

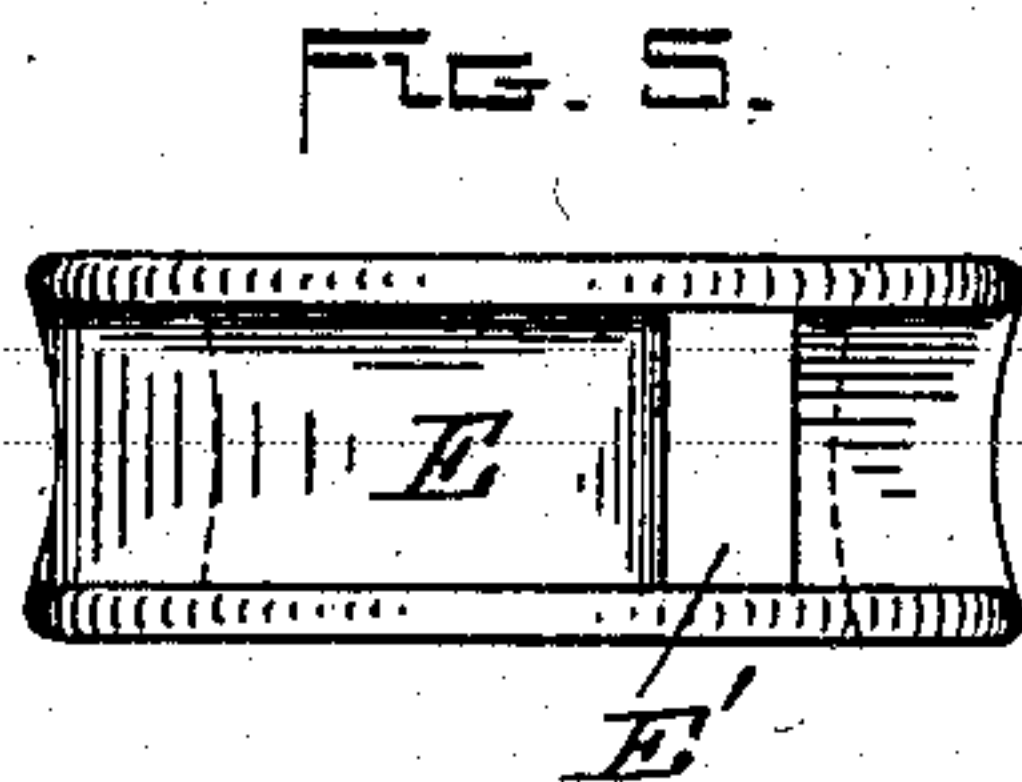
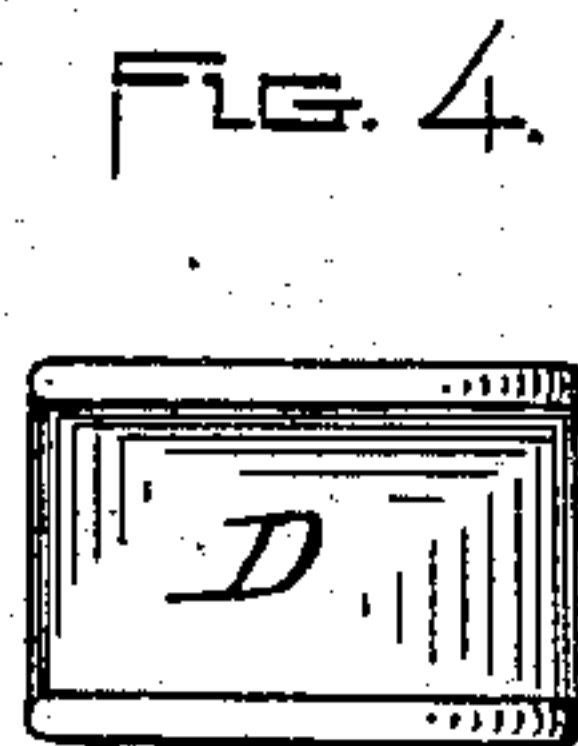
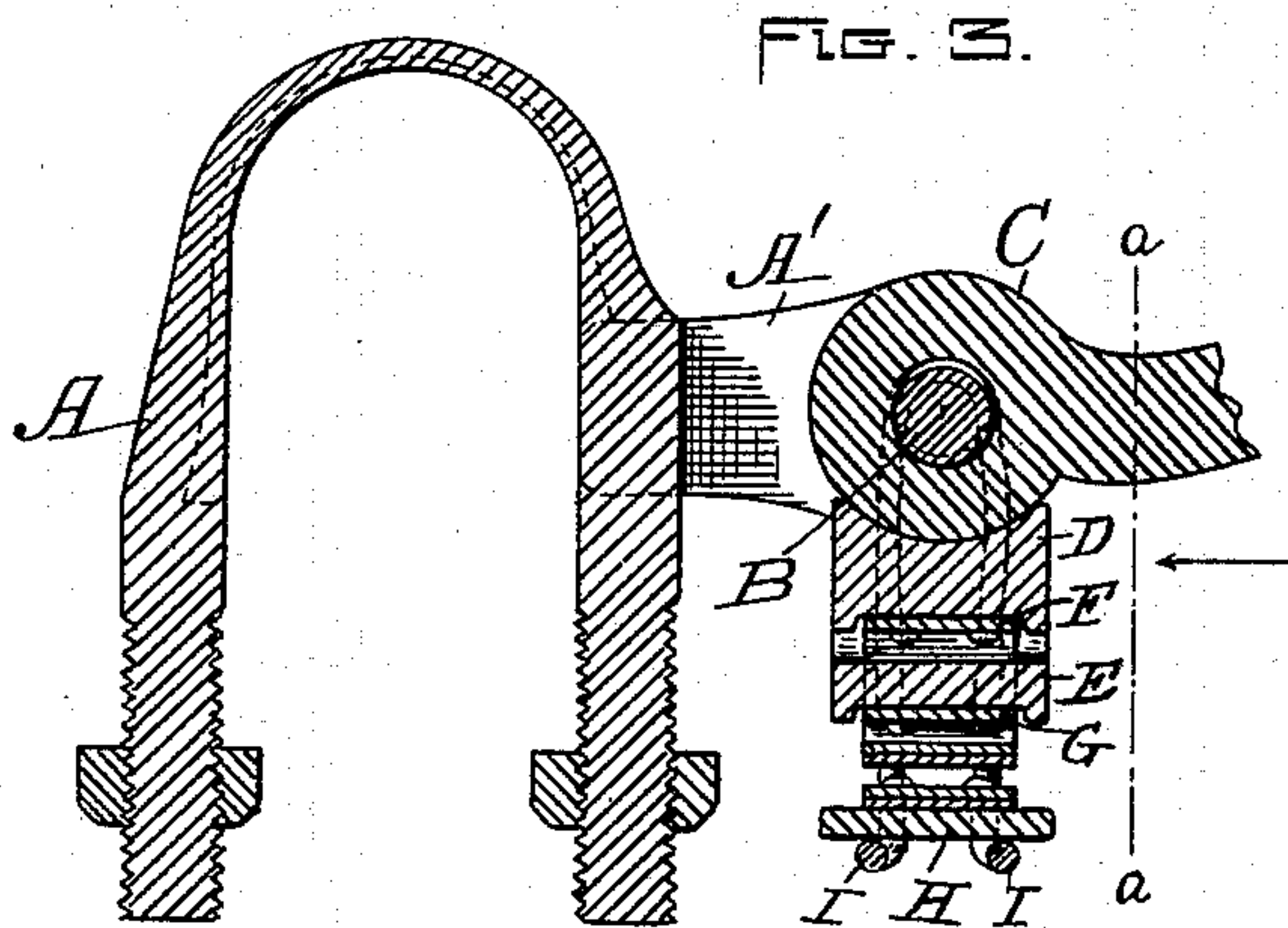
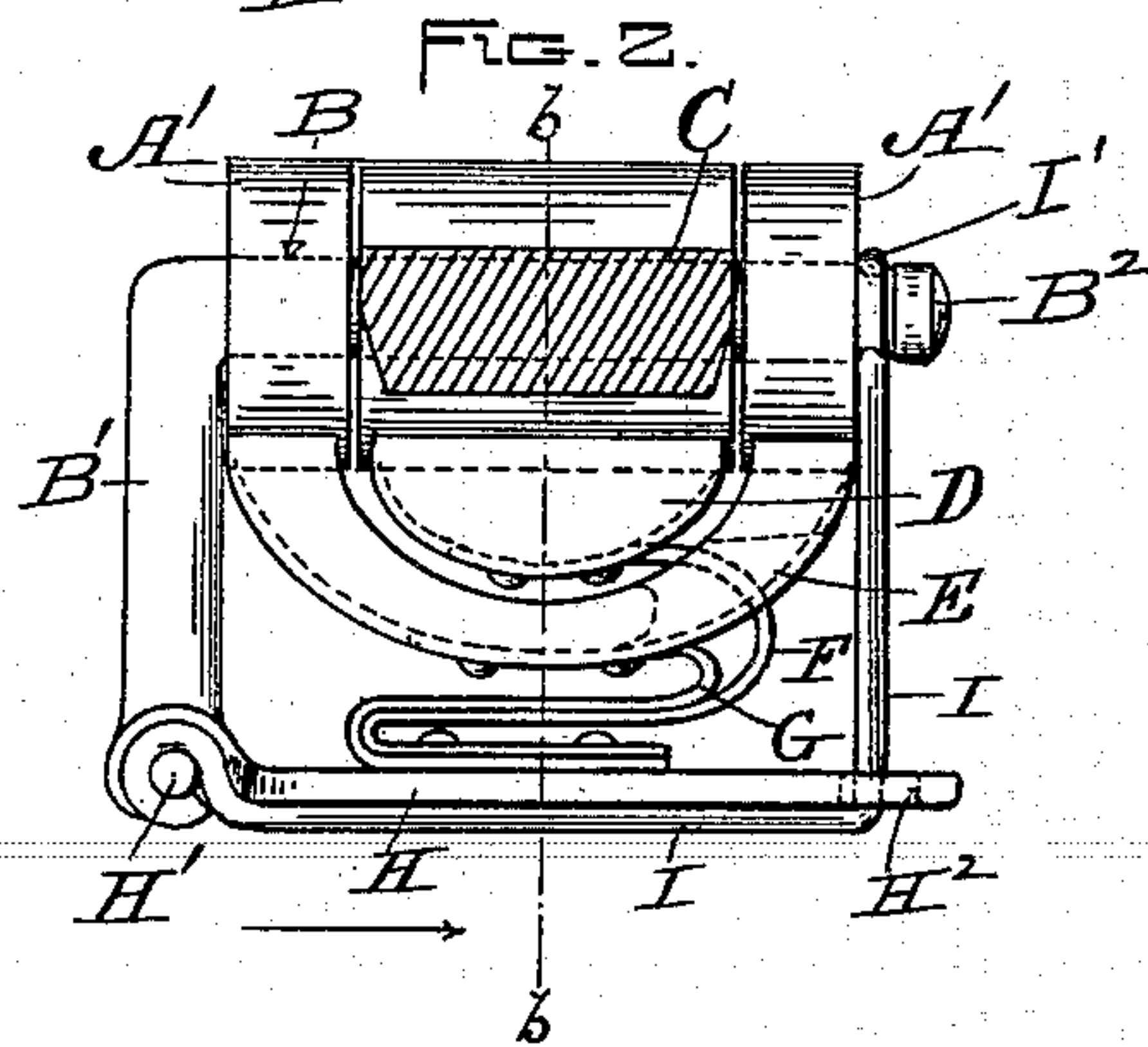
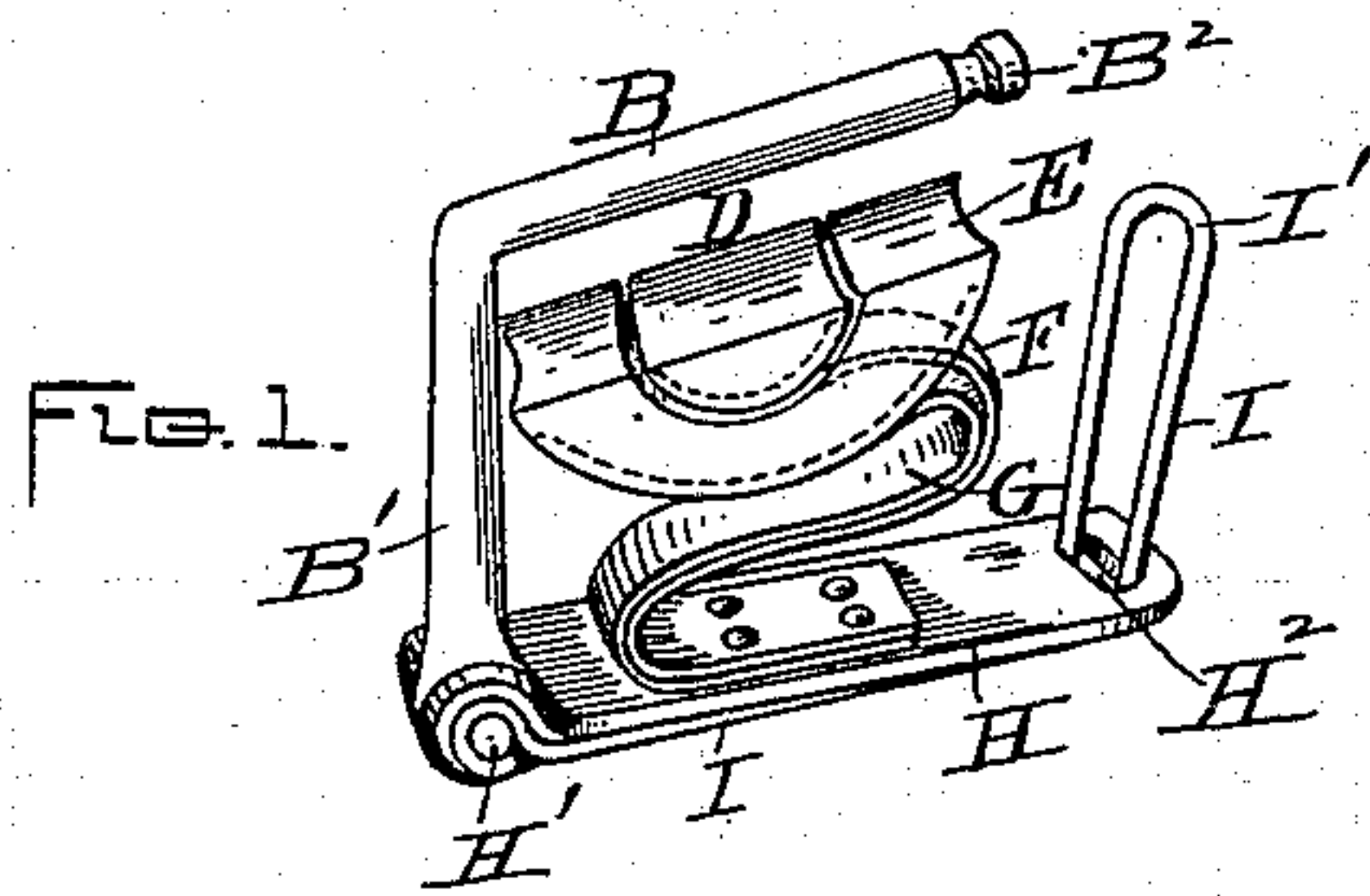
No. 615,513.

Patented Dec. 6, 1898.

J. E. WHITNEY.  
ANTIRATTLING THILL COUPLING.

(Application filed Oct. 15, 1898.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

JAMES E. WHITNEY, OF LEOMINSTER, MASSACHUSETTS.

## ANTIRATTLING THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 615,513, dated December 6, 1898.

Application filed October 15, 1898. Serial No. 693,584. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES E. WHITNEY, of Leominster, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Antirattling Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a detached perspective view of my aforesaid improved antirattling thill-coupling. Fig. 2 is a transverse section through the thill-iron just in front of the coupling, taken at the point indicated by line *a a* in Fig. 3 and showing a front view of my improved antirattling-coupling. Fig. 3 is a central vertical longitudinal section through the axle-clip, thill-coupling, and part of the thill-iron, taken at the point indicated by line *b b* in Fig. 2. Fig. 4 is a detached bottom view of a block which is pressed against the under side of the thill-iron by means of a suitable spring, as and for the purpose hereinafter described; and Fig. 5 is a detached bottom view of another block arranged just under the aforesaid block, which is pressed against the under sides of the ears of the axle-clip by means of another spring, which will also be hereinafter described.

The object of my invention is to provide a thill-coupling for vehicles, whereby independent pressures may be applied to the thill-iron and axle-clip to prevent the same from rattling on the coupling-pin when worn, and especially in case of uneven wear of the parts.

Said invention consists of two bearing-blocks, one adapted to bear against the thill-iron and the other against the axle-clip, both mounted independently on springs attached to a suitable support connected with one end of the coupling-pin and provided with a holding-wire adapted to be hooked over the opposite end of said coupling-pin to hold said bearing-blocks with a yielding pressure against said thill-iron and axle-clip, as will be hereinafter more fully set forth.

In order that others may better understand the nature and purpose of my said invention, I will now describe it more in detail.

Referring to the drawings, A represents one of the usual axle-clips of a vehicle, which is

provided with the ears A' A', having transverse holes therein to receive the coupling-pin B, which pin also passes through the usual transverse hole in the thill-iron C to pivot the latter and its thill to the axle of said vehicle.

D and E represent the bearing-blocks previously alluded to, which are each independently attached to the upper ends of suitable springs F G, the spring F supporting block D and spring G block E. The blocks are in this instance shown of convex or segment shape longitudinally upon their under sides, and the bottom block E is concave in shape longitudinally upon its upper side to receive the smaller top block D, as is shown in the drawings. Flat springs F and G are preferably used for supporting said blocks D E, the same being united at the bottom and fastened to a plate H, which is pivoted to pin H' at the lower end of an arm B', extending down at about right angles from one end of the coupling-pin B, the said plate H when the device is in use being about parallel to said coupling-pin. The spring G is fastened to the bottom of block E and the spring F to the bottom of block D, being passed through an opening E' into said block E to admit of said engagement with block D, as is shown by dotted lines in Fig. 2. The pin H' serves also as a pivot for the holding-wire I, which extends to the outer end of plate H, thence up at about right angles, and terminating at its outer end in the loop I', which is adapted to hook over the outer end B<sup>2</sup> of the coupling-pin B. In this instance said holding-wire is passed up through a slot H<sup>2</sup> in the outer end of plate H to keep the same in its proper position laterally; but I do not limit myself thereto.

The essential feature of my invention, as previously stated, is the employment of the aforesaid two bearing-blocks D E, having independent pressures imparted thereto to bear one on the thill-iron and the other on the axle-clip ears. It is not material how said pressure shall be applied, and I therefore do not limit myself to the special style of springs herein shown and described.

By the application of my invention to practice I find after a thorough test thereof that the thill-couplings are held absolutely secure against rattling at the bearings.



Said invention is of especial advantage where the wear is uneven, for the reason that each bearing-point, having an independent pressure applied thereto, is held equally secure against rattling. This is particularly the case when the under face of the axle-clip ears and the thill-iron are not "flush" or on a straight line and when the usual means employed for producing a pressure thereon bears only on one or the other. With my improved coupling it is not material whether said under faces are upon a line or not or whether the bearing of the thill-iron and those of the axle-clip ears wear evenly or not. For instance, supposing the thill-iron and coupling-pin upon one side of the vehicle become united by rust or otherwise, so that they will turn together, and the pivot motion is obtained by said coupling-pin turning in said ears, the latter bearings naturally are the ones which become worn and liable to rattle; while, on the other hand, the reverse pivot motion may exist in the coupling at the other side of said vehicle—that is, the pin being "stuck" in the ears and the pivot motion obtained by the thill-iron turning on said pin.

My improved coupling, as will at once be apparent, adapts itself to either of the above conditions and effectually secures either or both parts from rattling, a result which cannot be obtained by a single bearing-block bearing with equal pressure upon both the the thill-iron and the axle-clip ears.

The operation of applying the coupling is the same as with other similar devices, the coupling-pin being first passed through the holes in the axle-clip ears and thill-iron, with the bearing-blocks under said parts. The springs are then contracted by pressing upon the bottom of the device, and the loop end of the holding-wire is hooked over the coupling-pin to hold the parts with the springs in said compressed position and the bearing-blocks

with a yielding pressure against said thill-iron and axle-clip ears, as previously described.

Having now described my invention, what I claim therein, and desire to secure by Letters Patent, is—

1. The combination of the axle-clip, thill-iron and coupling-pin of a vehicle, with two bearing-blocks, one adapted to bear against the thill-iron and the other against the axle-clip; suitable springs, the same engaging with said bearing-blocks for exerting independent yielding pressures thereon against the aforesaid parts; means connected with the coupling-pin for supporting and holding said springs in position, and a holding-wire attached at one end to the spring-support, and its other end adapted to be hooked over the end of the coupling-pin to hold the aforesaid bearing-blocks against said thill-iron and axle-clip, substantially as and for the purpose set forth.

2. The combination of the axle-clip, thill-iron and coupling-pin of a vehicle, with two bearing-blocks, one adapted to bear against the thill-iron and the other against the axle-clip; suitable springs, the same engaging with said bearing-blocks for exerting independent yielding pressures thereon against the aforesaid parts; a supporting-plate, pivoted to an arm extending about at right angles from one end of the coupling-pin and to which plate the aforesaid springs are secured; said coupling-pin arm, and a holding-wire pivoted at one end to the coupling-pin arm and adapted to be hooked at its other, loop end over the end of the coupling-pin to hold the aforesaid bearing-blocks against said thill-iron and axle-clip, substantially as and for the purpose set forth.

JAMES E. WHITNEY.

Witnesses:

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