(No Model.) 2 Sheets—Sheet 1.

M. HERRENS.

CAR COUPLING.

No. 250,733. Patented Dec. 13, 1881.

Fig. 1.

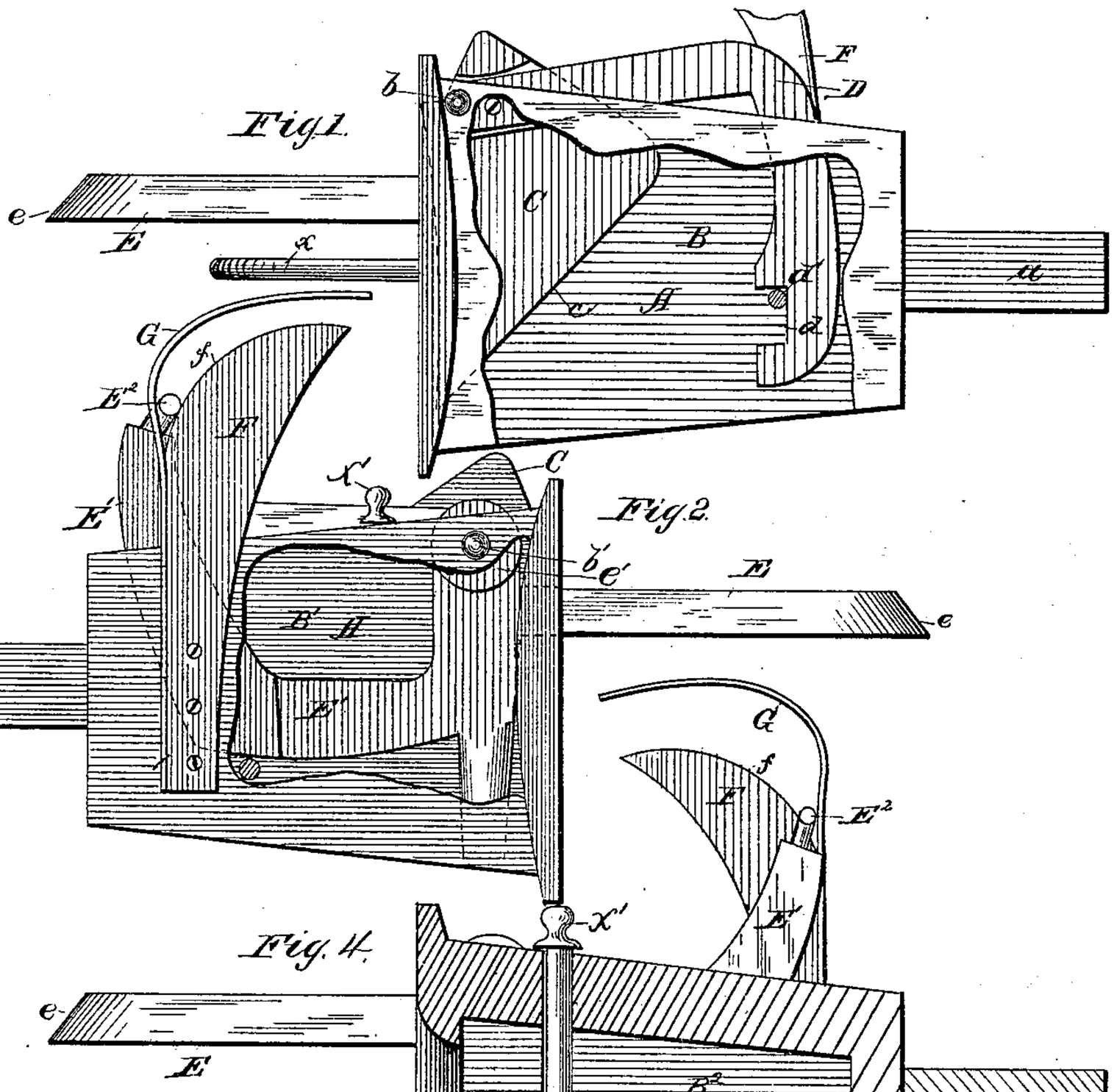
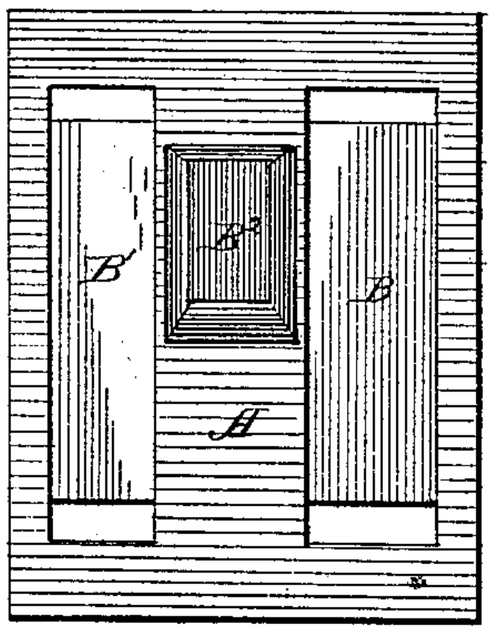


Fig. 2.

Fig. 4.

Fig. 3.



WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

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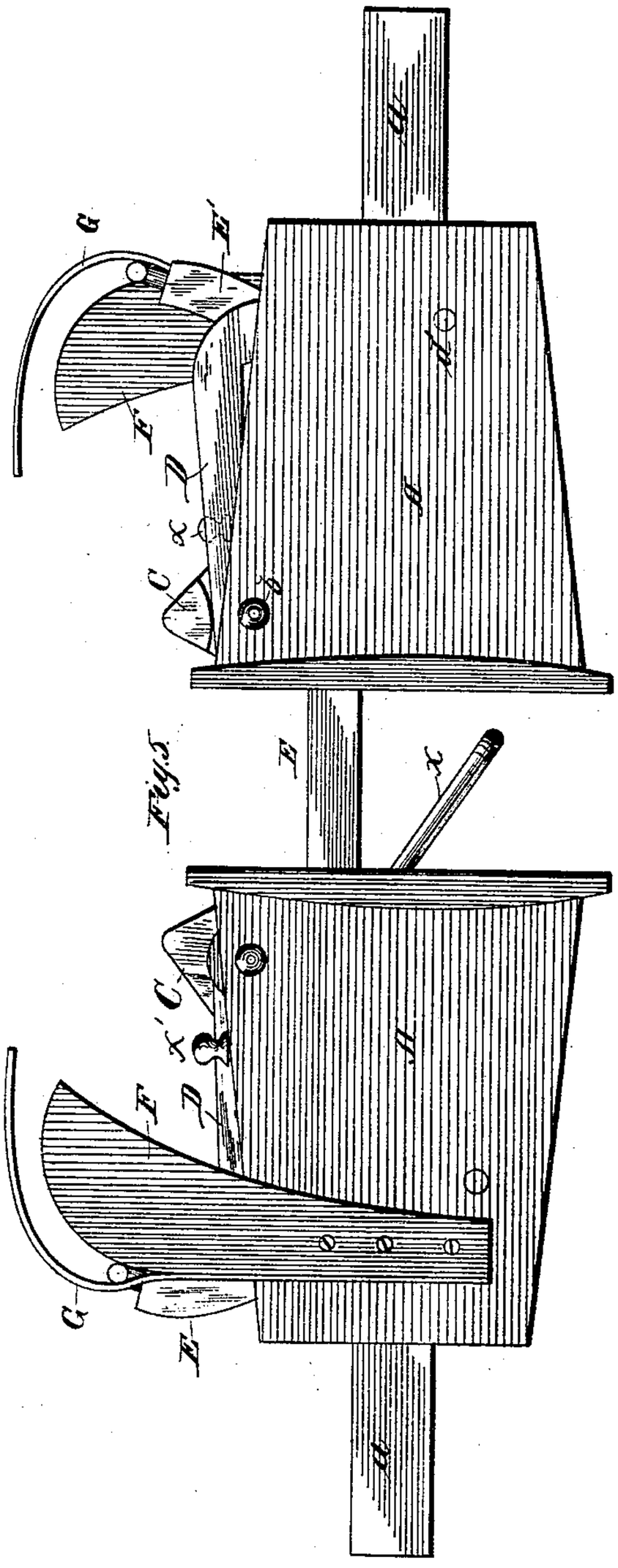

Fig. 5.

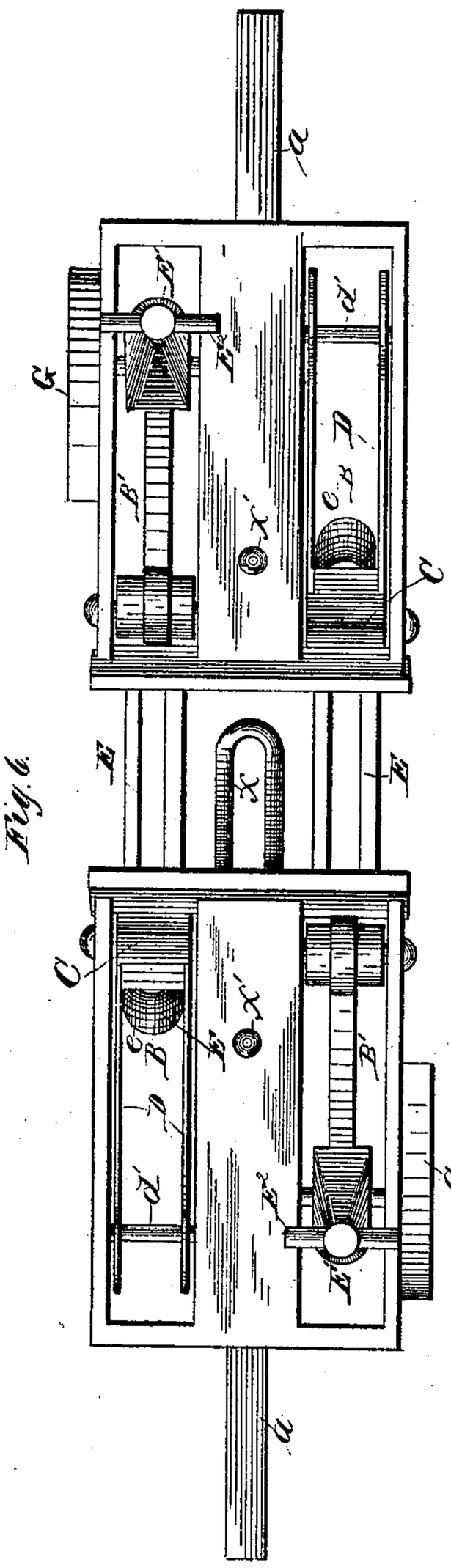

Fig. 6.

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UNITED STATES PATENT OFFICE.

MICHAEL HERRENS, OF ST. LOUIS, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 250,733, dated December 13, 1881.

Application filed July 2, 1881. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL HERRENS, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a new and useful device for coupling and uncoupling railroad-cars or the like; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

The invention is designed as an improvement upon the device patented to me September 30, 1879, and numbered 220,146; and the objects to that end are essentially, first, to provide auxiliary means for accommodating any form of link-coupling upon foreign cars; second, to divide the strain which ordinarily comes upon the pivot of the coupling-pin, and imparting the greater share thereof upon a separate bearing through brace-arms rigid with the pin; third, to provide for uncoupling the cars without slack in the connections by employing inclined bearings for the draft; and, fourth, in providing means for holding the coupling devices out of operation at will. To effect these ends I employ the mechanisms fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view, broken away to show the coupling-pin and brace-frame; Fig. 2, a similar view, showing the weighted coupling-link; Fig. 3, a face view of the draw-head, and Fig. 4 a section showing the auxiliary coupling means. Fig. 5 is a side elevation of two draw-heads interlocked, and Fig. 6 is a plan view.

To enable others skilled in the art to which the invention relates to make and use the invention, I will describe the construction and mode of operation of the same, reference being had to the accompanying drawings, in which similar letters of reference indicate like parts in all the figures, and in which—

A represents the draw-head, having the ordinary shank-rod, *a*, and having cast therein three chambers, B, B′, and B², as shown.

Pivoted in the chamber B, at *b*, is the coupling-pin C, having its rear surface, *c*, inclined downward and forward. This pin is received within the coupling-link of the adjacent car, and the downward incline *c* allows said link to be forced from its bearing thereon, even though the draft is in full operation, in contradistinction to those constructions in which the connecting devices have to be made slack by bringing the cars together before the uncoupling can be accomplished.

Secured to the pin C is a brace-frame, D, which extends backward and downward, its gravity, from its connection to the pin at a point adjacent to the pivot, serving to hold the pin in a normal vertical position. Formed in the forward surface of the brace-frame are notches *d*, which engage a cross-bar, *d′*, which extends across the chamber B. It will be observed that with this construction the chambers B and B′ are open from top to bottom, and that ice and snow are not allowed to collect therein to obstruct or defeat the efficient operation of the devices in severe weather. It will further be observed that the incline *c* allows the friction between the link and pin to be readily overcome, in order to effect the disengagement of the cars, and that the wrenching strain upon the pivotal pin *b* is distributed through the brace-frame D to the cross-pin *d′*.

Pivoted at *b′* in the chamber B′ is a link, E, having inclined or beveled point *e*, and the inner end surface of the same rounded, as shown at *e′*. The portion E′ of the link behind the pivot is much the heaviest, and serves, with a constant force, to hold the link in operative connection with the coupling-pin of the adjacent car. The portion E′ forms a standard, from which extends in either direction a cross-bar or lever, E², by means of which the link may be depressed or the pin elevated to accomplish the disengagement.

From one side of the draw-head extends a standard, F, having a rounded surface, *f*, and secured to this standard is a curved spring, G, which engages the lever as it is elevated, and holds it by friction until the spring-power is overcome, and while the lever is thus elevated the coupling-link is out of operation.

It often occurs that it becomes necessary or desirable to couple with a single link car or cars of other constructions belonging to other roads, and in such cases a disengagement of the ordinary devices has been resorted to to accommodate such car. I provide for such emergency by forming in the draw-head, preferably between the chambers B B′, an auxiliary link-chamber, B², having removable link *x* and coupling-pin *x′*. These devices are very necessary upon occasions such as hereinbefore mentioned, and they are formed in the device shown with a minimum of extra trouble, expense, or space.

From this description, in connection with the drawings, the operation of my device is obvious.

Various modifications may be made in details of construction without departing from the principle or sacrificing the advantages of my invention, the essential features of which are embodied in the means for uncoupling while under draft, means for relieving the pin-pivot from the volume of strain, auxiliary means for accommodating link-couplings of other constructions, means for preventing the accumulation of snow and ice, and means for automatically holding the coupling-lever elevated and the link out of operation.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The coupling-pin C, pivoted at *b*, and having downwardly and forwardly inclined bearing-surface *c*, combined with the brace-frame D, having notches *d*, and with the cross-pin *d′*, as and for the purposes specified.

2. The coupling-link E, having standard E′ and operating-lever E², combined with the standard F *f* and spring G, as and for the purposes set forth.

3. The combination of the pin C *c*, brace D *d*, link E *e e′* E′ E², standard F *f*, and spring G, with the draw-head having chambers B B′ and auxiliary chamber B², and with the cross-pins *d′*, as and for the purposes set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MICHAEL HERRENS.

Witnesses:

J. R. LITTELL,

H. CLAY SMITH.