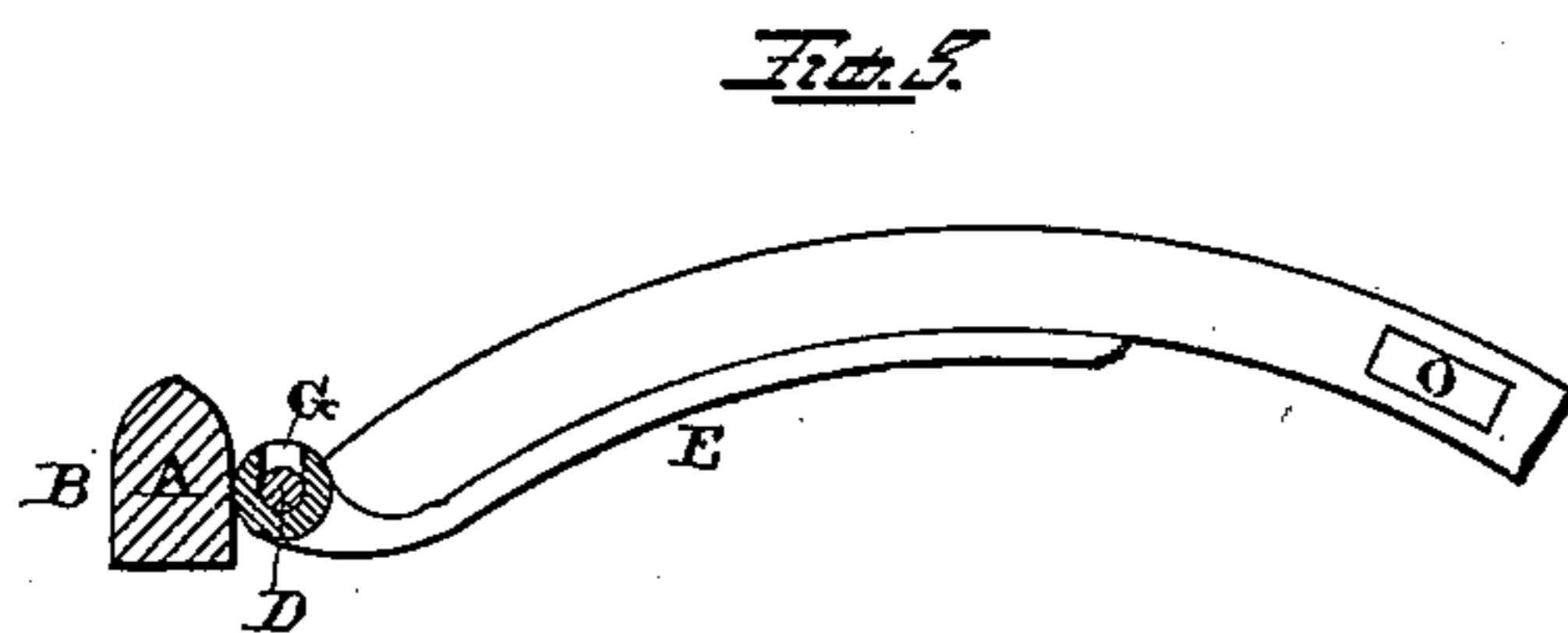
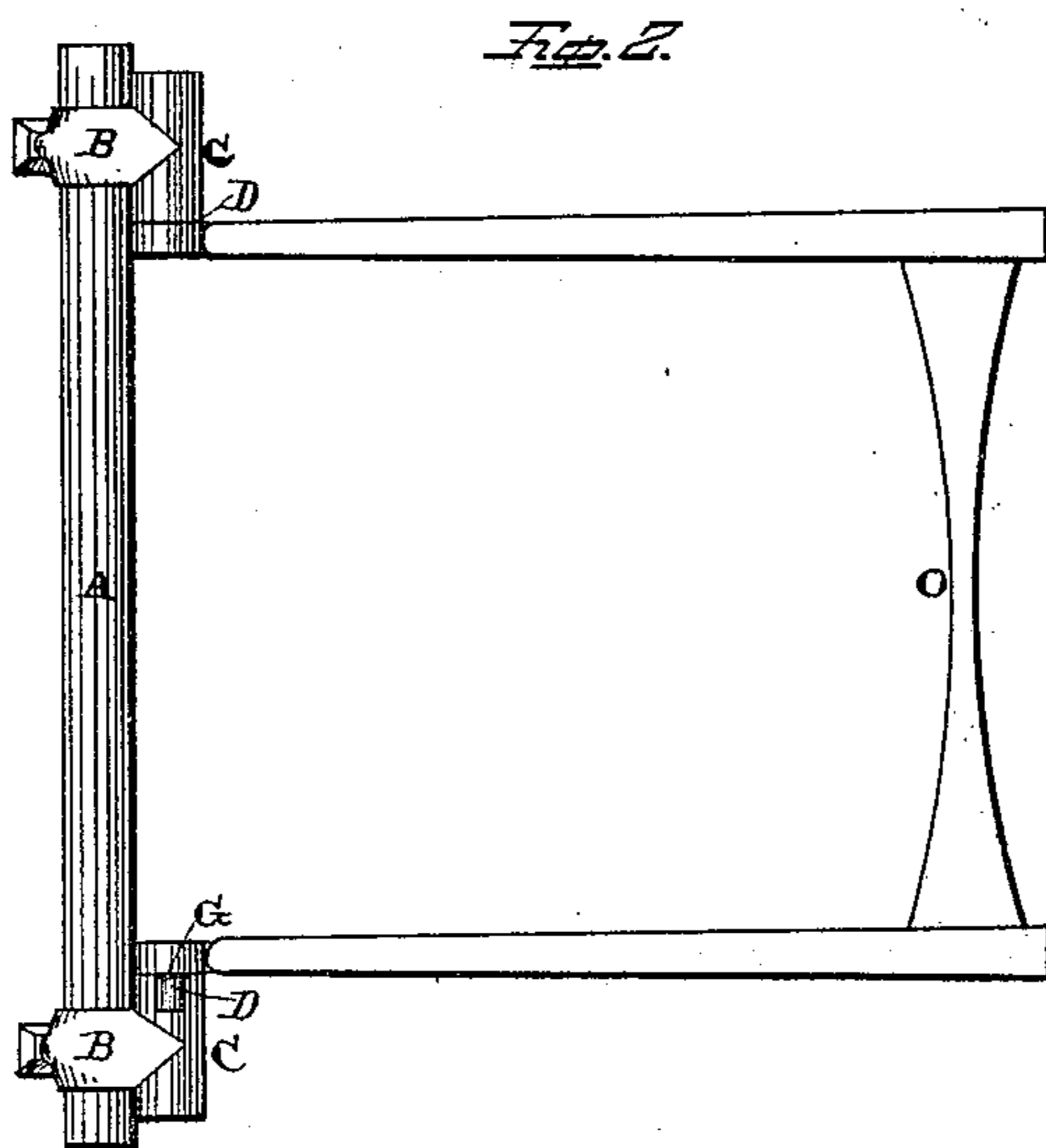
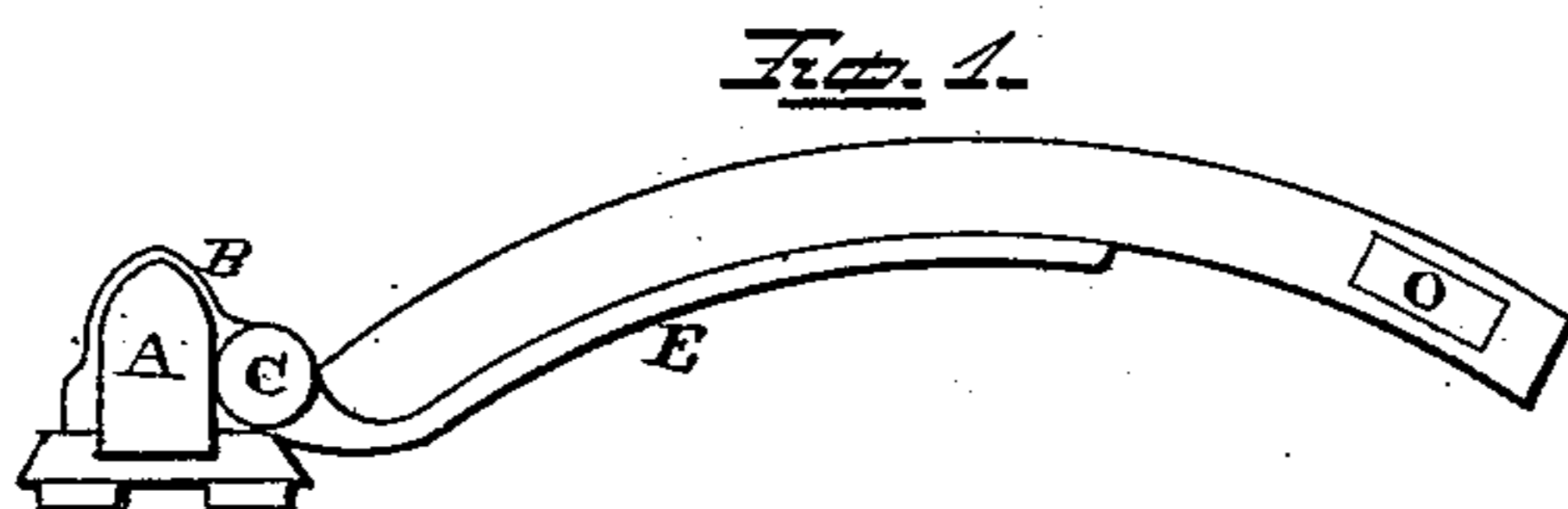


(No Model.)

J. S. SZYBOWSKI.  
Thill Coupling.

No. 230,971.

Patented Aug. 10, 1880.



WITNESSES=

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# UNITED STATES PATENT OFFICE.

JOSEPH S. SZYBOWSKI, OF BAYBOROUGH, NORTH CAROLINA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 230,971, dated August 10, 1880.

Application filed July 3, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH S. SZYBOWSKI, of Bayborough, in the county of Pamlico and State of North Carolina, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in thill-couplings; and it consists in forming a socket upon each one of the clips which pass around the front axle, which sockets are closed at their outer ends and open at their inner ends, and one of the sockets has a portion of its inner end cut away, so that the pivot formed on one of the shaft-irons can be readily inserted.

It further consists in uniting the rear ends of the shafts together by a cross-bar that is thinnest at its center, whereby their inner ends can be forced inward toward each other, so as to enable the pivots on the thill-irons to be inserted into their sockets, as will be more fully described hereinafter.

Figure 1 is a side elevation of my invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section taken through the pivot on the inner end of the shaft-iron and its socket.

A represents the axle, and B the two clips, which are passed around it in the usual manner. Secured to each side of these two clips is a socket, C, which is open at its inner end and closed at its outer one. These sockets receive the pivots D, which are formed on the rear ends of the shaft-irons E, and which pivots are turned in opposite directions, so as to enter the two inner ends of the two sockets. One of these sockets has a portion of its inner end cut away, as shown at G, so that the pivot which fits in this socket can be more readily inserted therein without having to move the outer end of the pivot any farther inward than is necessary.

The pivot upon the inner end of one of the

shaft-irons is first entered into its socket, and then the inner end of the other shaft is forced inward just far enough to have the outer end of the pivot drop down into that portion of its socket which has been cut away, and then, as soon as this shaft is released, the elasticity of the shaft causes the rear end of this shaft, which was forced inward, to spring outward until both shaft-irons bear against the inner ends of the two sockets.

By means of the construction above described it will be seen that all need of rubber and other devices to prevent rattling is entirely done away with, the coupling is made much more secure and durable, and the shafts can be readily attached and detached at will, and there is no danger of the coupling ever becoming accidentally loosened.

The cross-piece O, which unites the two shafts together, is here shown as made thinnest at the center, so as to allow the two ends of the shafts to be forced freely inward toward each other, and then, when released, snap outward into position. Where this cross-piece is thus made thinnest at the center the ends of the shafts can be forced freely inward to any desired distance.

Having thus described my invention, I claim—

1. The combination of the axle A, clips B, having the sockets C secured thereto, with the thill-irons E, having the pivots D on their outer sides, one of the sockets being cut away, as at G, so that the pivot can be inserted more easily, substantially as shown.

2. The combination of the two shafts, and a cross-piece for uniting them together, the cross-piece being made thinnest at its center, so as to allow the ends of the shafts to be moved toward each other, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of June, 1880.

JOSEPH S. SZYBOWSKI.

Witnesses:

STEPHEN H. FOWLER,  
SAMUEL S. GIBBS.