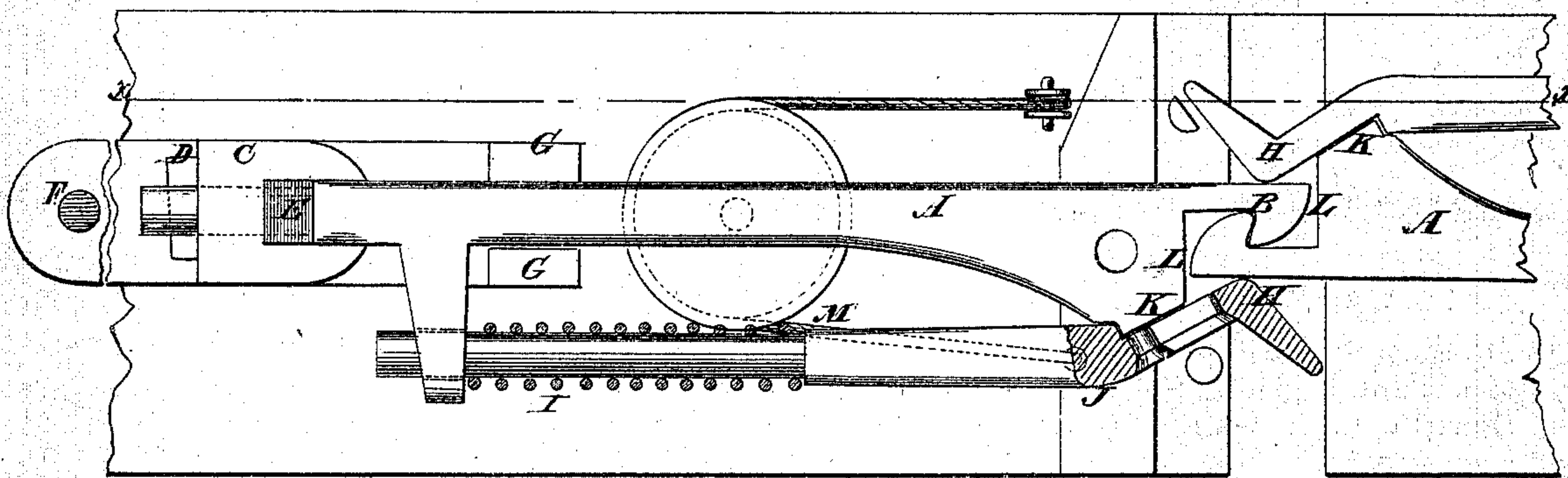


## Car-Couplings.

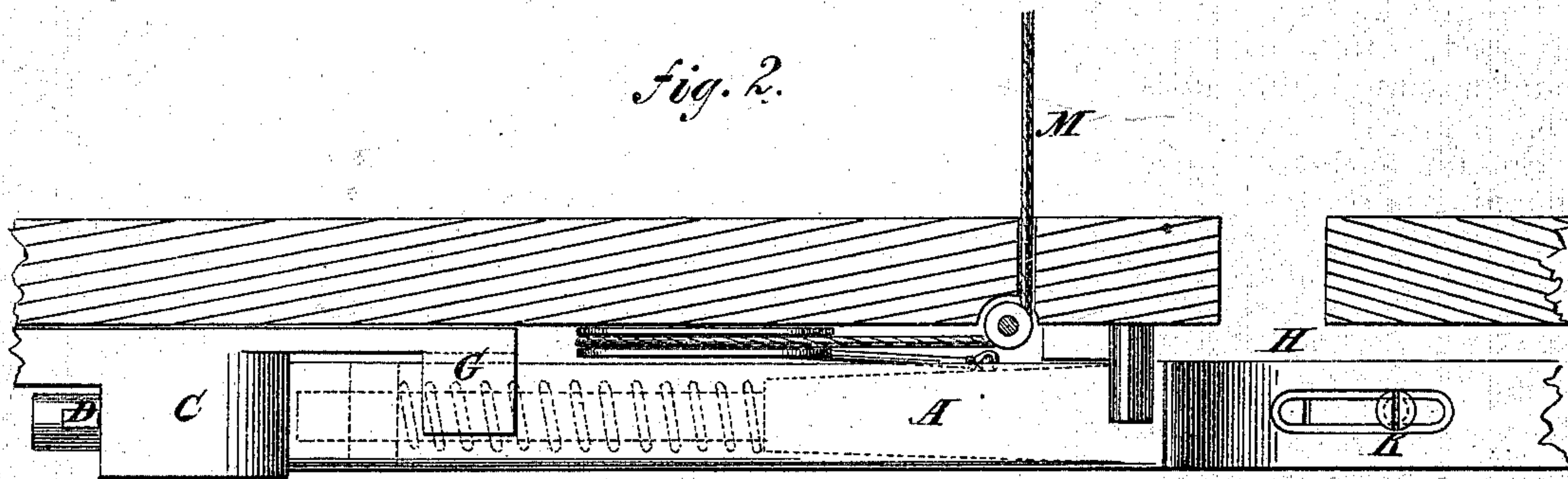
No. 146,814.

Patented Jan. 27, 1874.

*Fig. 1.*



*fig. 2.*



**WITNESSES:**

Justave Dietrich  
Sedgwick

**INVENTOR:**

INVENTOR:  
J. K. Forby  
BY  
Munnell

**ATTORNEYS.**



# UNITED STATES PATENT OFFICE.

HARBERT K. FORBIS, OF DANVILLE, KENTUCKY.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **146,814**, dated January 27, 1874; application filed December 1, 1873.

*To all whom it may concern:*

Be it known that I, HARBERT K. FORBIS, of Danville, in the county of Boyle and State of Kentucky, have invented a new and Improved Combined Car Coupler and Bumper, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

Figure 1 is a plan of the buffer and coupler inverted, with a part sectioned. Fig. 2 is a longitudinal section taken on the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the draw-bars, which hook together side by side, as at B. They are fitted at the rear end in a hanger, C, so as to slide a little, and secured, by a key, D, with a strong buffer-spring, E. This hanger is suspended from a strong plate extending a little beyond the hanger, and pivoted to the car-bottom at F, to swing laterally, and allow the draw-head the necessary movements sidewise for coupling and uncoupling, and to accommodate the side motions of the cars. At the front end of this plate it has a stud, G, projecting down each side of the draw-bar, to insure the alignment of the one with the other, so that the draw-bar will not cramp in the hanger when bumping. H is the cap on the draw-bar for sliding along in front of the hooked end of the draw-bar of the other car, and lock the hooks together, said cap being arranged to be forced back by the end of the draw-bar when coup-

ling, and forward after the hooks have engaged, by a spring, I.

In this example I have arranged the cap with a bend at J, and fitted it on an inclined rest, K, so as to slide obliquely against the hook, and be constantly pressed thereon to insure the hooks against working apart, and to prevent the rattling to which they are subject when not constantly pressed together. This arrangement is also to allow of widening the draw-bars at the bottom of the notch for the hook, and arranging the bottom to receive the end thrust of the other draw-bar, as at L, which, together with the arrangement of the draw-bar in a hanger pivoted to the car, and with a suitable buffer-spring, thus render the coupling a practical buffer.

For uncoupling, the caps are drawn back by a cord or chain, M, which may be conducted over suitable guide-rollers to a lever or other means of operating it upon the platform.

Spiral springs may be used, instead of the india-rubber springs here shown, in connection with the buffers.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The locking-caps H, arranged to slide obliquely against the coupling-hooks, and press them together, substantially as specified.

HARBERT K. FORBIS.

Witnesses:

J. W. PROCTOR,  
J. M. WALLACE.