

(No Model.)

H. SOMMERFELD.
CAR COUPLING.

No. 395,361.

Patented Jan. 1, 1889.

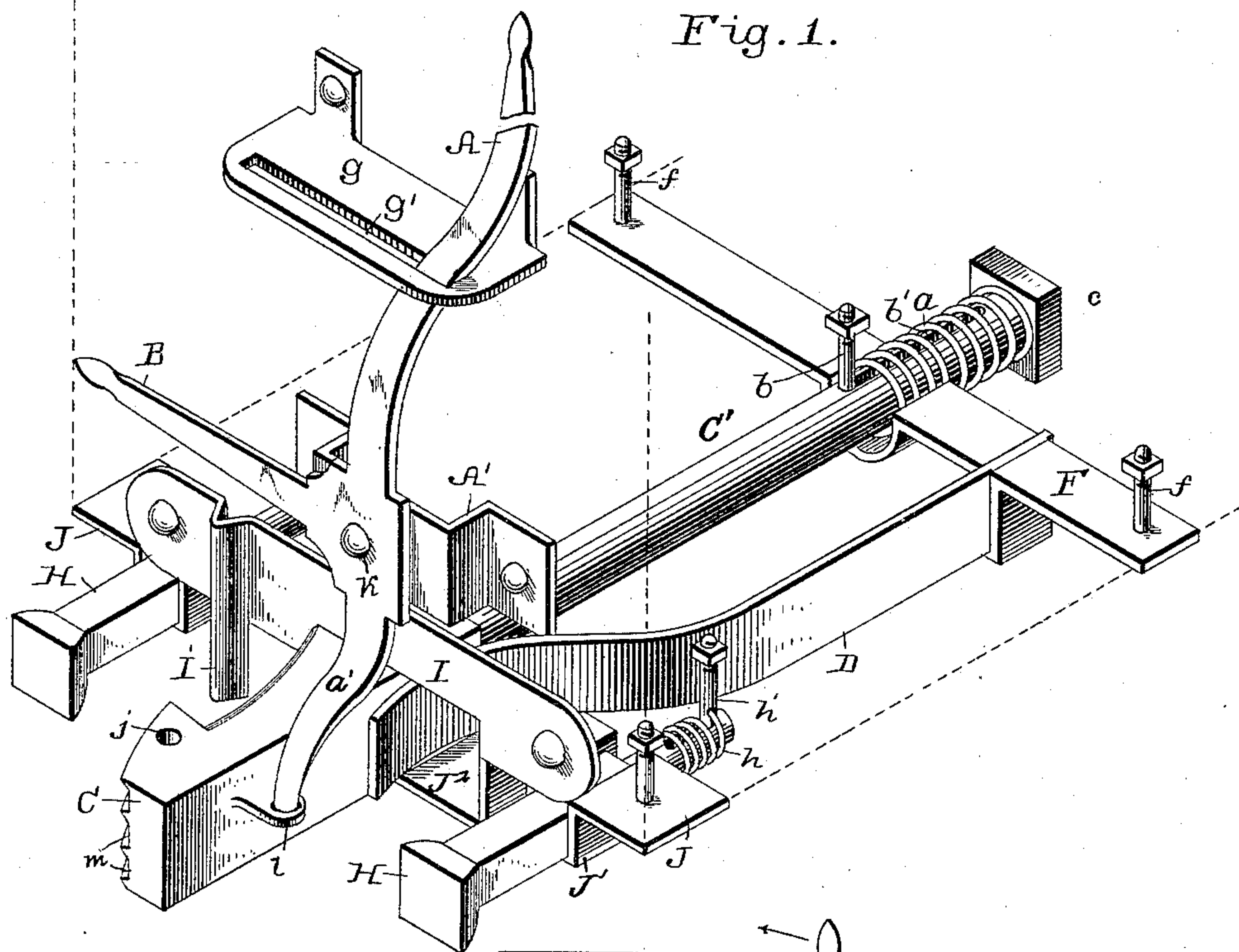


Fig. 1.

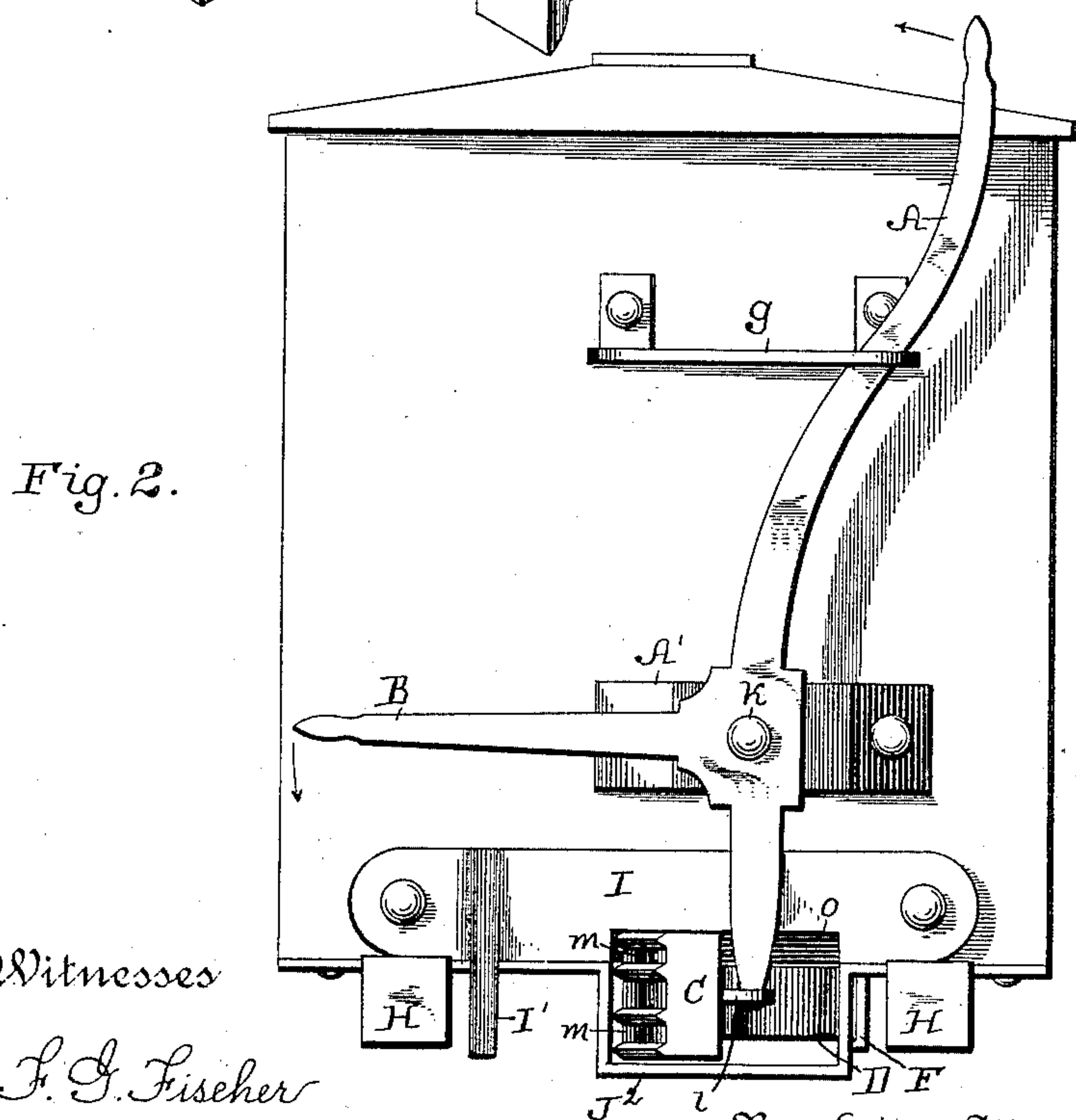


Fig. 2.

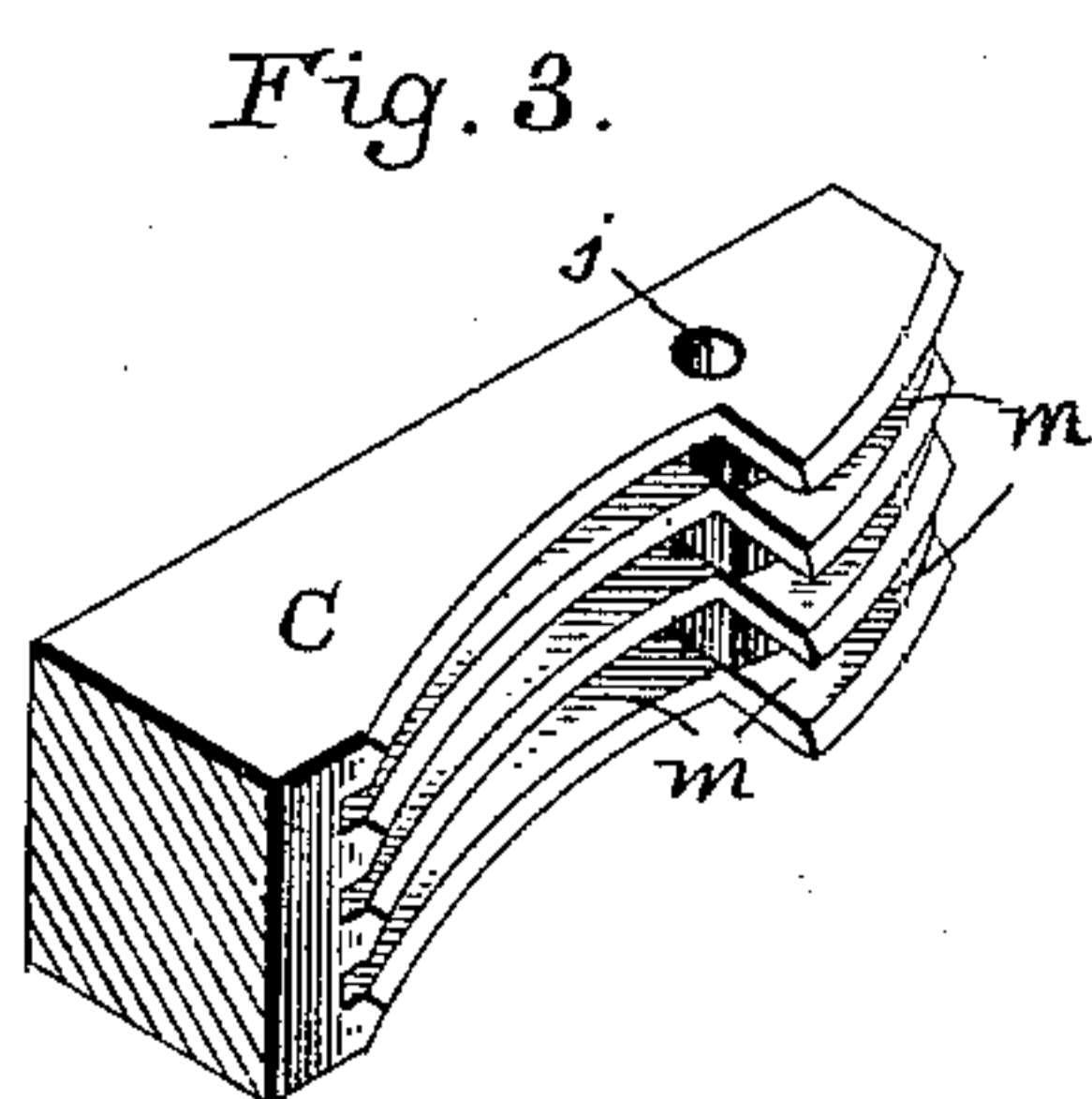


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

HEINRICH SOMMERFELD, OF CANTON, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 395,361, dated January 1, 1889.

Application filed September 19, 1888. Serial No. 285,797. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH SOMMERFELD, of Canton, McPherson county, Kansas, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to automatic car-couplings of that class employing interlocking spring-actuated jaws; and it consists of certain improvements in the construction of the jaws of such couplers, in the means for uncoupling them, and in certain other details of construction to be hereinafter pointed out.

Figure 1 is a perspective view of a car-coupling device embodying my invention; Fig. 2 a front elevation of the same attached to a car. Fig. 3 is a detached perspective view of one of the coupling-jaws.

The coupling-jaw C, which takes the place of the ordinary draw-head, is provided with a stem, C', extending beneath the car-body, to which it is secured. The forward end of the jaw is hooked to adapt it to engage with similarly-shaped jaws carried by other cars with which it is to be coupled, and the rear end of its stem is encircled by a coiled spring, a, arranged between a bolt, b, and the head c of the stem. This spring a prevents shocks and disastrous strains when the car is being started, the stem of the jaw being slotted at b' to permit a limited movement past the bolt b, which extends through such slot.

Bearing upon the jaw, and forcing it toward one side, is a spring, D, which, by preference, is flat, as shown in the drawings, and secured beneath the car by a strap or plate, F. The jaw is moved against the force of the spring to uncouple the cars by means of a lever pivoted at K to a bracket, A', and having an arm, a', which engages with a lug, l, carried by the coupler-jaw, an operating handle or arm, B, extending to the side of the car, and another operating handle or arm extending to the top thereof, the latter arm projecting through a slot, g', in a plate, g, secured to the car, by which it is guided and directed in its movements.

H H are the bumpers, provided at their rear ends with the springs h, and mounted in sockets J', formed in a plate, J, secured to the lower side of the forward end of the car. This plate has also a central depressed portion, J², forming a support for the coupling-jaw, and surrounding and protecting the spring D.

In order to prevent the two engaging-jaws separating vertically when the train strikes either a down or an up grade, I provide the inner or engaging face of each jaw with a series of grooves and ribs, m, which interlock when the cars are coupled, and thus prevent vertical sliding of the jaws upon each other. These grooves extend rearward from the end of the jaw preferably a distance about equal to the length of that portion of the opposing jaw which engages therewith.

In order to prevent the jaws from becoming uncoupled when going around sharp curves, or when the cars sway laterally, I provide stops against which the ends of the jaws are adapted to bear to prevent too great freedom of movement. The preferred form of such stops is that shown in the drawings, and consists of a rib, I', formed by folding a metal plate, I, secured to the front end of the car.

It will be seen that the above-described coupling device is automatic in its operation, and avoids the necessity of an operator entering between the cars in order to couple them, and that at the same time it may be uncoupled either from the top of the car or from the side thereof by means of the three-armed lever connected with the jaw.

The parts of this apparatus are simple in construction and are all of such nature as to be easily replaced should any one or more become broken or otherwise unfitted for use.

Having thus described my invention, what I claim is—

1. The combination of a coupler-jaw and a depending stop arranged to one side thereof in a position to prevent lateral movements of opposing coupler-jaws, and formed by folding a metal plate, I, substantially as set forth.

2. In combination with a car-coupler jaw and the bumpers, a plate, J, secured to the under forward end of the car, having sockets

J' for the bumpers, and a depressed portion, J², for the coupler-jaw, substantially as described.

5 3. In combination, a spring-actuated coupler-jaw, a plate, such as J, secured to the front end of the car and provided with sockets J' and a depression, J², and bumpers II, mounted in said sockets, substantially as described.

In testimony whereof I affix my signature 10
in presence of two witnesses.

HEINRICH SOMMERFELD.

Witnesses:

F. G. FISCHER,
A. A. HIGDON.