(No Model.)

J. M. IGOE.

CAR COUPLING.

No. 305,929. Patented Sept. 30, 1884.

Fig. 1

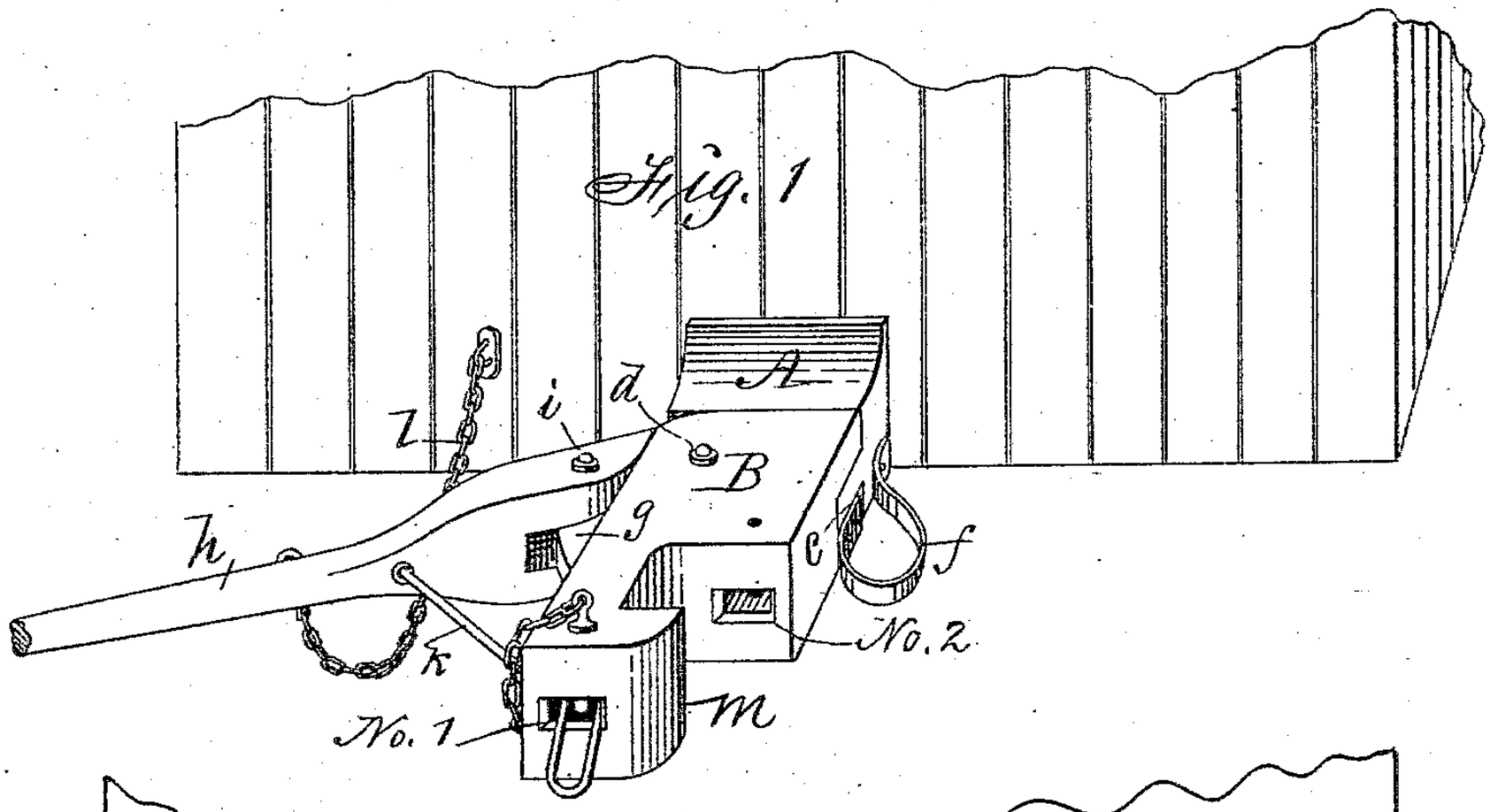
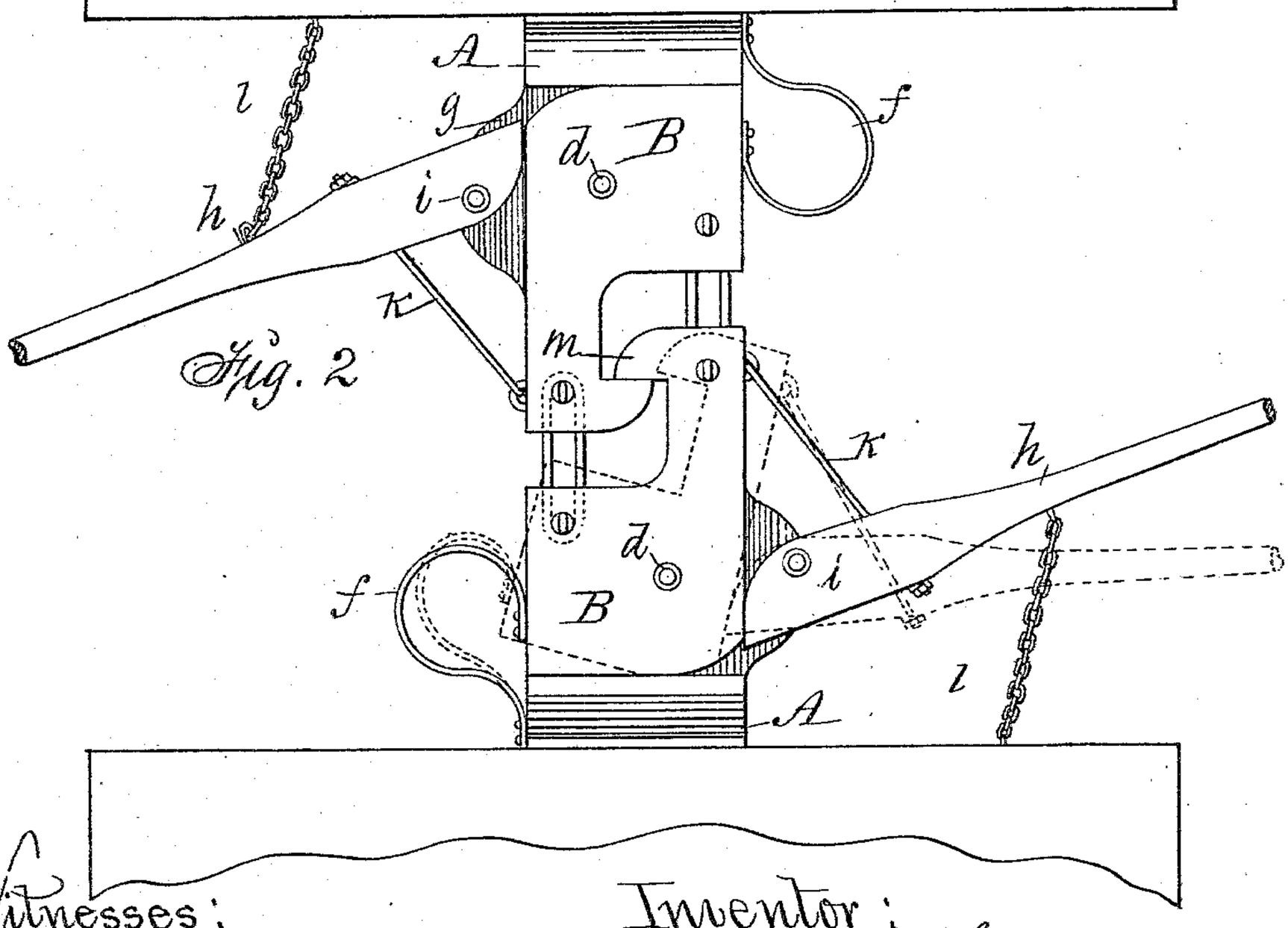


Fig. 2



Witnesses:
Orra C. Moore.
M. T. Anderson.

Inventor:
John M. Igoe,
By Thomas G. Orwig, Attorney

UNITED STATES PATENT OFFICE.

JOHN M. IGOE, OF FAIRFIELD, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 305,929, dated September 30, 1884,

Application filed December 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. IGOE, of Fairfield, in the county of Jefferson and State of Iowa, have invented an Improved Car-Coupling, of which the following is a specification.

The object of my invention is to facilitate the coupling and uncoupling of railway-cars, and to prevent the dangers, accidents, and damages to life and property incident to the defective construction and operation of coupling devices heretofore used.

It consists in the construction and combination of a jointed draw-head, a spring, and a compound lever with a car, as hereinafter fully set forth, in such a manner that cars provided with my coupling will be automatically coupled whenever they come together on a track, regardless of a varying elevation of the two approaching draw-heads, in such a manner that when a car jumps from the track or falls through a bridge it will be instantly by such a movement detached from a contiguous car or cars in a train; also in such a manner that any two cars in a train can be readily uncoupled by means of my compound lever without going between the cars; and also in such a manner that my coupling can be readily used, in combination with a draw-head of common form, to couple cars by means of common open links and straight pins.

Heretofore hooks have been combined with draw-heads and springs attached in such a manner that the springs would in their normal condition hold two operlapping hooks engaged; but my manner of forming jointed draw-heads that can be coupled with or without links is novel and greatly advantageous.

Figure 1 of my accompanying drawings is a perspective view of one of my couplings attached to a car. Fig. 2 is a top view showing two coupled together.

Together these figures clearly illustrate the construction, application, and operation of my complete invention.

A represents a draw-head fitted and secured to a car by means of screw-bolts, or in any suitable way. B is a hinged section at its front end.

c is a tongue or tenon formed on the front end of the body of the draw-head to enter a corresponding slot or mortise in the rear end of the hinged section.

d is a heavy wrought-metal bolt passed downward through perforations in the section B and the tenon *c* to hinge the two parts together. The front end of the tenon *c* and the rear ends of the bifurcated section B are rounded off at one of their sides and made square on their opposite sides, so as to allow the hinged section to turn laterally in only one direction.

f is a steel plate-spring fixed against the side of the draw-head in such a manner that it will in its normal condition press against the rear end of the hinged section B, and retain it in a straight line with the fixed draw-head.

g is a lateral extension formed on or fixed to the edge of the tenon *c*, on the opposite side of the draw-head relative to the spring *f*, for the purpose of supporting the fulcrum-pin of my compound lever.

h is a hand-lever bifurcated at its inner end and short arm to fit over the lateral extension or bearing *g*, to which it is pivoted by means of a bolt, *i*. The end of the lever thus pivoted is an eccentric that engages the rear end of the hinged section B, and thus becomes a lever of the first order, by means of which the force of the spring *f* can be overcome, and the hinged section turned laterally and brought into an angling position relative to the fixed draw-head and car.

k is a rod fixed to the front end of the hinged section, and adjustably connected with the lever *h* by means of a screw-thread and nuts, in such a manner that the said hand-lever *h* becomes a lever of the second order adapted to act upon the front end of the hinged section, at the same time that it acts as a lever of the first order upon the rear end of the same hinged section.

l is a chain attached to the long arm of the compound lever *h k*, for the purpose of retaining the lever *h*, the spring *f*, and the hinged section B in an abnormal position, as required to prevent a car from being coupled.

m is a hook formed on the front end of the hinged section B in such a manner that it will extend laterally to engage a corresponding hook, as shown in Fig. 2.

No. 1 is a cavity in the front face of the hook *m*, adapted to receive a common open link that can readily be detachably connected

by means of a pin passed downward through a perforation that intersects the cavity. No. 2 is a similar cavity in the front face of the hinged section B.

In the practical operation of my invention, when the front faces of the hooks *m* are pressed together, they will act reciprocally in pressing each other laterally in opposite directions so as to pass each other; and the instant they have passed each other the springs *f* will cause them to resume their normal positions relative to the cars and draw-heads, and thereby interlock and couple the cars together.

To uncouple I simply step to the side of the track and seize one of the compound levers *h k*, and press the long arm of the lever rearward relative to the draw-head and car.

I claim as my invention—

1. A jointed draw-head consisting of a body, A, and the hinged section B, having a hook, *m*, at its front end, and link-cavities Nos. 1 and 2, substantially as shown and described, for the purpose specified.

2. The draw-head A, the hinged section B, having a hook, *m*, the spring *f*, and a lever, *h*, and link-cavities Nos. 1 and 2, arranged and combined, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

3. The improved automatic car-coupling consisting of the draw head or bar A, having a link-cavity, the hinged section B, having a hook at its front end, and also a link-cavity, the spring *f*, and the compound lever *h k*, substantially as shown and described, and adapted to operate in the manner set forth, for the purposes specified.

JOHN M. IGOE.

Witnesses:
CHAS. P. SIPPEL,
VAN M. THOMAS.