

No. 656,811.

Patented Aug. 28, 1900.

W. G. CLINE & W. R. HANDY.

THILL COUPLING.

(No Model.)

(Application filed Mar. 26, 1900.)

Fig. 1.

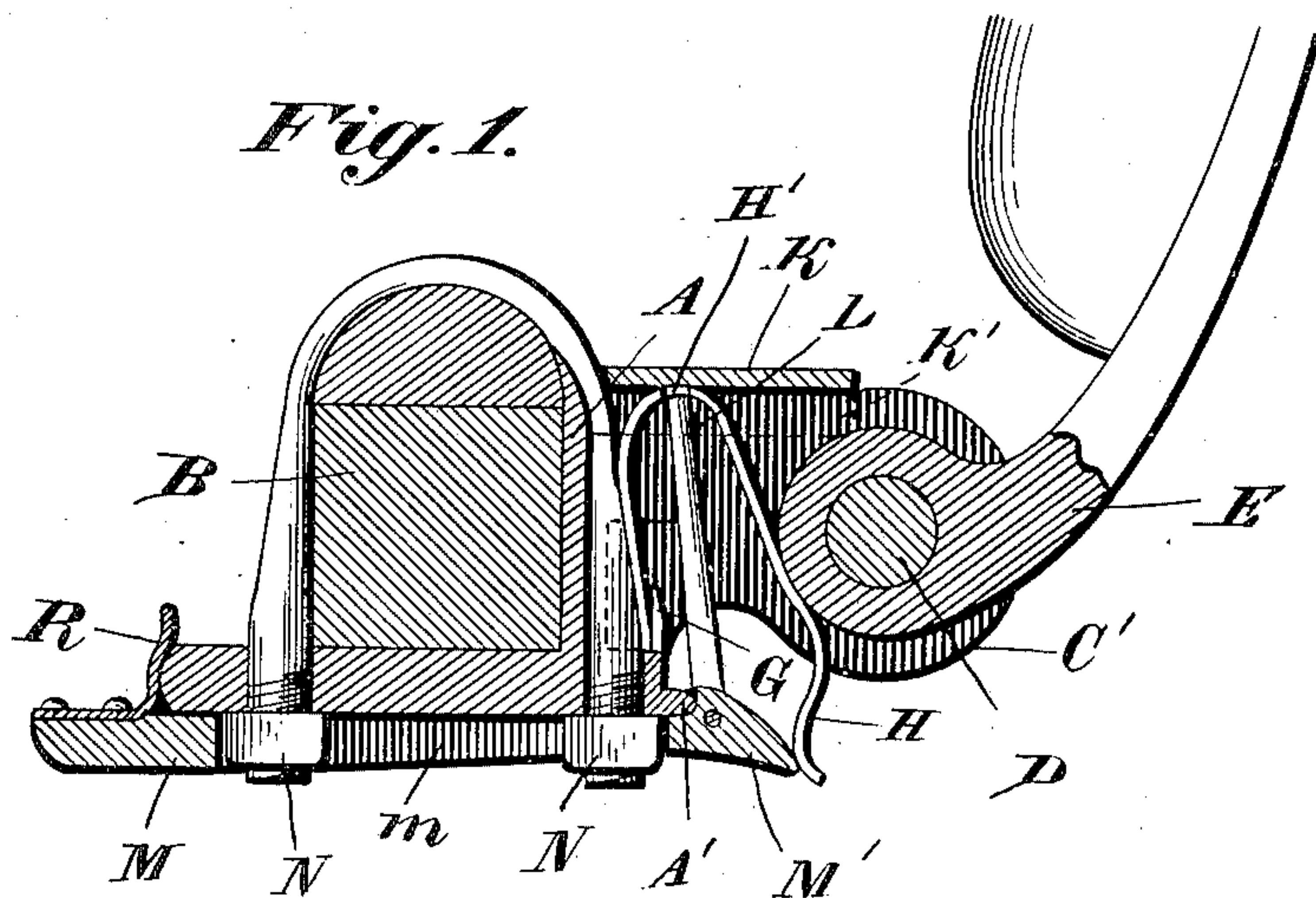


Fig. 2.

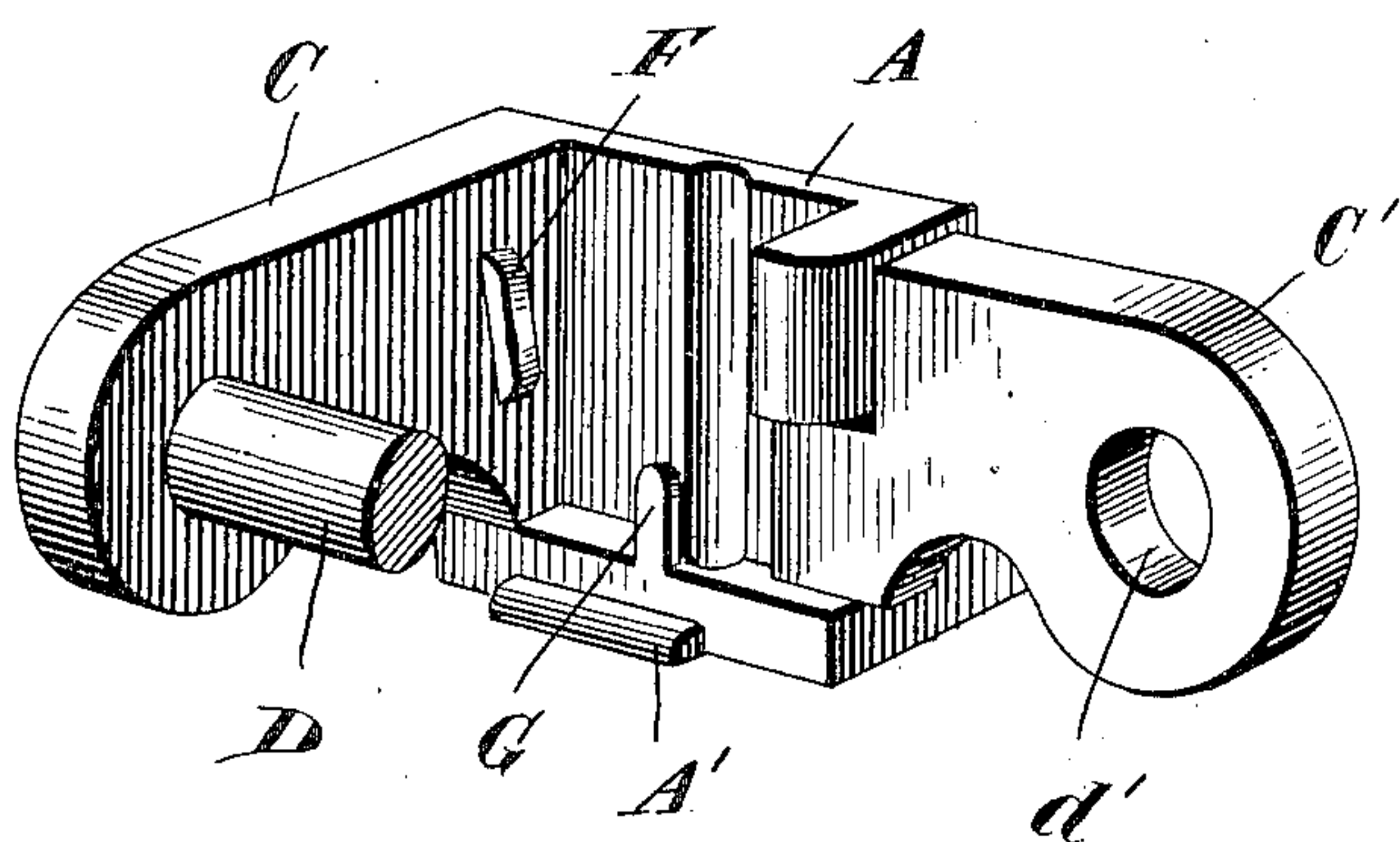


Fig. 4.

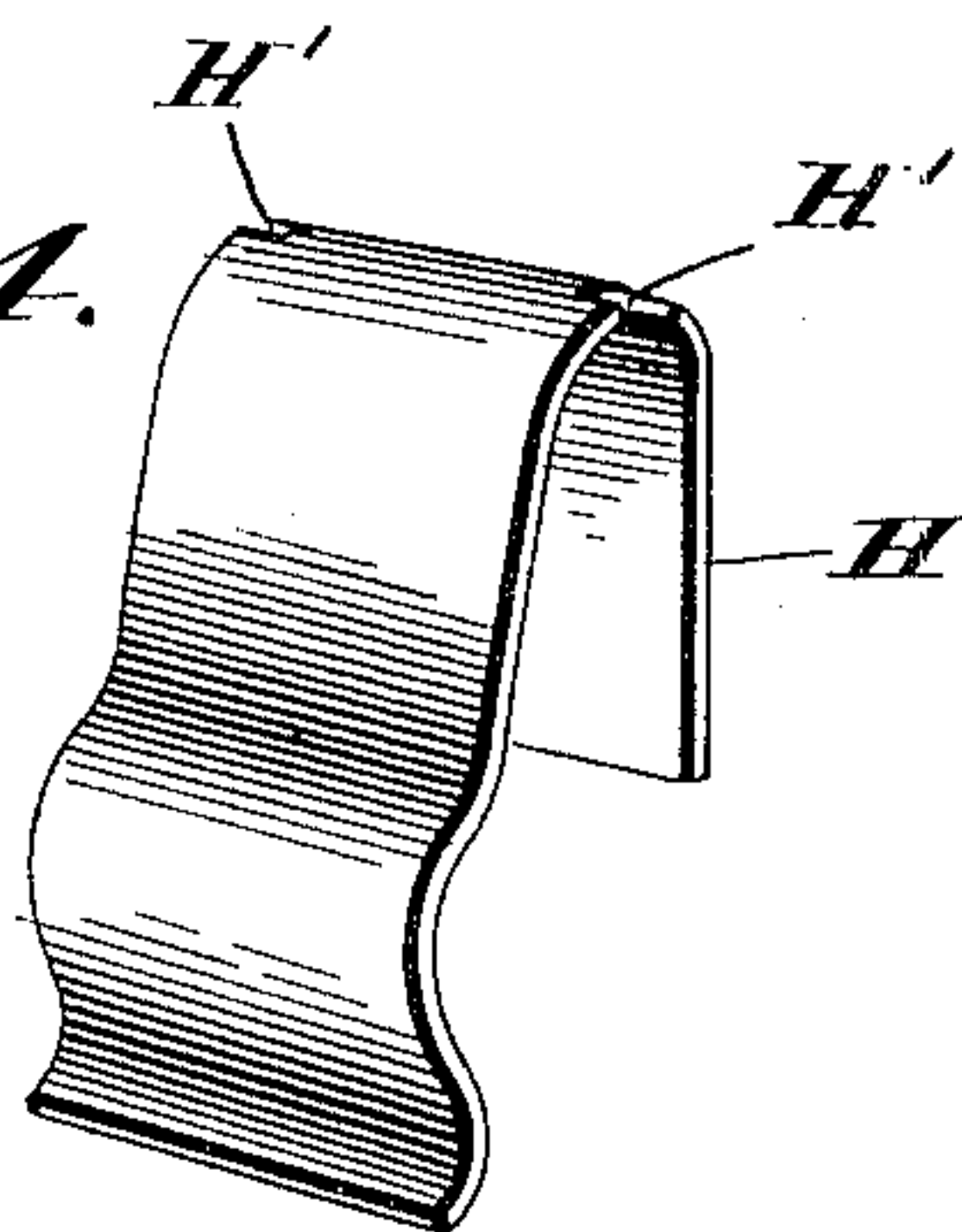
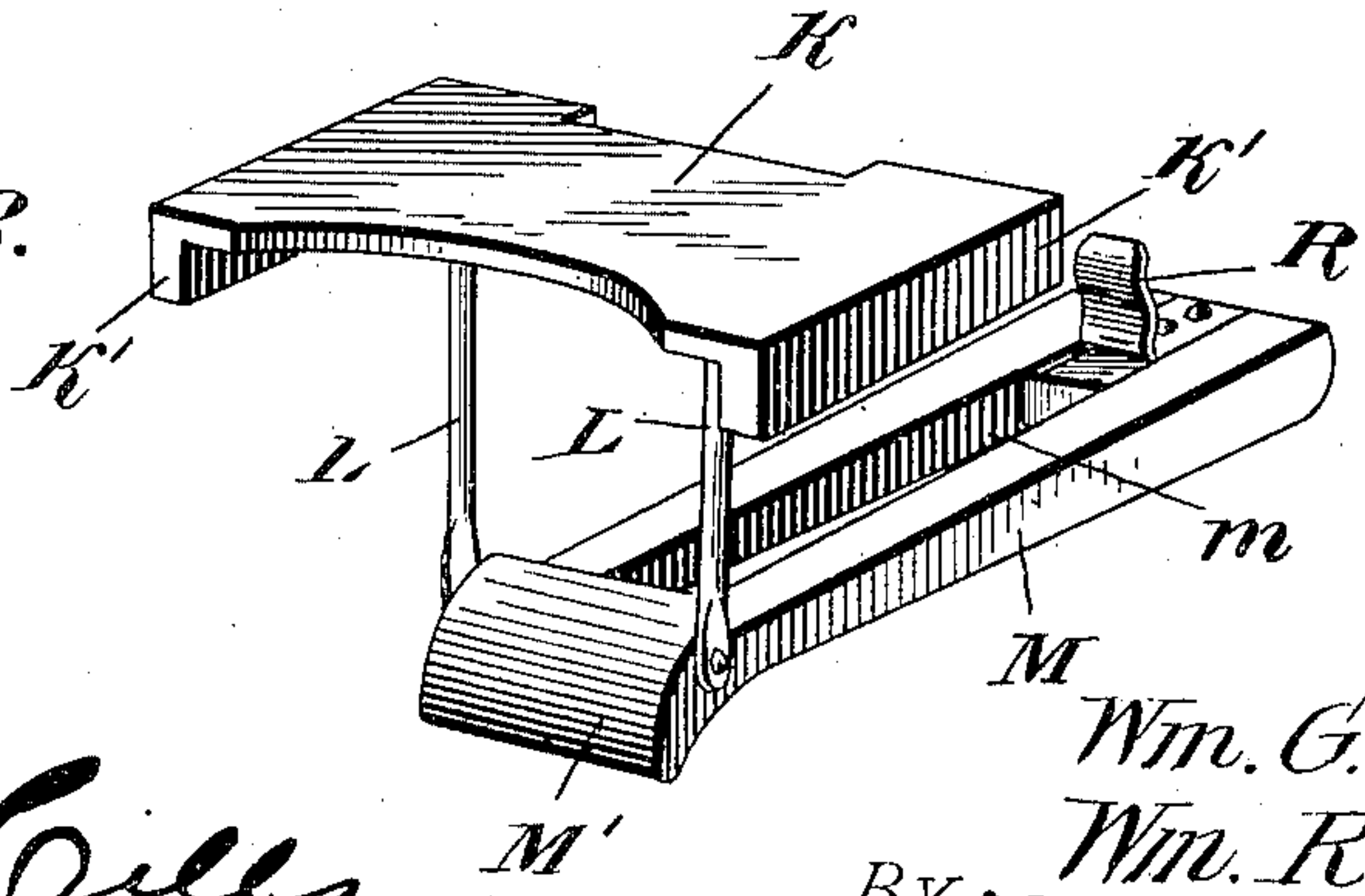


Fig. 3.



WITNESSES:

*L. C. Hills*  
*R. W. Taylor.*

INVENTORS

*Wm. G. Cline and*

*Wm. R. Handy*

By *Franklin H. Hough*  
Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM G. CLINE AND WILLIAM R. HANDY, OF GALLATIN, MISSOURI.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 656,811, dated August 28, 1900.

Application filed March 26, 1900. Serial No. 10,246. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM G. CLINE and WILLIAM R. HANDY, citizens of the United States, residing at Gallatin, in the county of 5 Daviess and State of Missouri, have invented certain new and useful Improvements in Thill-Couplers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled 10 in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

15 This invention relates to new and useful improvements in antirattlers for thill-couplings, and especially to a device which may be easily applied to the axle-clip and held in place by means of a spring-catch engaging 20 the end of the clip.

More especially the invention consists in the provision of a clip having one of its arms hinged to allow the thills to be easily attached to the clip and held on stationary pins, thus 25 dispensing with the use of removable bolts, and the provision of a plate having flanged edges, which is designed to be held over the arms of the clip.

Another feature of the invention resides in 30 the provision of a spring which is held against the end of the thill-coupling by means of links connecting the clip-engaging plate and the pivoted member carrying a spring-catch, which latter engages the rear end of the clip 35 on the under side of the axle.

The invention will be hereinafter described in detail and then specifically defined in the appended claims.

Our invention is clearly illustrated in the 40 accompanying drawings, which with the letters of reference marked thereon form a part of this application, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

45 Figure 1 is a central vertical sectional view through our improved antirattler and thill-coupler. Fig. 2 is a perspective view showing one of the arms of the clip, which arm is pivoted, swung open, and the retaining-plates 50 and antirattler removed. Fig. 3 is an enlarged detail view in perspective of the re-

taining-plates and spring-catch. Fig. 4 is a perspective view of the antirattler-spring.

Reference now being had to the details of the drawings by letter, A designates a clip, 55 which is secured to the axle B in any suitable manner, and is provided with two arms C and C', the former of which is integral with said clip and carries a pin D at right angles thereto. The second arm of the clip C' is 60 pivoted or hinged to the clip, as shown, and is apertured, as at d', said aperture adapted to receive the end of the pin D after the apertured thill-iron E has been placed on said pin. On the inner face of the stationary arm of the 65 clip is a lug or rib F, and on the upper surface of the bottom plate of the clip is a projecting pin G, behind which pin and rib or lug the antirattler-spring H is adapted to be held. The forward edge of the bottom plate 70 of said clip is slightly upwardly inclined, as seen at A', while its rear end projects behind the axle a short distance.

The plate K, having flanged or angled ends K', is designed to rest upon the upper edges 75 of the arms of the clip, when the swinging arm is swung into engagement with the end of the pin, said flanged or angled ends of the plate adapted to extend over the outer faces of the arms and hold the swinging arm in a 80 locked relation. To the under side of the plate K are fastened the links L, which at their lower ends are pivoted to the locking member M at its hooked end M'. This member M has a rectangular aperture m therein 85 provided to receive the nuts N, which are carried on the threaded ends of the U-shaped bolts which pass over the axle. Said spring H has notches H' on its opposite edges in which the links L rest to hold said spring in 90 place between the arms of the clip. The nose of the member M, which is slightly curved, as shown at M', is designed to bear against the bent end of the spring, as illustrated, and to hold the spring against the thill-iron to 95 prevent any rattling of the connected parts. The member M has a spring-catch R at its opposite end, which when the member is swung up against the under face of the clip is adapted to engage over the rear projecting 100 end of the latter. As the spring-catch is caught over the rear end of the clip the



hooked end of the member M will engage over the upwardly-turned forward end of the clip and the nose M' will force the antirattler-spring against the thill-iron. As the member M is swung up against the under face of the clip, the nuts N will serve to hold said member in place, as they will rest in said aperture *m*.

From the foregoing it will be noted that in removing the thill-iron from the clip the spring-catch at the end of the member M is first released from the rear end of the clip, after which the plate K, having pivotal connection with the member, may be removed, and with them the antirattler-spring, after which the hinged arm of the clip is allowed to swing open to allow the thill-iron to be removed.

It will be observed that when the thill is coupled to the pin carried by the rigid arm and the hinged arm swung over the end of the pin as the pivoted hooked member is swung back under the under face of the clip the hooked portion of said member engaging over the projecting end of the clip will draw the flanged plate snugly down against the upper edges of the arms of the clip, there being a cam action, the hooked portion of said member being fulcrumed over the projection on the forward end of the clip. As the hooked member is released at its rear end the nose of said member will slightly raise the flanged plate, thus allowing the hinged arm to swing laterally, whereby the thill may be uncoupled or detached.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

1. A thill-coupler and antirattler, comprising a clip having a rigid arm and a hinged arm and pin carried by said rigid arm, a plate having flanged ends held on the upper edges of said arms, a member having a spring-catch having pivoted-link connection with said plate, said catch designed to engage over a projecting portion of the clip and an antirattler-spring held by said member, as set forth.

2. A thill-coupler and antirattler, comprising in combination with the clip having the rigid and hinged arms the pin and thill-iron carried thereon, the ribs and pin on the in-

ner faces of arms and clip, the antirattler-spring held in place by said ribs and pin, the flanged plate, the links secured to said plate, and engaging the opposite edges of said antirattler-spring, the member pivoted to the lower ends of said links, the catch at the opposite end of the member, adapted to engage a projecting portion of the clip, as set forth.

3. A combined thill-coupler and antirattler, comprising in combination with the clip the arms and flanged plate as described, the links secured to the latter, the hooked member pivoted to said links, the antirattler-spring having notches on its opposite edges and engaged by said links, the nose of said hooked member, adapted to bear upon the antirattler-spring as said member is swung into a locked relation, and a catch for locking the latter to the under face of the clip, as set forth.

4. A combined thill-coupler and antirattler, comprising a clip having the arms and pin as described, the antirattler-spring, the flanged plate, the links secured thereto, the hooked member pivoted near its hooked end to said links, the curved nose on said member adapted to engage the rear face of the antirattler-spring, the hook to engage a projection on the clip, and a spring-catch at the opposite end of the member which catch is designed to engage a rearwardly-projecting portion of the clip, as set forth.

5. A combined thill-coupler and antirattler comprising a clip having the arms and pin as described, the antirattler-spring, the plate and links secured thereto, the hooked member pivoted to the lower ends of said links, the hooked portion of said member adapted to engage over a projection on the forward portion of the clip, the nuts on the clip-retaining bolt held in an apertured portion of said member, and a spring-catch at the end of the latter engaging a portion of said clip, as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM G. CLINE.

WILLIAM R. HANDY.

Witnesses:

HUSTON Y. TARWATER,  
A. TARWATER.