

**No. 612,306.**

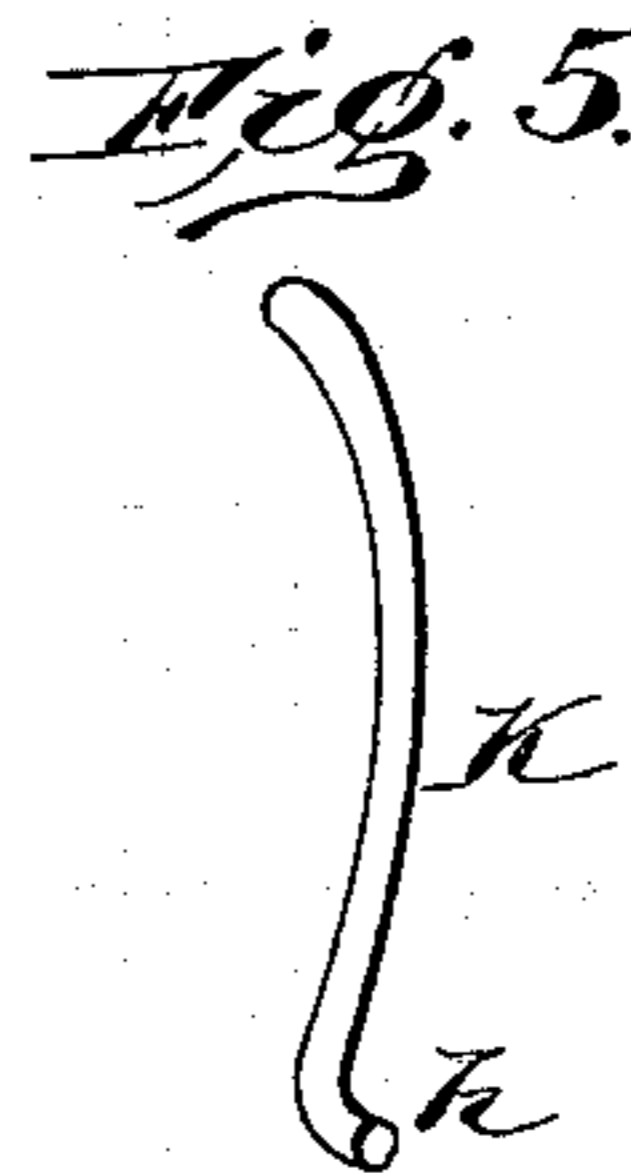
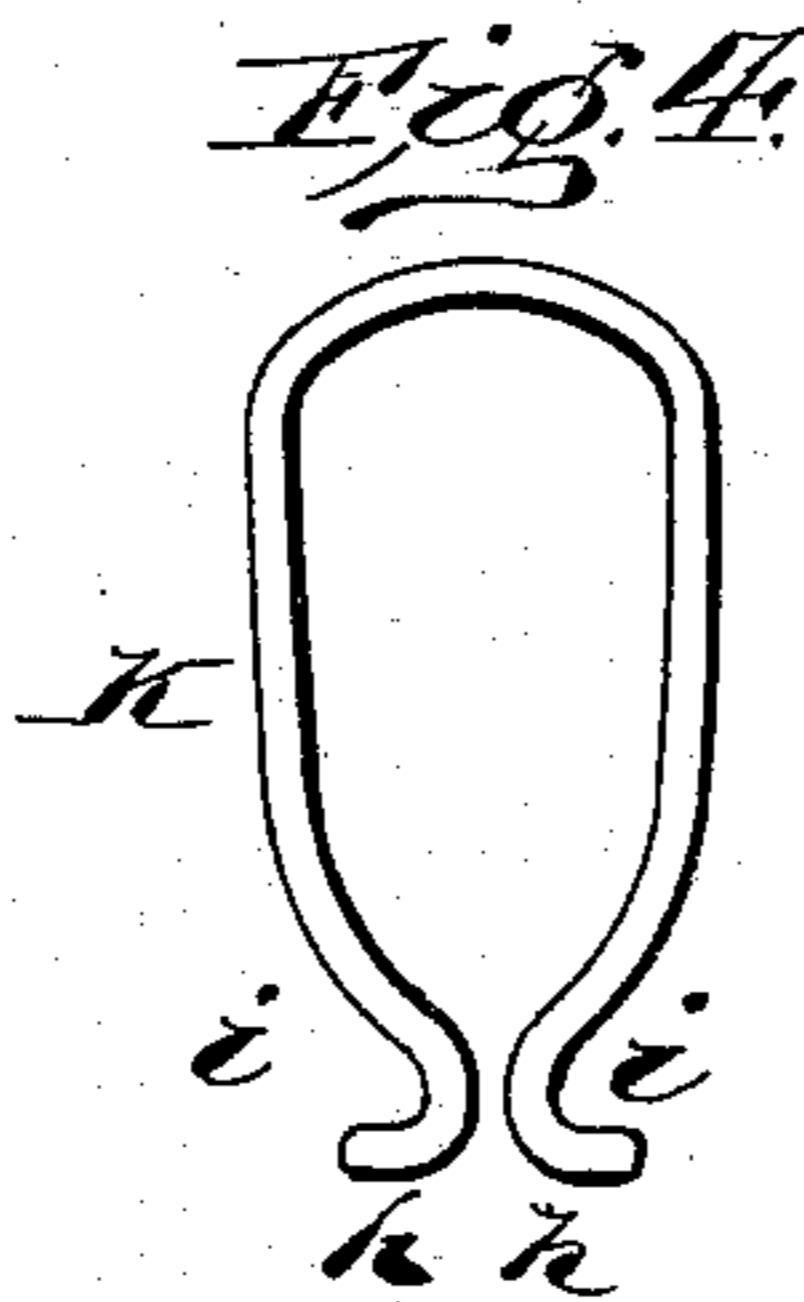
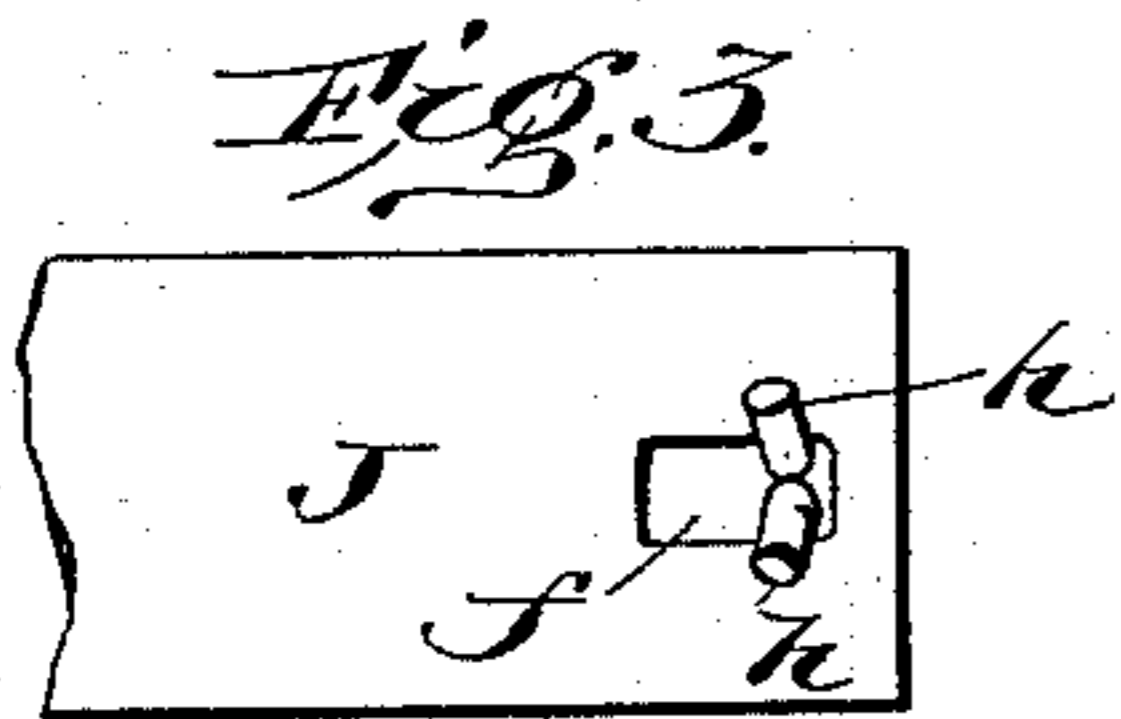
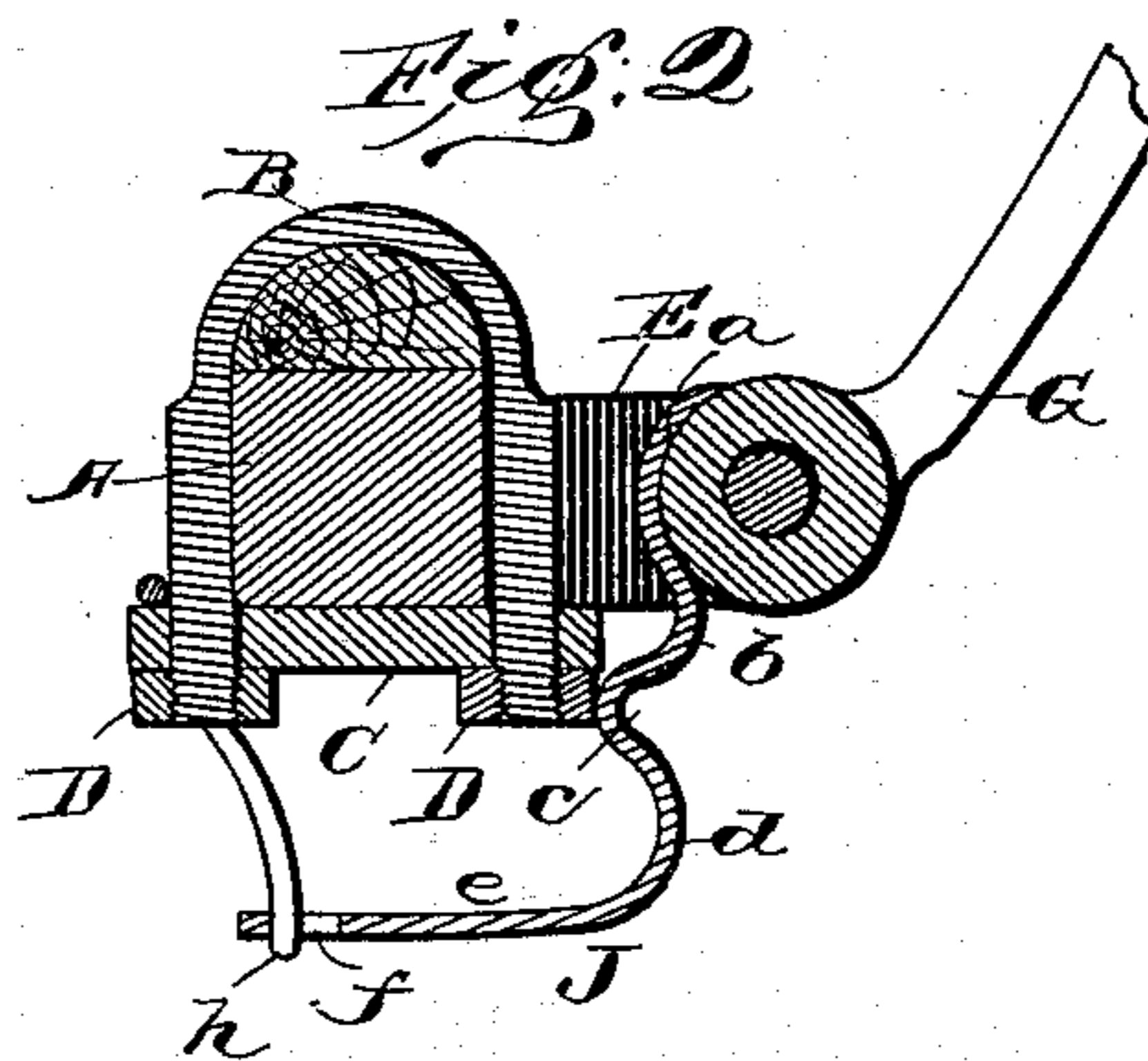
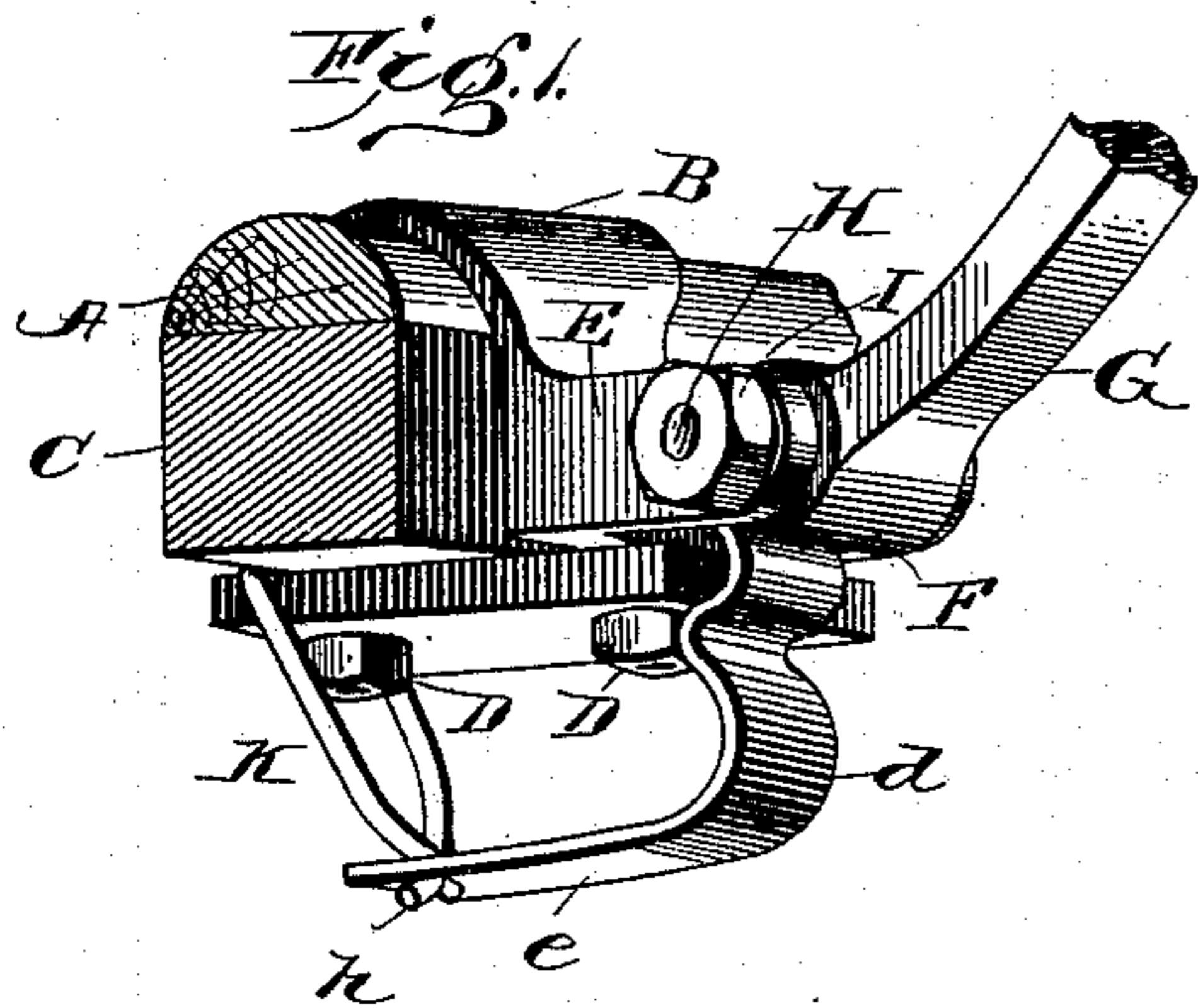
**Patented Oct. 11, 1898.**

**H. BREIDING.**

## ANTIRATTLER FOR THILL COUPLINGS.

(Application filed Apr. 4, 1898.)

(No Model.)



witnesses:  
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# UNITED STATES PATENT OFFICE.

HENRY BREIDING, OF STERLING, ILLINOIS.

## ANTIRATTLER FOR THILL-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 612,306, dated October 11, 1898.

Application filed April 4, 1898. Serial No. 676,341. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY BREIDING, a citizen of the United States, residing at Sterling, in the county of Whiteside, in the State of Illinois, have invented a certain new and useful Improvement in Antirattlers for Thill-Couplings, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention has for its object the production of a simple and efficient device of this character which may be readily applied to and removed from the coupling by hand and without the employment of any tools or mechanical devices for the purpose. Its novelty will be hereinafter set forth, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of a thill-coupling embodying my invention; Fig. 2, a vertical section of the same transversely of the axle; Fig. 3, a detail bottom plan view of the rear end of the spring-plate with the wire connecting-loop in position; Fig. 4, a front or rear elevation of the wire loop, and Fig. 5 a side elevation thereof.

The same letters of reference are used to indicate corresponding parts in the several views.

Referring to Figs. 1 and 2, A is the axle, upon which is fitted the usual clip B, the lower extremities of whose opposite ends pass through holes in the clip-bar C and are threaded to receive the nuts D, by means of which the clip is secured to the axle. Projecting forwardly from the clip B are the two integral side arms or lugs E, between the forward ends of which fit the eye F of the thill-iron G, the parts being connected together by the bolt H, passing through the holes in the front ends of the arms E and through the eye F of the thill-iron G and having the nut I screwed upon its threaded end. The antirattling spring applied to this coupling consists of a flat spring-plate J, reversely curved, as shown, to form at its upper end a concave forward face *a*, adapted to fit against the rear side of the eye F of the thill-iron G. Below this concave portion *a* the spring J is formed into a forward bend *b*, immediately beneath the eye of the thill-iron, then into a rearward bend

*c*, adapted to bear against the forward end of the clip-bar C or the forward nut D, then into a second forward bend *d*, and thence rearward into an approximately horizontal rearward extension *e*. Near its rear end the spring-plate J is provided with an approximately rectangular opening *f*, through which pass the contracted lower ends of the wire connecting-loop K. The two lower ends of this loop are bent inwardly, as shown, until they nearly come together at the point *i*, and below such contracted portion are bent outwardly again to form the approximately horizontal projecting extremities *h h*. These horizontal projections are also preferably bent slightly forward from the plane of the main body of the loop K, as clearly shown in Fig. 5, while the upper end of the loop is preferably bent slightly rearward, as also shown in said figure.

The horizontally-bent lower ends of the loops K are of such length that when the inwardly-bent portions of the lower end of the loop are squeezed together the projecting ends *h h* may be passed through the opening *f* in the spring-plate J by turning the loop diagonally of such opening, after which by turning it to a transverse position therein the inwardly-bent portions of the lower ends of the loop will be pressed approximately together, the rectangular opening being of slightly less width than the contracted portion *i* of the loop when the latter is disengaged from the plate, as in Fig. 4.

The friction between the outer sides of the contracted lower ends of the loop K and the sides of the opening *f* serves to hold the loop in position in said opening, while the engagement of the horizontally-projecting lower extremities *h h* of the loop with the under side of the spring-plate J prevents the loop being swung forward or backward from its normal position approximately perpendicular to the plate J without bending the loop. It results from this that if the upper end of the loop be forced rearward and then released it will spring forward again.

In applying this antirattling device to the coupling the upper forward end of the spring-plate J is first placed in position with its concave upper end bearing against the eye F of the thill-iron G and its rearward bend *c* bear-

ing against the forward end of the clip-iron C or nut D. The rear end of the plate J is then sprung slightly upward by pressing it with the hand and the upper end of the loop K also sprung rearward until it can be passed upward and forward over the rear end of the clip-bar C, whereupon it and the plate J will both be released, the upper end of the loop springing forward against the rear side of the axle A and the rear end of the plate J springing downward as far as the loop K will permit, the length of the loop being such as to hold the spring J under tension when the parts are in this position. When it is desired to remove the antirattling device from the coupling, the rear end of the spring J is pressed upward by hand until the upper end of the loop K can be pulled rearward and disengaged from the clip-bar C.

As will be understood from the foregoing, the device may be readily applied to and removed from a thill-coupling with simply the use of one's hands, and when removed the spring-plate and the wire connecting-loop may be readily detached from and reattached to each other. This latter feature is an important advantage in the commercial handling of the device, since it is desirable to pack the largest number possible in a given space. In handling my improved device when the wire loops K are disengaged from the spring-plates J a large number of the latter may be nested or fitted compactly together in a very small space and a corresponding number of the loops K be packed with them in a box very little larger than required for the springs.

I am aware that springs of substantially the same shape as my spring-plate J have heretofore been employed in antirattlers for thill-couplings, and I am also aware that the rear ends of the spring-plates of antirattlers have

in some instances been connected to the rear end of the clip-bar by means of a wire loop detachably connected at its lower end to the rear end of the spring-plate; but my device is an improvement upon and readily distinguishable from any of such prior devices with which I am familiar.

Having thus fully described my invention, I claim—

The herein-described antirattler for thill-couplings, composed of the reversely-curved spring-plate J having the concave upper end *a* adapted to fit against the rear side of the eye of the thill-iron, the forward bend *b* beneath the portion *a*, the rearward bend *c* beneath the bend *b* and adapted to bear against the forward end of the clip-bar or nut, the forward bend *d* beneath the bend *c*, and the rearwardly-extending horizontal portion *e* provided near its rear end with the opening *f*, in combination with the wire loop K having its lower ends bent inwardly and then outwardly to form the contracted portion *i* and the laterally-projecting approximately horizontal extremities *h h*, the lower end of said loop being adapted to be passed downward through the opening *f* in the plate J and have its horizontally-projecting extremities *h h* bear against the under surface of the plate J and yieldingly retain the loop in normal position relatively to the plate J, and the upper end of said loop being adapted to be sprung rearwardly against the resistance of the connection of its lower end with the plate J and engaged with the rear end of the clip-bar of the coupling, substantially in the manner and for the purpose described.

HENRY BREIDING.

Witnesses:

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