

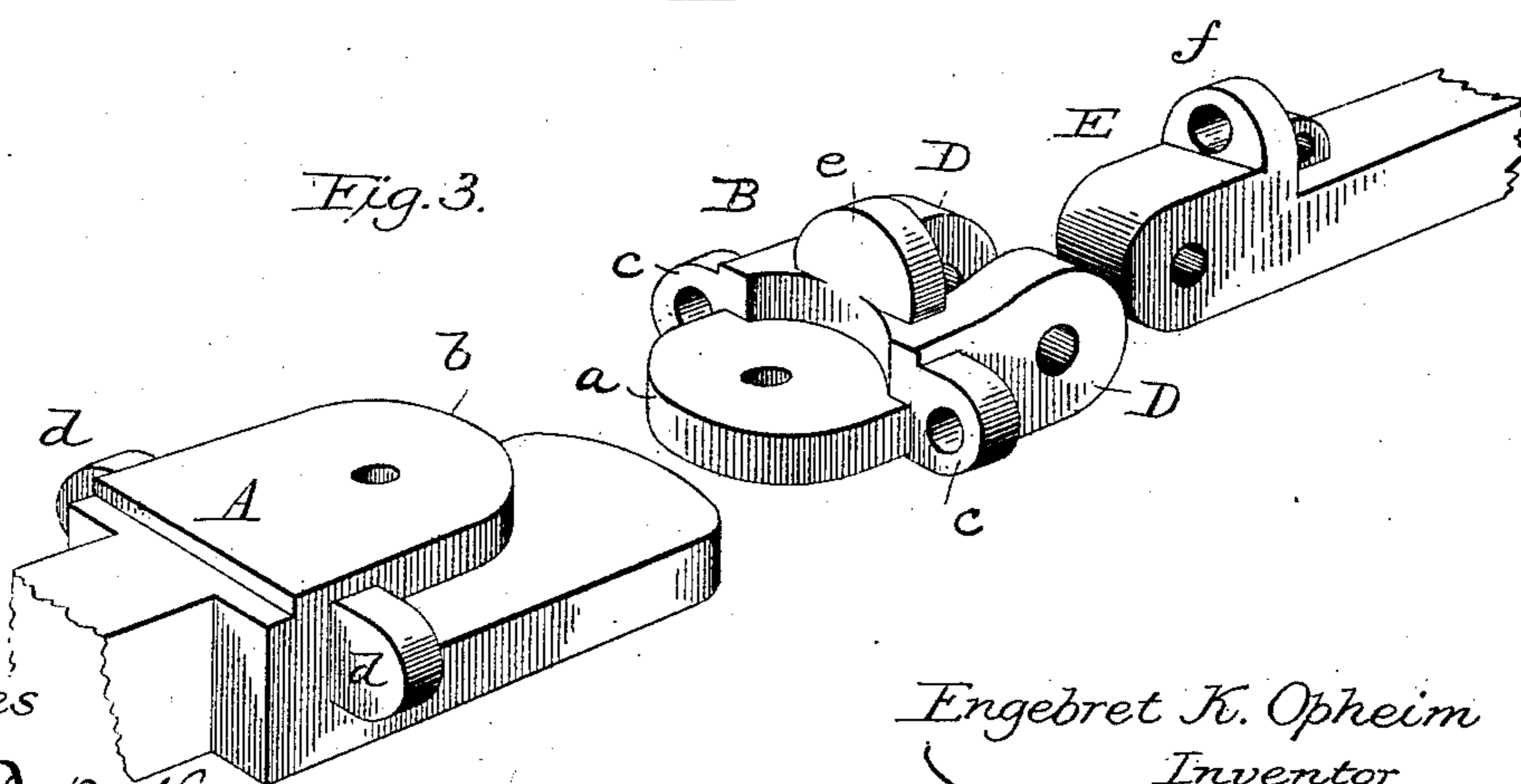
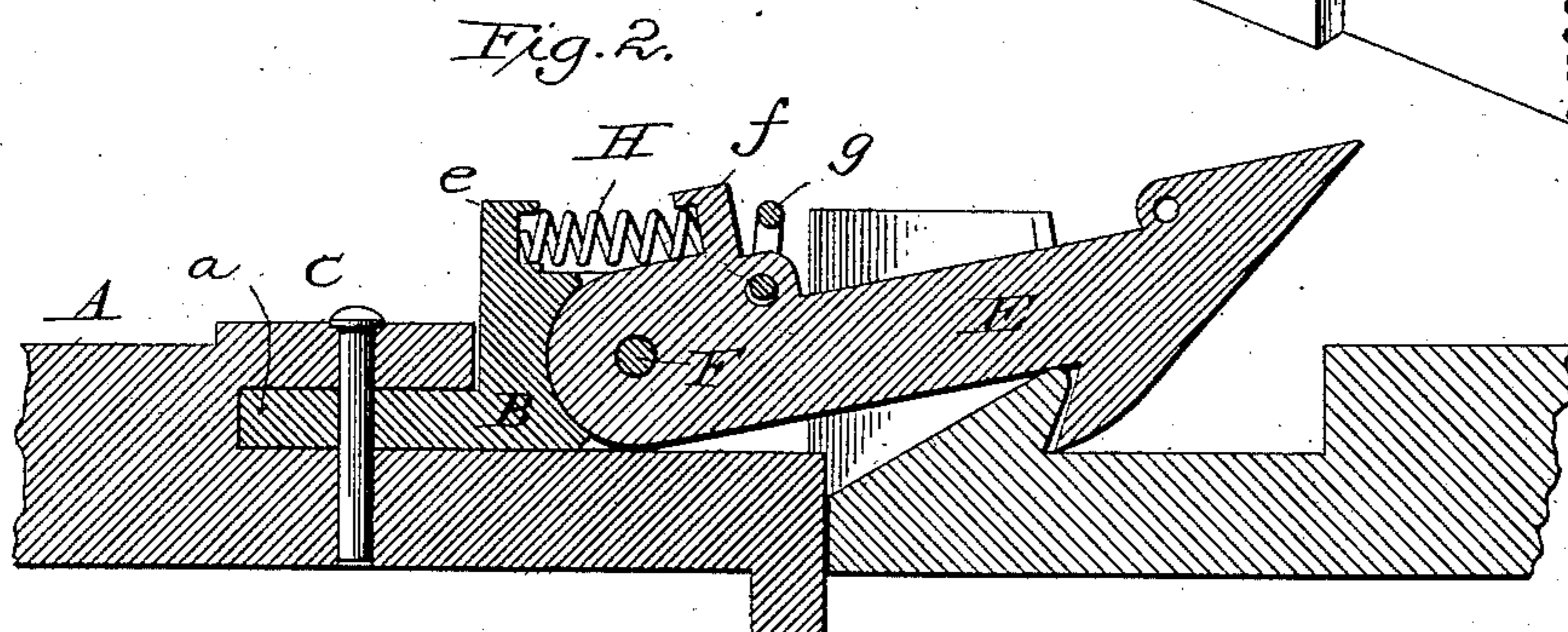
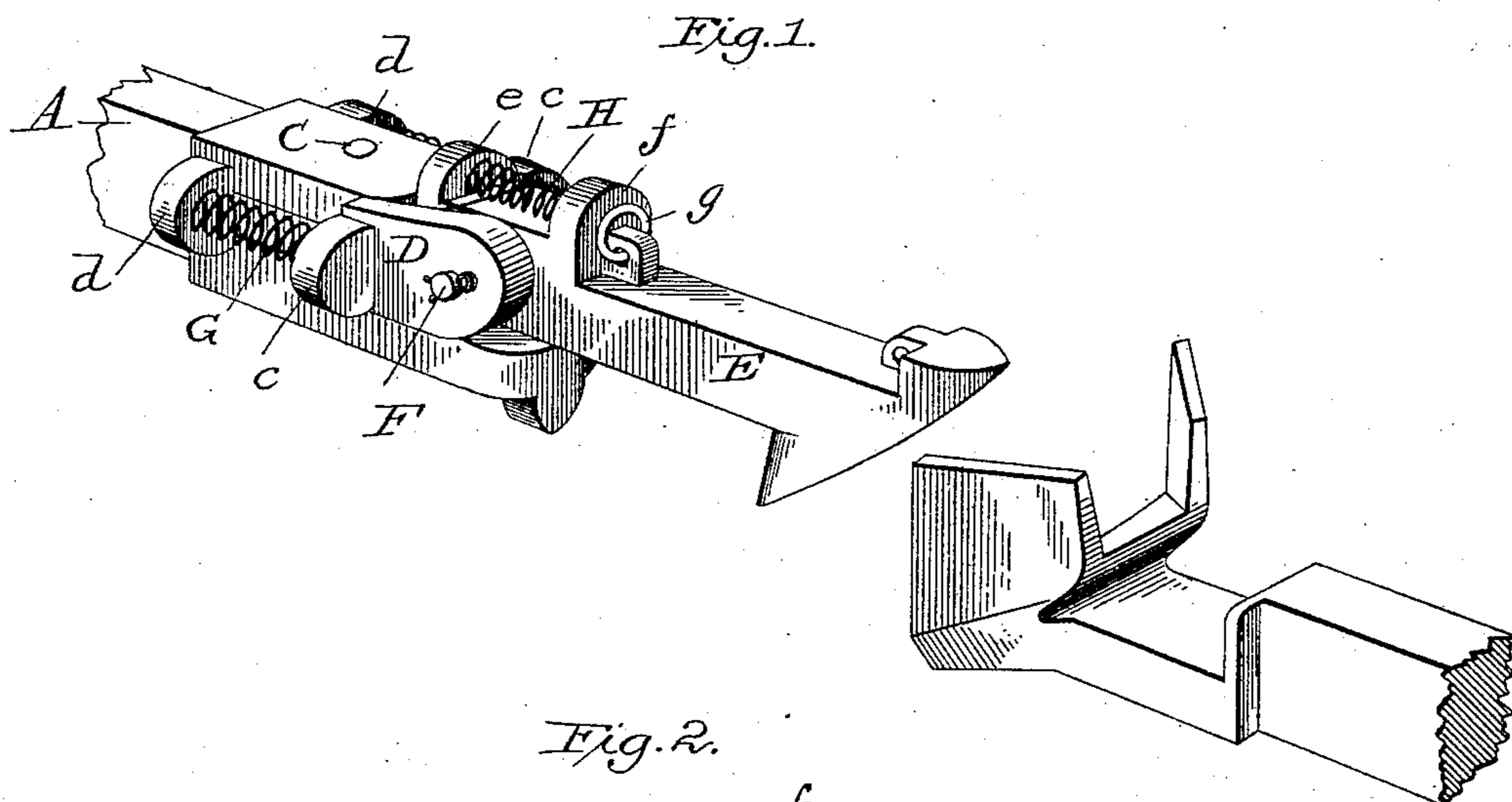
(No Model.)

E. K. OPHEIM.

CAR COUPLING.

No. 354,575.

Patented Dec. 21, 1886.



Witnesses

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UNITED STATES PATENT OFFICE.

ENGEBRET K. OPHEIM, OF LA CROSSE, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 354,575, dated December 21, 1886.

Application filed June 21, 1886. Serial No. 205,785. (No model.)

To all whom it may concern:

Be it known that I, ENGBRET K. OPHEIM, of La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates to car-couplers; and it consists in the combination, with a draw-head, of a block pivoted thereto and capable of lateral motion thereupon and a coupling-hook pivoted to said block and movable vertically in relation thereto, the hook and the block being connected with the block and draw-bar, respectively, by means of springs, all as hereinafter explained.

In the drawings, Figure 1 is a perspective view of my improved coupler; Fig. 2, a vertical longitudinal central section through the same, and Fig. 3 a view of the parts separated. My invention is designed to allow the coupling-hook to have a lateral movement, so that in going around curves there is no danger of the cars becoming uncoupled.

In the drawings, A indicates the draw-bar, which may be secured to the car in any of the usual and well-known methods, and B represents a block pivoted to the draw-bar by means of a vertical pivot pin or bolt, C.

As shown in Figs. 2 and 3, the draw-bar is recessed or undercut to receive a flat arm or extension, *a*, of the block B, and it is through this arm or extension *a* that the bolt C passes. The forward face or shoulder, *b*, at the front upper edge of the draw-bar, is curved on the arc of a circle concentric with the pivot C, and the adjacent face of the block B is correspondingly curved. The block B, as shown in Figs. 1 and 3, is provided with forwardly-extending parallel arms D, which are separated a distance to receive the rear end of the coupling-hook E, the latter being connected to the arms D by means of a horizontal pin or bolt, F.

Formed upon the side of each arm D is a lug, *c*, and upon opposite sides of the draw-bar A are similar lugs, *d*, the two sets of lugs *c d* being preferably formed with sockets, in which are secured the ends of coiled springs G, as shown in Figs. 1 and 2. The springs G are secured firmly at each end to the lugs *c d*, so

that as the block is moved in one direction one of the springs will be positively distended, and when moved laterally in the reverse direction the other spring will likewise be drawn out or distended. By this arrangement the springs act positively to return the block to its normal position, and to this extent possess advantages over prior constructions where flat plate-springs have been employed.

The block B is further provided with a lug, *e*, on its upper face, between the arms D, and the hook E is also provided with a similar lug, *f*, these two lugs being adapted to receive the ends of a coiled spring, H. Now, when the forward end of the hook E is raised to engage with the draw-head of the other car, the spring is placed under compression; but as soon as the coupling is effected the spring tends to keep the front end of the hook down and in engagement.

The forward end of the hook is rounded vertically and beveled, as shown, so as the more readily to slide up the inclined mouth of the receiving draw-bar, and the rear wall of the lower barb of the hook inclines from its base upward and forward, so as to form a good hold upon the other car and obviate the danger of becoming uncoupled accidentally.

In advance of the lug *f* the hook is provided with an eye, *g*, to which a chain may be attached and connected with suitable devices for operating the coupler without going between the cars; but as this feature forms no part of my invention it is not shown.

Having thus described my invention, what I claim is—

1. In a car-coupler, the combination, with the draw-bar, of a block pivoted thereto and capable of horizontal movement thereupon and a coupling-hook pivoted in said block and movable vertically in relation thereto.

2. In a car-coupler, the combination of a draw-bar, a horizontally-movable block secured thereto, a vertically-movable hook secured to said block, and springs connecting the movable block and the draw-bar.

3. In a car-coupler, the combination of a draw-bar, a horizontally-movable block, a vertically-movable hook secured to said block, a

spring connecting the hook and the block, and springs connecting the draw-bar and block.

4. In combination with draw-bar A, having lugs *d* on each side, block B, provided with
5 arms D and lugs *c e*, a vertical pivot pin or bolt, C, a coupling-hook, E, provided with a lug, *f*, a horizontal pivot, F, connecting the

hook E and the arms D, a spring, H, between the lugs *e f*, and springs G between the lugs *c d*, all arranged substantially as shown.

ENGEBRET K. OPHEIM.

Witnesses:

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