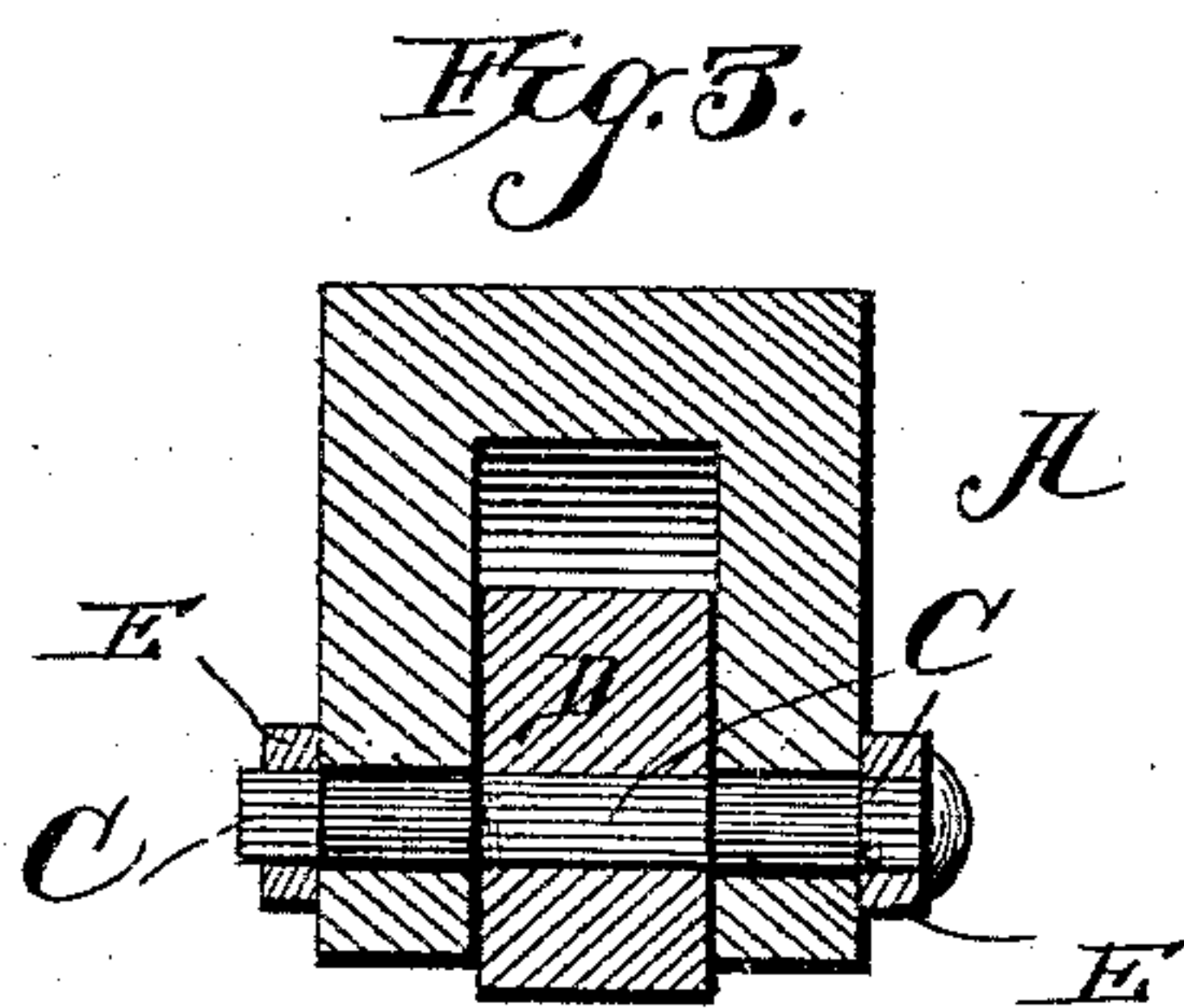
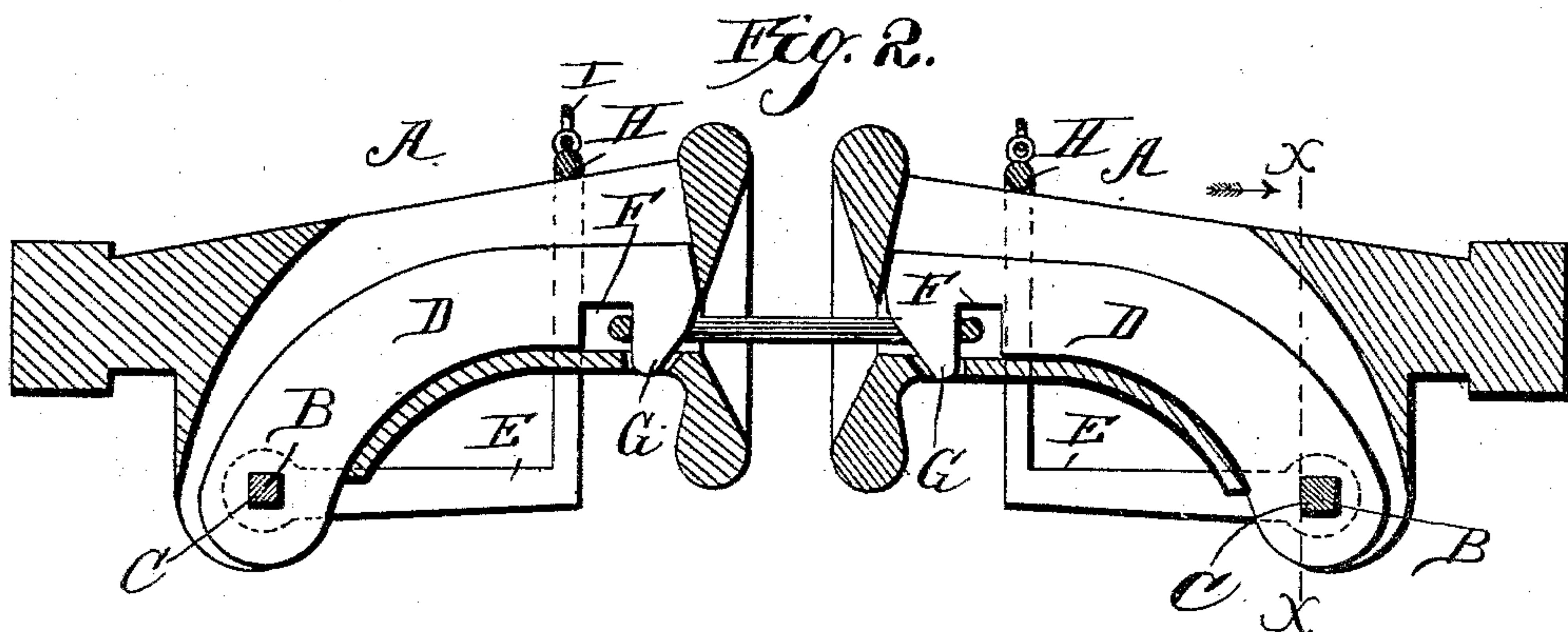
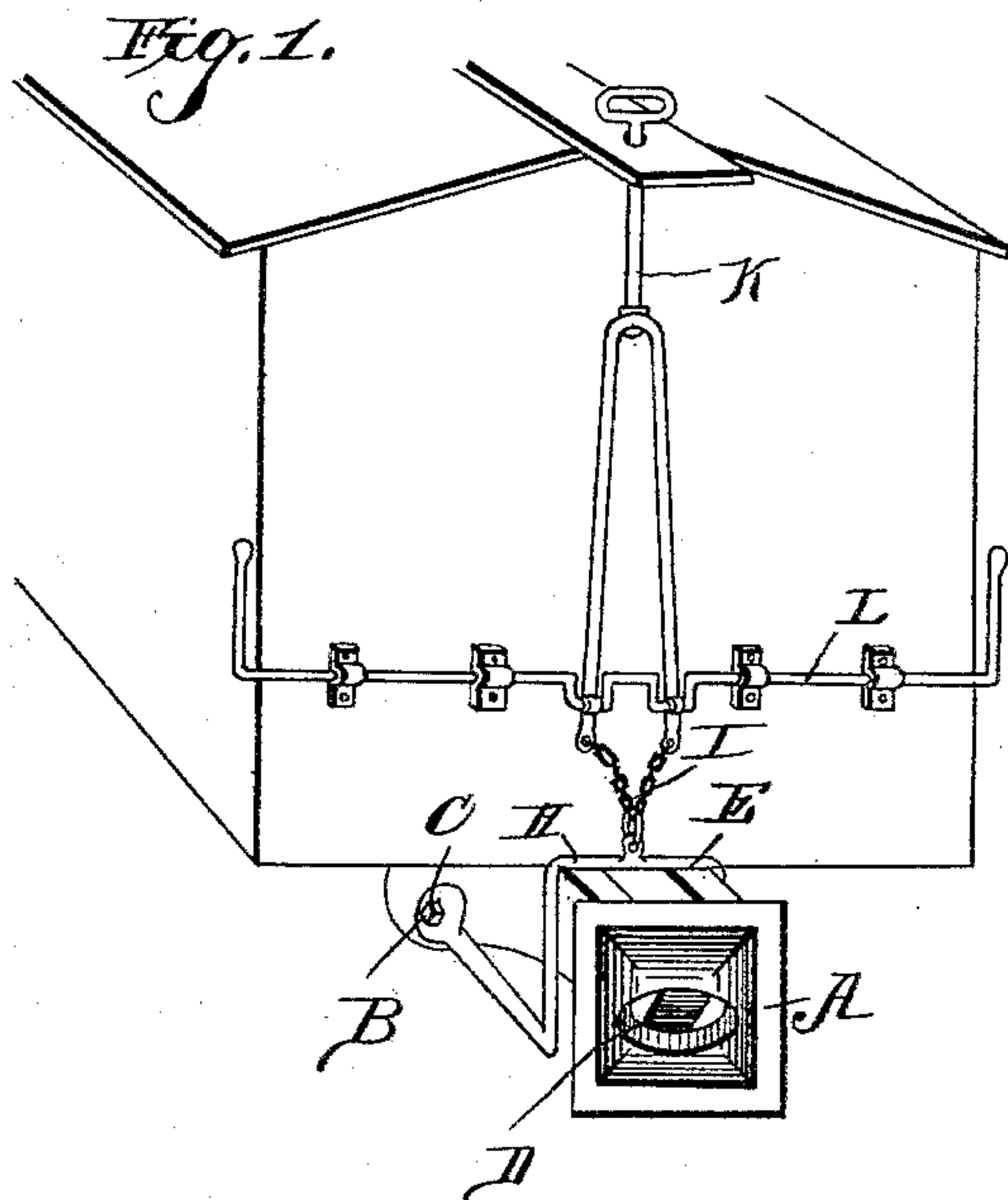


(No Model.)

D. U. GRAVELINE.  
CAR COUPLING.

No. 401,430.

Patented Apr. 16, 1889.



Witnesses  
*Henry E. Dieterich.*  
*R. W. Bishop.*

Inventor.  
*David U. Graveline*

By *his* Attorneys  
*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

DAVID U. GRAVELINE, OF CHICAGO, ILLINOIS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 401,430, dated April 16, 1889.

Application filed January 9, 1889. Serial No. 295,829. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID U. GRAVELINE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to improvements in car-couplings; and it consists in certain novel features, hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a car-coupling embodying my invention. Fig. 2 is a longitudinal vertical section showing two draw-heads coupled together. Fig. 3 is a vertical transverse section on the line  $xx$  of Fig. 2. Fig. 4 is a detail view of the pivot-bolt.

Referring to the drawings by letter, A designates the draw-head, secured to the end of a car in the usual or any preferred manner, and having the pivot-bolt B inserted transversely through its lower portion, near its rear end. The said pivot-bolt is provided with the angular portions C, to which I secure the rear ends of the coupling-hook D and the uncoupling-yoke E, as shown.

The coupling-hook D is secured to the central angular portion of the pivot-bolt and extends forward to near the mouth of the draw-head. The said hook is provided with a notch, F, which receives the end of the link, and a lip or tongue, G, which engages the coupling-link, so as to effect the coupling, as will be readily understood.

The uncoupling-yoke E is substantially L-shaped in side view, and has the ends of its lower arms secured on the outer angular portions of the pivot-bolt, while the vertical arms of the yoke extend upward on opposite sides of the draw-head from the front ends of the horizontal arms, and are connected by a cross-bar, H, to which the lower ends of the uncoupling-chains I are secured.

The construction and arrangement of the parts of my device being thus made known, the operation of the same will be readily understood.

When it is desired to couple two cars together, the coupling-link is secured in one draw-head and the two cars then brought to-

gether. The link then enters the approaching draw-head and rides under the beveled surface of the tongue or lip G of the coupling-hook, thereby raising the coupling-hook so that it will ride over the end of the link and fall into engagement with the link, thereby coupling the two cars together. When it is desired to uncouple the cars, the uncoupling-yoke is raised, thereby rotating the pivot-bolt, and consequently raising the coupling-bolt, by reason of the angular construction of the said bolt, so that the link can be drawn out from the draw-head, so as to uncouple the cars.

It will be observed that my coupling is composed of few parts, which are simple in construction, and that it is automatic in its operation.

The device can be uncoupled from the top of the car by lifting the bar or rod K, and can be uncoupled from the side of the car by rotating the crank-shaft L, journaled on the end of the car, and having its cranks connected to the said rod K. The said rod K is connected to the uncoupling-yoke by short chains I, as shown.

Having thus described my invention, I claim—

1. In a car-coupling, the combination of the draw-head, the pivot-bolt inserted transversely through the rear portion of the draw-head and having angular portions, the uncoupling-yoke having its rear ends secured to the outer angular portions of the pivot-bolt, the coupling-hook having its rear end secured to the central angular portion of the pivot-bolt, and the link adapted to engage said hook, as set forth.

2. The combination of the draw-head, the pivot-bolt mounted therein, the coupling-hook and uncoupling-yoke secured thereto, the rod K, connected to the uncoupling-yoke, and the crank-shaft connected to said rod K, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

DAVID U. GRAVELINE.

Witnesses:

MARK BENJAMIN,  
NATHAN FOSTER.