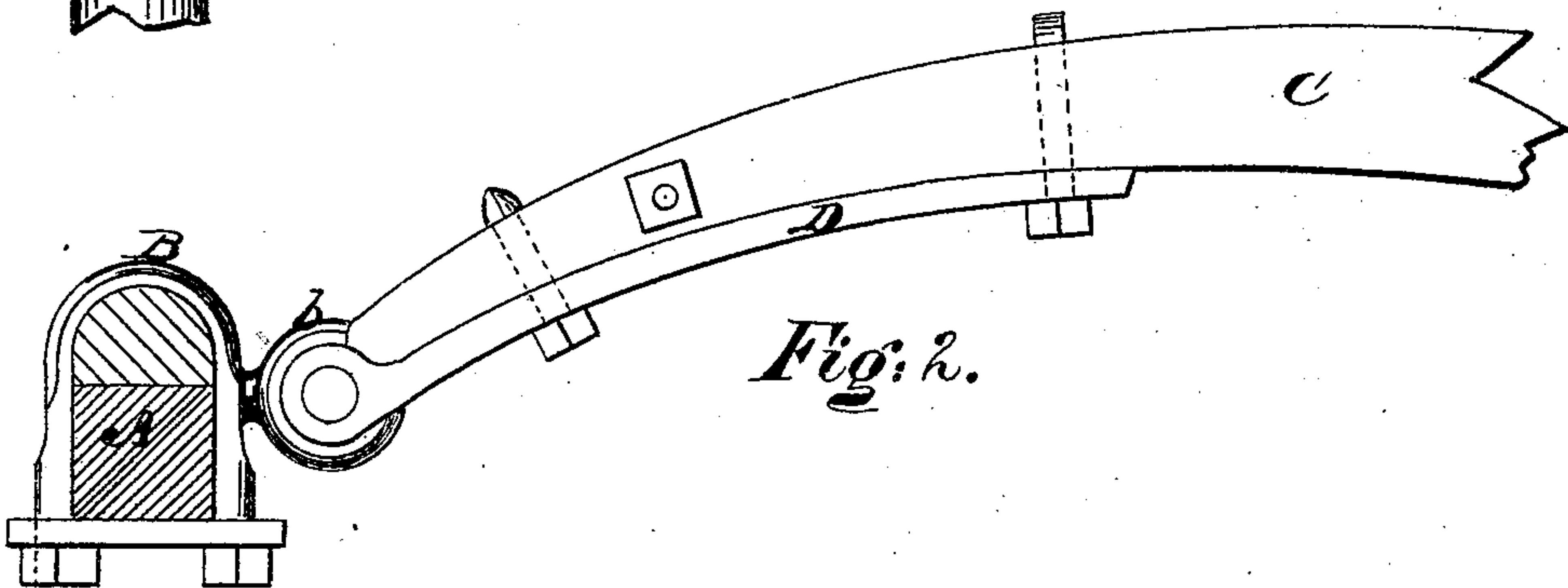
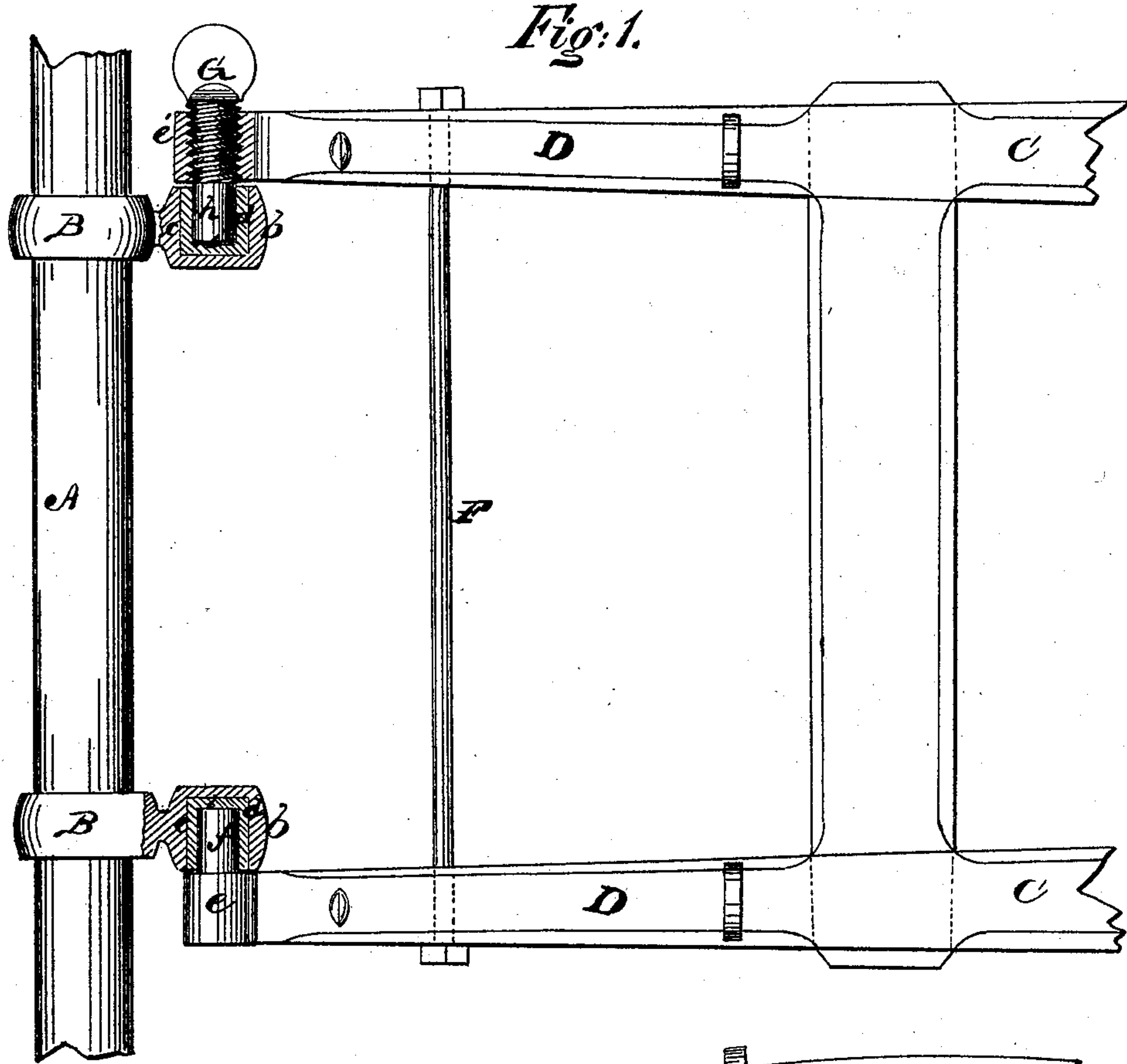


M. M. LATTA.
Thill-Couplings.

No. 152,129.

Patented June 16, 1874.



Witnesses:
H. L. Mattenberg
M. Louell

Inventor:
Milton M. Latta
per *[Signature]*
Atty

UNITED STATES PATENT OFFICE.

MILTON M. LATTA, OF GOSHEN, INDIANA.

IMPROVEMENT IN THILL-COUPPLINGS.

Specification forming part of Letters Patent No. **152,129**, dated June 16, 1874; application filed March 24, 1874.

To all whom it may concern:

Be it known that I, MILTON M. LATTA, of Goshen, in the county of Elkhart and State of Indiana, have invented a new and Improved Axle-Clip; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an improvement in axle-clips and device for securing thills to vehicles; and the invention consists of a thill-coupling in which the axle-clips are made with socketed bosses, and the two thill irons or straps are provided one with a fixed and the other with a movable projection to engage in said bosses.

It is well known that in the thill attachments, as ordinarily constructed, the wear at the point of attachment, by reason of friction, is so great as to render them constantly liable to breakage, and at the same time make an unpleasant, rattling noise; and another objection to the ordinary thill attachments is, that they are frequently very troublesome to detach or adjust from the axle-clip. The additional advantage is also obtained by my invention, in that if one of the thills should happen to become detached from its clip, the other one will also instantly drop from the corresponding clip, and thus free the horse from the vehicle.

In the accompanying sheet of drawings, Figure 1 represents a plan or top view of my invention, partly in section; and Fig. 2, a side view of same.

Similar letters of reference indicate like parts in the several figures.

A represents an axle, to which are secured the clips B. These clips, or that part of the same which incloses the axle, are similar in construction, and are attached to the axle in a similar way, as is the ordinary clip. These clips are formed on their outer side with two bosses, *b b*, into which are formed recesses or sockets *c*. Into these sockets are tightly fitted cores of leather, india-rubber, or other non-metallic substances, *d*. On the ends of the thills C are securely bolted straps D, the inner ends of said straps terminating in shoulders *e* and *e'*. From the shoulder *e* projects a cylindrical lug, *f*, and through the shoulder *e'*

is formed a hole with screw-threads cut therein, into which passes a screw, *g*, the lower part *h* of said screw being cylindrical and of the same size as the lug *f* of the shoulder *e*.

My axle-clip and thill-coupling being constructed substantially as above described, it is operated as follows: The recesses or sockets *c* being tightly fitted with the leather or rubber packing *d*, the thills C are sprung or bent slightly outward with the hand until the lug *f* enters into a hole, *i*, made in the packing *d* for that purpose, and the hole in the shoulder *e'* is coincident with the hole in the packing in the boss *b*. The screw *g* is then inserted in the hole in the shoulder *e'* until its lower end *h* enters firmly into the packing *d*, when the thills are secured to the axle-clips.

In most instances it will be found that the natural elasticity of the thills will be sufficient to keep the lug *f* and screw *g* tightly within the bosses *b*; but in some cases it may be necessary to guard against any possible chance of the thills separating so far as to allow the lug and screw to detach themselves from the bosses of the clip. For this purpose I secure a tie-rod, F, between the thills.

From the foregoing it will be seen that by my invention the thills are attached to the vehicle in a manner that precludes the possibility of their cutting out from friction, and all noise from rattling is effectually guarded against, and at the same time, if from any cause one of the thills should become detached from the axle-clip, the other one would be detached also, and in this way the horse would be freed.

It is obvious that my clips and connections are equally applicable to attaching a pole as it is for attaching thills.

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

The thill-coupling composed of the axle-clips having socketed bosses, and the thill-straps having a fixed and a removable projection fitting in said bosses, combined substantially as and for the purpose specified.

MILTON M. LATTA.

Witnesses:

C. C. SPARKLIN,
E. G. CHAMBERLAIN.