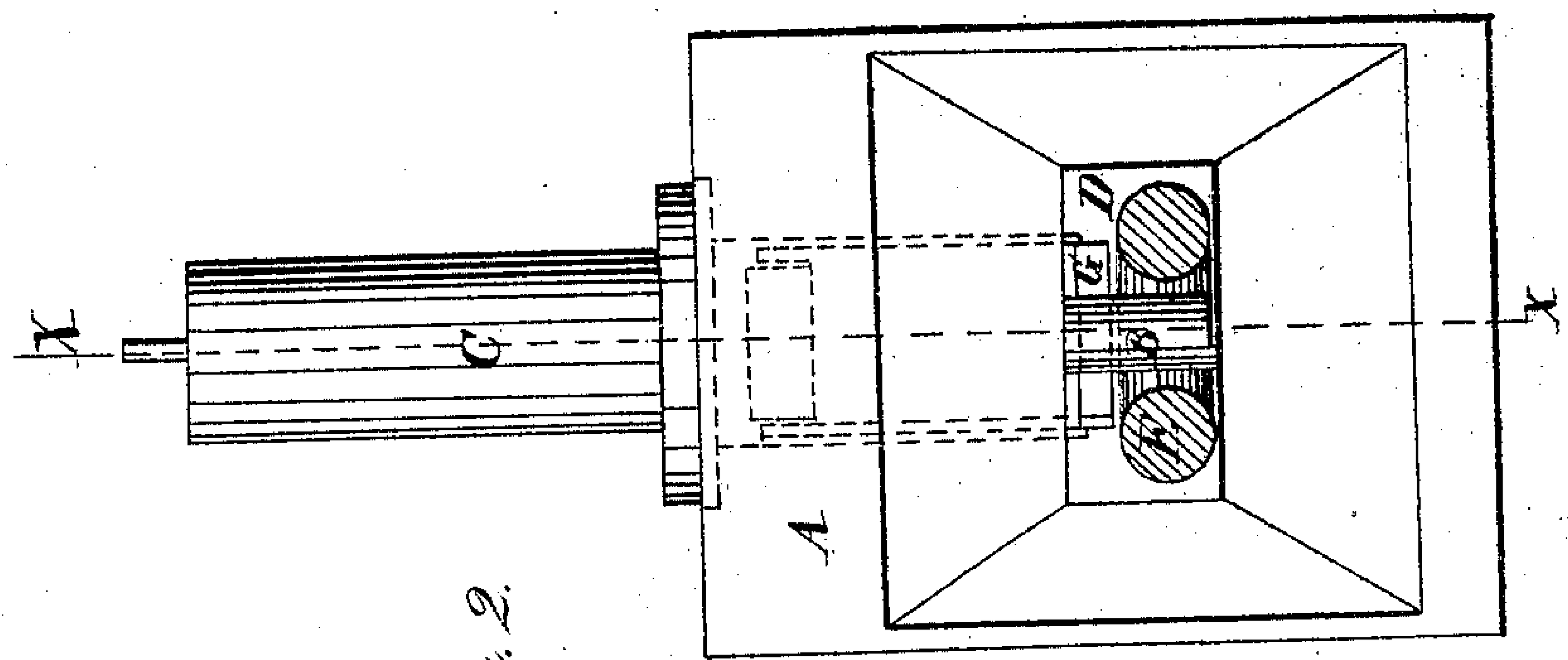
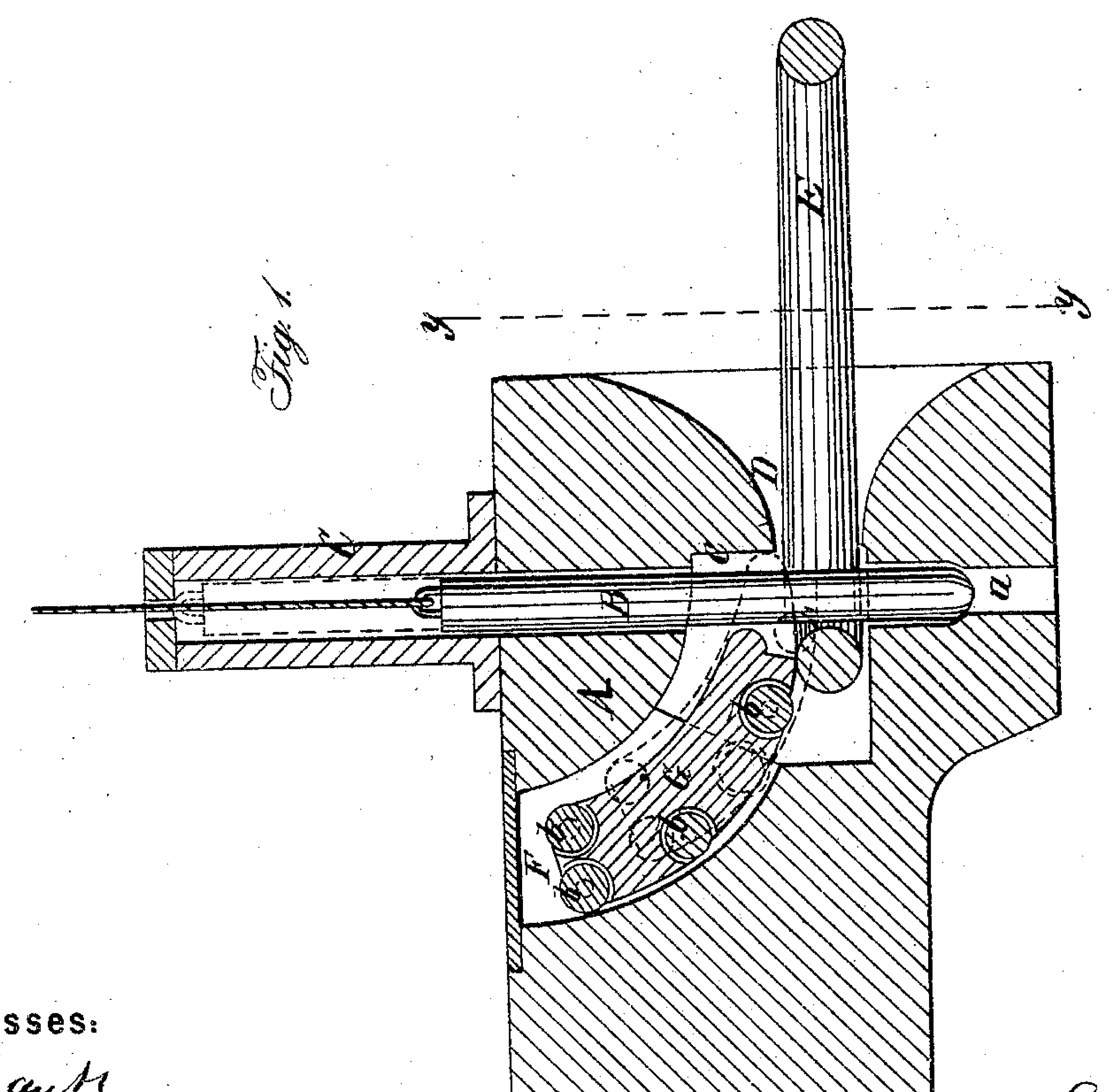


Fig. 2.

Fig. 1.



Witnesses:

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Henry Morris

Inventor:

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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

EDWIN F. WELLS, OF NEW YORK, N. Y.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 45,288, dated November 29, 1864.

To all whom it may concern:

Be it known that I, EDWIN F. WELLS, of the city, county, 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 thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming 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, a front view of the same, the link or shackle being in section, as indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved car-coupling of that class which are commonly termed "self-acting" or "self-coupling;" and it consists in the employment or use of a drop-pin and a curved or segment slide in connection with an ordinary link or shackle, all arranged in such a manner that when the drop-pin is raised the link or shackle will be released, and the pin retained in an elevated state by the segment-slide, the latter being forced back when the link or shackle of the draw-head of an adjoining car comes in contact with it, so as to allow the pin to descend through the link or shackle and form a connection. The segment-slide, when a disconnected link or shackle is in the draw-head, holds the former in a horizontal position, so that it may enter the draw-head of an adjoining car.

A represents a draw-head, which may be of wrought or cast iron, and secured to the car in the usual or in any proper manner.

B is a drop-pin which is fitted in a vertical tube, C, on the draw-head and works in a hole, *a*, in the same, as shown clearly in Fig. 1.

D represents the opening in the draw-head, which receives the link or shackle E, and through which opening the drop-pin B passes; and F is a curved opening, which extends backward and upward within the draw-head, the front end of F communicating with the upper part of the rear end of D.

G is a curved or segment slide constructed of metal and corresponding in shape to the opening F, in which the slide G is allowed to work freely. To insure the easy movement of G in F the former is provided with a series of friction-rollers, *b*, as shown clearly in Fig. 1.

The slide G, when the pin B is raised, has its front end bearing against a shoulder, *c*, at the upper side of the opening D, the gravity of the slide having a tendency to keep it in that position to support the pin B in an elevated state, as shown in red in Fig. 1. When the pin B is thus retained or held in an elevated position by the slide G, the draw-head A is ready to receive the link of the draw-head of an adjoining car, and as said link enters the draw-head it forces back the slide G, so that the pin B will drop through the link and form a connection between the two draw-heads.

The two draw-heads may be disconnected at any time by raising the pin B of either draw-head, and the disconnected link is retained in one of the draw-heads in a horizontal position in consequence of the slide G bearing on its back end. This is an important feature of the invention, as it insures the link entering the empty draw-head of an adjoining car.

I am aware that car-couplings have been provided with drop-pins and movable pin-supports so arranged that an entering link will drive back the support and cause the pin to drop through the link and form a connection; but in all of these cases, so far as I am aware, the slide has been actuated in connection with springs, the latter being liable to become deranged by use, and no provision made for the slide to hold the disengaged link in a horizontal position.

I would remark that the rear end of the opening D below the front end of the opening F serves as a bearing or stop for the link E.

By means of this coupling accidents caused by persons passing between the cars to connect them are avoided, while a very durable and efficient coupling is obtained.

I do not claim, broadly, the employment or use, in a car-coupling, of a drop-pin, and a pin-sustaining slide irrespective of the construction and arrangement of the same, as herein shown and described; but

I do claim as new and desire to secure by Letters Patent—

The drop-pin B, in combination with the segment-slide G, fitted in a curved opening, F, at the rear of the opening D, which receives the link E, all being arranged within the draw-head A, and with a link or shackle, E, to operate in the manner substantially as and for the purpose herein set forth.

E. F. WELLS.

Witnesses:
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