No. 810,552. PATENTED JAN. 23, 1906.

J. A. McLAUGHLIN.

THILL COUPLING.

APPLICATION FILED AUG. 9, 1905.

Fig. 1.

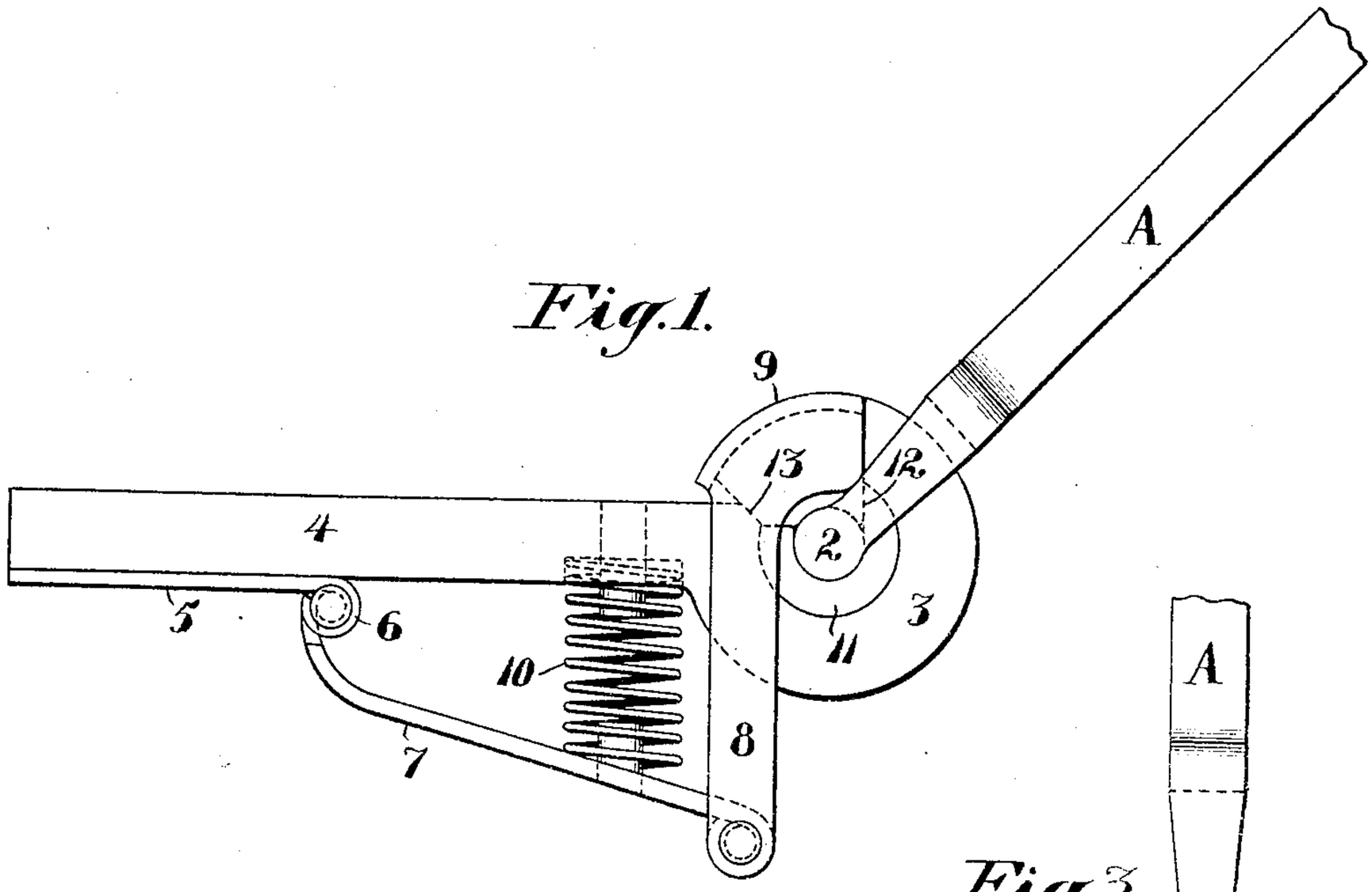


Fig. 3.

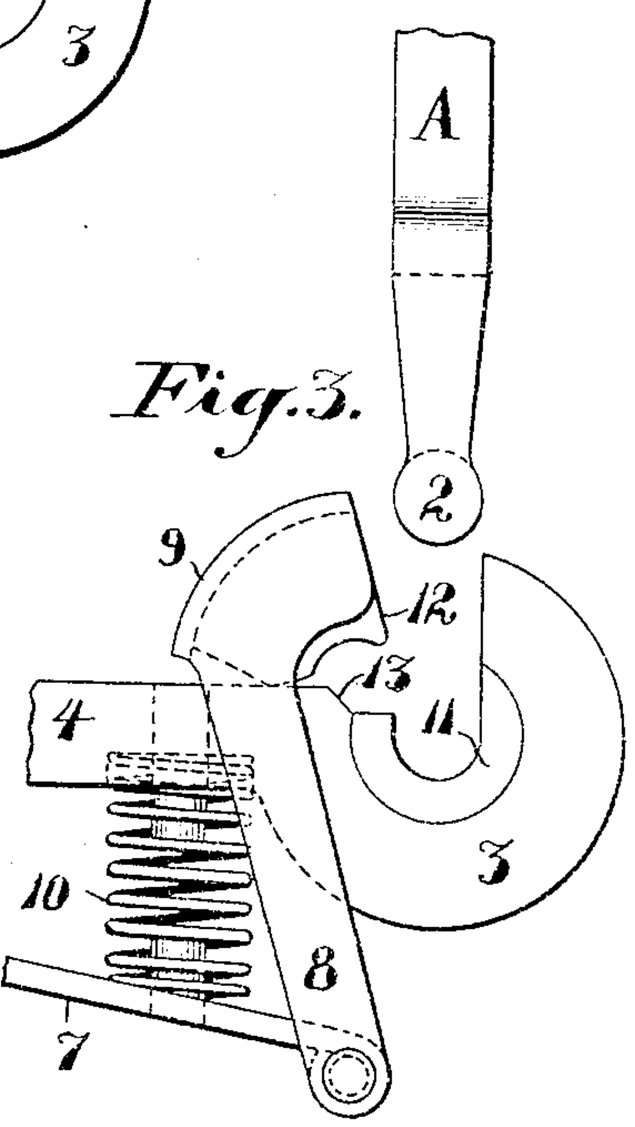
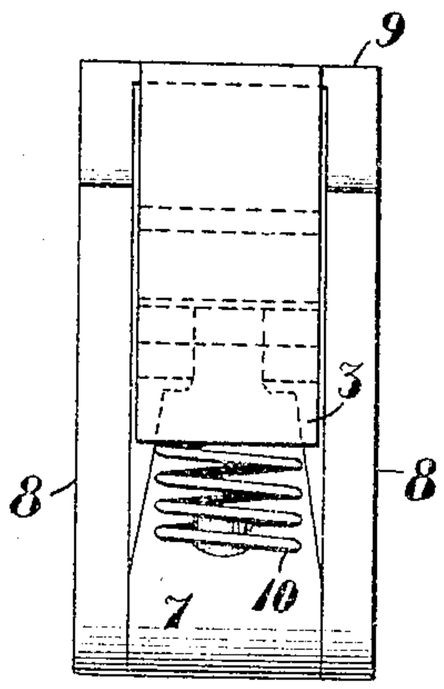


Fig. 2.



Witnesses:-

F. C. Fliedner

J. L. Snure.

Inventor;

John A. McLaughlin.

By Geo. H. Strong.

Atty

UNITED STATES PATENT OFFICE.

JOHN A. McLAUGHLIN, OF SAN RAFAEL, CALIFORNIA.

THILL-COUPLING.

No. 810,552. Specification of Letters Patent. Patented Jan. 23, 1906.

Application filed August 9, 1905. Serial No. 273,364.

To all whom it may concern:

Be it known that I, JOHN A. McLAUGHLIN, a citizen of the United States, residing at San Rafael, in the county of Marin and State of California, have invented new and useful Improvements in Thill-Couplings, of which the following is a specification.

My invention relates to a device for coupling thills or like draft appliances to carriages and vehicles.

It consists in the combination and arrangement of parts whereby the coupling is automatically closed and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side view of my device. Fig. 2 is an end view looking from the right of Fig. 1, omitting the pole-iron. Fig. 3 shows the device in an open position.

A represents a shaft or pole iron having an open loop at the inner end and a transverse cylindrical bar 2 extending across the open end of this loop and adapted to turnably fit the fixed part of the coupling. This part consists of a segment 3, the rear portion of which extends beneath the axle, as shown at 4, and is secured thereto by clip-bolts in the usual manner of securing parts in this position. Beneath this part 4 is a plate 5, bolted or riveted thereto and having an eye formed in its end, as shown at 6. To this eye is hinged a plate 7, which extends forward and beneath the rear portion of the curved segment 3, as shown. To the end of this leaf 7 is pivoted the yoke 8, the arms of which extend down upon each side of the parts 3 4, and a pin passing through the lower ends of these arms and through the leaf 7 holds the parts together and allows the arms to swivel about the hinged point. At the upper end these arms carry a cap-piece 9, which extends across above segment 3 and the front part of the bar 4, and this cap is movable so as to close against the open end or shoulder of the segment 3.

10 is a spring located between the bottom of the bar 4 and the top of the hinged plate 7. The spring is here shown as a spiral spring, and each of the parts 4 and 7 have a short pin projecting into the central portion of the spring and serving as guides to prevent its getting out of place. The upper end of the spring may also be fitted into a depression in the lower part of the bar 4, if desired, for a similar purpose.

Within the jaw 3 is the metal wear-plate or box 11, and within the cap-piece 9 is a similar opposing metal wear-plate 12. These pieces of metal are fitted, respectively, into the segment 3 and the cap-piece 9 and having the adjacent pieces bored segmental, so that the bar 2 may lie within the cylindrical bore formed by the segments when the wear-pieces are closed together, thus forming a bearing in which the bar 2 is freely turnable and about which the shaft-iron is movable. These wear-pieces are fitted into their respective holder in any suitable way. The wear-pieces 11 may be driven in from the side or otherwise fixed.

The front of the bar 4 where it merges into the curved segment 3 has a depression or offset, as shown at 13, and when the links 8 are swung forwardly the spring 10 by its tendency to turn the hinge-plate 7 about its fulcrum pulls upon the lower ends of the links 8, thus drawing the wear-pieces 12 down against the shoulder of the segment 3 into relation with the wear-pieces 11. A journal-box is thus formed within which the bar or shank 2 of the shaft-iron is turnable, and the offset or shoulder serves to prevent the link from moving backwardly without some pressure being brought upon it. At the same time if it is desired to open this attachment, so as to remove the shaft-iron, it is effected by pressing the links 8 and the cap-piece backwardly about their fulcrumed point, and the spring being compressed during this movement allows this part to ride up over the shoulder or offset 13 and rest upon the top of the bar 4, thus leaving an open space between the wear-plates 11 and 12, through which the pin of the shaft-iron may be removed.

The whole device comprises a simple and convenient automatically-closable and easily-opened connection for the parts described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A thill-coupling, consisting of a shaft-iron having a transverse cylindrical bar, a socket and journal for the bar, said socket consisting of a fixed segment carrying one member of the box, a swinging link carrying the other member of the box and closable with relation to the segment, a plate having

one end hinged and the opposite end pivotally connected to the link, and a spring operating the plate intermediate of end connections.

2. In a thill-coupling the combination of coacting members between which the thill-iron is received one of said members opening and closing relative to the other, and having an extended arm portion, a plate hinged at one end and extending to the arm of said movable member and hingedly connected therewith, and a spring acting upon said plate intermediate of its said ends whereby said movable member is held in a closed position.

3. In a thill-coupling, bars secured to the vehicle-axle and having segmental wear-pieces fitted to the front ends to receive the thill-irons, arms swiveled below the bars and carrying the opposing members of the wear-pieces, plates hinged at one end to a fixed point and extending to the arms and hingedly connected therewith, and a spring engaging the plate at an intermediate point and operating in a vertical plane to hold the said opposing member of the arms in a closed position relative to the companion member acting to hold said wear-pieces in position to clasp the thill-irons.

4. In a thill-coupling, bars secured to the vehicle and segmental wear-pieces carried by the front ends of the bars, arms carrying opposing wear-pieces, said arms extending downwardly, hinged plates to which the arms are pivoted and springs fixed between the plates and the bars.

5. In a thill-coupling, bars fixed to the vehicle-axle with segmental wear-pieces at the front ends, arms carrying opposing wear-pieces and extending down below the bars, plates to which the arms are pivoted, said plates being hinged to the bars, and springs interposed between the bars and plates.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN A. McLAUGHLIN.

Witnesses:
WILLIAM J. BOYD,
ESTELLA E. BOYD.