(No Model.)

C. GATES.

CAR COUPLING.

No. 472,871. Patented Apr. 12, 1892.

Fig. 1.

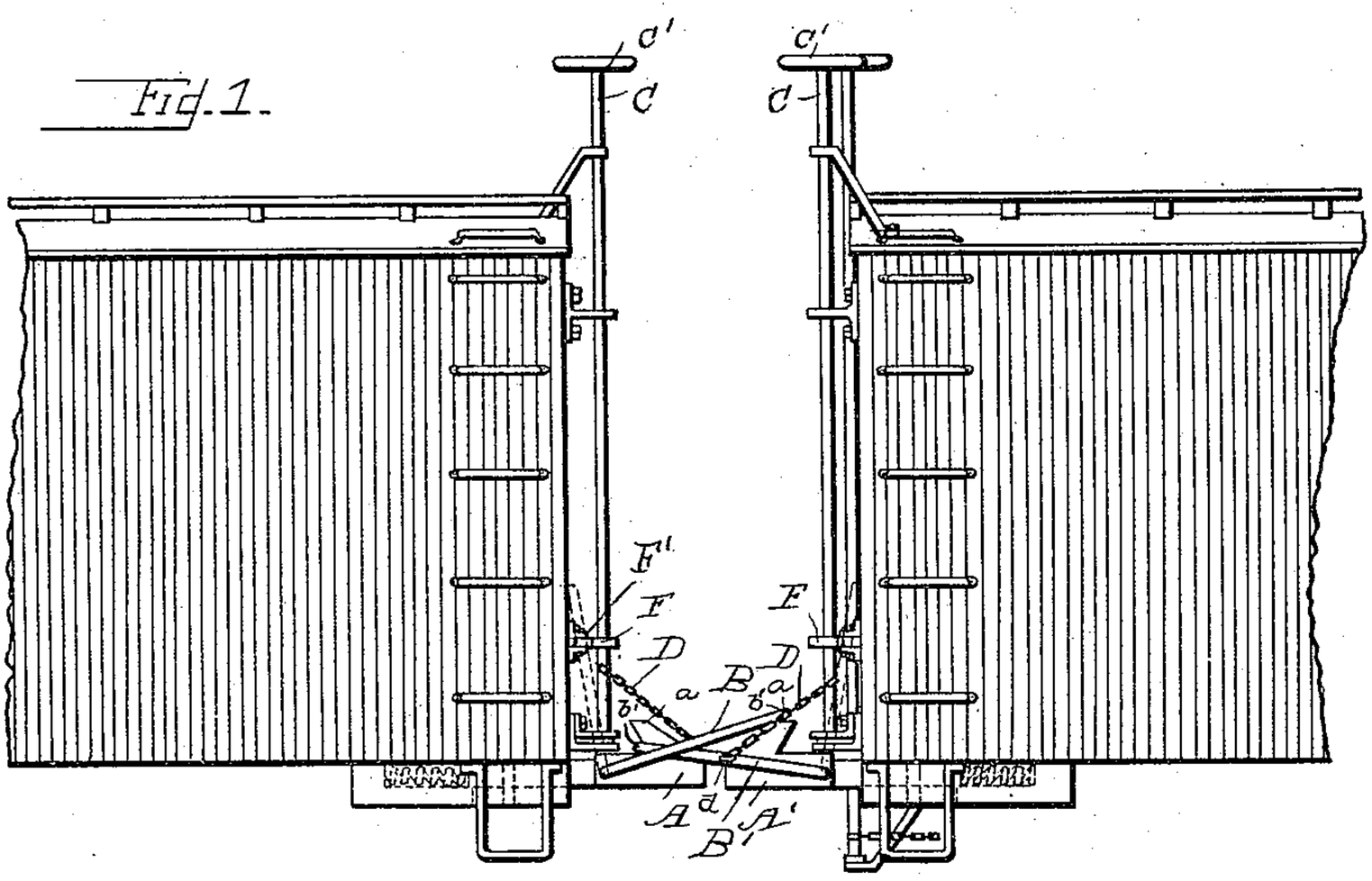


Fig. 2.

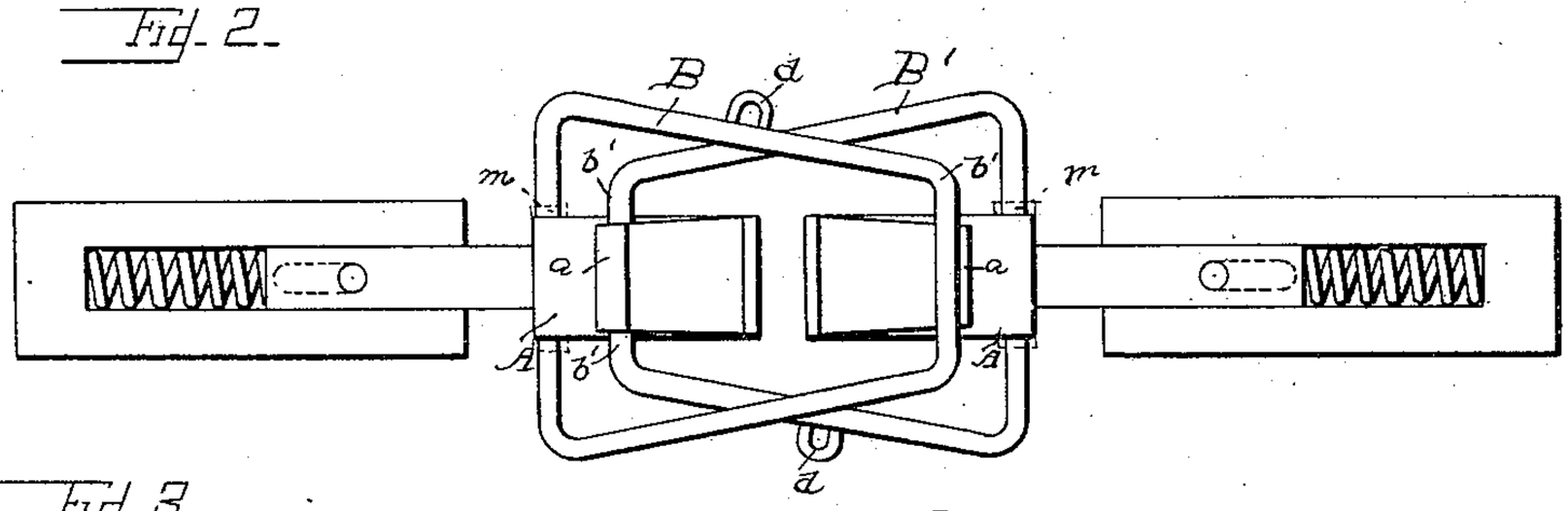


Fig. 3.

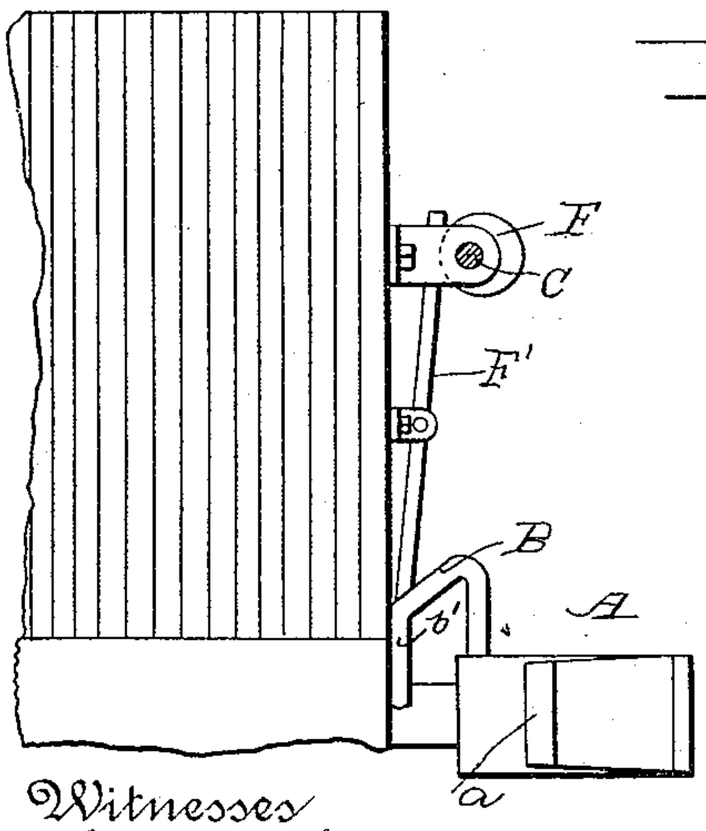
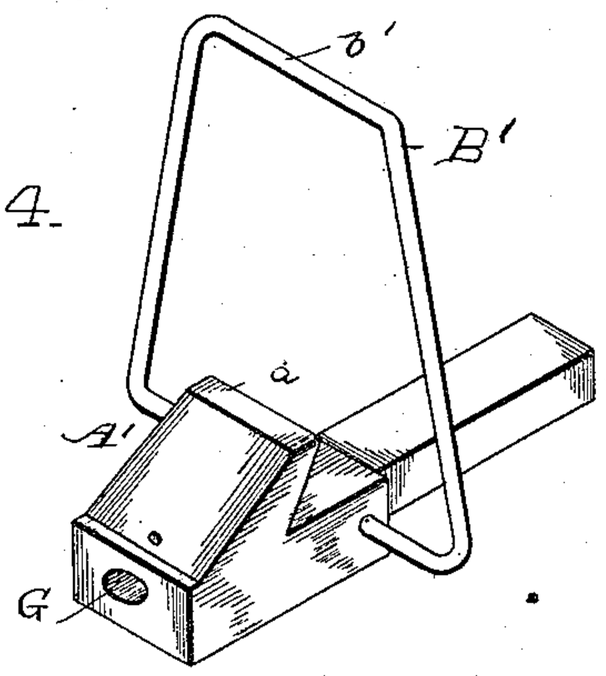


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CURTIS GATES, OF LYNDON, VERMONT.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 472,871, dated April 12, 1892.

Application filed November 30, 1891. Serial No. 413,573. (No model.)

To all whom it may concern:

Be it known that I, CURTIS GATES, a citizen of the United States, and a resident of Lyndon, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Car-Couplings; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side elevation illustrating the invention. Fig. 2 is a plan view. Fig. 3 is a plan view, partly in section, showing one half of the coupling and the uncoupling device; and Fig. 4 is a detail of one of the draw-heads.

This invention has relation to certain new and useful improvements in car-couplings; and it consists in the novel construction and combination of parts as hereinafter specified.

In the accompanying drawings, the letters A A′ designate the draw-heads of the respective cars, having each on its upper face an angular shoulder or projection *a*, standing at an acute angle to the surface of the head.

B B′ designate the coupling-links, which are shown as being of truncated triangular form, the transverse end portions of which are journaled or pivoted at their central portions in their respective draw-heads. The shorter transverse bar *b′* of either of the links is adapted to engage the angular shoulder *a* of the opposing car to effect the coupling.

C is a vertical rod provided with suitable bearings on the end of each car and having at its upper end a wheel C′, similar to a brake-wheel, or other suitable means for its operation. Connected to said rod or shaft is a chain or cable D, the opposite end of which is connected to the link at *d*, so that when said shaft is turned the chain or cable will be wound thereon and the links raised from engagement with the opposing head to effect the uncoupling. The shock or concussion of the cars in coming together is usually sufficient to cause one of the links to fall over the shoulder of the opposing head and effect the coupling; but if the slack of the chain or cable is wound upon the shaft C or if the cars come together gradually this would not take place, and I therefore provide each shaft with a cam F, which, when the shaft is turned, will come into engagement with a pivoted arm or lever F′, against which the link rests, and cause it to fall to effect the coupling.

If desired, a chamber G may be formed in the forward portion of each draw-head, adapted to receive the link of an ordinary pin-and-link coupling, said chamber being provided with the usual intersecting pin-aperture. The link may be provided with washers *m* on each side of the draw-heads for the purpose of holding them centrally in the bearings. The heads A A′ are formed on the ends of the draw-bars H, which are beveled and work loosely in guides I underneath the cars, buffer-springs J being provided therein.

Having described this invention, what I claim as new, and desire to secure by Letters Patent, is—

The car-coupling comprising the draw-heads, having each an angular acute shoulder or projection on its upper face, in combination with the links provided with loose bearings in their respective heads, either of said links being adapted to engage the shoulder or projection of the opposing head, and the vertical rods or shafts having bearings on the car ends and provided with the chain or cable connections with the respective links, pivoted arms or levers, against which the links rest when not in coupling position, and cams on the said vertical rods or shafts adapted to engage said arms or levers, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CURTIS GATES.

Witnesses:

EDMUND P. TOWNE,

C. L. GATES.