

(No Model.)

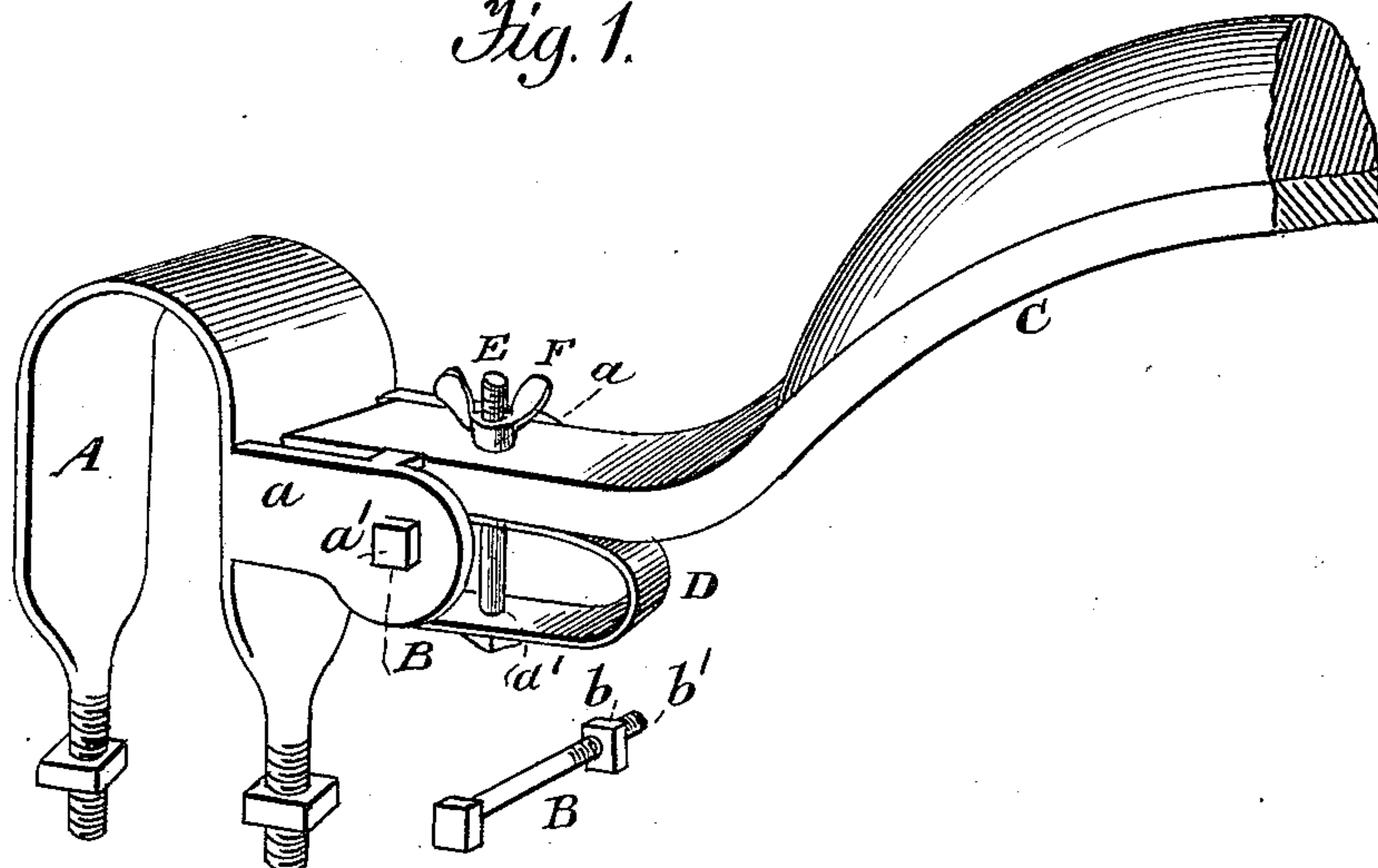
T. G. INGRAM.

THILL COUPLING.

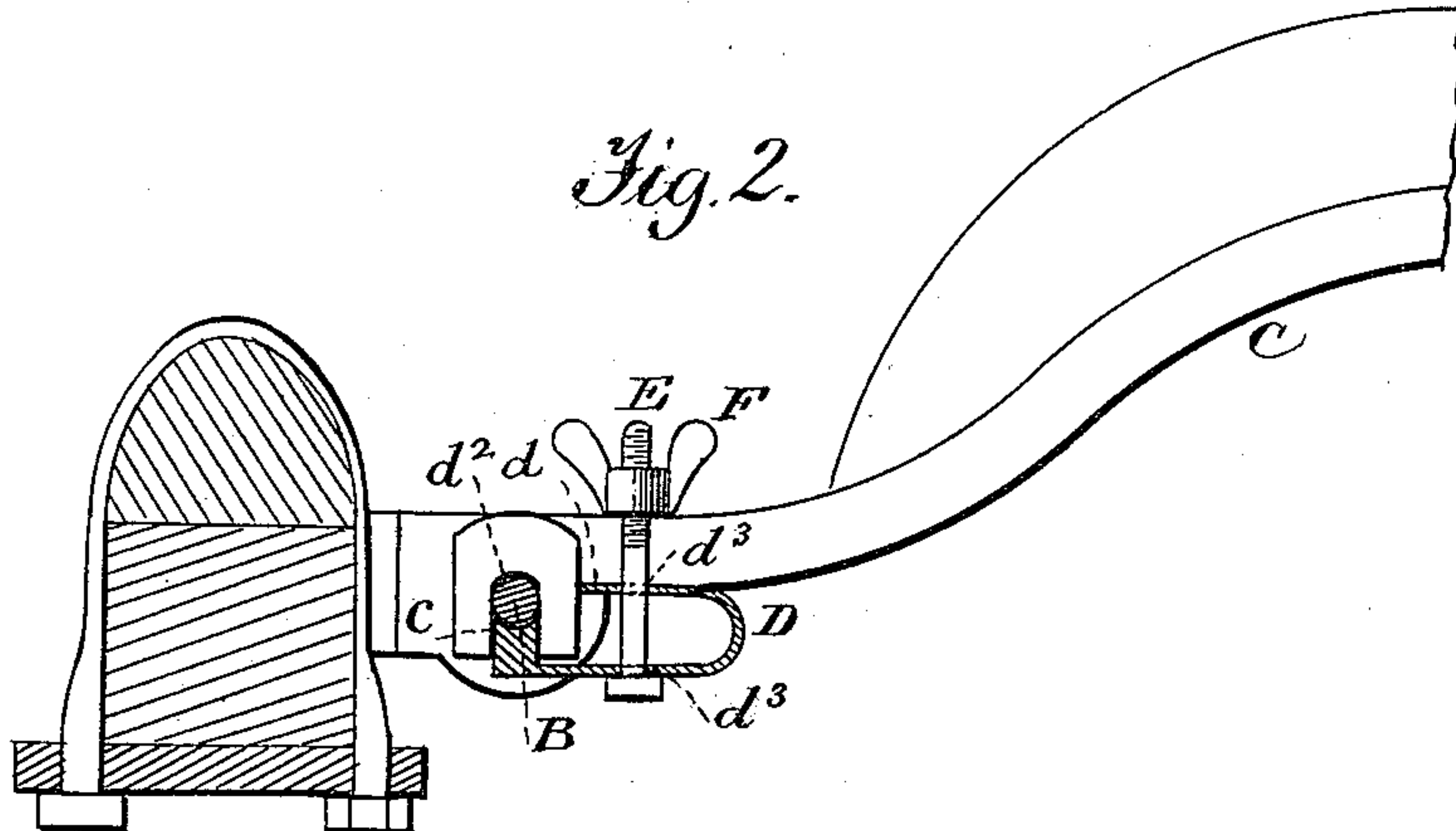
No. 379,578.

Patented Mar. 20, 1888.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*  
*A. Ruppert.*  
*S. J. Thomas.*

*Inventor.*  
*T. G. Ingram,*  
*Per*  
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*att'y.*

# UNITED STATES PATENT OFFICE.

THOMAS G. INGRAM, OF CENTRAL CITY, NEBRASKA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 379,578, dated March 20, 1888.

Application filed July 23, 1887. Serial No. 245,117. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS G. INGRAM, a citizen of the United States, residing at Central City, in the county of Merrick and State of Nebraska, have invented certain new and useful Improvements in Thill-Couplings; and I do declare the following to be 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, and to the letters and figures of reference marked thereon, which form a part of this specification.

The special object of the invention is to hold the thill-iron to the pivot-bolt by a subjacent spring made adjustable to take up wear and to form a coupling which will not necessitate the removal of a single bolt or nut in separating the pole or thills from the axle clip.

Figure 1 of the drawings is a perspective view showing my invention applied; Fig. 2, a median longitudinal vertical section.

In the drawings, A represents an axle-clip having the ears *a a*, holed at *a'* to receive the pivot-bolt B, which is provided with a nut, *b*, working on the threaded end *b'*. These devices are old and well known to the public.

I make the thill-iron C with a perpendicular slot, *c*, open at the bottom to receive the pivot B, on which the thill-iron is supported.

D is a curved plate-spring having an upper short arm, *d*, and a lower long arm, *d'*, the

outer end of the latter being provided with a transverse top concaved bearing, *d''*, which projects up into the slot *c* and against the pivot B, so as to prevent rattling. Through the opposite plate-holes, *d''' d'''*, passes upwardly the shank of an adjusting screw, E, on which works the thumb nut F, so that the bearing *d''* will exert sufficient pressure upon the pivot B to prevent the rattling noise which is so objectionable in vehicles.

The wear is taken up as fast as it occurs by simply turning the thumb screw F, while by simply loosening said thumb-screw the latter, with the spring and thill-iron, may be quickly detached from the axle-clip without taking off any nut or bolt.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

In thill-couplings, the curved plate-spring having the unequal arms *d d'*, with the bearing *d''* on the lower arm and adjustably clamped to the thill-iron, whereby the bearing *d''* may work in the thill-iron slot *c*, as and for the purpose described.

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

THOMAS G. INGRAM.

Witnesses:

JAMES B. LAZEAR,

BENAJAH F. KINGSLEY.