(No Model.) 2 Sheets—Sheet 1.

F. CLYDE.

THILL COUPLING.

No. 565,331. Patented Aug. 4, 1896.

Fig. 1.

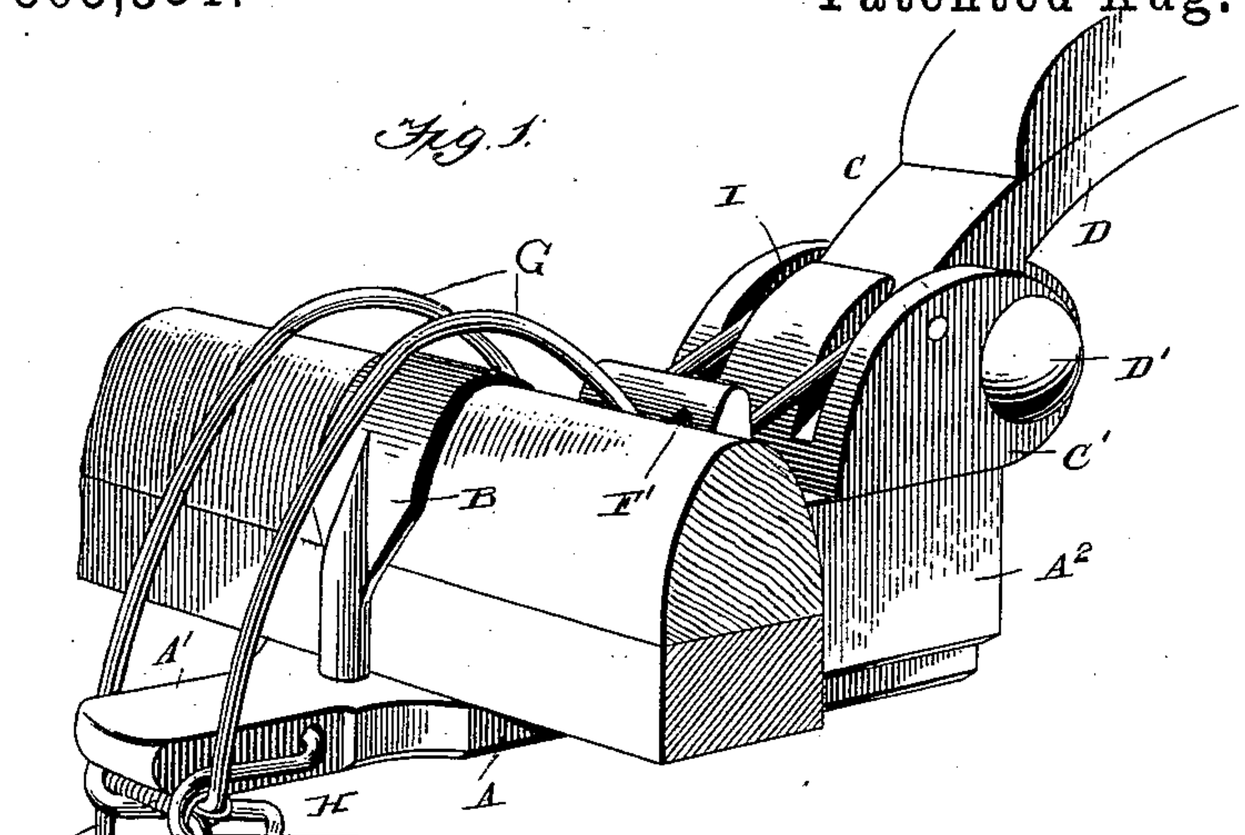


Fig. 2.

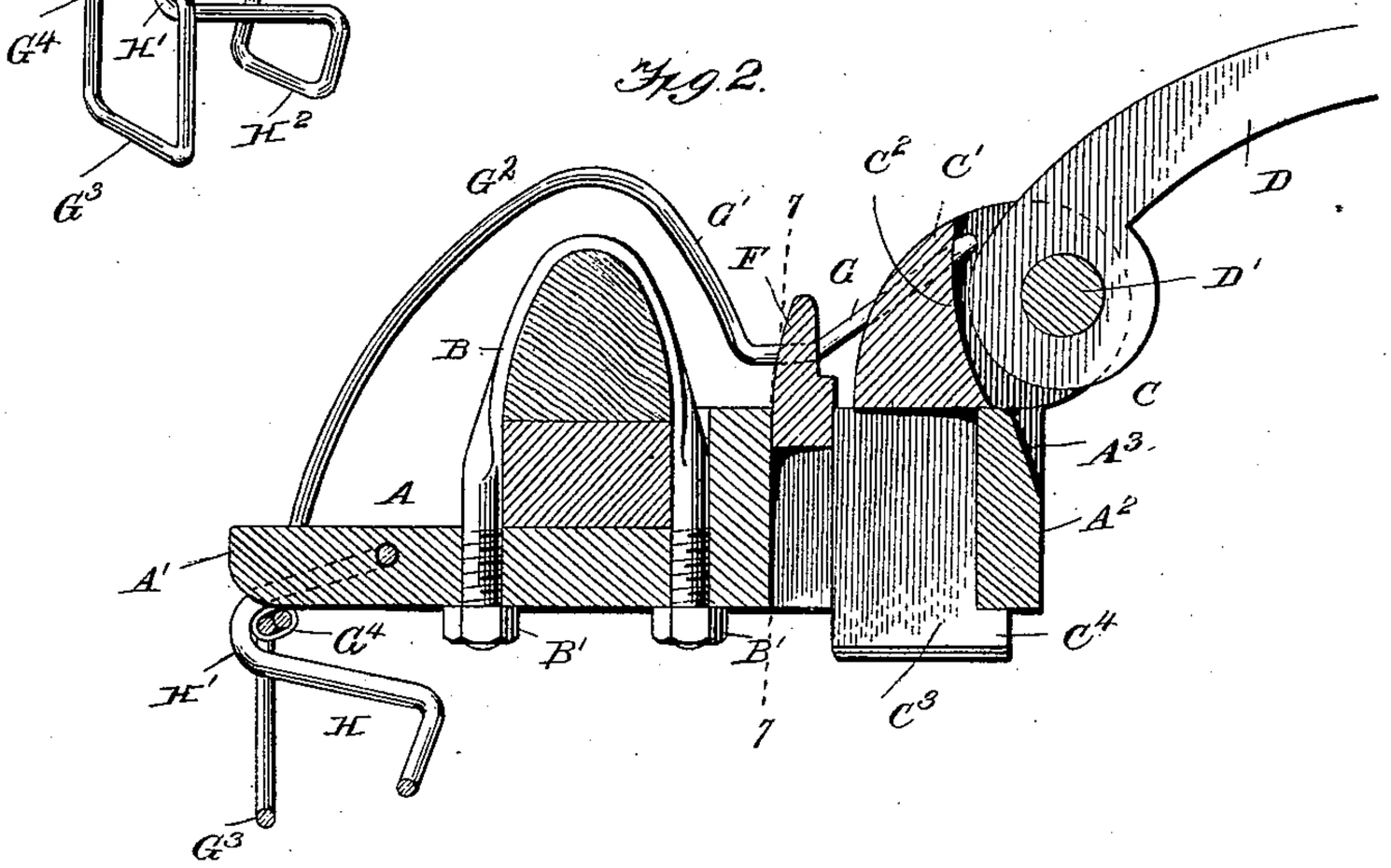
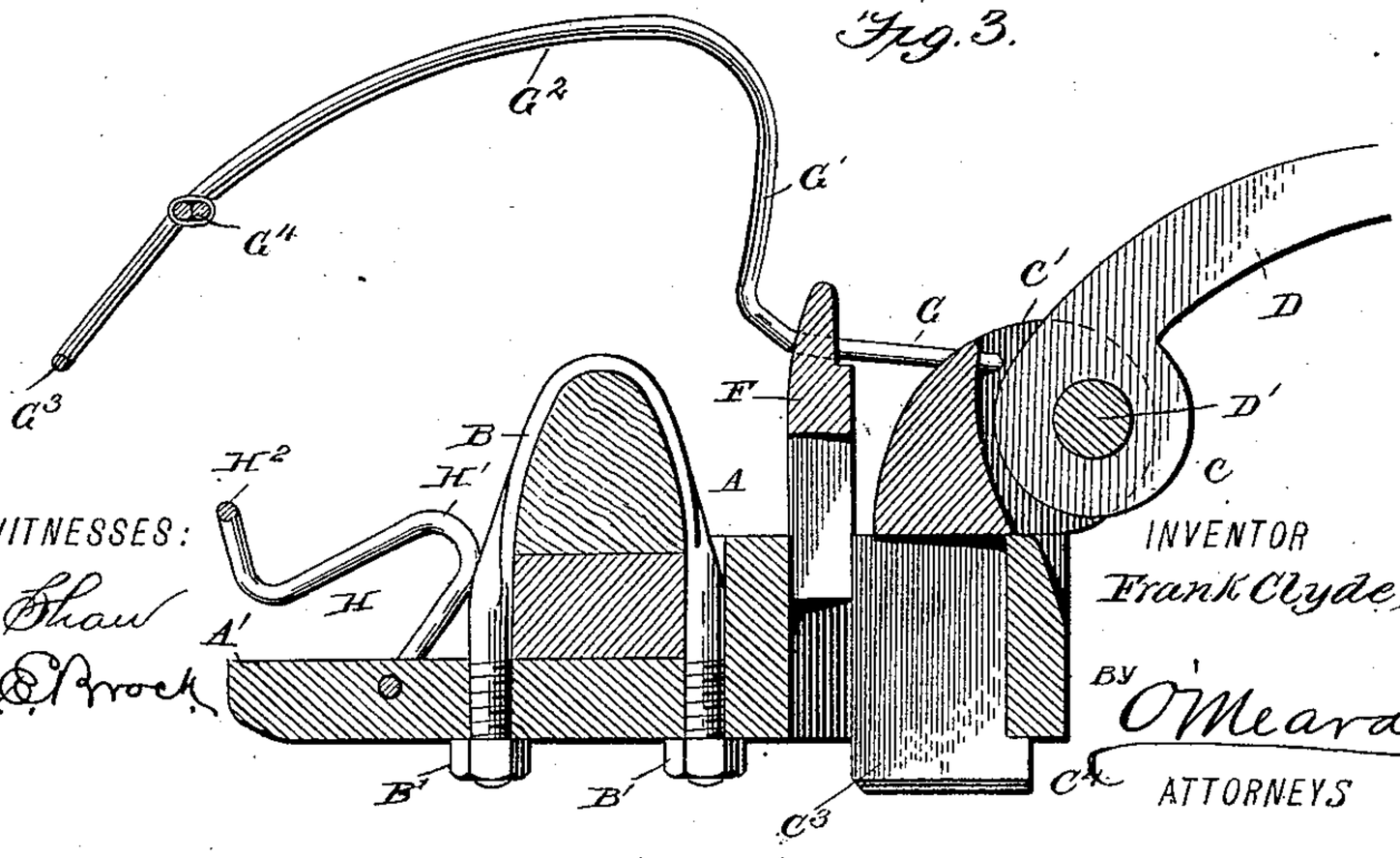


Fig. 3.



WITNESSES:

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Chas. E. Brock

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ATTORNEYS

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

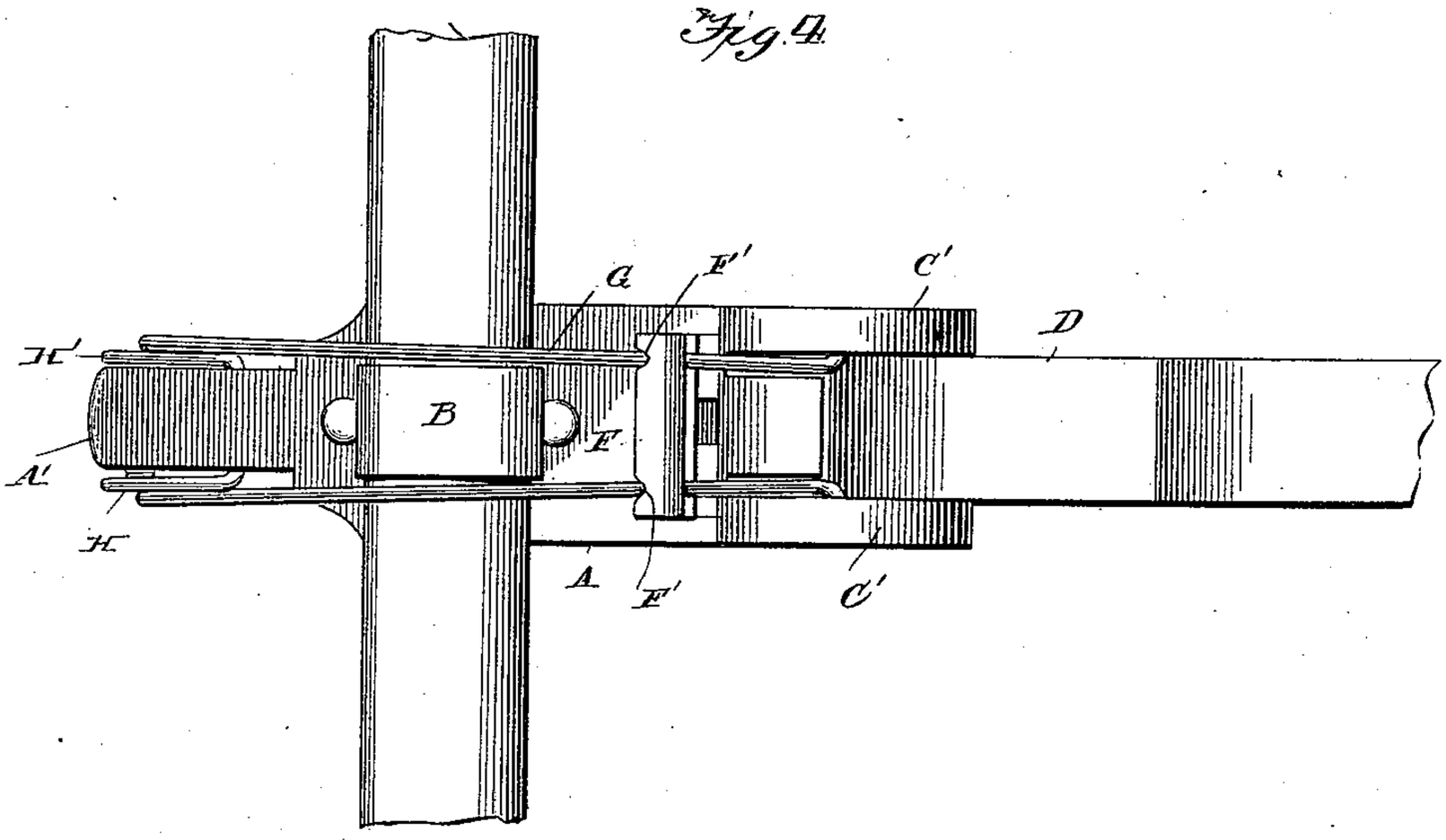

Fig. 5.

Fig. 6.

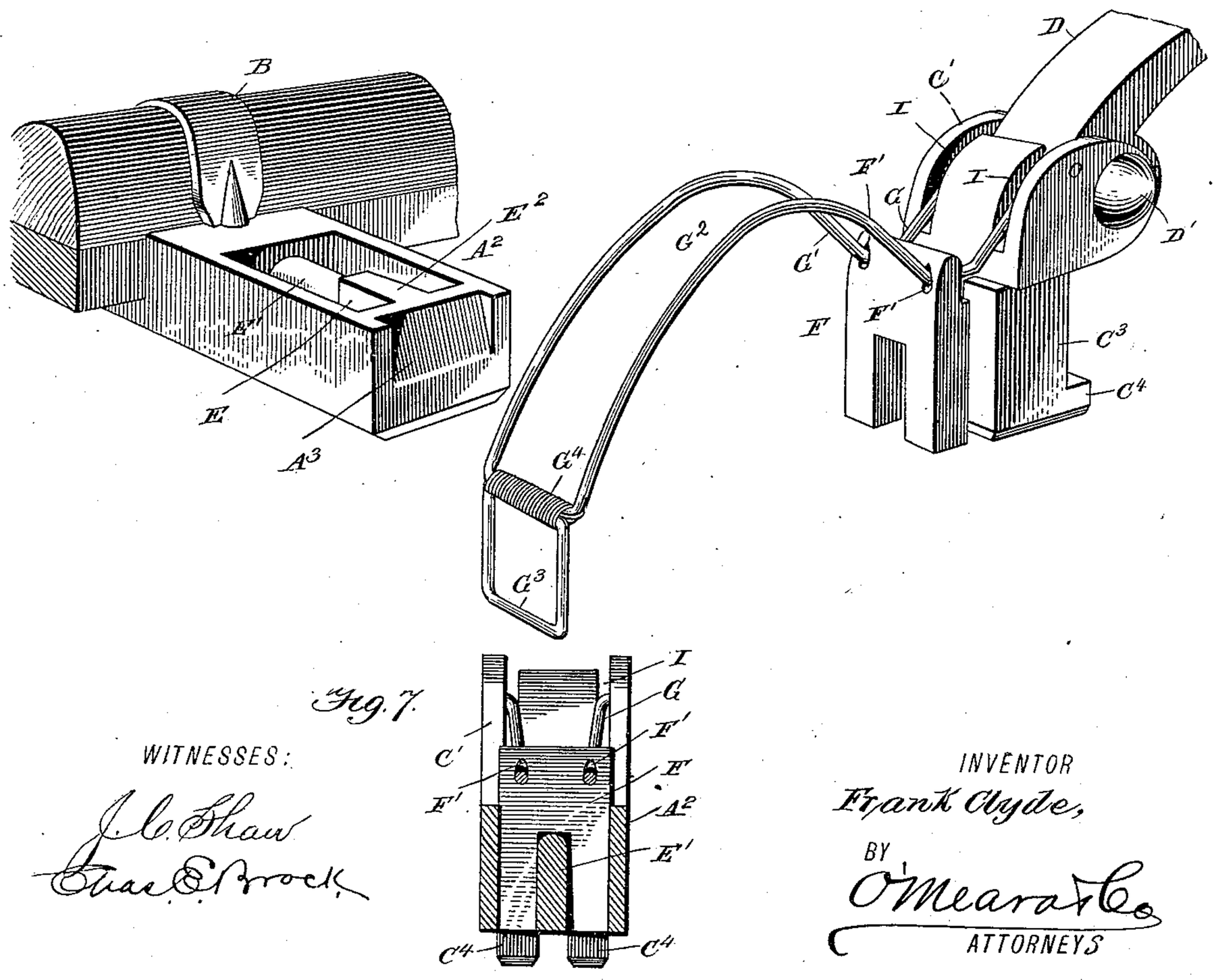

Fig. 7.

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UNITED STATES PATENT OFFICE.

FRANK CLYDE, OF WELLSVILLE, OHIO.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 565,331, dated August 4, 1896.

Application filed April 14, 1896. Serial No. 587,474. (No model.)

To all whom it may concern:

Be it known that I, FRANK CLYDE, residing at Wellsville, in the county of Columbiana and State of Ohio, have invented a new and Improved Thill-Coupling, of which the following is a specification.

This invention is an improved thill-coupling, the object of the invention being to provide an antirattler and thill-coupling which will securely hold all of the parts together and thereby prevent any noise or rattling while the vehicle is in use.

Another object of the invention is to provide a thill-coupling by means of which the shafts can be quickly and easily attached or detached from the axle.

Another object is to provide a thill-coupling which is applicable to the shafts for a single or double team and readily removable, so that the shafts or thills can be quickly and easily removed from the axle and the draft-pole attached in lieu thereof.

Another object is to provide a thill-coupling in which all of the parts, after being locked, are securely held in place against all possibility of disengagement.

Another object is to provide a spring-fastener attached to one member of the coupling and carrying a wedge for holding said member in the other portion of the coupler; and a still further object is to provide an improved means for locking the said spring-fastener in position.

With these various objects in view my invention consists in the peculiar construction of the various parts and in their novel combination or arrangement, all of which are shown in the drawings, set forth in the description, and pointed out in the appended claims.

In the drawings forming a part of this specification, Figure 1 is a view showing the invention in use. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a similar view, the spring locking-bail being released and slightly elevated to raise the locking-wedge. Fig. 4 is a top plan view. Fig. 5 is a detail view of one portion of the coupler. Fig. 6 is a detail view of the other portion, showing the thill-iron attached thereto and also the spring locking bail and wedge. Fig. 7 is a transverse section taken on the line 7 7 of Fig. 2.

In carrying out my invention I employ a base or block-like portion A, which is securely bolted to the axle by means of the usual clip B and nuts B′.

The base A comprises a rear or plate-like portion A′, which rests beneath the axle and through which the clip passes, and the forward or block-like portion A^2, which rests directly in front of the axle. The rear portion of the block A^2 is slightly cut away to permit the passage of the clip member, but this is not at all necessary. It will thus be understood that the base portion A is fixed to the axle, while the other member C of the coupler is attached to the thill-iron D and is readily removable from the fixed portion, as hereinafter explained.

The member C comprises the perforated ears or lugs C′, between which the thill-iron is pivoted upon the bolt D′, the inner face of said member being curved, as shown at C^2, to permit the end of the thill-iron to turn freely therein.

Depending from the upper portion of the member C are the parallel legs C^3, having forwardly-projecting shoulders C^4. The leg members C^3 are adapted to pass through the elongated slots or openings E, produced in the block portion A^2 and separated by a central partition E′, the forward portion of said partition being somewhat higher than the rear portion, as most clearly shown in Fig. 5, the upper face of said portion at E^2 being flush with the top of the block portion A^2.

The elongated slots or openings E are sufficiently long to permit the lower ends of the leg members C^3 to pass therethrough, and after passing entirely through said block the forwardly-projecting shoulders C^4 are brought beneath the front portion of the block A^2, thereby holding the coupling member C against upward movement.

In order to hold the member C in such position, I employ a locking key or wedge F, which is bifurcated for the greater portion of its length, as shown, in order to straddle the partition E′, and while the coupling member C rests upon the raised portion E^2 of said partition the locking key or wedge F rests upon the lower or rear portion of said partition.

The legs C^3 and the locking key or wedge completely fill the elongated slots or openings E, and thereby prevent any movement of the coupling member C, and as there can be no movement of the fixed member of the coup-

ling it is obvious that a firm and substantial coupling is effected.

In order to hold the locking key or wedge F in place, I employ a spring-fastening or locking-bail G, pivotally attached at its forward end to the inner faces of the ears or lugs C′ and passing through the apertures F′ in the body of the key or wedge F near the top thereof, and just to the rear of the key or wedge the bail is curved or bent upward at G′ and then curved around, as shown at G^2, in order to clear the top of the axle when the lower or rear end of said bail is fastened beneath the rear end of the plate portion A′.

The parts of the spring-bail G extend parallel and at their rear ends are united by a suitable cross-bar G^4, below which is attached, by a wire wrapped around the parts, a link G^3.

Pivoted to the plate portion A′ at a point to the rear of the axle is a spring-clasp H, having a bend H′ and a handle or end portion H^2, said clasp being adapted to pass between the members of the bail G, over and under the locking-bar G^4, and through the link G^3 in order to bring the locking-bar G^4 directly beneath the rear end of the extended or plate portion A′.

As before stated, the forward ends of the bail are pivoted to the inner sides of the ears or lugs C′, and the rear portion of the member C is slotted vertically, as shown at I, in order to permit free movement of the bail, as it is clear that the bend G′ in said bail would bring the members of the bail below their pivotal point when the locking key or wedge is forced into the elongated slot or opening E in the block member.

In operation the thill-iron D is attached to the member C by means of the pivotal bolt D′ and works freely between the ears or lugs of the member C. The leg members C^3 of the member C are then inserted into the slots or openings in the block portion A^2 and the forwardly-projecting shoulders C^4 brought into engagement with the under side of the forward end of said block. The locking-bail is then thrown down, forcing the locking key or wedge into the rear portion of the slot or opening to the rear of the legs C^3, and securely holds the shoulders C^4 beneath the bottom of the block A^2. The rear end of the bail G is then pressed down sufficiently to permit the clasp H to be passed between the members and above the bar G^4. The clasp is then pressed downward and forward, bringing the bend H′ into engagement with the locking-bar G^4, while the handle portion H^2 passes between the cross-bar G^3 and the locking-bar G^4. The continued forward movement of the clasp H throws the locking-bar G^4 inward beneath the rear extended or plate portion A′, and the coupling and locking is effected, and all of this can be done in the quickest and easiest manner.

In order to disengage the parts, the handle H^2 is thrown upward out of engagement with the bail, as shown in Fig. 3, the bail lifted to throw the locking wedge or key from behind the coupling member C, and then said coupling member and its attached parts can be lifted away from the member A.

It will thus be seen that I provide a coupling which can be quickly and easily operated to either attach or detach the thills or shafts. By this means I am enabled to quickly remove the shafts from the buggy and attach the pole thereto, the irons of the pole being of course provided with the coupling member C, locking-bail, and wedge similar to the parts already described.

If desired, the forward end of the block portion A^2 may be cut away, as most clearly shown at A^3, in order to provide ample space for the movement of the end of the thill-iron.

Having thus 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 fixed member having the slotted forward portion provided with the central partition, the rear plate-like portion, of the movable member having the bifurcated lower portion provided with forwardly-extending shoulders, the bifurcated locking-key, the locking-bail pivoted to the movable member and carrying the locking-key and the clasp carried by the plate portion and adapted to engage the rear end of the locking-bail, substantially as shown and described.

2. In a thill-coupling, the combination of the fixed member having the slotted forward portion provided with the forward shoulders, the bifurcated locking-key, the locking-bail pivoted to the movable member, and passing through the body of the locking-key, said bail being curved downwardly, and then upwardly, adapted to clear the axle and engage the rear end of the fixed member, substantially as shown and described.

3. In a thill-coupling, the combination with the fixed and movable members, of a locking key and bail, and the clasp attached to the fixed member and adapted to engage the rear end of the bail, substantially as shown and described.

4. In a thill-coupling, the combination with the fixed member having a slotted forward portion provided with a central partition, of the movable portion having the depending legs provided with forward shoulders, and the bifurcated locking-key adapted to be arranged to the rear of the movable member, and secure the same within the fixed member, substantially as shown and described.

FRANK CLYDE.

Witnesses:
W. H. DAUGHADAY,
THOS. KEELING.