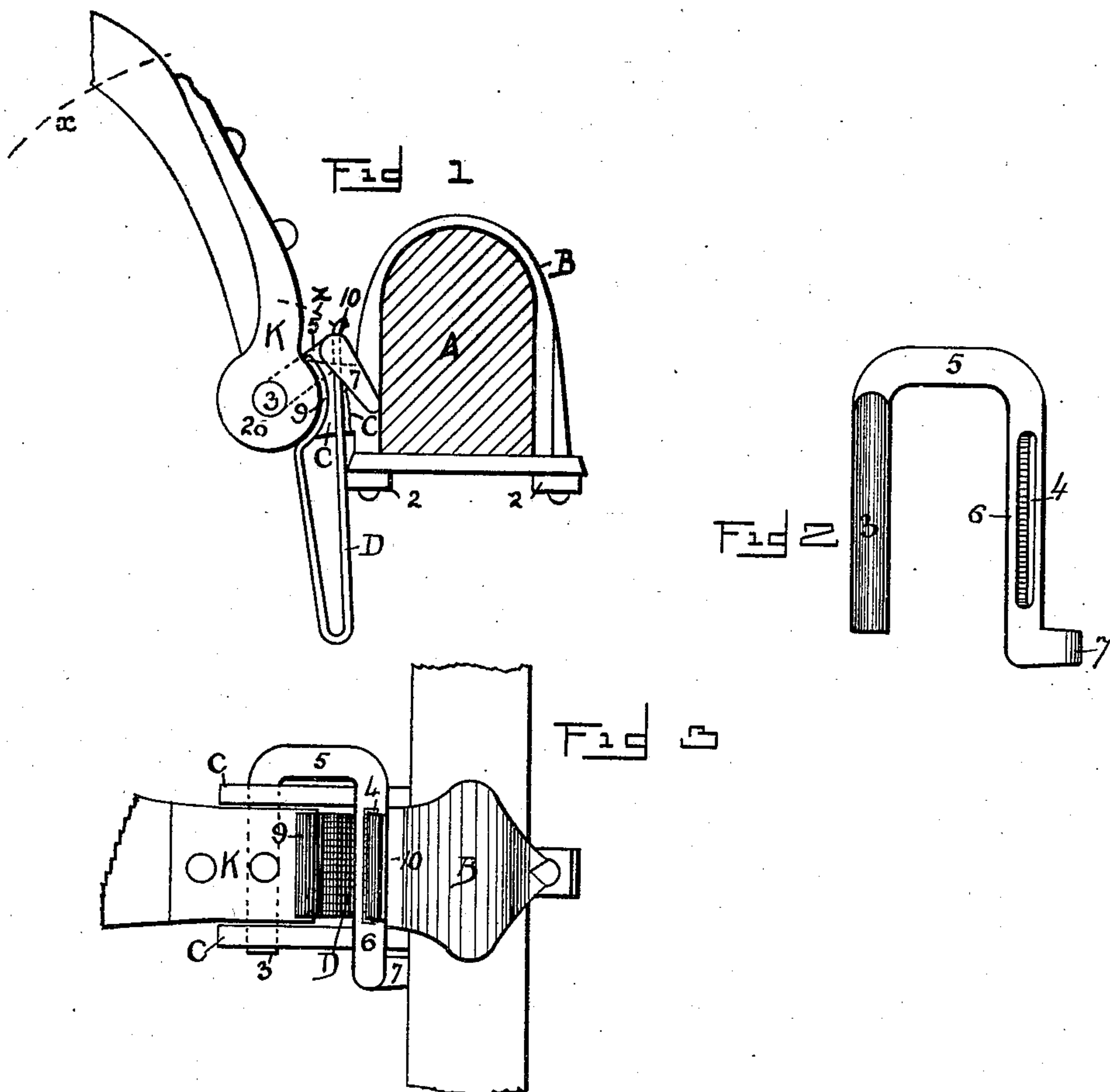


(No Model.)

W. A. LUCAS & L. P. MOONEY.
THILL COUPLING.

No. 547,729.

Patented Oct. 8, 1895.



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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 547,729, dated October 8, 1895.

Application filed January 21, 1895. Serial No. 535,710. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM A. LUCAS and LEWIS P. MOONEY, residing at Fremont, in the county of Dodge and State of Nebraska, have invented certain useful Improvements in Thill-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the invention, such as 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.

This invention has relation to a new and novel thill-coupling, the object of our invention being to provide a thill-coupling that shall be so constructed that the thills can be easily removed.

In the accompanying drawings, Figure 1 shows a side elevation with an ear broken away of a thill-coupling embodying our invention. Fig. 2 shows a detached detail of the locking-key, while Fig. 3 shows a top view of one of our thill-couplings.

In a great many private as well as public barns it is often desirable to change a tongue to a pair of shafts. This, with the thill-coupling as ordinarily constructed, is a troublesome and time-consuming task, as most pleasure-vehicles are provided with antirattlers. These as a rule are exceedingly hard to place in position.

In our present invention we provide an ordinary thill-coupling B, having the usual ears C C, with an ordinary thill-iron K, which iron supports the shaft or tongue in the usual manner. In securing the thill-iron to the coupling we employ a peculiarly-shaped key, preferably of bar metal, comprising the cylindrical stem 3, adapted to pass through the ears C, and the thill-iron K, containing this key, extends from the cylindrical portion at right angles a suitable distance in the form of a neck 5, as is shown in detail in Fig. 2, and from thence extending by means of the stem 6 in the same direction with the stem 3 and finally being provided with a stub end 7, extending at right angles to the stem 6 and preferably perpendicular to the same. The stem 6 is provided with an opening 4. This key is used in conjunction with an approximately V-shaped spring of any suitable length and

width, so that said spring can be readily inserted into the opening 4. At one end this spring is provided with an inwardly-curved portion 9, adapted to partly encompass the hub 20 of the thill-iron K, the remaining end of the spring being curved in the opposite direction, terminating in the end 10, as is shown in Figs. 1 and 3. The approximately U-shaped key and the spring D comprise our locking mechanism. In making a connection the V-shaped spring D is first inserted through the opening 4, so that the lower angular portion of this spring rides up snug against the lower portion of its stem 6, when the thill-iron K is placed between the coupling while the stem 3 is inserted. The spring D is next forced down, preferably with a hammer, until it escapes between the lower end 20 of the thill-iron K and the coupling, the key in the meanwhile being, of course, movably held by means of the stem 3 until the spring finds a seating, as is shown in Fig. 1, in which position the curved portion 9 of the spring rides against the hub 20, while the remaining upper end of the spring presses outward against the key-stem 6, as is shown in the figure. As the spring D was inserted between the thill iron and coupling, the stub 7 would have fallen upon the outside and adjoining the ear C of the coupling, as is shown in Fig. 1, so that when the spring exerts its tension this stub 7 is securely locked and holds the key, as indicated in Fig. 1.

The play between the key-stem 6 and the thill-iron K, as will be noticed in Fig. 1, is smaller than the length of the stub 7, so that this key can only be released when the shaft ends or tongue's ends are in their lowest position upon the ground, when the ear 7 is permitted to escape. In this position the key can be moved in the path of the arc marked z, so that the stub 7 will escape the ear C. The key can be removed by drawing the stem 3 out laterally. To remove the key, the spring D would, however, first have to be forced upward beyond the hub 20, which is accomplished by tapping it with a hammer or any other device from below. The coupling can be so readily removed or inserted that any woman or child may operate the same.

Now, having thus described our said inven-

tion, what we claim as new, and desire to secure by United States Letters Patent, is—

1. The combination with a thill coupling and iron, of an approximately U shaped key, provided at one end with a laterally extending stub, one of said U shaped stems passing through said thill iron and coupling, and a spring adapted to work against said thill iron and said stubbed stem, all substantially as
10 and for the purpose set forth.

2. The combination with a thill coupling and iron, of an approximately U shaped key, one end of said key being adapted to work through said thill iron and coupling, the remaining end being slotted and being provided with a laterally extending stub, and a spring, said spring being held within said slotted stem and working against said thill iron, said key being adapted to be locked while said
15 spring is in position adjoining said coupling,
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all substantially as and for the purpose set forth.

3. The combination with the coupling, B, of the thill iron, K, provided with a hub, 20, of a key comprising the stems, 3, 5, 6, and terminating in the stub, 7, said stem, 6, being provided with a slot, 4, said stem, 3, being adapted to work through the said coupling, B, and said iron, K, and a spring D, adapted to be held within the slot, 4, and against the hub, 20, to lock said key adjoining said coupling, B, all substantially as and for the purpose set forth.
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In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM A. LUCAS.
LEWIS P. MOONEY.

Witnesses:

W. J. COURTRIGHT,
ADELE HASTORF.