

No. 630,001.

Patented Aug. 1, 1899.

A. B. LYMAN.
THILL COUPLING.

(Application filed Feb. 16, 1899.)

(No Model.)

Fig. 1.

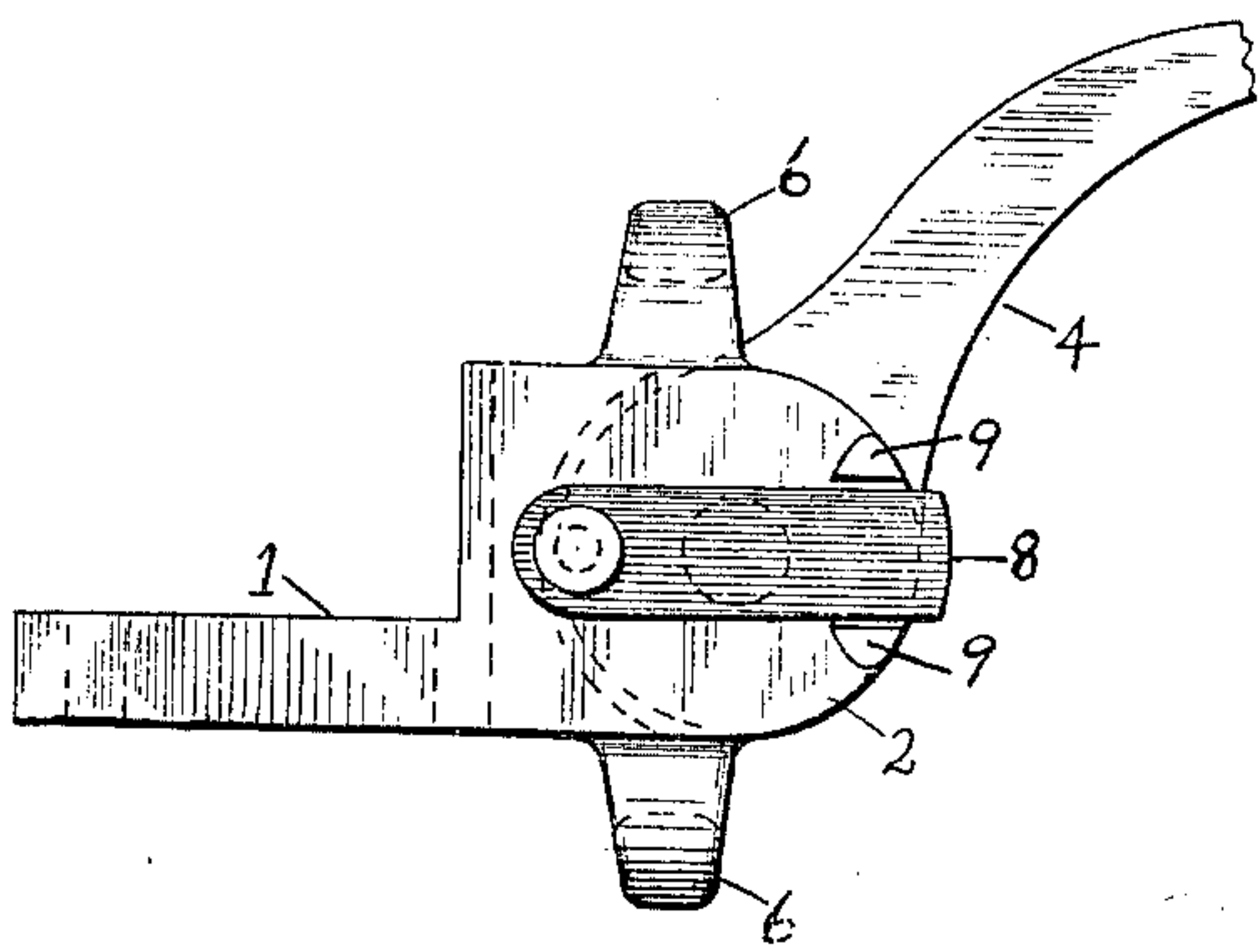
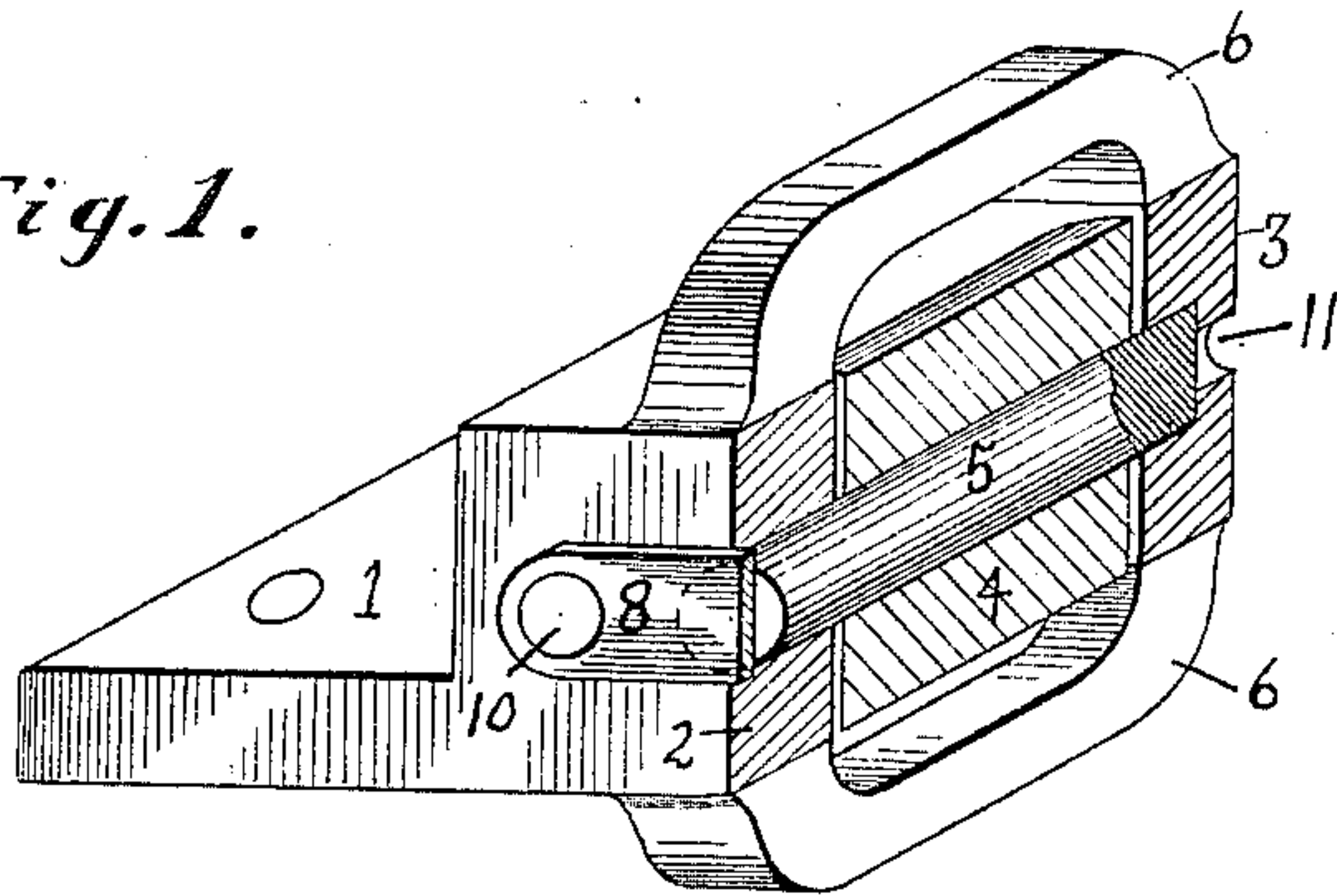


Fig. 2.

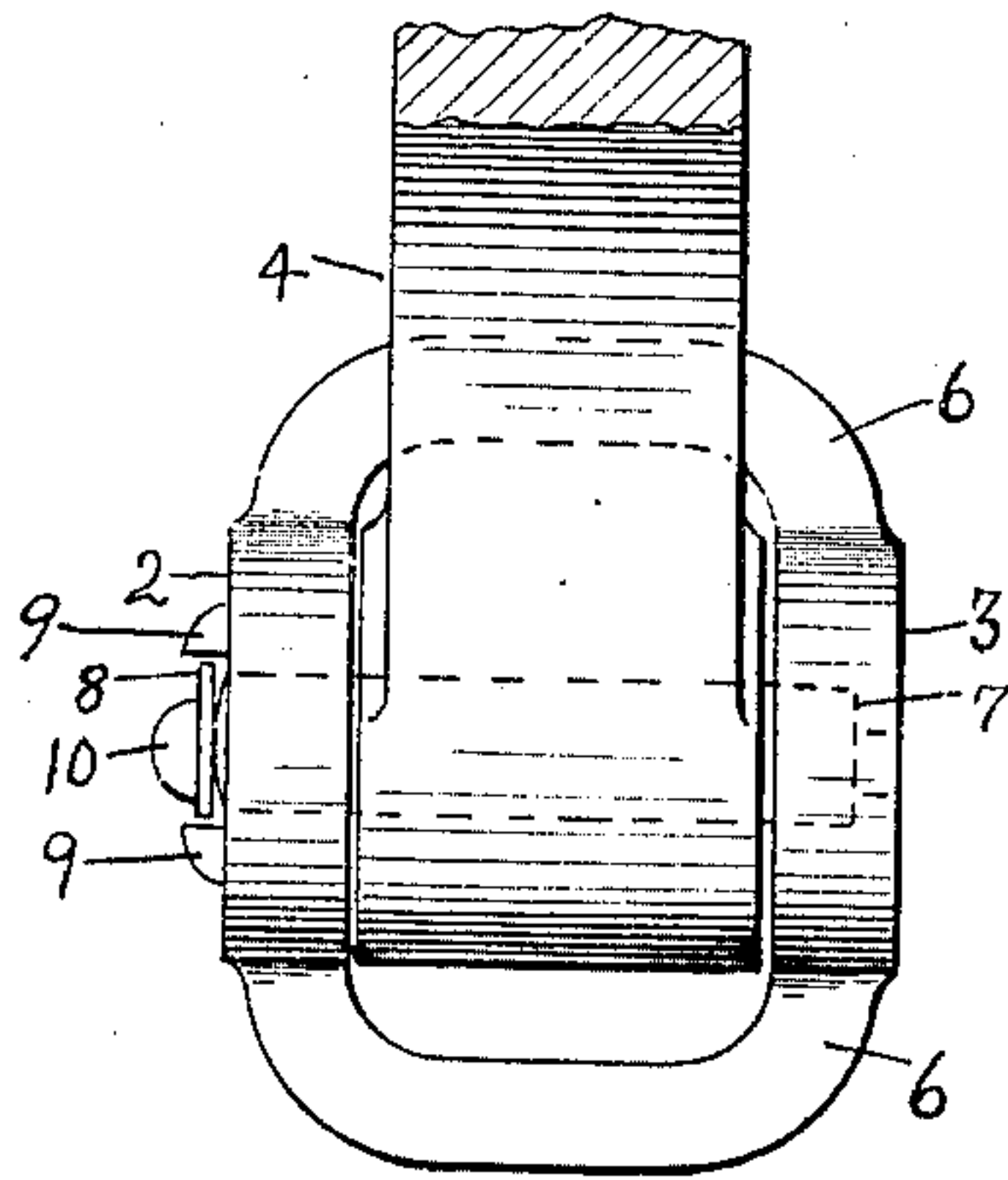


Fig. 3.

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 630,001, dated August 1, 1899.

Application filed February 16, 1899. Serial No. 705,600. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. LYMAN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

This invention relates to an improvement in thill-couplings.

Among the objects of the invention are to provide means to facilitate the coupling and uncoupling of shafts or tongues of vehicles in order that one may be substituted for the other or to remove the same for the purpose of economy in stowing the vehicles, to provide the device with a pin for coupling the shafts or tongue that can be readily renewed should the same break or become injured, and to provide means for retaining the said pin in position when the parts are connected.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, partly in section, showing the position of the pin when the parts are connected. Fig. 2 is a side view. Fig. 3 is a front view.

Referring to the drawings, 1 designates the clip-plate, having jaws 2 and 3, between which the thill-iron 4 is held by means of the pin 5. The jaws 2 and 3 are provided with yokes 6, extending from one jaw to the other to prevent the said jaws from spreading apart by reason of any lateral strain. The retaining-yokes 6 are integral with the jaws 2 and 3 and are especially adapted to this class of thill-coupling wherein the ordinary bolt is dispensed with, as the retaining-yoke takes the place of this function of the bolt—namely, preventing the jaws from spreading. The jaws are also provided with holes, through which the pin 5 is inserted. The pin 5 is inserted through the jaw 2 and through the thill-iron 4, the end of the pin entering the jaw 3 and abutting against the shoulder 7, formed by the reduction of the diameter of the hole for part of the distance through the jaw 3, as shown in Figs. 1 and 3.

The jaw 2 is provided with a spring 8, which is pivoted at one end and extends across the

hole in the jaw 2 and projects slightly beyond said jaw to permit of being raised. Projecting from the surface of the said jaw 2 are two projections 9, which serve the purpose of holding the spring 8 in position over the hole in the jaw 2, thereby preventing it from working up or down and insuring the retention of the pin 5 in position when the parts are connected. When the spring 8 is in position between the projections 9, the inner surface of the spring will rest against the end of the pin 5, which latter projects slightly beyond the surface of the jaw 2. The pin 5 will thus be held tightly in position against the shoulder 7 and prevented from rattling and unnecessary wearing.

The pin 5 being an ordinary straight bar can readily be renewed should it break or become injured without the use of special tools or loss of time required to make a tapered pin or a pin with ribs, as are sometimes used.

When it is desired to couple the shafts or tongue, the spring 8 is lifted from between the projections 9 and turned up or down on the pivot 10 until the hole in the jaw 2 is uncovered. The thill-iron 4 is then placed between the jaws and the pin 5 inserted through the hole in the jaw 2 and through the thill-iron 4, the end of the pin entering the other jaw 3 and abutting against the shoulder 7. The spring 8 is then moved back into position between the projections 9, the spring extending across the hole in the jaw 2 and bearing against the end of the pin 5, holding the latter in position and preventing it from rattling, as before stated. To remove the shafts or tongue, the spring 8 is turned on the pivot 10 until the hole in the jaw 2 is uncovered and a nail or other suitable device is inserted in the small hole 11 in the jaw 3, striking the end of the pin 5 and pushing the latter out through the hole in the jaw 2.

By this invention the thill-coupling possesses simplicity, durability, and is not liable to get out of order. It also possesses the advantage of the parts being readily renewed at any ordinary blacksmith-shop in case any accident should happen to the same. Fur-

thermore, by it when changing from shafts to pole, or vice versa, no wrench or special tool of any kind is required, thereby providing a thill-coupling which is exceedingly convenient to manipulate and keep in order.

It will be seen that by having the yokes integral with the jaws of the clip the device can be made very light without the liability of the jaws spreading apart or breaking. In thill-couplings wherein the thill-iron and yoke are integral the yoke also forms the means for connecting the thill-iron and the jaws of the plate. All the strain in pulling is on this connecting-pin, and should the latter break the whole thill-iron would be rendered useless, whereas in the device shown should the connecting-pin break a new one can be readily inserted, at the same time the jaws would be secured against any tendency to spread apart, which may be caused by the thill-iron

pulling out on an angle to the jaws, owing to the end of one shaft being held secure.

Having thus described my invention, what I claim is—

In a thill-coupling, the combination of the clip-plate, 1, having jaws, 2, and, 3, each of said jaws having a hole through it, the hole in the jaw, 3, being reduced in diameter for part of its length to form the shoulder, 7; retaining-yokes, 6, integral with the jaws, 2, and, 3, to prevent them from spreading apart; a thill-iron, 4; a pin, 5, and a spring, 8, to retain the said pin in position.

In testimony whereof I affix my signature in the presence of two witnesses.

ALBERT B. LYMAN.

Witnesses:

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