(Model.)

T. M. RICHARDSON.

Thill Coupling.

No. 234,067. **Patented Nov. 2, 1880.**

Fig. 1.

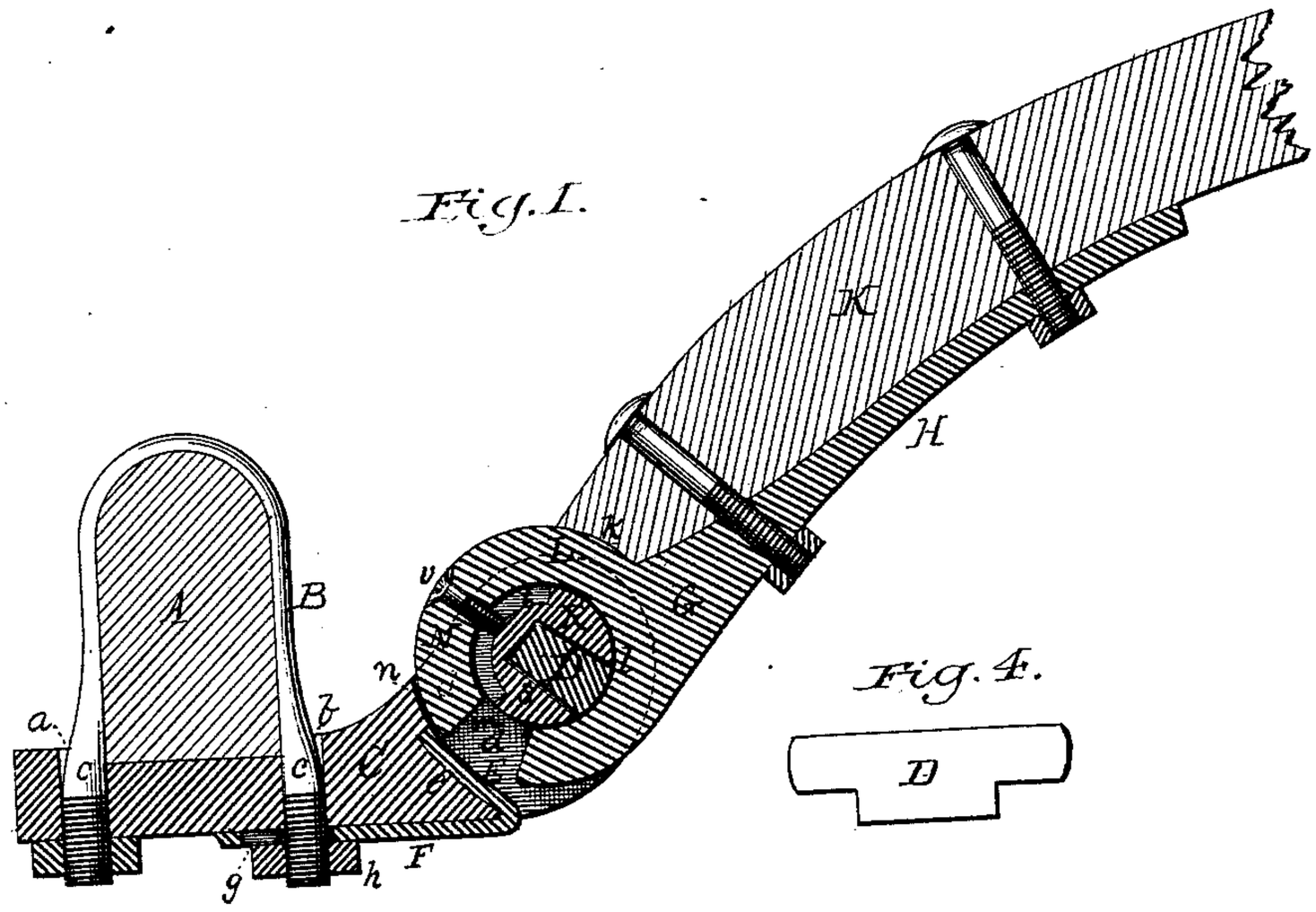


Fig. 4.

Fig. 2.

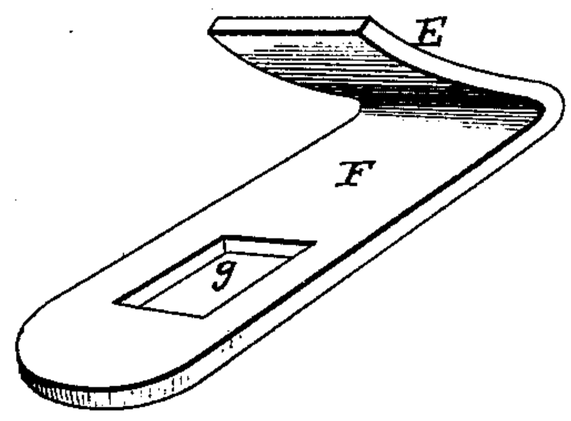
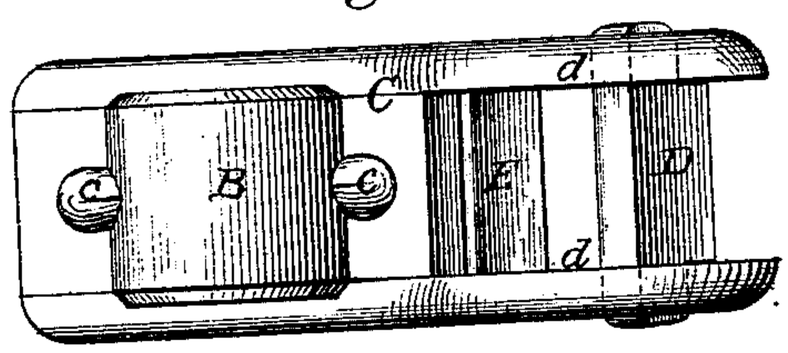


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

THEODORE M. RICHARDSON, OF STOCKTON, MAINE, ASSIGNOR OF ONE-HALF TO LEWIS M. PARTRIDGE, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 234,067, dated November 2, 1880.

Application filed September 4, 1880. (Model.)

To all whom it may concern:

Be it known that I, THEODORE M. RICHARDSON, of Stockton, in the county of Waldo and State of Maine, have invented a new and valuable Improvement in Shaft-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical central section of this invention. Fig. 2 is a detail view of the adjustable friction-plate. Fig. 3 is a plan view of the holder. Fig. 4 is a detail view of the pin-bearing.

This invention has relation to thill-couplings; and it consists in the construction and novel arrangement, in combination with the slotted thill end carrying a slotted disk-bearing in a circular seat of the axle-clip, its holder having cheeks supporting the ends of a squared draft pin or bearing, and a metallic friction-slide having an upwardly and reversely inclined front flange extending between the cheeks and engaging the rear branch of the thill end, all as hereinafter shown and described.

In the accompanying drawings, the letter A designates the axle and B the clip thereon. C is the holder, usually made of malleable cast-iron, perforated at *a* and *b* for the passage of the threaded ends *c* of the clip. In front the holder is forked, having bearing-cheeks *d*, in the central portions of which are secured the squared ends of a squared pin or bearing, D, the breadth of which is greater than its thickness. This pin extends transversely between the cheeks *d*, its broad sides being inclined at an angle of about forty-five degrees backward, as shown in the drawings.

In the throat or front of the holder, between the cheeks, is formed a beveled seat, *e*, to receive the upward and reversely inclined front flange, E, of the adjustable friction-plate F, which is made with a slot, *g*, through which one of the ends *c* of the clip passes, so that it is adjustable, its position being secured by the clip-nut *h*.

G indicates the iron thill end, having a shank portion, H, which is bolted to the under side of the end of the wooden shaft K, in which position it is out of the way, so that it does not mar the symmetry of the shaft. Its rear end, L, is expanded in circular form, having a shoulder, *k*, which abuts against the shaft end, and a central circular bearing, *l*, having an offset slot or opening, *m*, in its under side opposite said shoulder, as shown in the drawings. This bearing end L is therefore forked, and its rear branch, N, is rounded on its rear surface, as indicated at *n*, to form a bearing which is in contact with the forward bearing-surface of the reversely-inclined flange E of the friction-plate F when the parts are coupled together.

In the circular seat *l* is located the brass bearing-disk R, having in its under portion a slot, *s*, corresponding in breadth to the offset slot of the iron thill end, which leads into said circular seat, and in its upper portion a groove, *t*, which extends around it circularly, and which, engaging with a set-screw, *v*, in the branch N, serves to hold the disk in place when the thills are disconnected from the holders.

It will be observed that the flange-bearing E and the transverse pin-bearing D between the cheeks are in parallel position, both being inclined, and the thill end is connected by holding the thills raised and slipping the forked end on the bearing D downward and forward. This bearing D being received in the slot of the bearing-disk R, the thills are turned forward into the position for draft. The slot of the thill end now being downward, all particles of soil will drop out.

The rear branch of the thill end receives the pressure of the friction-plate on its rear curved surface, while its inner or front face bears against the disk R which, in turn, bears against the broad side of the bearing-pin D, the inclined position of which causes it to set at right angles, or nearly at right angles, to the direction of the thill end.

I am aware that it is not new to employ a slotted bearing-disk and a rectangular transverse bearing-pin engaging therewith in the construction of thill-couplings, and I do not desire to claim such devices, broadly; but

What I claim, and desire to secure by Letters Patent, is—

The combination, with the forked thill-end G, having the circular seat *l* and the slotted bearing-disk R, of the axle-clip B, the holder C, having the cheeks *d*, the squared draft pin or bearing D, and the adjustable slotted friction-plate F, having an upwardly and reversely inclined bearing-flange, E, extending between the holder-cheeks and engaging the rear branch, N, of the thill end, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THEODORE MANSFIELD RICHARDSON.

Witnesses:
LORING BLANCHARD SMALL,
ELVIN FRENCH STAPLES.