O. O. ROBERTS.

THILL-COUPLING.

No. 187,484. Patented Feb. 20, 1877.

Fig. 1.

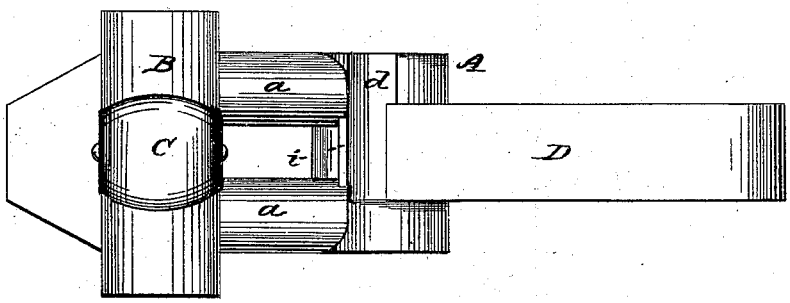


Fig. 2.

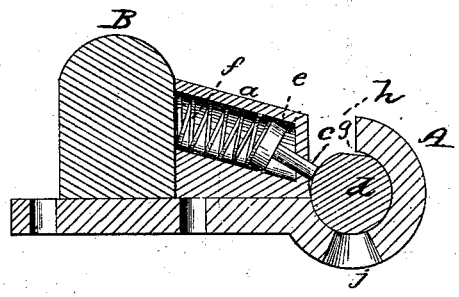
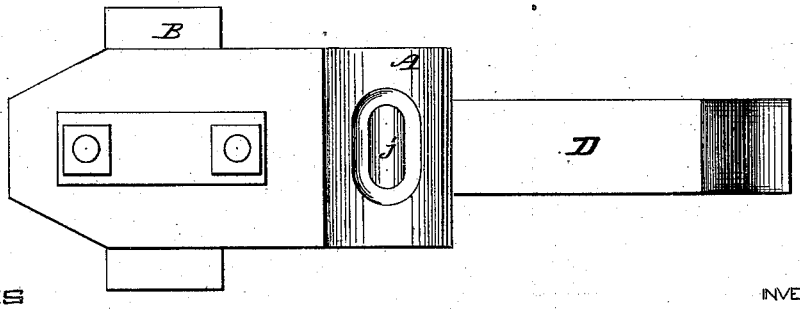


Fig. 3.



WITNESSES

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D. P. Lowe

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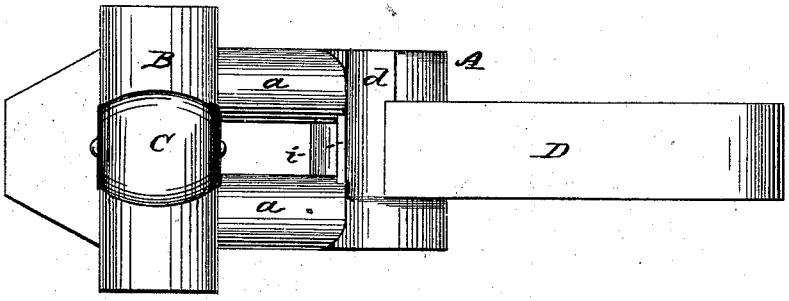

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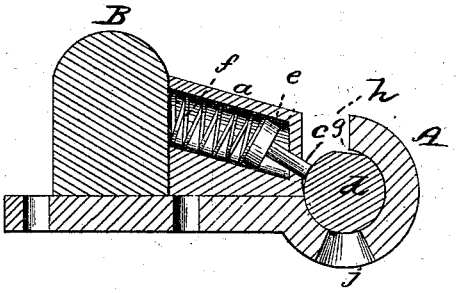

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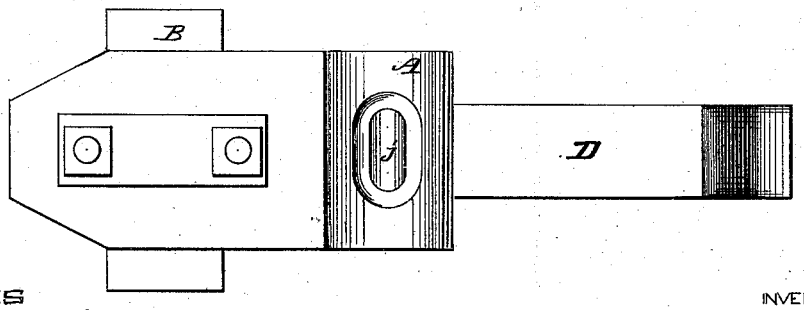

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UNITED STATES PATENT OFFICE.

OSMORE O. ROBERTS, OF NORTHAMPTON, MASSACHUSETTS.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. 187,484, dated February 20, 1877; application filed December 11, 1876.

To all whom it may concern:

Be it known that I, OSMORE O. ROBERTS, of Northampton, in the county of Hampshire and State of Massachusetts, have invented a new and valuable Improvement in Thill-Coupling; 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 plan view of my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a plan view of the under side of the coupling.

The object and purpose of this invention is to prevent as far as possible the continued and rapid wearing of thill-coupling long sought to be overcome, but which difficulty has only been to a limited extent removed, the evil resulting from this wearing being the constant rattling and unpleasant noise during the motion of the vehicle.

My invention therefore consists in one or more plugs or pins of suitable material passing through openings in the thill box, and kept pressed against the journal or cross-piece of the T-iron by suitable springs, as will be hereinafter described, and subsequently pointed out in the claims.

My invention further consists in constructing the box with a recess to form an outlet between the box and the T-iron, to allow the escape of any sand or dirt that gets between the same, and its escape through an opening in the bottom of said box, thereby providing an additional precaution against the wearing of the thill-coupling.

In the accompanying drawings, A represents the box, which may be secured to the axle B by a band-coupling, C, or other suitable means, as the manner of connecting the box to the axle forms no part of my invention. The box A has formed at its rear two chambers, *a*, for the reception of pins *c*, the ends of which pass through openings in the chambers, and bear against the cross-piece or journal *d* of the T-iron D. The pins *c* are formed with flat cylindrical heads *e*, and are kept pressed against the journal or cross-piece *d* by coiled springs *f*, placed within the chambers *a*, and bearing against the heads of said pins.

It will be seen that if the journals should become worn the springs will act automatically in keeping the pins pressed against journal or cross-piece *d*, and thereby prevent any rattling.

The cross-piece or journal *d* is slightly flattened upon its periphery, as shown at *g*, to facilitate the withdrawal of the same when the T-iron D is thrown up in line with the opening *h*.

A recess, *i*, is made upon the interior of the box A, to allow the passage and escape of the sand and dirt between the box and journal drawn through the opening *j* at the bottom of the box, thus preventing the accumulation of the sand or dirt, and preventing the wear upon the cross piece or journal *d*.

It will be noticed that as there is comparatively little contacting surface between the pins and cross-piece or journal, there is consequently very little wear by friction, and as the pins are at all times kept pressed against the journal, all rattling of the coupling is avoided, while further precaution is taken by devising means for the ready escape of the sand or dirt from between the box or journal, which would tend greatly to grind down the face of the journal, as well as to obstruct the free operation of the pins.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a thill-coupling the combination, with the journal or cross-piece *d*, flattened upon its periphery, as shown at *g*, of the chambers *a*, springs *f*, pins *c*, and the box A, with recess *h*, substantially as and for the purpose specified.

2. The box A, formed with a recess, *i*, and opening *j*, substantially as and for the purpose described.

3. A thill-coupling consisting of the chambers *a*, pins *c*, springs *f*, and the box A, formed with recess *i* and opening *j*, constructed and arranged to operate as specified.

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

OSMORE O. ROBERTS.

Witnesses:
OLIVER WALKER,
A. L. THAYER.