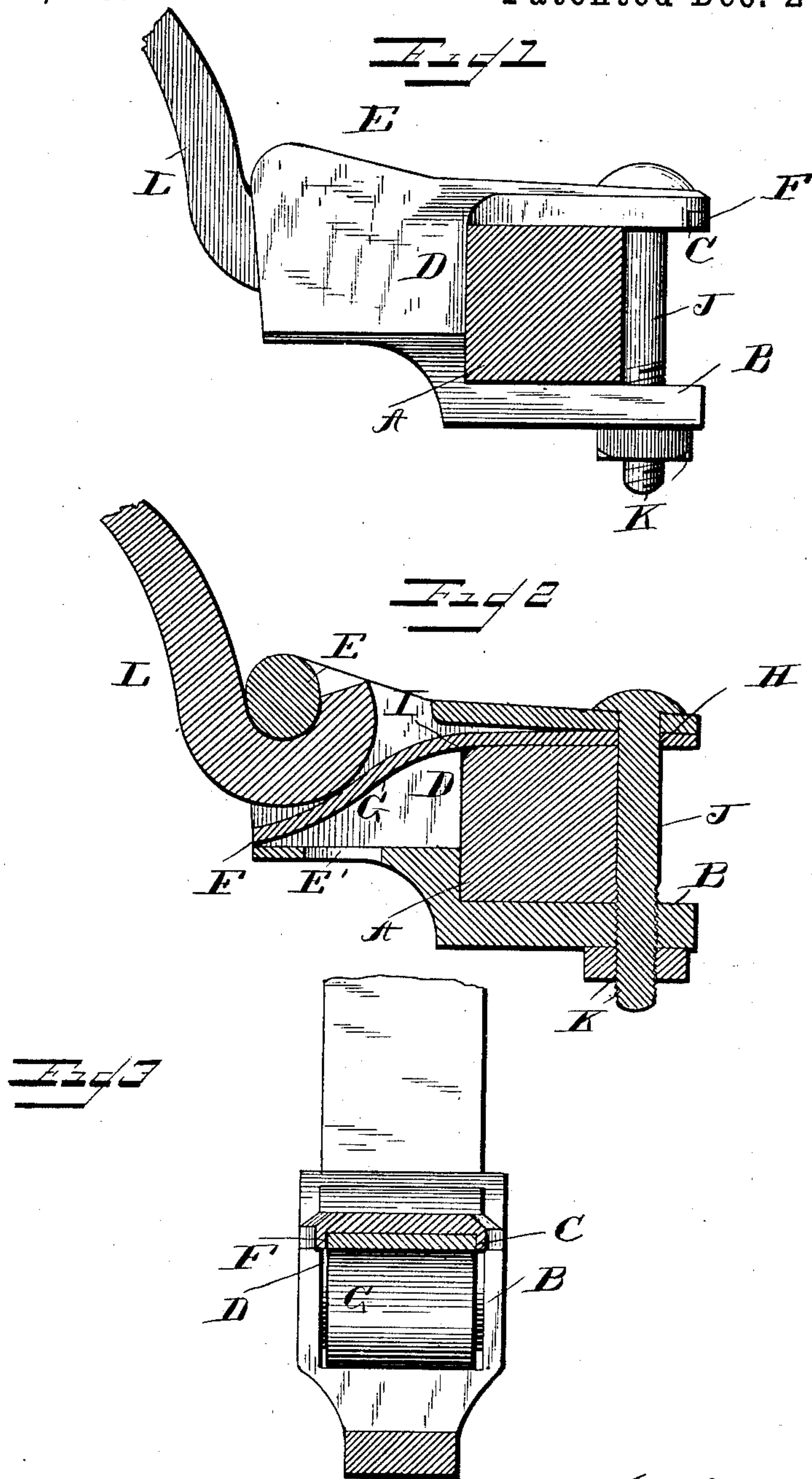


(No Model.)

T. G. MANDT.
THILL COUPLING.

No. 375,643.

Patented Dec. 27, 1887.



WITNESSES

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UNITED STATES PATENT OFFICE.

TARGE G. MANDT, OF STOUGHTON, WISCONSIN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 375,643, dated December 27, 1887.

Application filed September 9, 1887. Serial No. 249,239. (No model.)

To all whom it may concern:

Be it known that I, TARGE G. MANDT, a citizen of the United States, and a resident of Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved thill-coupling. Fig. 2 is a longitudinal vertical sectional view of the same, and Fig. 3 is a transverse vertical sectional view.

Similar letters of reference denote corresponding parts in all the figures.

My invention has relation to anti-rattling thill-couplings, and more particularly to the manner in which the spring, which will be hereinafter more fully described, is secured to the clip.

In the accompanying drawings, the letter A represents the axle, to which the clip B is secured. This clip is provided near its rear ends with registering apertures, while its upper portion or jaw is formed with a flange, C, upon each side thereof. The box D is formed integral with the forward end of the clip, and is provided at its forward end with a short circular cross-rod or bearing-pin, E, and at its under side with a large aperture, E', the object of which is to permit the escape or removal of dust or dirt, which is apt to accumulate in the box.

F denotes the spring, having its forward end curved, as shown at G, and provided with an aperture, H, which, when in position, registers with the apertures in the rear portion of the clip. This spring is secured, with its straight rear portion against lateral displacement, to the upper jaw of the clip, between the flanges thereof.

The clip is secured to the vehicle-axle, which is filed away to produce a rounded surface, (shown at I,) by means of a bolt, J, passing through the apertures in the jaws of the clip and the aperture of the spring, and a nut, K, screwed upon the lower screw-threaded end of the said bolt. The thill-hook L, to which the thill is secured, is hooked to the

bearing-pin E and above the forward curved end of the spring.

It will be seen that the spring will force the thill-hook firmly against the bearing-pin, thus preventing it from rattling, and it will also be seen that by forming a rounded surface upon the axle this spring will be allowed a greater vertical play.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood without requiring further explanation. It is simple in construction, inexpensive to manufacture, and the thill-hook can be easily and quickly attached to or detached from the clip, if desired.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a thill-coupling, the combination of a clip having flanges integral with the upper jaw of the same, with a curved spring inclosed within said clip and retained against lateral displacement by said flanges.

2. In a thill-coupling, the combination of a clip having the edges of one of its jaws flanged, registering apertures in said jaws, a boxing integral with the forward portion of the clip, said boxing provided with a bearing pin or rod and having an aperture in its under side, a spring having its lower end curved and its upper end formed with an aperture registering with the apertures in the clip, bolts passing through the apertures of the clip and the spring, a nut screwed upon the end of said bolt, and a thill-hook.

3. In a thill-coupling, the combination of a vehicle-axle, a portion of its forward upper edge formed rounded, with a clip, substantially as hereinbefore described, a spring inclosed by said clip and bearing with its intermediate portion against the said rounded edge of the axle, which permits of the said spring having a vertical play, and means for securing the clip to the axle.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

TARGE G. MANDT.

Witnesses:

B. E. WAIT,
GEO. W. CURRIER.