

No. 661,828.

Patented Nov. 13, 1900.

J. H. THACKER.  
THILL COUPLING.

(Application filed Dec. 29, 1899.)

(No Model.)

Fig. 1.

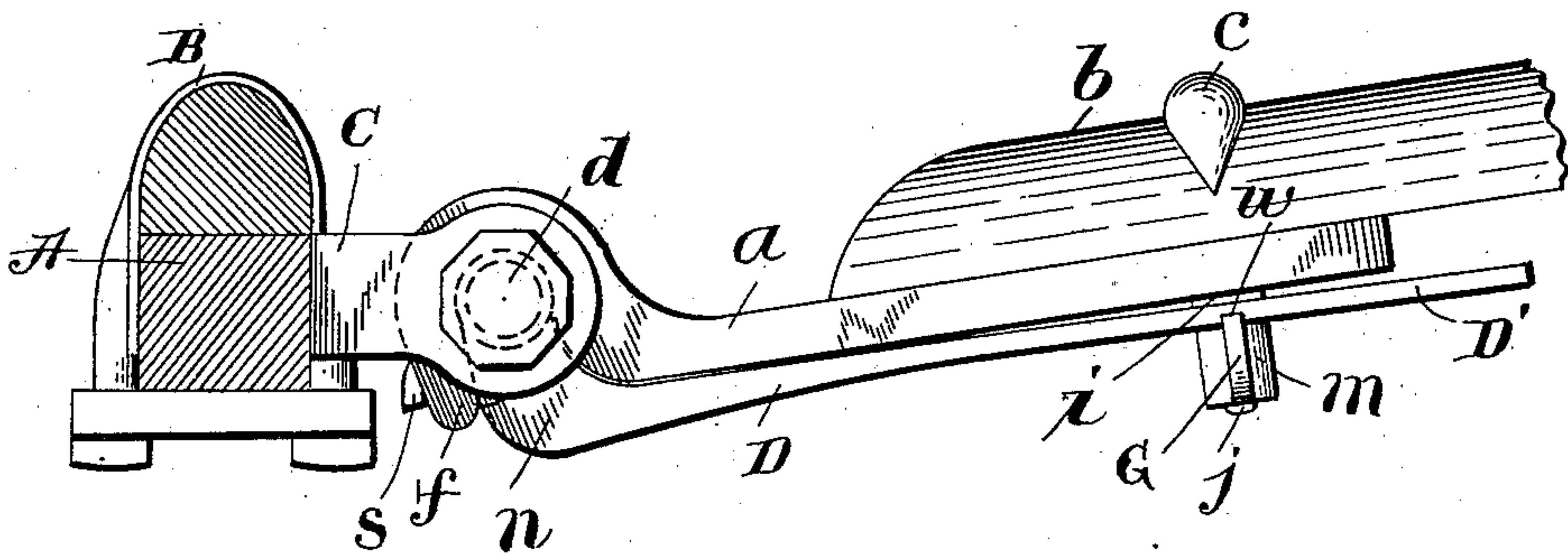


Fig. 2.

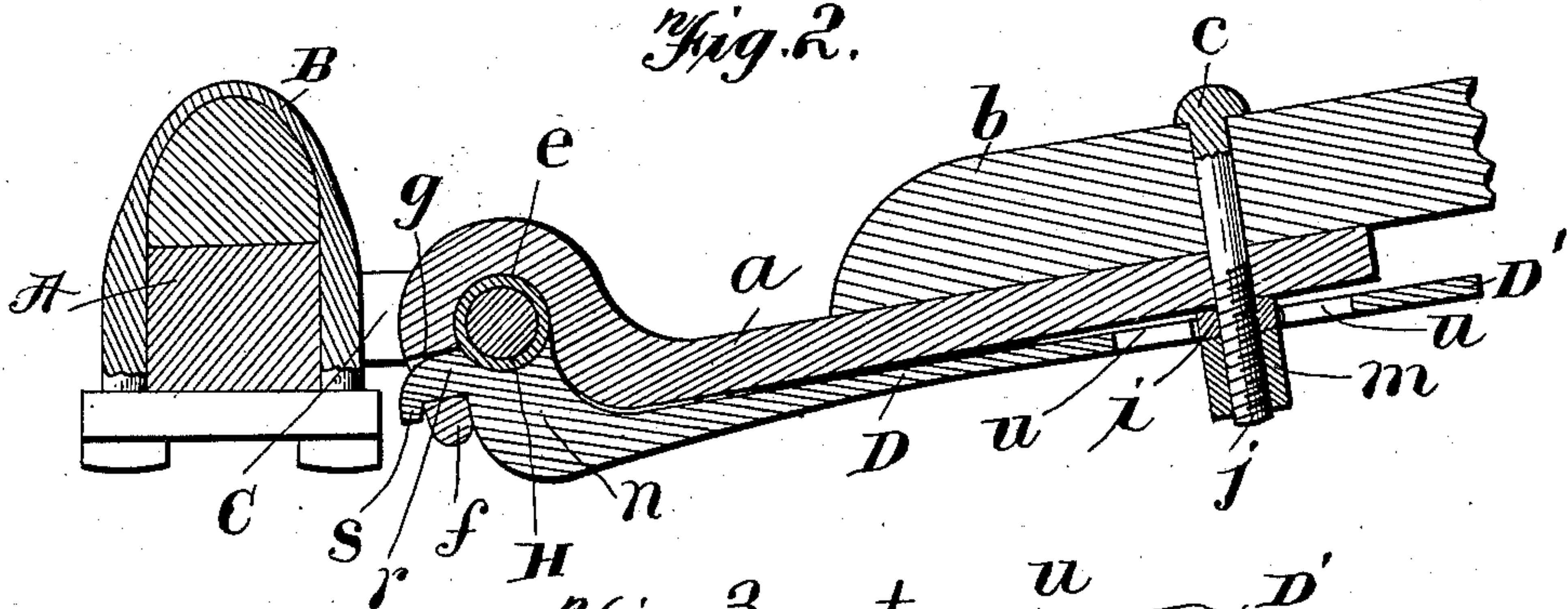


Fig. 3.

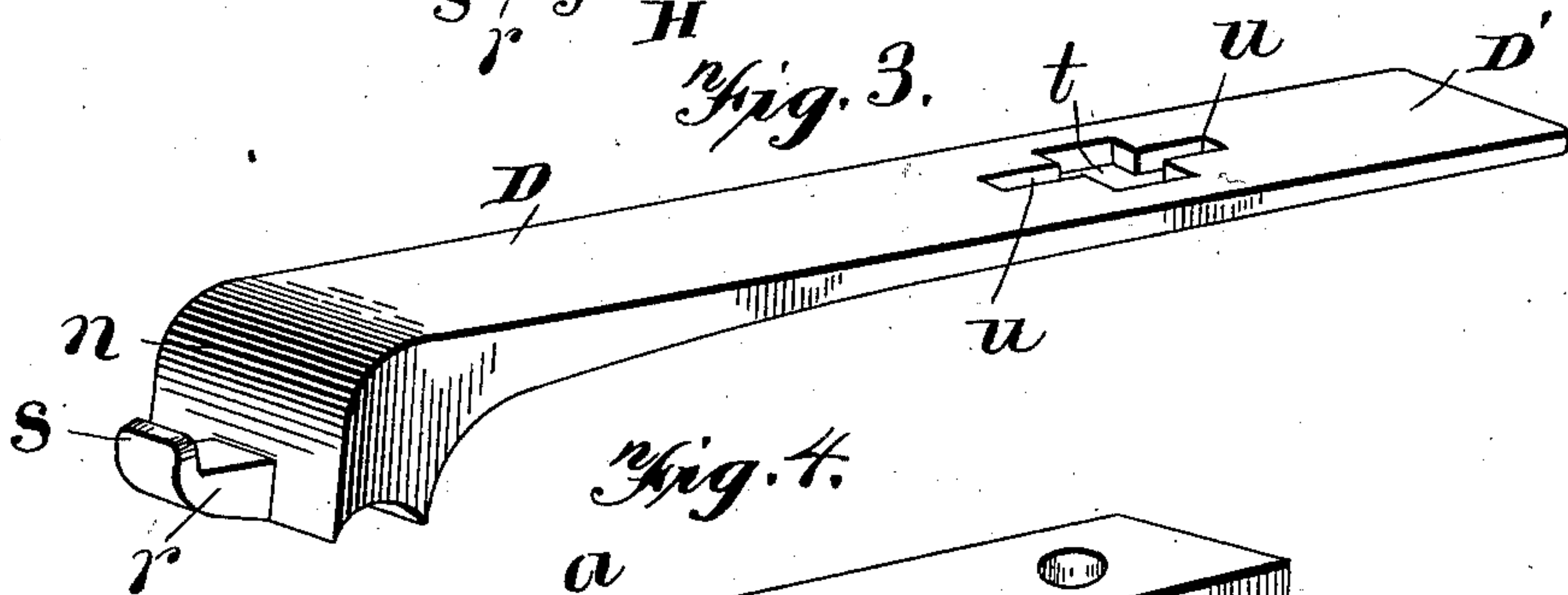


Fig. 4.

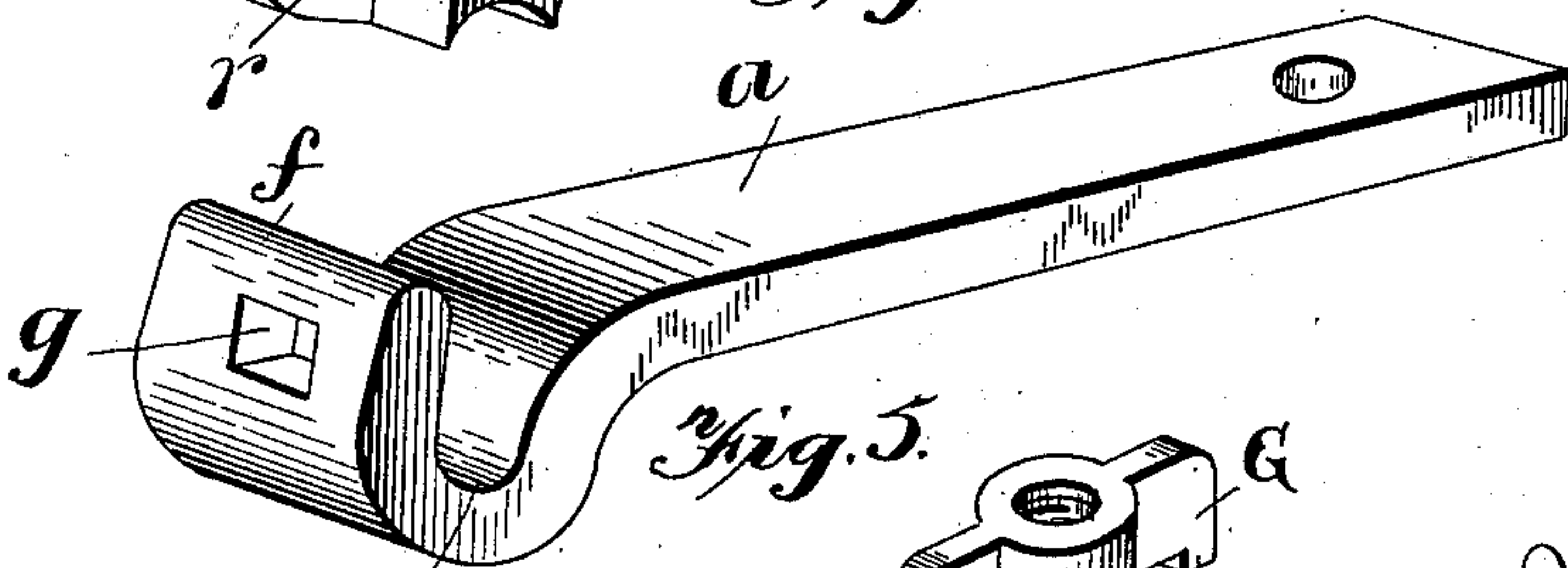
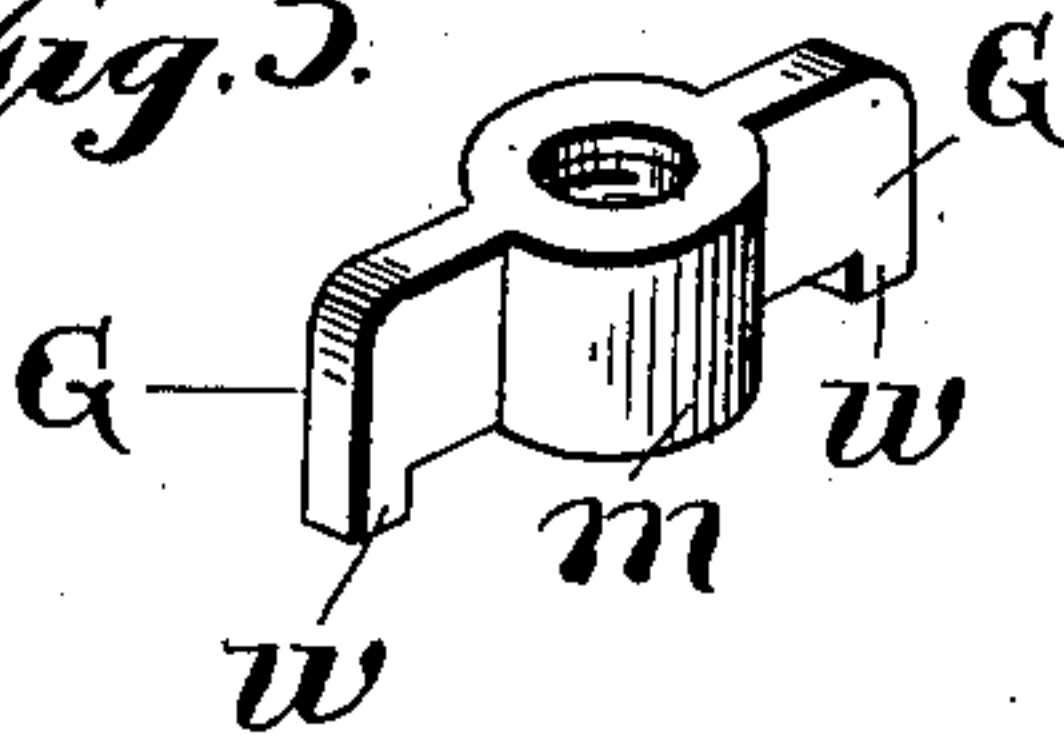


Fig. 5.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JAMES H. THACKER, OF OSWEGO, SOUTH CAROLINA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 661,828, dated November 13, 1900.

Application filed December 29, 1899. Serial No. 741,983. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. THACKER, a citizen of the United States, residing at Oswego, in the county of Sumter and State of South Carolina, have invented new and useful Improvements in Thill-Couplings, of which the following is a specification.

My invention relates to improvements in thill-couplings, and pertains to a coupling in which there are two members, one member being movable for the purpose of clamping the draft-bolt and thereby the thill-coupling to the clip and means for holding the movable member, all of which will be fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my coupling, showing it attached to the axle-clip. Fig. 2 is a vertical longitudinal sectional view of Fig. 1. Fig. 3 is a detached perspective view of the movable clamping member. Fig. 4 is a detached inverted perspective view of the permanent member of the coupling. Fig. 5 is a detached perspective view of the locking thumb-nut.

The object of my invention is to provide a simple and cheap thill-coupling in which the parts are readily movable for the purpose of connecting the coupling or detaching it, the parts being constructed to utilize one of the shaft-clamping bolts as the means for holding the movable clamping member of the coupling.

Referring now to the drawings, A indicates the axle; B, the ordinary axle-clip; C, the ears projecting therefrom and through which the draft-bolt passes, and between the said ears my improved coupling is also adapted to be placed and to embrace the said draft-bolt. The above-enumerated elements are here shown as of the ordinary construction, but they may be of any desired form without affecting in any manner my invention.

*a* is one member of my coupling and which is here shown as the upper member. This member is rigidly connected with the shaft *b* by means of the front bolt *c* and the rear bolt *d*. This upper member being therefore permanently attached to the shaft will for the purpose of convenience and brevity in the claims be termed the "permanent" member

of the coupling. The inner or rear end of this permanent member *a* is provided with a U-shaped bolt-receiving socket *e*, which is formed by bending the rear end of the said permanent member, and the rear wall of this U-shaped socket extends laterally at right angles to the body portion of the permanent member *a* and a considerable distance beyond the adjacent face thereof, as clearly illustrated. The projecting portion of this wall *f* is provided with a transverse opening *g*, for a purpose to be presently described.

The inner bolt *d* for the purpose of clamping the permanent member *a* to the inner end of the shaft *b* is provided with the usual clamping-nut *i* and the bolt projecting, as shown at *j*, for the purpose of receiving a locking thumb-nut *m*.

The movable member D of my coupling consists of practically a straight spring portion D', enlarged inwardly at *n*, the inner end of this enlargement being concaved for the purpose of engaging the draft-bolt, and this enlargement *n* is made of a size which will permit it to pass within the U-shaped socket *e*. Projecting inwardly from the inner end of this enlargement *n* is a hook-shaped projection *r*, which is adapted to pass through the passage-way *g* in the projecting portion *f* of the socket *e*, and the hooked portion *s* of this projection *r* extends downwardly or in a direction away from the draft-bolt.

The projecting spring-arm D is provided with an opening *t*, adapted to receive the clamping-nut *i* of the bolt *j*, and at the ends of this opening *t* is provided the oppositely-projecting notches *u*, which are adapted to permit the passage therethrough of the wings G of the locking-nut *m*. The enlarged central portion of this locking-nut is adapted to pass through the passage or opening *t*, which receives also the nut *i*, as before stated. The outer ends of the rings of the locking-nut *m* are provided with inwardly-projecting lugs *w*, which have straight or right-angled inner walls, and the locking-nut is made of such a width that these lugs will engage the outer edges or walls of the spring-arm D of the movable member.

Preferably the draft-bolt is surrounded by a suitable elastic packing H, which packing



may be renewed from time to time as necessity may require to effect a tight and anti-rattling joint.

In operation the U-shaped socket *e* is placed  
5 to receive the draft-bolt and its packing or bushing and the removable member is then placed in position, with its hooked projection in the opening *g*, and the locking-nut *n* is then turned to cause the engagement of its  
10 lugs with the outer edges of the spring-arm D, and when in engagement therewith, owing to the right-angled walls of these lugs, the parts are held together against any accidental separation. When it is desired to separate  
15 the parts for removing the coupling, the spring-arm D is pressed inward sufficiently to permit the turning of the locking-nut parallel with the spring-arm, when the movable member can be detached by the passage through  
20 the opening *t* and the notches *u* on the locking-nut and without removing the locking-nut. The parts are placed in position by the reversal of this operation.

From the above description it will be seen  
25 that I have produced a very simple, cheap, and effective thill-coupling which is quickly and readily attached and detached from the vehicle without the use of any tools whatever.

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

1. In a thill-coupling, the combination with a shaft, a thill-iron having at one end a socket,

a bolt passing through the shaft and the thill-iron and projecting therebeyond and a nut on  
35 said bolt permanently securing the thill-iron to the shaft, of a spring member having one end interlocking with the socket and the other end provided with a nut-receiving opening and a nut on the projecting end of said bolt  
40 on the outside of the spring member, whereby the spring member is clamped against the thill-iron, substantially as described.

2. In a thill-coupling the combination with a shaft, a thill-iron having at one end a socket,  
45 a bolt passing through the shaft and the thill-iron and projecting therebeyond, and a nut on said bolt permanently securing the thill-iron to the shaft, of a spring member having one end interlocking with the socket and the other  
50 end provided with a nut-receiving opening having on opposite sides laterally-extending slots, and a locking-nut on the projecting end of the bolt on the outside of the spring-arm, said nut having oppositely-projecting wings  
55 provided with upwardly-projecting lugs, whereby the said nut straddles the movable spring member, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing  
60 witnesses.

JAMES H. THACKER.

Witnesses:

W. E. MINES,

J. H. ROBINSON.