(No Model.)

W. H. HANNAN.

THILL COUPLING.

No. 486,251. Patented Nov. 15, 1892.

Fig. 1.

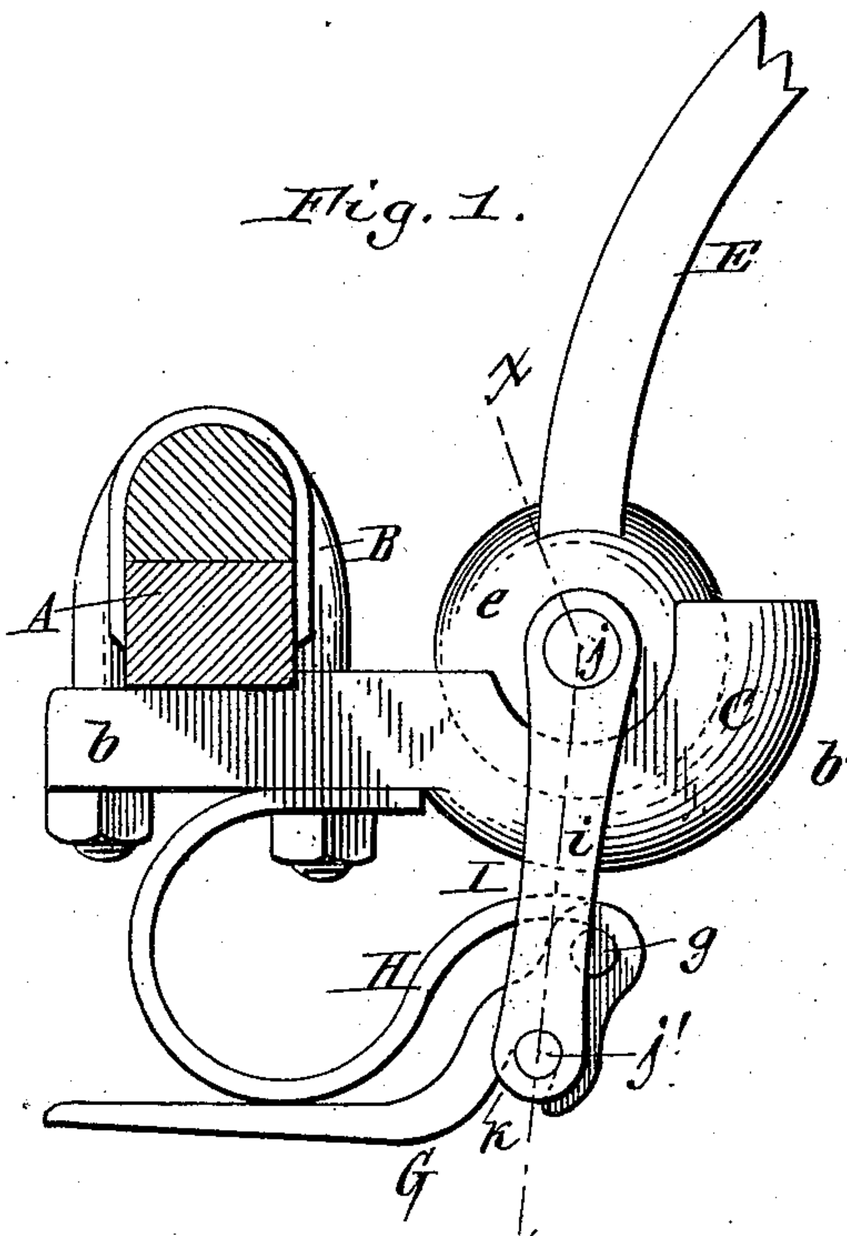


Fig. 2.

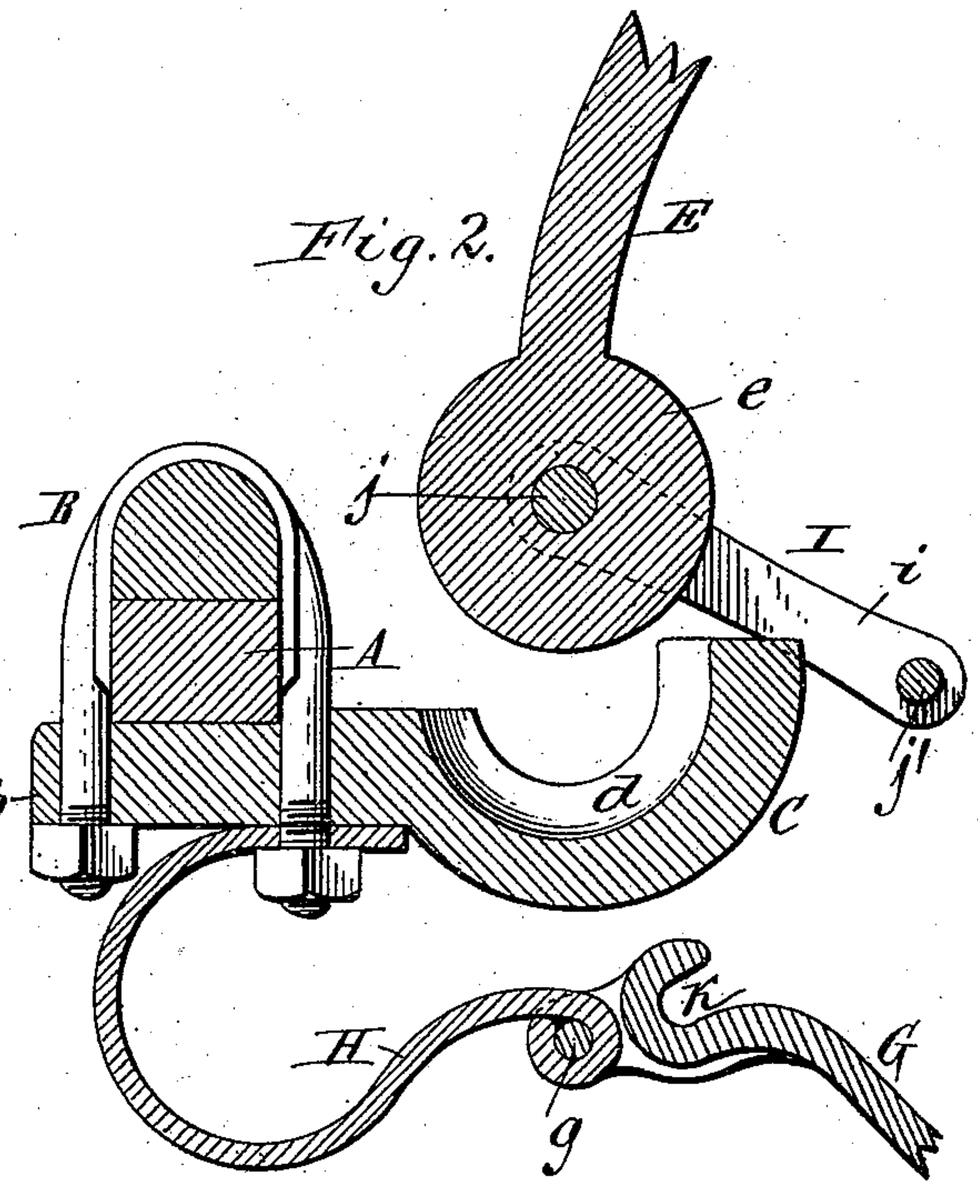


Fig. 4.

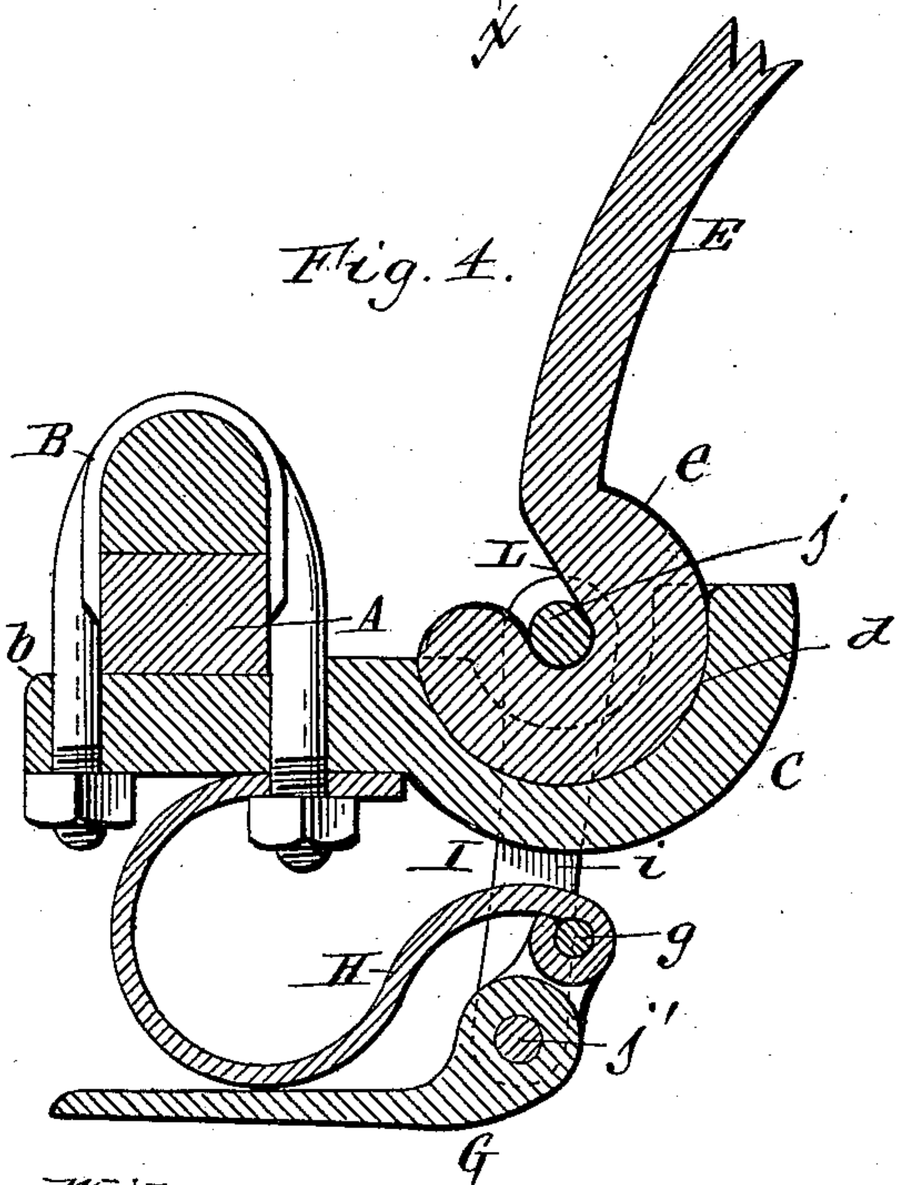
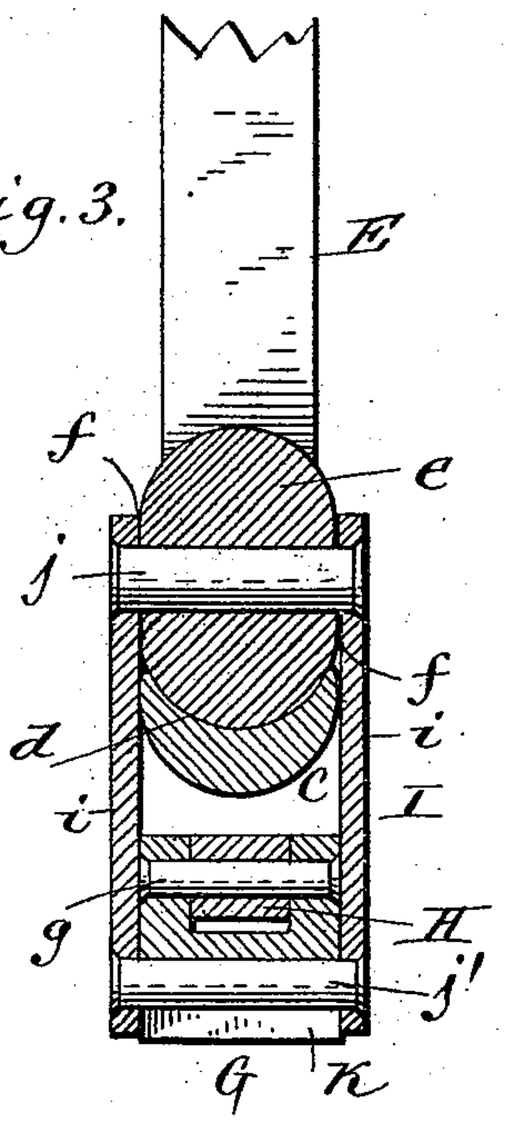


Fig. 3.



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UNITED STATES PATENT OFFICE.

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 486,251, dated November 15, 1892.

Application filed December 22, 1891. Serial No. 415,882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY HANNAN, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Thill-Couplings, of which the following is a specification.

This invention relates to a thill-coupling in which the thill-iron is secured to the draft-eye by a clamping device, whereby the thills can be quickly attached to or detached from the vehicle.

The object of my invention is to simplify the construction of the coupling and to render it durable and efficient in operation.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of my improved thill-coupling and connecting parts, showing the same in a coupled position. Fig. 2 is a longitudinal section thereof, showing the parts in an uncoupled position. Fig. 3 is a vertical transverse section in line *x x*, Fig. 1. Fig. 4 is a longitudinal section showing a modified form of my thill-coupling in a coupled position.

Like letters of reference refer to like parts in the several figures.

A represents the front axle, and B the thill-clip secured to the axle and provided with a tie-bar *b*. The front end of the tie-bar is provided with a rigid draft-eye C, which has the form of a semicircular hook and is provided with a socket *d* in its upper side.

E represents the thill-iron, provided at its rear end with a knuckle or wrist *e*, which is seated in the socket *d* when the parts are in their coupled position. This knuckle has its face preferably made approximately spherical in form and has flattened sides *f*. The socket in the upper side of the draft-eye is correspondingly shaped, thereby preventing the knuckle from moving laterally in the draft-eye and permitting the parts to center themselves.

G represents a clamping-lever whereby the knuckle of the thill-iron is firmly drawn against the draft-eye. This clamping-lever is arranged lengthwise underneath the draft-eye, and is pivoted with its front end by a pin *g* to the front end of a flat tension-spring H. The latter is curved rearwardly and upwardly, and is secured with its upper or rear end to the under side of the tie-bar by the clip.

I represents a link or loop whereby the knuckle of the thill-iron is connected with the clamping-lever. This link consists of two upright bars *i i*, arranged on opposite sides of the draft-eye and horizontal cross-bars *j j'*, connecting their upper and lower ends. The upper cross-bar of the link passes horizontally through the center of the knuckle, while the lower cross-bar is arranged in a transverse groove or notch *k*, formed in the clamping-lever outside of the fulcrum of the latter. The notch or groove *k* is sufficiently open to permit the link to be detached from the lever.

When it is desired to couple the thills to the vehicle, the clamping-lever is swung forwardly, as represented in Fig. 2. The knuckle of the thill-iron is then placed into the socket of the draft-eye and the lower cross-bar of the link is placed into the groove *k* in the clamping-lever. The clamping-lever is then swung rearwardly on its fulcrum until the lever rests against the under side of the tension-spring, whereby the knuckle is firmly drawn against the draft-eye. In this position of the parts the point at which the link is attached to the clamping-lever lies in rear of the fulcrum of the lever and the tension of the spring holds the lever locked against the under side of the spring, as represented in Fig. 1, and exerts a constant downward pressure against the link and knuckle, thereby preventing rattling and automatically taking up any wear of the parts. If desired, the connecting-link may be permanently attached with its lower end to the clamping-lever and detachably connected with its upper end to the knuckle by providing the latter with a recess L, in which the upper cross-bar of the link rests loosely, as represented in Fig. 4.

My improved thill-coupling is extremely simple, durable, and secure, has but few parts, and can be manipulated very easily.

I claim as my invention—

1. The combination, with the axle, of a draft-eye provided with a socket in its upper side, a thill-iron provided with a knuckle seated in said socket, a spring secured to the axle and projecting forwardly, a clamping-lever

pivoted to the front end of said spring, and a link attached to the clamping-lever outside of its fulcrum and connecting the lever with the knuckle, substantially as set forth.

2. The combination, with the axle, of a draft-eye provided with a socket in its upper side, a thill-iron provided with a knuckle seated in said socket, a spring secured to the axle and projecting forwardly, a clamping-lever pivoted to the front end of said spring, and a link which is permanently attached to the knuckle and detachably connected to the clamping-lever outside of the fulcrum of the latter, substantially as set forth.

Witness my hand this 7th day of December, 1891.

WILLIAM HENRY HANNAN.

Witnesses:
THEO. L. POPP,
JENNIE T. CLOUGH.