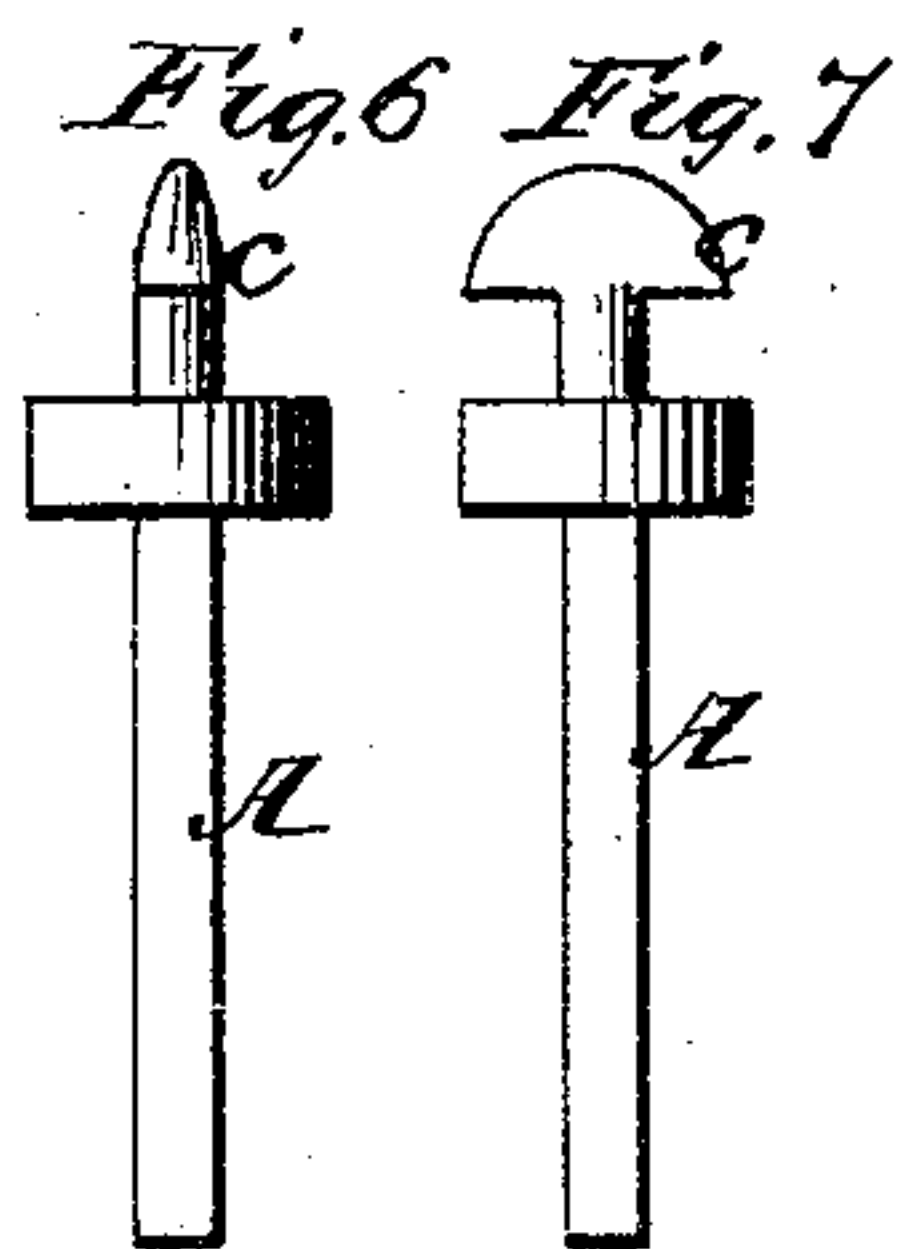
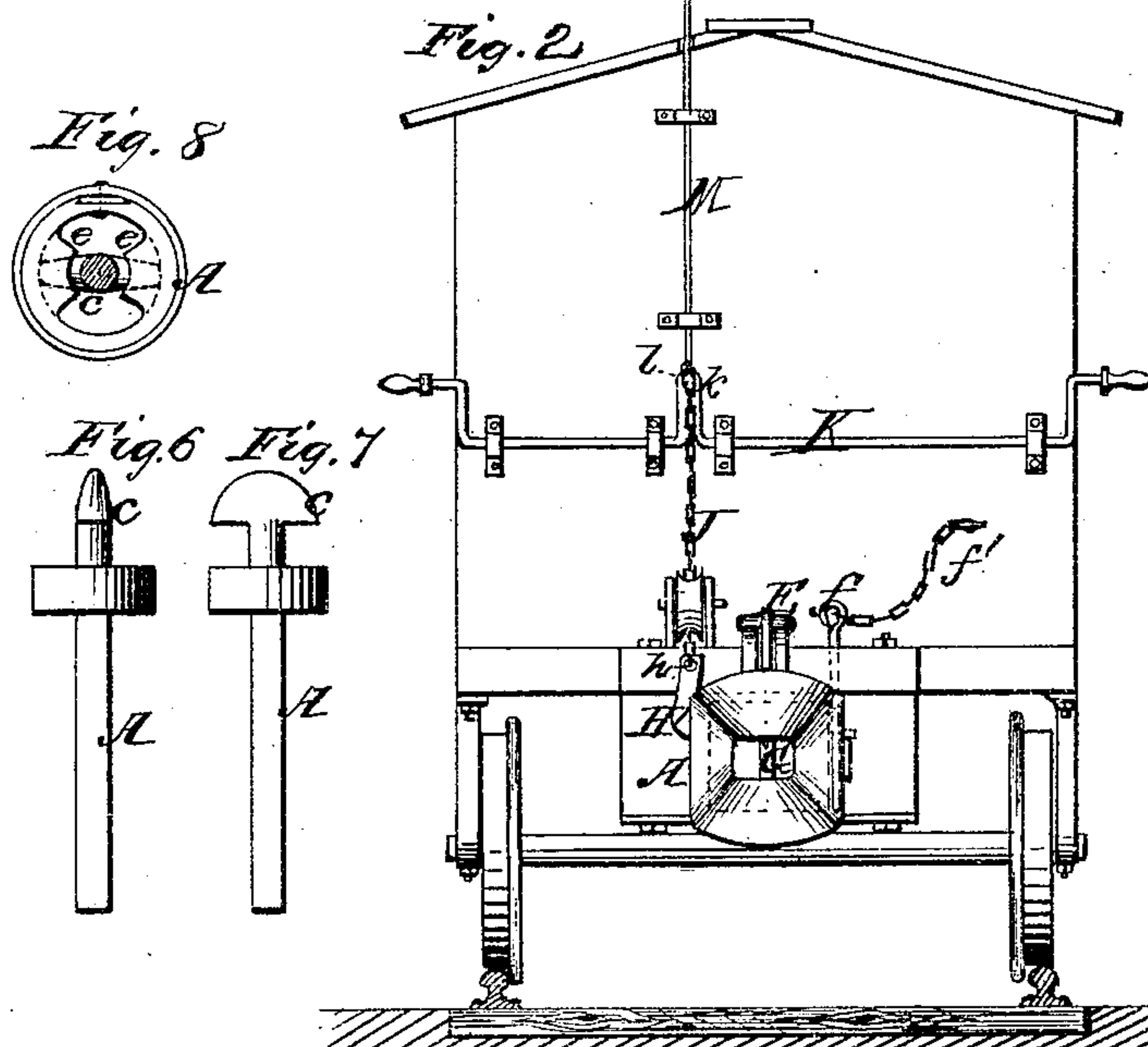
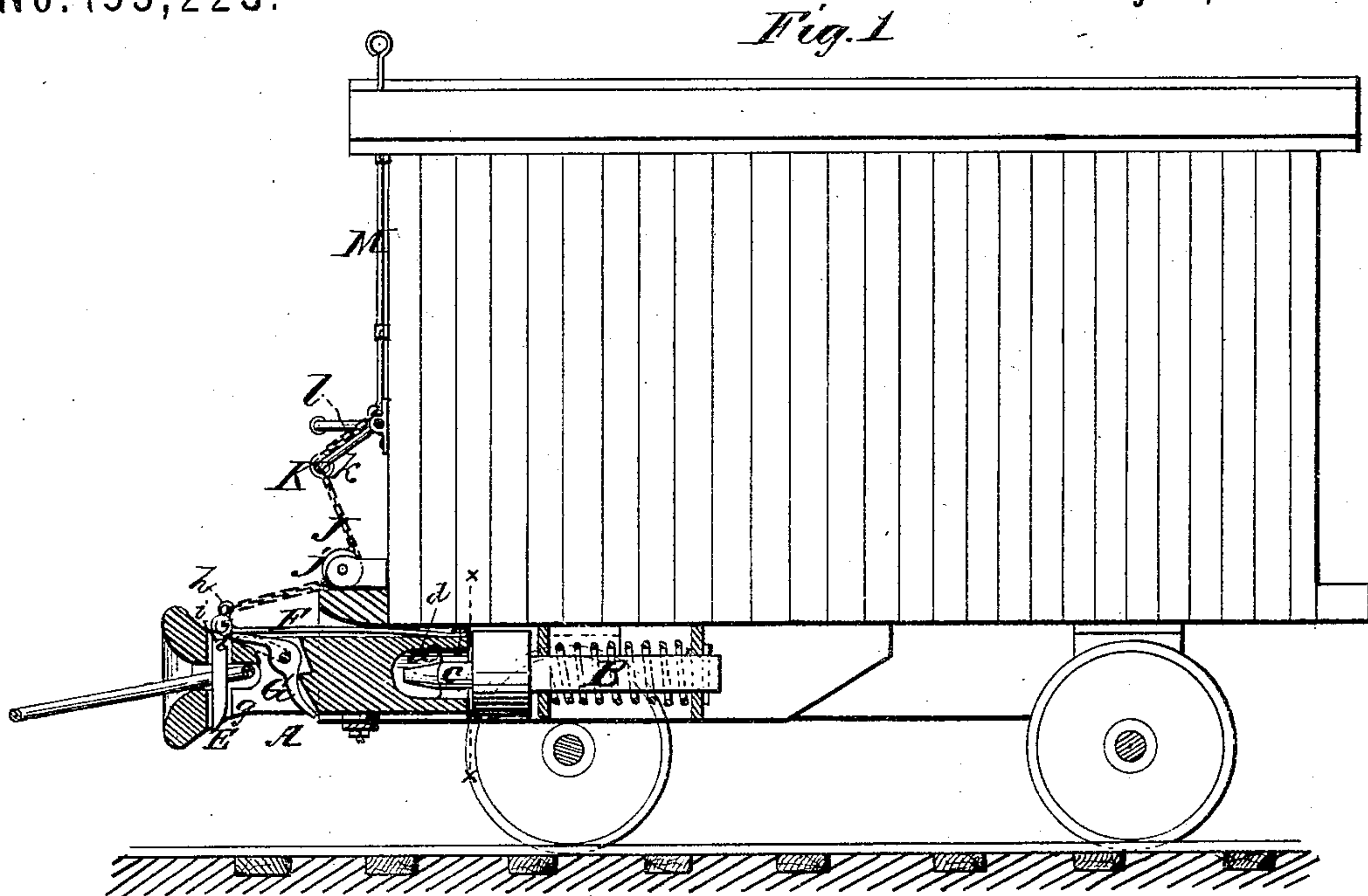


C. SCHNOOR.
Car-Couplings.

No. 153,223.

Patented July 21, 1874.



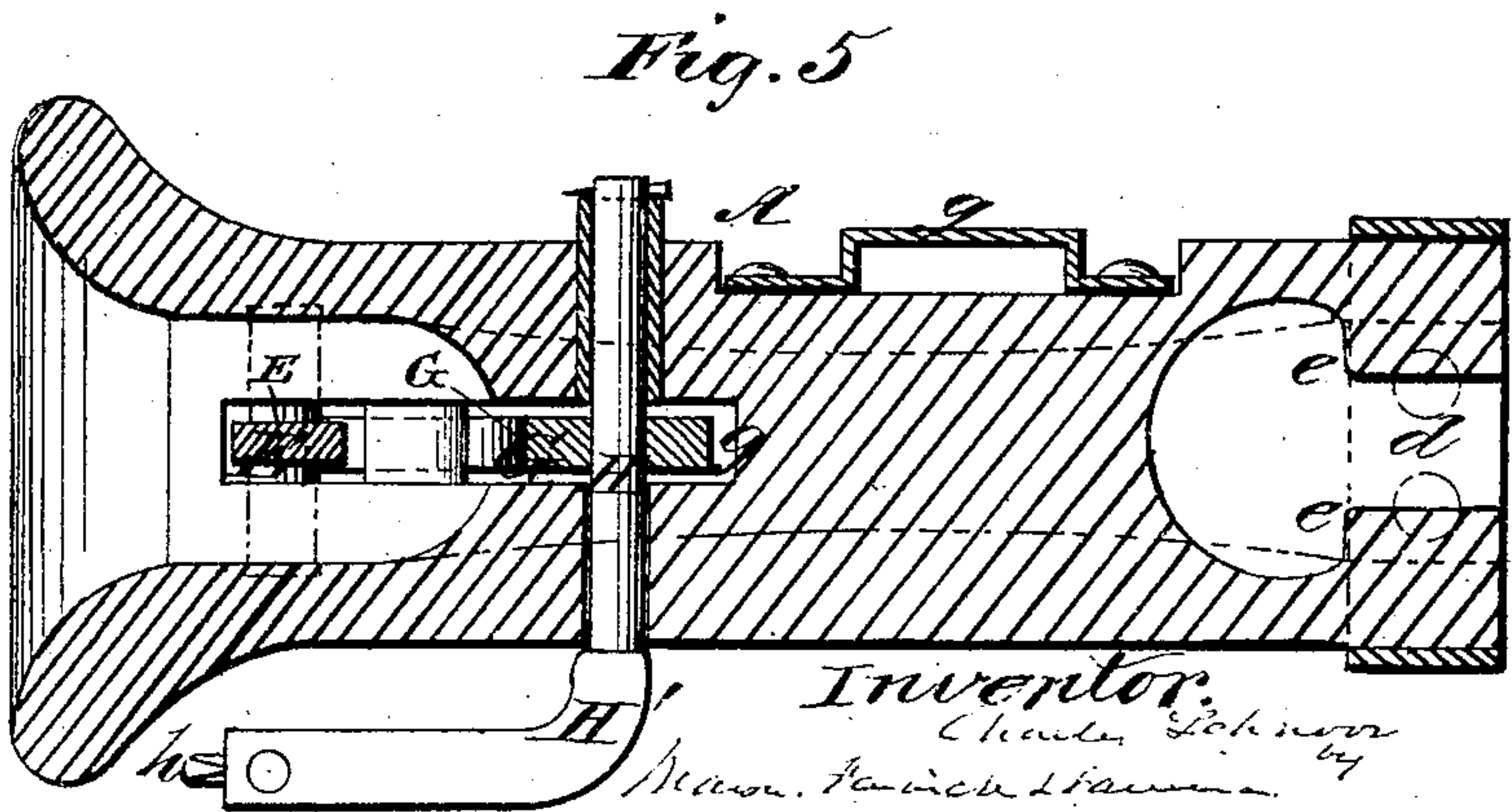
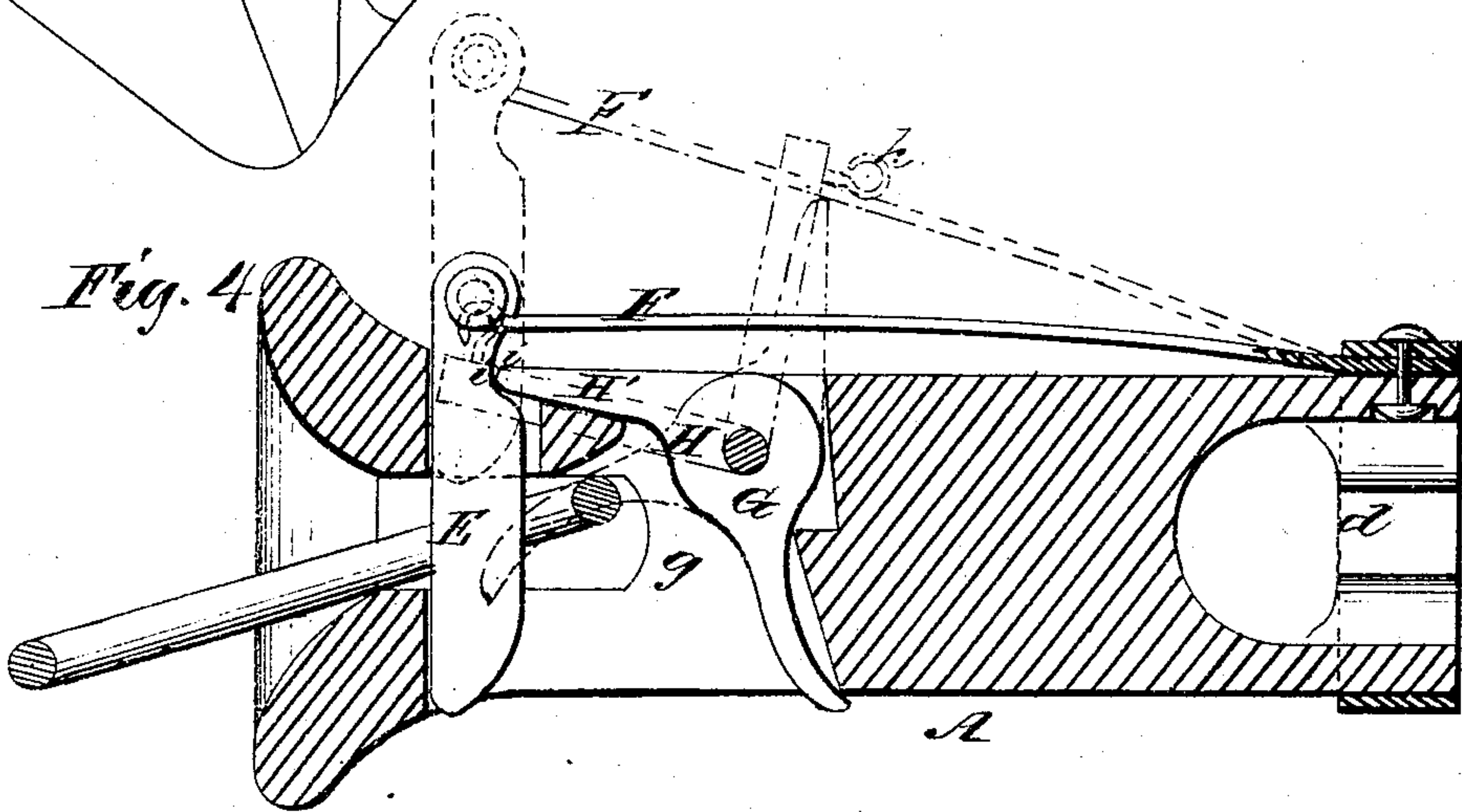
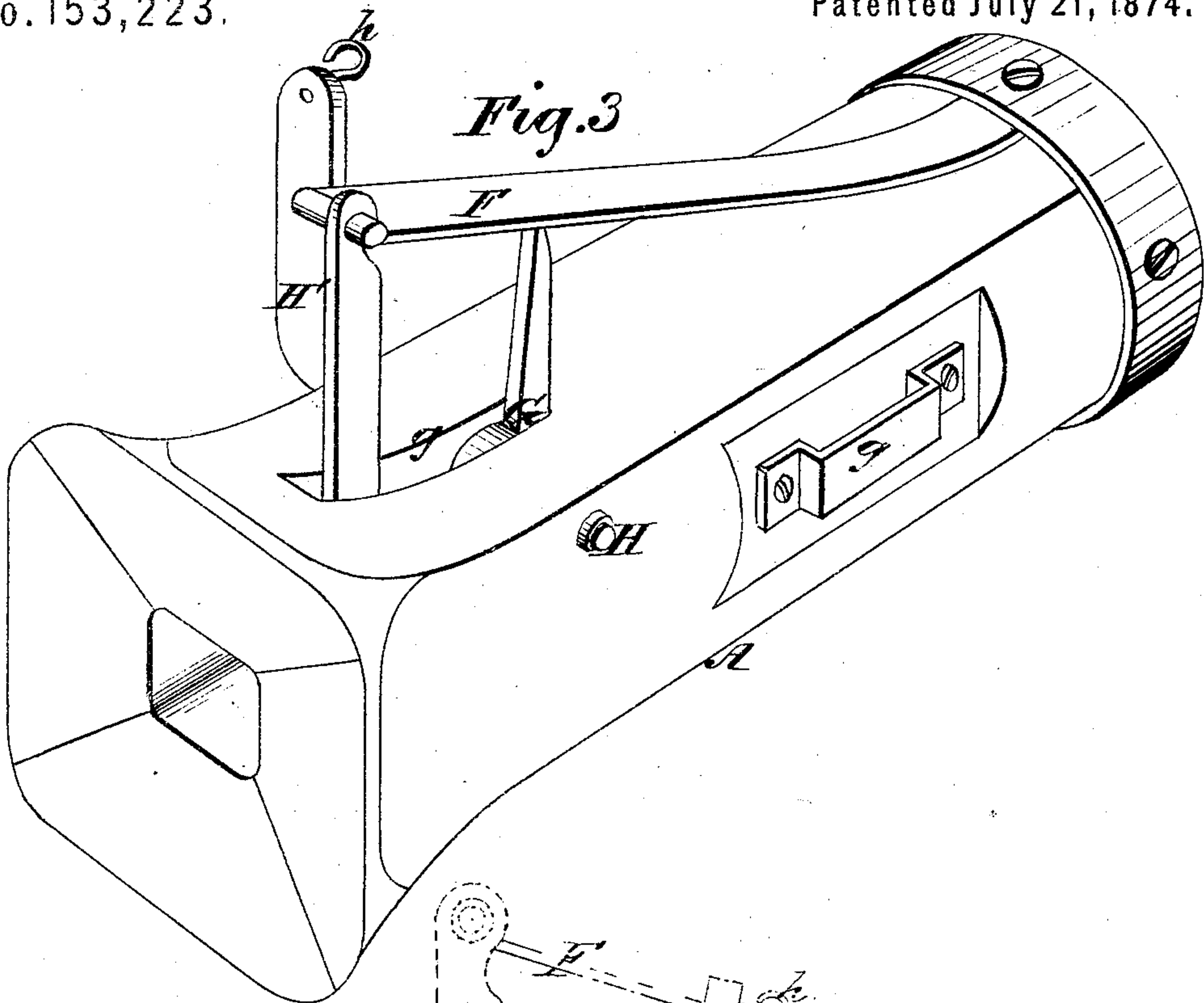
Witnesses:
James Martin Jr.
J. W. Campbell.

Inventor:
Charles Schwoor
by
Marion F. Wendt & Harnett

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Inventor:
Charles Schnoor
By Mason, Smith & Hannan

UNITED STATES PATENT OFFICE.

CHARLES SCHNOOR, OF DAVENPORT, IOWA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **153,223**, dated July 21, 1874; application filed April 23, 1874.

To all whom it may concern:

Be it known that I, CHARLES SCHNOOR, of Davenport, county of Scott, State of Iowa, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which--

Figure 1 is a longitudinal section of the car-coupling applied to a full box-car. Fig. 2 is a front view of the same. Fig. 3 is a perspective view of the draw-head or bumper. Fig. 4 is a longitudinal section; Fig. 5, a horizontal section of the same. Figs. 6 and 7 are views of the rear section of the draw-head, and Fig. 8 is a cross-section of the draw-head in line *x x*.

The nature of my invention consists in certain combinations of parts for lifting and holding up the coupling-pin; also, in a certain combination of a front section of the draw-head with a rear section, whereby the cars are allowed to separate automatically when they are running off the track.

To enable others skilled in the art to make and use my invention, I will proceed to describe it.

A represents a draw-head or bumper, fitted upon the car so as to press back upon a spiral spring, B, as represented, or in any well-known manner, when the cars come together. The draw-head is made in two sections. The rear section is constructed with an arrow-head coupling-iron, *c*, on its front end; the front section with a socket, *d*. This socket is made oblong in a direction at right angles to the widest part of the arrow-head or iron *c*, along a certain portion of its depth, and then is continued back with a concave form, and the diameter of the continued portion is equal to the length of the oblong portion of the socket. Thus constructed, two shoulders, *e e*, are formed between the oblong and the circular concave portion of the socket, as shown. The two sections of the draw-head are united together by inserting the arrow-head into the socket, and turning the front part one-quarter around in the circular part of the socket. To keep the parts thus coupled together, a pin hung by a chain, *f'*, which is attached to the car, is passed

down through the platform or cross-sill of the car-frame into a side loop or perforated ear, *g*, on the side of the draw-head. This pin prevents the front section turning, and, therefore, the arrow-head cannot get out of place. By withdrawing this pin the cars will be free to separate whenever the forward cars of a train make a sufficient turn to the right or left to cause them to run off the track. When such accident takes place the front section of the bumper, with the coupling-pin and attachments, will turn one-quarter round, and the oblong socket will come in line with the widest part of the arrow-head, and thus the front section will no longer be held to the arrow-head by the contact of the shoulders *e e* thereof, but will be free to slip over the arrow-head and pass along with the car to which it is fastened by the coupling-pin. E is the pin which couples the cars together. This pin is attached by its upper end to a long flat spring, F, which is fastened to the rear end of the front section of the draw-head. G is an elbow-lever, connected to a vibrating crank-pin, H H', which extends across the draw-head. The lever works up and down through a central slot, *g*, in the draw-head. The arm H' of the pin H is on the outside of the draw-head, and has a hook, *h*, on its extremity. The lever G occupies a position under the spring F, and when the pin is down the horizontal arm of this lever sits in a notch, *i*, of the pin, and prevents the pin from jumping up or rising out of the coupling-link I, as shown. For operating the pin to uncouple the cars a chain, J, is attached to the hook *h*, carried back of a pulley, *j*, on the sill of the frame of the car, and then up and attached to crank-arm *k* of a shaft, K. The shaft K has two handles, so that it may be turned from either side of the car by persons on the ground or platform. In order to afford opportunity for operating the coupling-pin from a position on the top of the car a chain, *l*, is connected to the crank-arm *k*, and carried to a vertically-sliding rod, M, as shown. This arrangement of chains, cranks, and rods places the coupling-pin under immediate and convenient control of the manager.

When the crank-shaft K is turned in the proper direction the elbow-lever passes under the spring F, and causes its front end to rise and

carry with it the coupling-pin E, and as soon as the upper part of the lever passes a little back of the center on which it turns the spring and pin will be held up firmly, and cannot again get back to their normal positions until released by the manager, or its lower arm is struck by the link which enters the draw-head. When the link enters it strikes the lower arm of the lever and forces the upper end forward of the axis on which it turns, and of course the power of the spring causes the coupling-pin to fall into the link and couple the cars automatically.

In practice I propose to employ a sliding spring or auxiliary bumper-rod in connection with the crank-arm of the elbow-lever, so that when two cars come together the pin will be lifted automatically instead of by the rods and chains.

I do not claim a vertically-sliding weight carrying a coupling-pin, and arranged in relation to an elbow-lever, to be raised by said lever when the link strikes the lever, as shown in the Letters Patent of M. Disney, dated November 29, 1872; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the front section of the draw-head, carrying the coupling mechanism, and having socket and perforated lug *g*, with the rear section of the draw-head, having the arrow-head *c* formed on it, and the removable pin *f*, substantially as described.

2. The combination of the coupling-pin E, the spring F, and the elbow-lever G, substantially as and for the purpose set forth.

3. The combination of the chain J, pulley *j*, and crank-shaft K, with the crank-shaft H H', the spring F, and the elbow-lever G, substantially as and for the purpose described.

4. The combination of the vertical rod M, the chain *l*, the crank-shaft K, the chain J, the pulley *j*, the crank-shaft H H', the spring F, and the elbow-lever G, substantially as described.

CHARLES SCHNOOR.

Witnesses:

HUGO SCHMIDT,
CHAS. J. HAGEMANN.