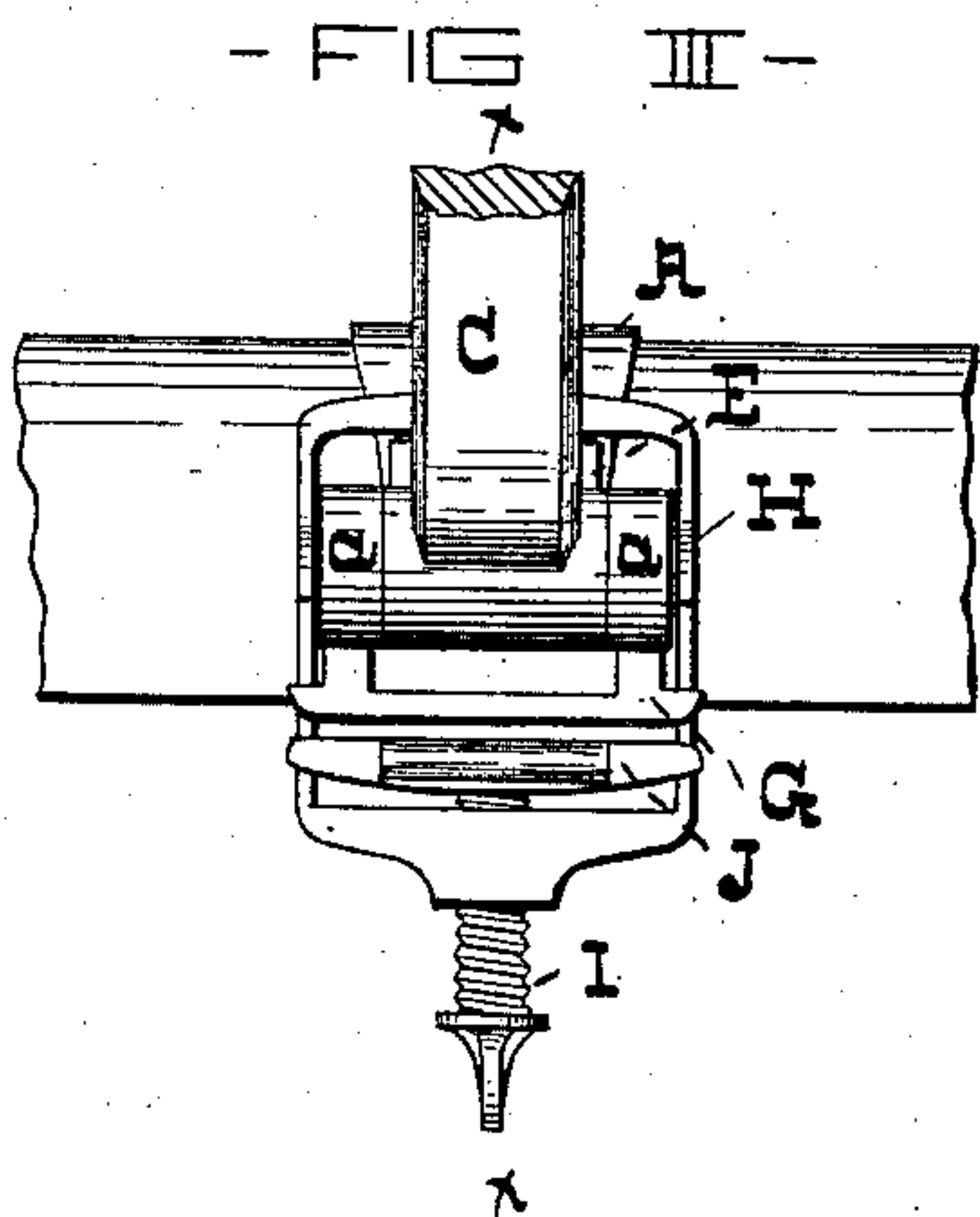
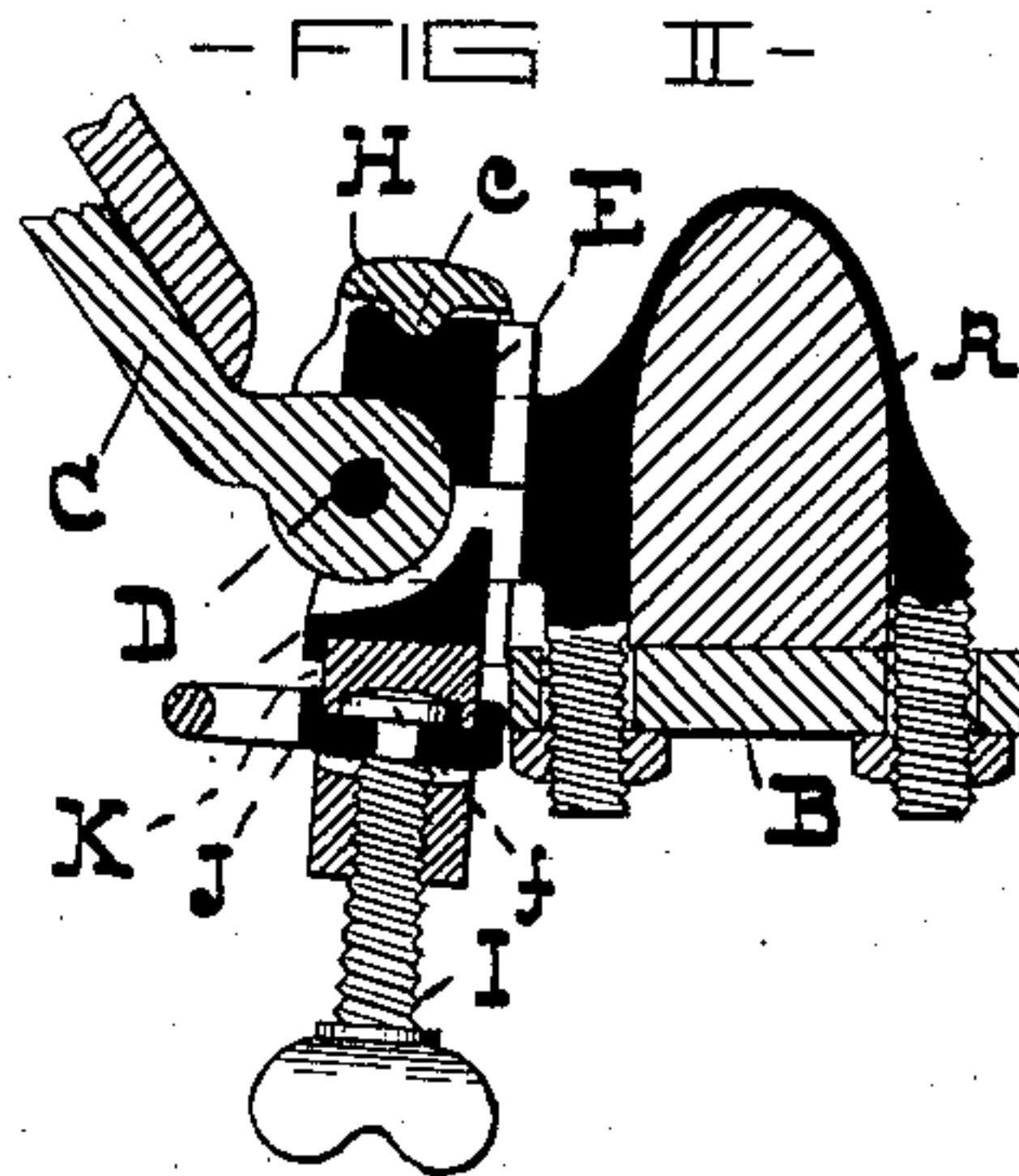
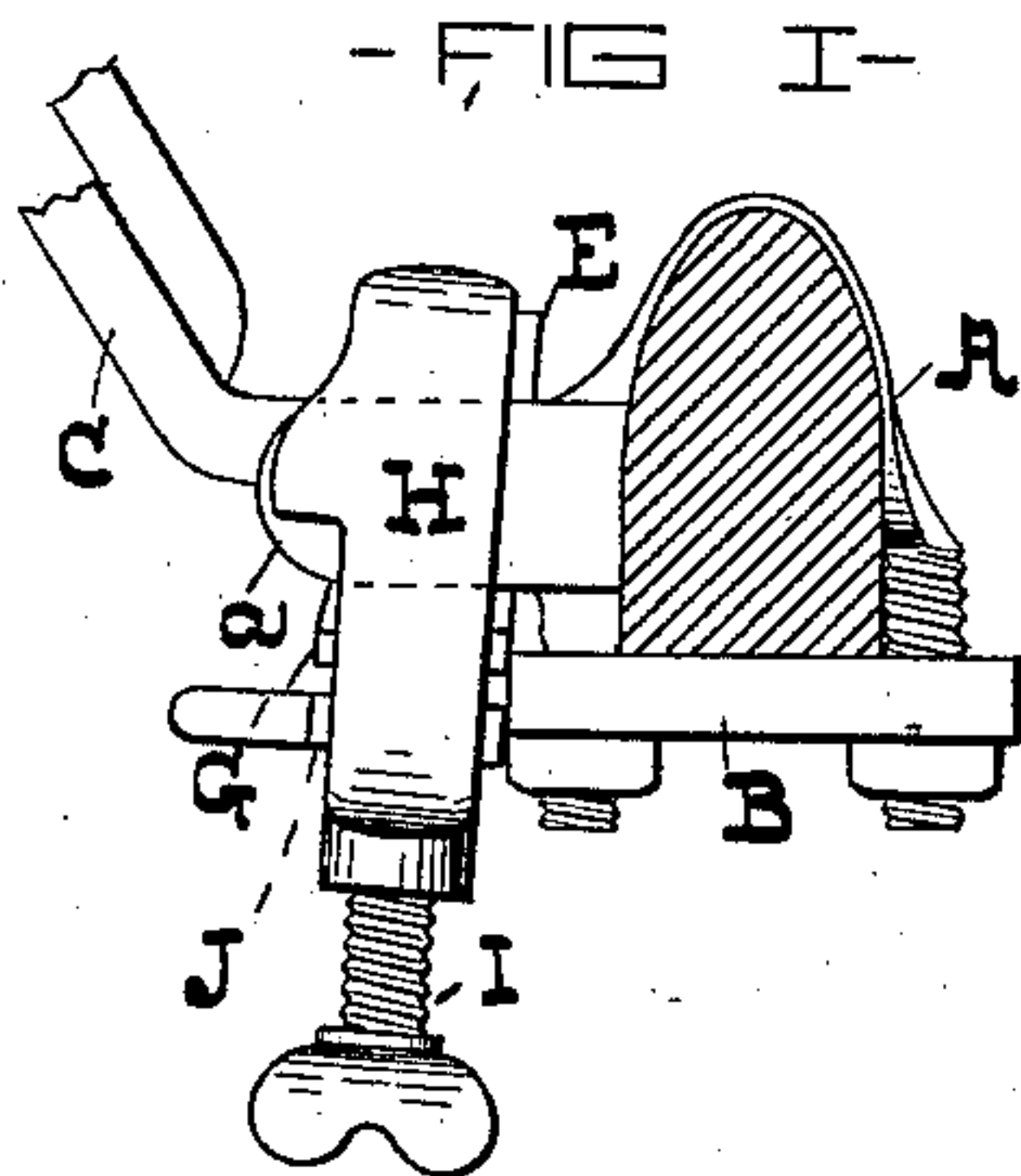


(No Model.)

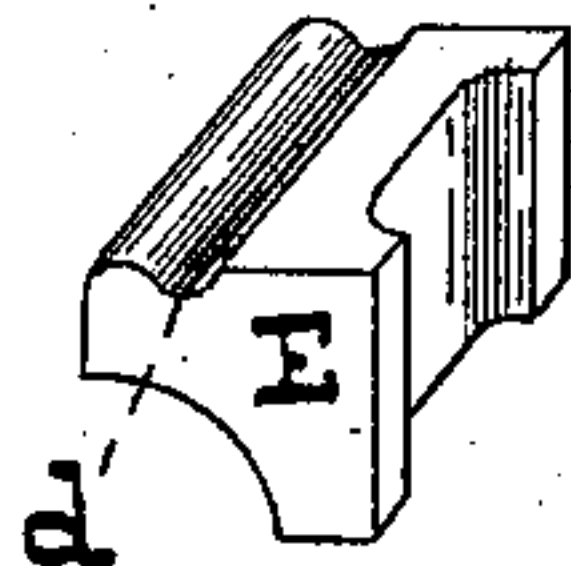
E. P. IRONS.  
THILL COUPLING.

No. 372,021.

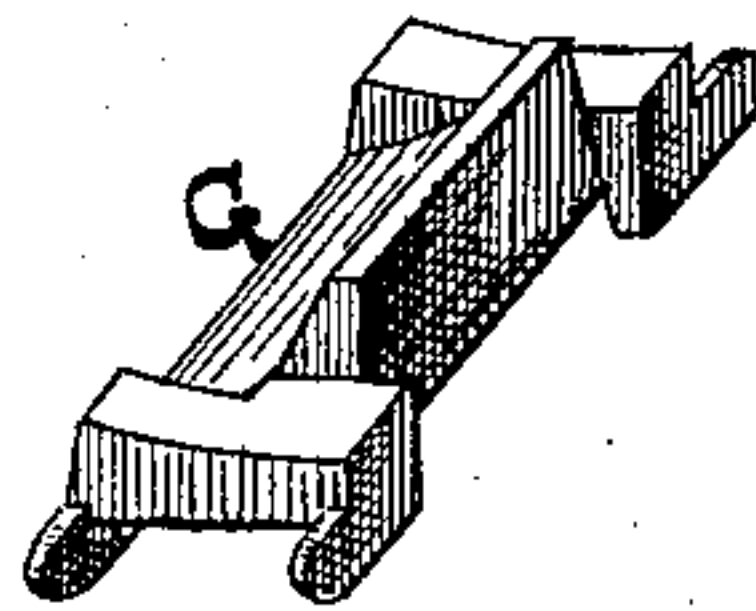
Patented Oct. 25, 1887.



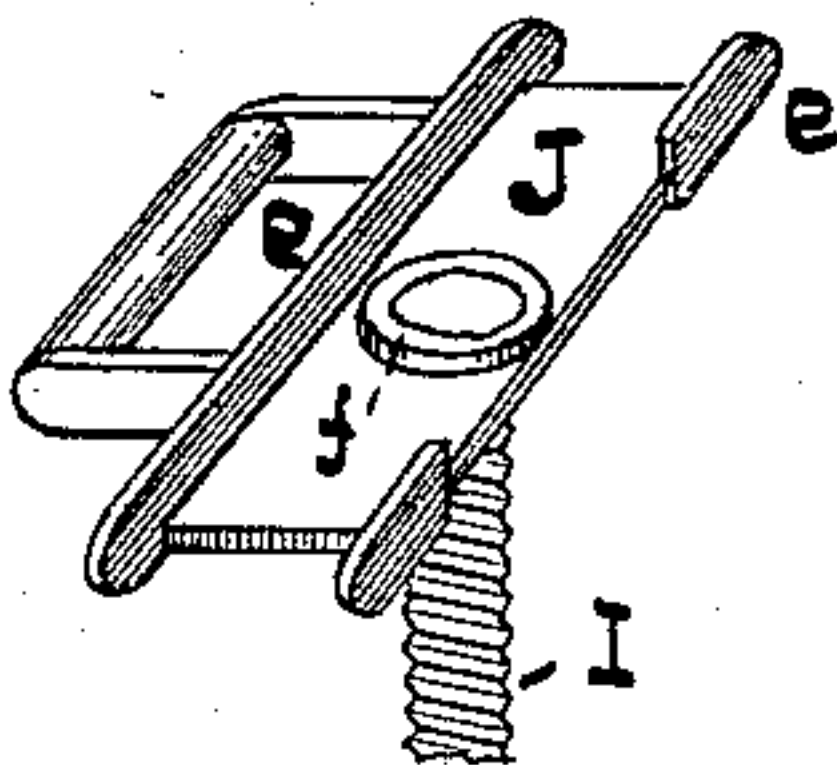
- FIG IV -



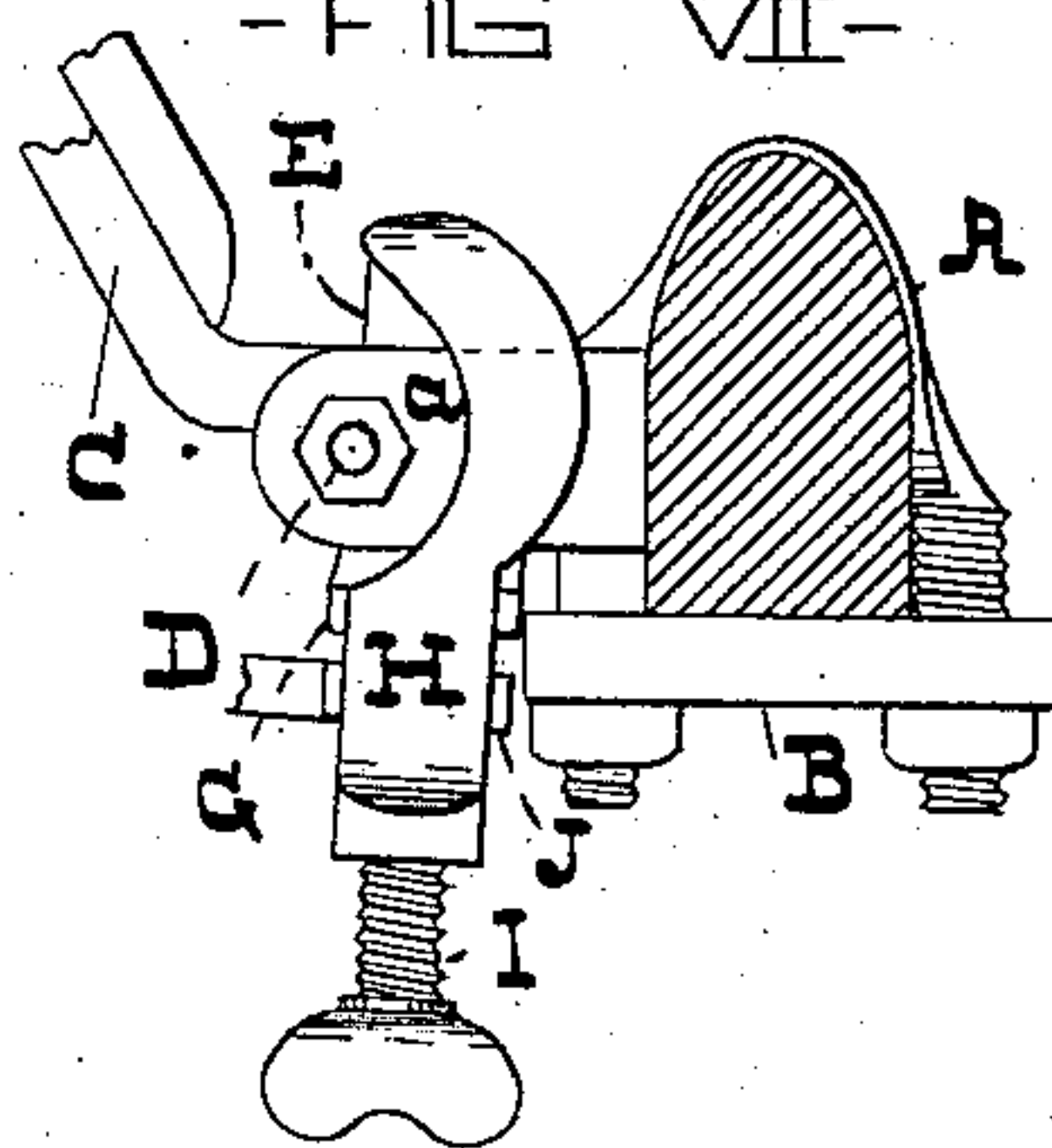
- FIG V -



- FIG VI -



- FIG VII -



- WITNESSES -

*Dan'l Fisher*  
*J. Orman Cox.*

- INVENTOR -

*Edward P. Irons,*  
*by G. H. N. Howard,*  
*att'y.*

# UNITED STATES PATENT OFFICE.

EDWARD P. IRONS, OF BALTIMORE, MARYLAND.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 372,021, dated October 25, 1887.

Application filed May 16, 1887. Serial No. 238,330. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD P. IRONS, of the city of Baltimore, in the State of Maryland, have invented certain Improvements in Carriage-Shaft Couplings, of which the following is a specification.

The object of this invention, in common with others of its class, is to prevent the rattling of the coupling; and it consists in certain details of construction, as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure I is an exterior side view of a shaft-coupling of ordinary description provided with my invention and secured to an axle, which is shown in section. Fig. II is a sectional view of Fig. III, taken on the dotted line *xx*. Fig. III is a front view of Fig. I. Figs. IV, V, and VI are details of the invention in perspective. Fig. VII illustrates a modification in a part of the invention.

Similar letters of reference indicate similar parts in all the figures.

A, B, and C are the three members of the shaft coupling, which is of ordinary description.

D is the bolt which connects the parts A and C, and this bolt may have a head and nut or be headless, as preferred.

E is a wedge-shaped block made of metal or some other suitable material, which is placed between the lugs *a a* of the part or member A of the coupling and bears on the rounded end of the part C of the same. This block tends to press the parts A and C of the coupling apart and keep the latter firmly in contact with the bolt D.

G is another block placed in the same position with reference to the several parts of the coupling as the block E, except that it is below instead of above the member C. This block is cut away at a point directly below the member C, in order that it may only bear against the lugs *a a* of the member A of the coupling.

H is a clamp placed around the coupling and the blocks. The upper end of this clamp has a ridge or rib, *c*, which rests in a depression or groove, *d*, in the block E. The lower end of the clamp H has a thumb-screw, I, or other similar device, by means of which the blocks are drawn toward each other.

J is a plate adapted to slide in the clamp H, and the end of the screw I passes through this plate and is provided with a cap, *f*, which prevents its removal.

K is a piece of rubber or other elastic material inserted between the plate J and the under side of the block G, and to prevent its working out of its place the inner side of the plate is furnished with flanges *e* and the lower side of the block recessed, as shown in the drawings. (See particularly Fig. II.) It will be seen that in setting up the thumb-screw the cap on the end of the same is forced into the rubber, which has the effect of preventing the screw from working loose.

M is a loop which projects from the forward edge of the plate J, to which a safety-strap (not shown) leading from the shaft is attached.

In Figs. I, II, and III the clamp is shown as covering the bolt D, which is devoid of a head and nut, while in Fig. VII the clamp is curved, so that a nut and bolt-head can be employed.

I claim as my invention—

1. In a shaft-coupling, the combination of the members A and C of the coupling, clamp H, having therein the blocks E and G, the plate J, the rubber K, and the thumb-screw I, having the cap *f*, which is fastened immovably to its end, substantially as and for the purpose specified.

2. In a shaft-coupling, the blocks E and G, the same being adapted to rest, respectively, against the part C of the coupling and the lugs *a a* of the member A of the same, substantially as and for the purpose specified.

EDWARD P. IRONS.

Witnesses:

JNO. T. MADDOX,  
DANL. FISHER.