

(No Model.)

I. CLARK.
THILL COUPLING.

No. 397,633.

Patented Feb. 12, 1889.

Fig. 1.

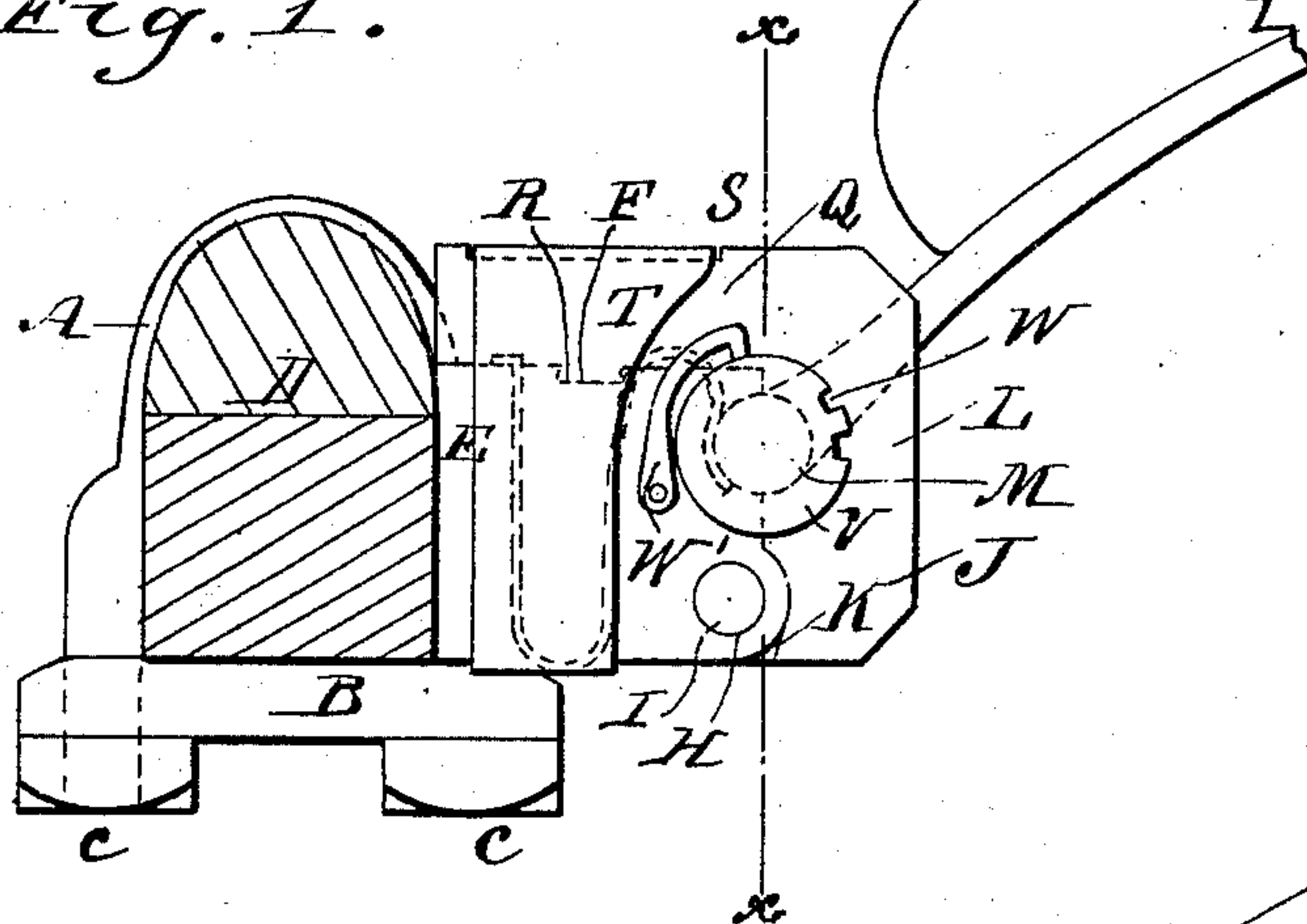


Fig. 2.

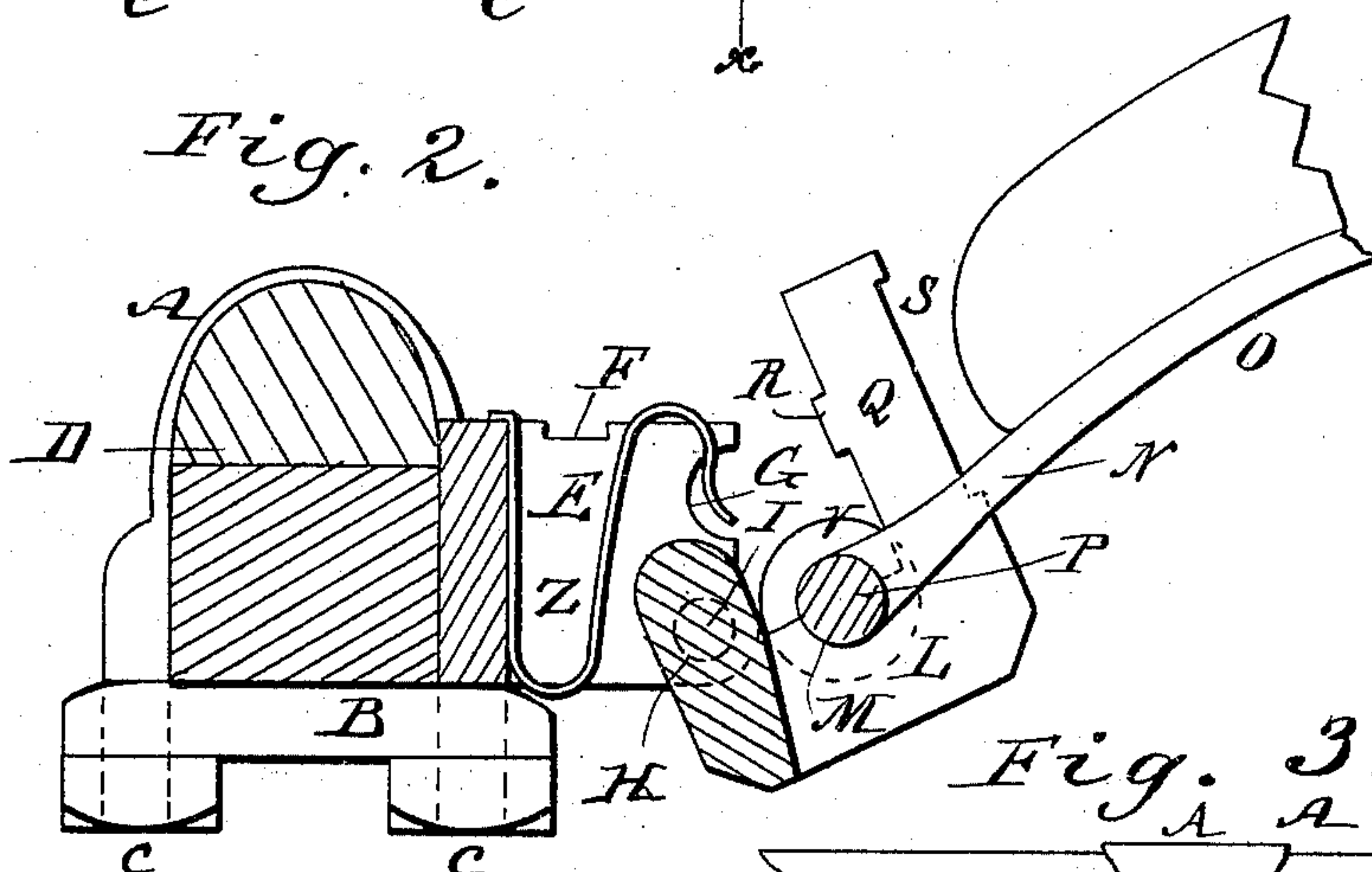


Fig. 3.

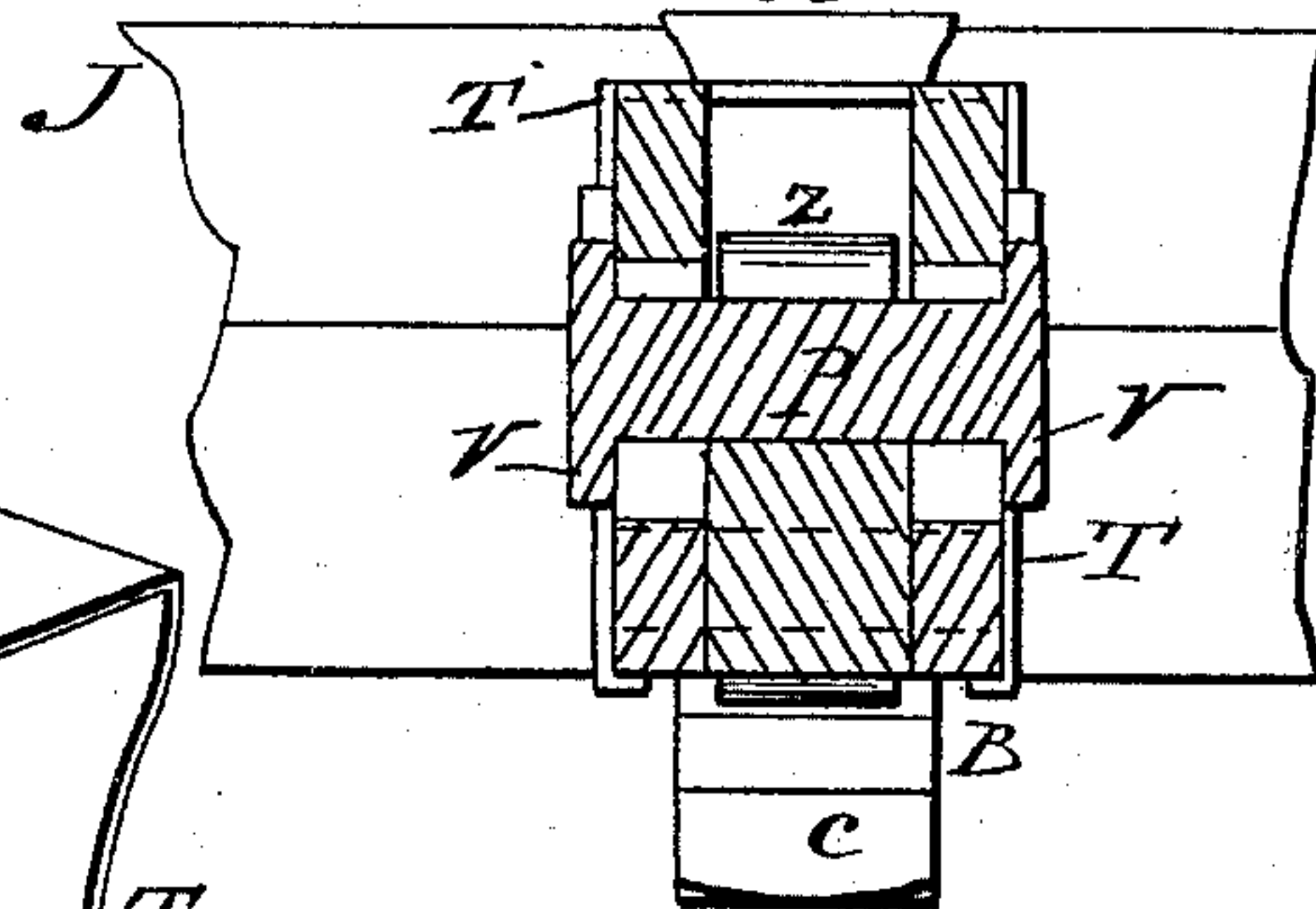
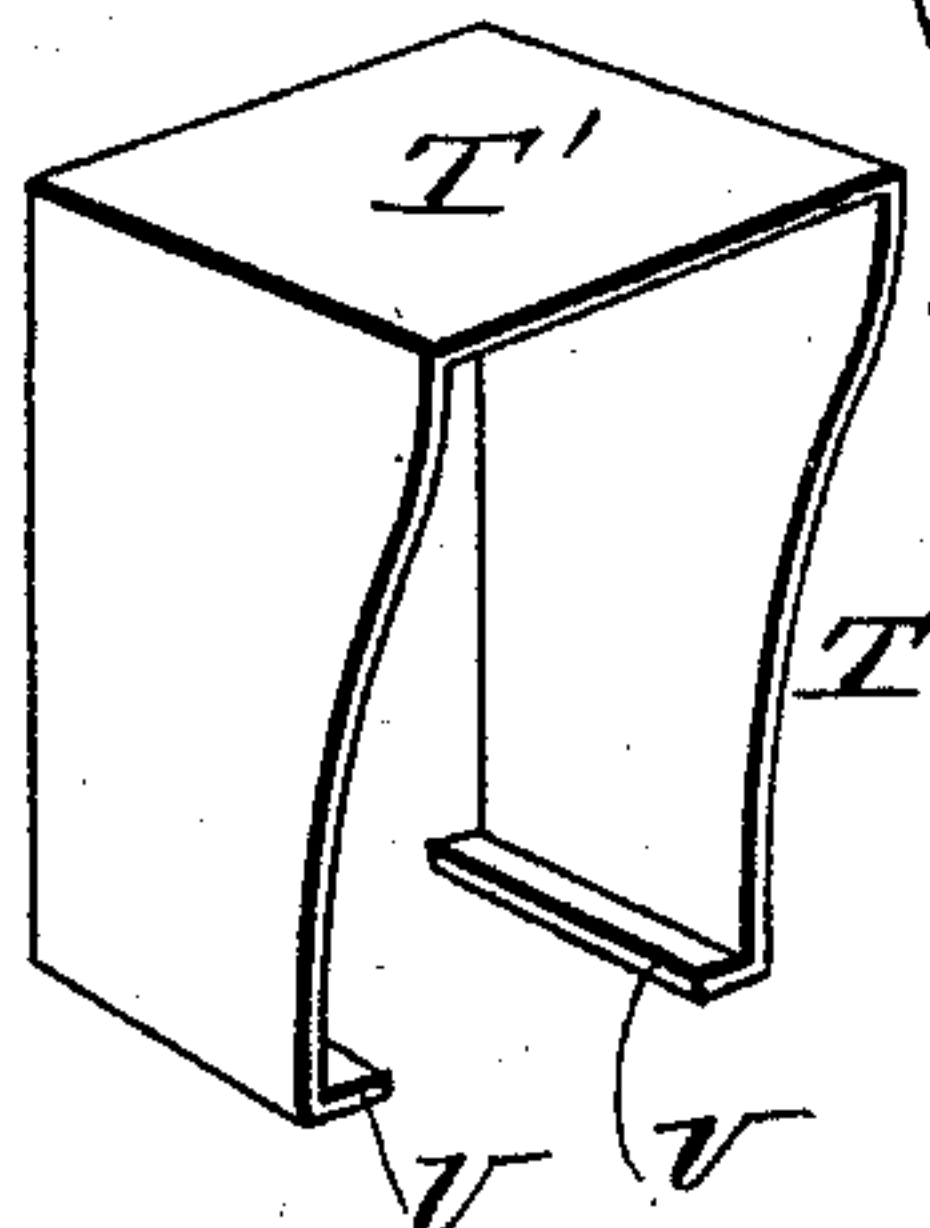


Fig. 4.



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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 397,633, dated February 12, 1889.

Application filed June 19, 1888. Serial No. 277,552. (No model.)

To all whom it may concern:

Be it known that I, ISAAC CLARK, of Morris Plains, in the county of Morris and State of New Jersey, have invented a new and useful
5 Improvement in Thill-Couplings, of which the following is a full, clear, and exact description.

The object of this invention is to provide a thill-coupling which is simpler, stronger, more convenient in use, and easier to couple and
10 uncouple than those heretofore in general use.

The invention comprises certain novel features of construction and arrangement, which, in order that they may be fully understood, I will first describe in detail, and then point out
15 particularly in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

20 Figure 1 is a side elevation of a thill-coupling embodying my invention. Fig. 2 is a sectional side elevation of the same. Fig. 3 is a cross-sectional elevation of the same on the line *xx*, Fig. 1. Fig. 4 is a detail perspective view
25 of a part hereinafter referred to.

The coupling thus illustrated is provided with an ordinary clip, A, yoke B, and nuts C, for application to the axle D of a vehicle, as shown.

30 On the front enlarged leg of the clip A are formed two parallel forward-projecting rectangular lugs, E, which are formed in their horizontal upper edges with corresponding mortises, F, in the upper parts of their vertical front edges with corresponding half-round
35 bearings G, and in the lower parts of said front edges with corresponding pivot-holes, H. In the pivot-holes H are mounted to turn the respective end pivots, I, of a vertically-swinging block, J, which is formed with beveled end
40 shoulders, K, to abut against the lower edges of the lugs E and limit the downward swing of the block J, and with upward-projecting parallel jaws, L, the inner edges of which are
45 constructed to coincide with the front edges of the lugs E when the block J is swung upward, and are formed with half-bearings M to coincide with the half-bearings G.

50 The jaws L are constructed to embrace therebetween loosely the shank N of a T-shaped

thill-iron, O, the cross-head P of which is adapted to the sectional bearings G M, the construction and arrangement being such that when the jaws are in their upper position, as shown in Fig. 1, the thill-iron O will be properly coupled to the axle, and when in their
55 lower position—determined by the stop-shoulders K and shown in Fig. 2—the thill-iron will still be connected to the axle, but may be easily uncoupled on simply lifting the T-head of
60 the thill-iron from the half-bearings M.

The upper ends of the jaws L are formed, respectively, with rigid arms Q, projecting inward at right angles thereto, and adapted, when the jaws L are lowered, as in Fig. 2, to
65 serve as guards against the withdrawal of the thill except by lifting, and, when raised, to bear closely upon the upper edges of the lugs E, with the mortises F of which they have downward-projecting locking-tenons R to engage.
70

The upper edges of the arms Q are formed with slots S to receive the yoke T' of a spring U-clip, T, which is sprung around so as to embrace the arms Q and lugs E, and has inward-projecting toes U on the lower ends of its legs
75 to catch the lower edges of the lugs E, and thus lock the arms Q firmly but detachably thereto, completing the coupling.

On the opposite ends of the cross-head P of the thill-iron are fixed solid disks V, to bear
80 against the outer sides of the jaws L and lugs E and resist their relative lateral displacement, and in one of said disks V are formed notches W for engagement by a dog, W', which is pivoted to the side of the corresponding lug, E, so that the thill or shafts can
85 be held up when desired.

A bent spring, Z, is preferably arranged between the front leg of the axle-clip and the thill cross-head P when raised to prevent rattling.
90

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a thill-coupling, the combination, with
95 an axle-clip, A, having forward-projecting parallel lugs E, formed with front half-bearings, G, and pivot-holes H, of a block, J, pivoted to the holes H and formed with rigid upward-projecting jaws L, having inner half-bearings,
100

M, and with rigid rearward-projecting bearing-arms Q, a T thill-iron, O, pivoted and embraced between the jaws L, and a locking-connection for the arms Q and lugs E, substantially as shown and described.

2. In a thill-coupling, the combination, with an axle-clip formed with coupling-lugs E, of a pivoted block, J, having beveled stop-shoulders K, and jaws L and arms Q, forming thill-iron hooks, substantially as shown and described.

3. In a thill-coupling, the combination, with an axle-clip formed with coupling-lugs E, having top mortises, F, and front half-bearings, G, of pivotal jaws L, having half-bearings M, and formed with rearward-projecting arms Q, having bottom tenons, R, a locking-connection for the arms Q and lugs E, and a thill-iron, O, substantially as described.

4. In a thill-coupling, the combination, with clip-lugs E and movable jaws L, having corresponding sectional bearings, G M, of a T thill-iron, N, having a cross-head, P, adapted to the bearings G M, and formed on its opposite ends

with lateral bracing-disks V, substantially as described.

5. In a thill-coupling, the combination, with parallel clip-lugs E, having corresponding bearings, of a T thill-iron pivoted to and between said bearings, and having a notched disk, V, on an end outside the bearing, and a dog, W, pivoted to the outside of the corresponding lug, E, substantially as described.

6. In a thill-coupling, the combination, with an axle-clip, A, having forward-projecting parallel lugs E, formed with front half-bearings, G, and pivoted holes H, of a block, J, pivoted to the holes H, and formed with rigid upward-projecting jaws L, having inner half-bearings, M, and with rigid rearward-projecting bearing-arms Q, and a locking-connection for the arms Q and lugs E, substantially as shown and described.

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Witnesses:

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