

No. 697,603.

Patented Apr. 15, 1902.

C. C. BRADLEY.

THILL COUPLING.

(Application filed Feb. 20, 1902.)

(No Model.)

Fig. 1.

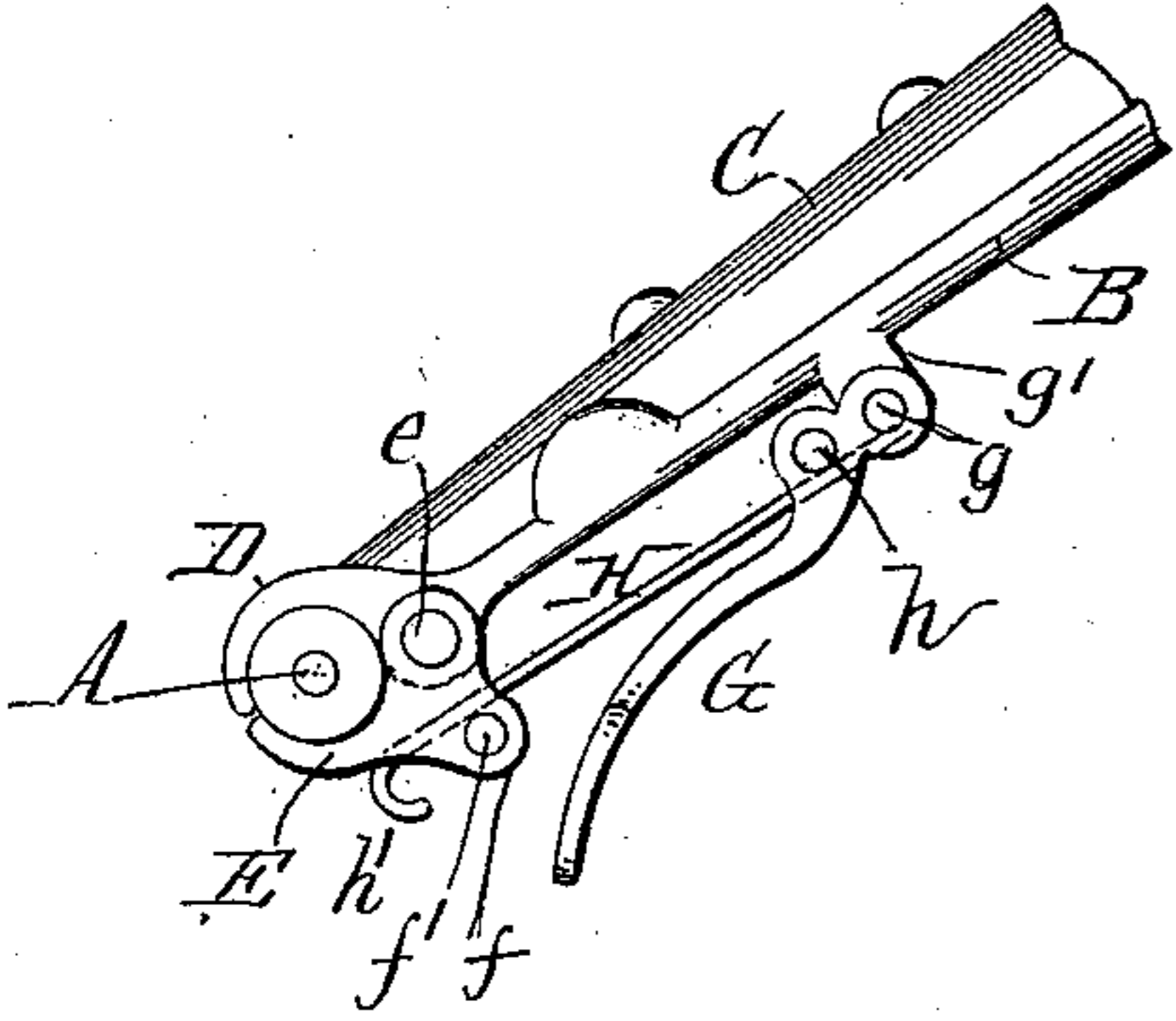


Fig. 4.

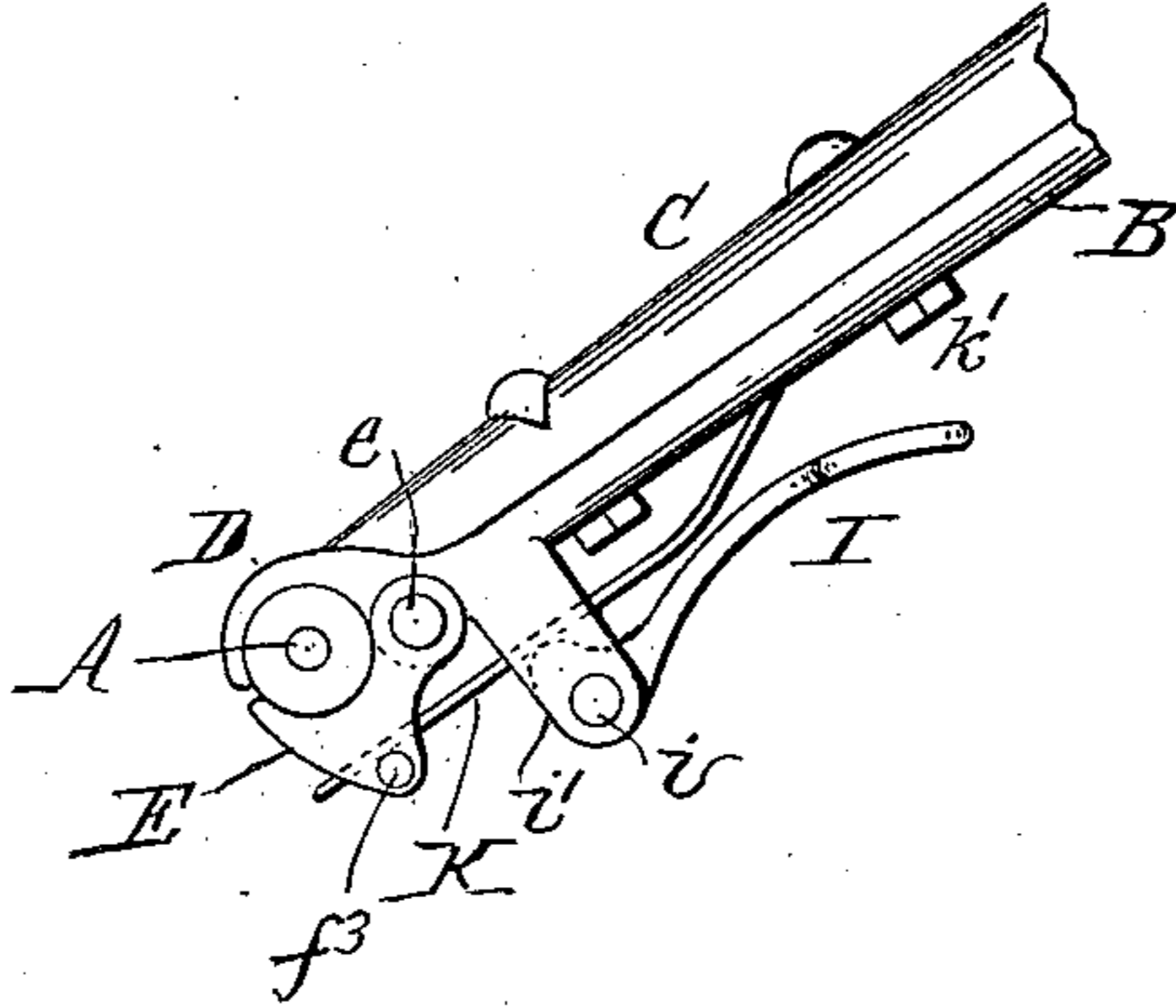


Fig. 2.

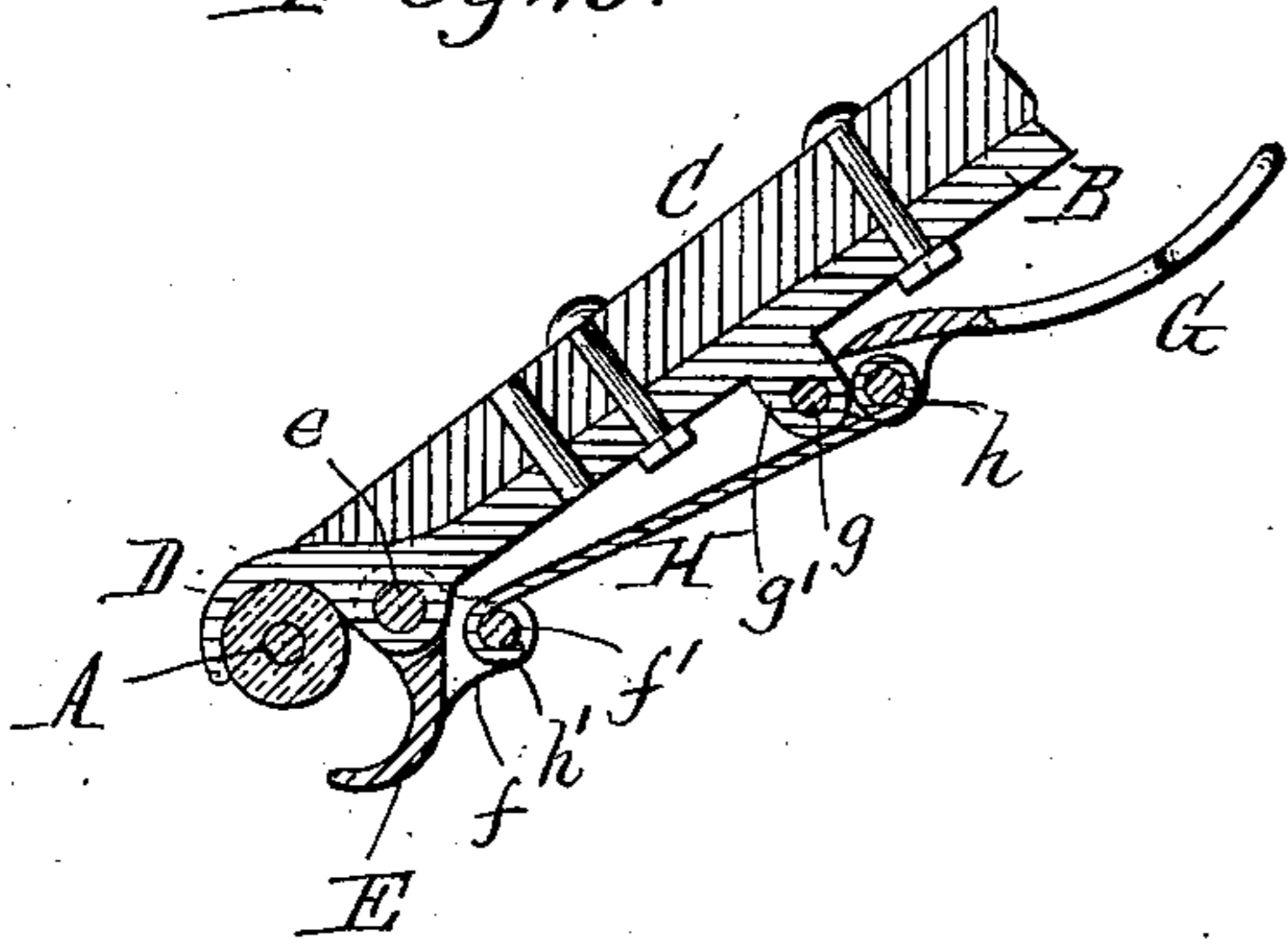


Fig. 5.

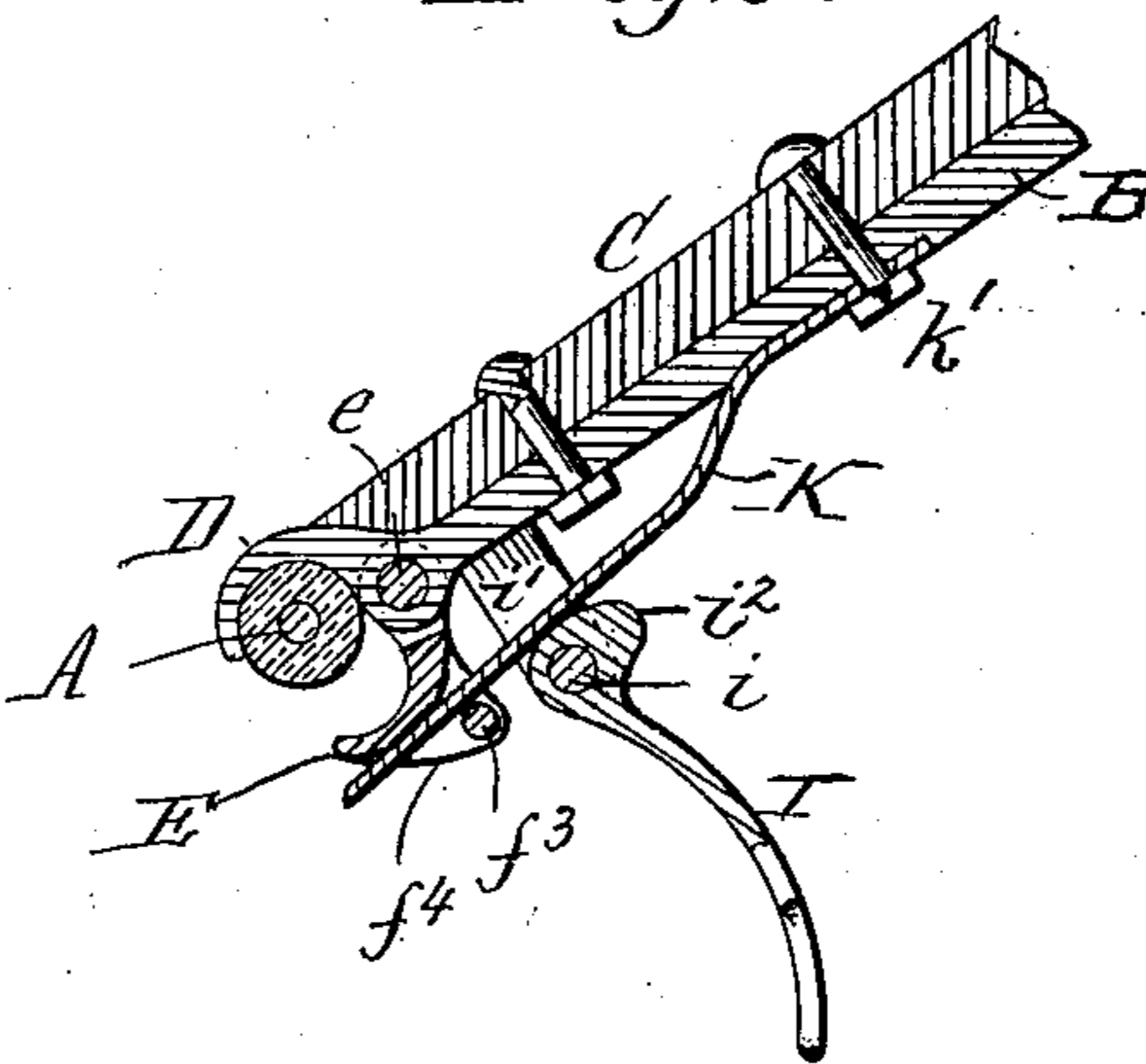


Fig. 3.

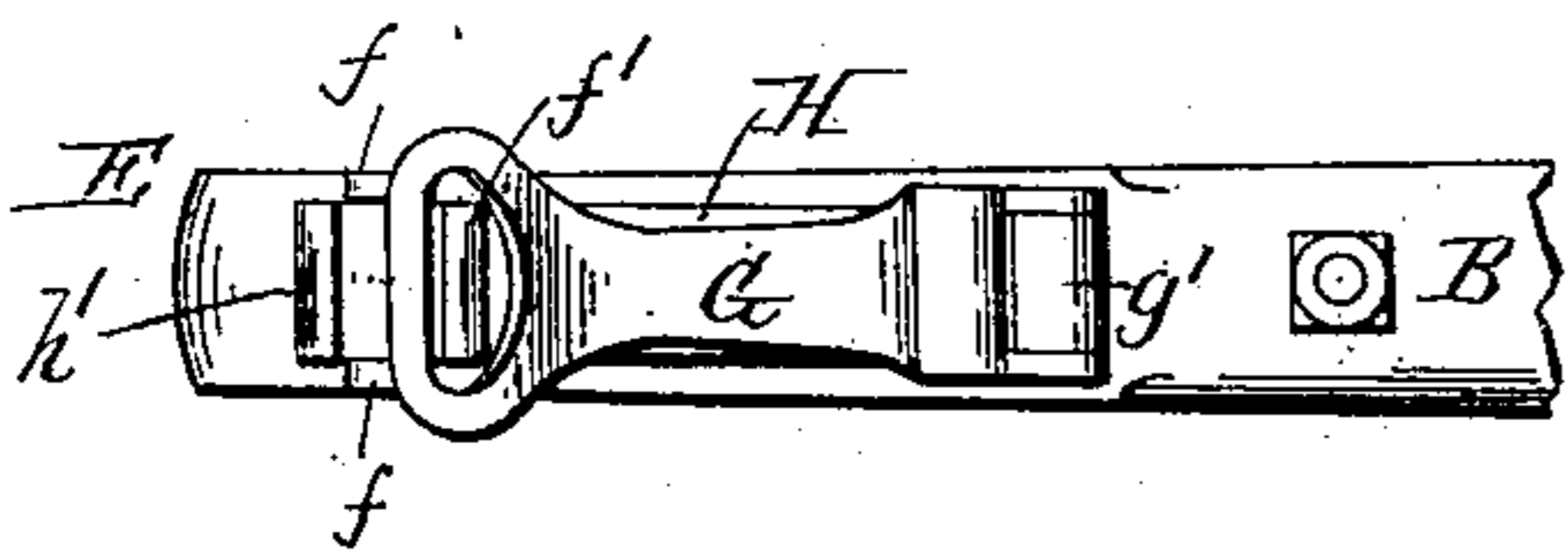
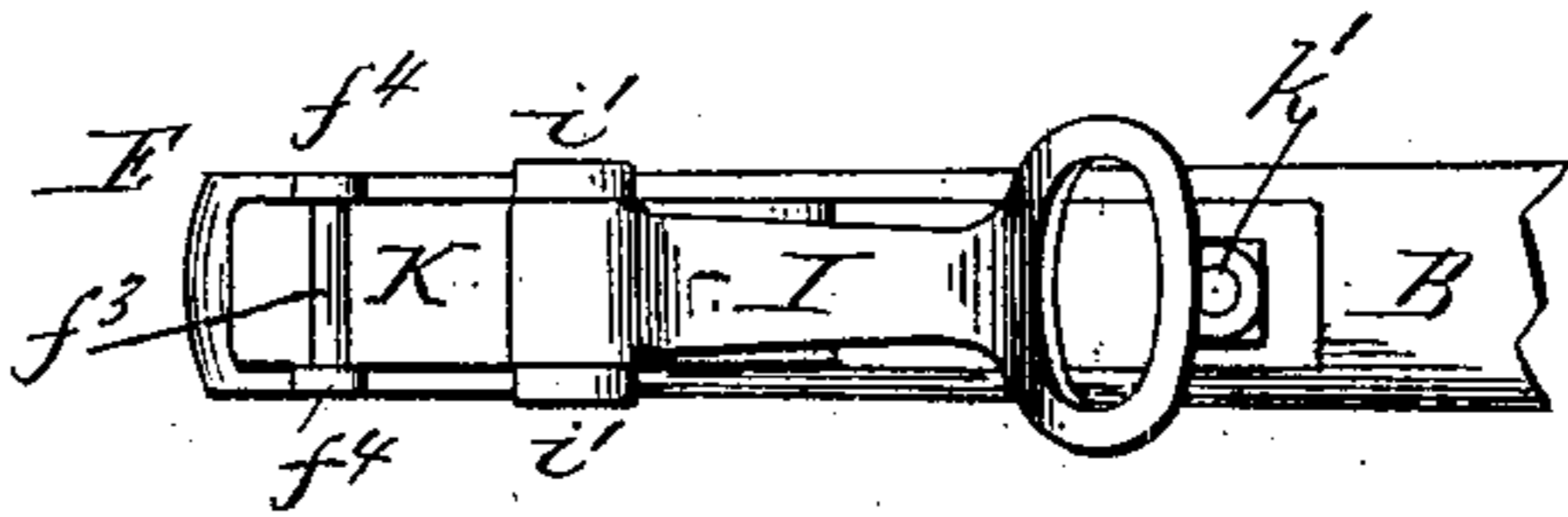


Fig. 6.



Witnesses:

F. J. Schuyler.

Albert V. Trauer

C. C. Bradley Inventor.

By Wilhelm Broun.

Attorneys.

UNITED STATES PATENT OFFICE.

CHRISTOPHER C. BRADLEY, OF SYRACUSE, NEW YORK.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 697,603, dated April 15, 1902.

Application filed February 20, 1902. Serial No. 94,902. (No model.)

To all whom it may concern:

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

This invention relates to that class of thill-couplings in which the draft-eye is attached to the thill or pole iron and composed of an upper fixed jaw and a lower movable jaw, which latter is opened and closed by a lever pivoted to the thill or pole iron and a spring connecting the lever with the movable jaw. In this class of thill-couplings the fixed jaw is formed by the manufacturer integrally with a short section or stub which forms part of the thill or pole iron and to which section both the movable jaw and the lever are pivoted. This section or stub of the thill or pole iron is welded to the main part of the same by the carriage-maker and applied by him to the thill or pole. As the thill-iron is of considerable length and is curved to correspond with the curvature of the thill or the pole-arm, as the case may be, it is very difficult to properly bend the iron without changing the relative position of the lever-pivot and the point of attachment of the spring to the movable jaw when the spring is connected to the latter by a positive attaching device, as heretofore. When the relative location of the lever and the attaching-point of the spring to the movable jaw is disturbed by bending the iron, the movable jaw is thrown out of alinement with the fixed jaw, and the jaws do not properly close upon the draft bolt or knuckle.

The object of this invention is to construct the connection between the spring and the movable jaw in such manner that the end of the spring is free to change its position with reference to the jaw in uniting the stub of the thill-iron to the main part thereof or in bending the iron, thereby preventing the movable jaw from being thrown out of alinement with the fixed jaw.

In the accompanying drawings, which represent my invention applied to two different styles of thill-couplings, Figure 1 represents a side elevation of a thill-coupling in which the spring is attached to the lever, the figure

showing the jaws closed. Fig. 2 is a sectional elevation thereof, showing the jaws opened. Fig. 3 is a bottom plan view showing the jaws closed. Fig. 4 is a side elevation of a thill-coupling in which the spring is attached to the thill-iron, the figure showing the jaws closed. Fig. 5 is a sectional elevation thereof, showing the jaws opened. Fig. 6 is a bottom plan view showing the jaws closed.

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

A represents the draft bolt or knuckle, which is of any desired form or construction and attached to the front axle of the vehicle by any desired means.

B represents the stub or section of the thill-iron, and C the thill, to the under side of which the iron is secured in a well-known manner.

D represents the fixed jaw which is formed integrally with the stub or section B of the thill-iron at the rear end thereof and which engages over the draft bolt or knuckle.

E represents the movable jaw, which is pivoted at its front end to the thill-iron in front of the fixed jaw by a pivot *e*, so as to close against the under side of the draft bolt or knuckle.

Referring to Figs. 1 to 3, *f* represents two ears formed on the under side of the movable jaw E, near the pivot thereof, and *f'* is a transverse pin secured in said ears at a short distance from the under side of the movable jaw, so as to leave a free space or slot between this pin and the under side of the jaw.

G represents the lever by which the movable jaw is opened and closed and which is pivoted by a bolt *g* on a lug *g'*, formed on the thill-iron B.

H represents the spring, which is attached to the lever, near the front thereof, by a pivot *h* and which extends with its opposite free end through the slot or open space between the pin *f'* and the movable jaw. The spring is bent at its free end to form a projection or hook *h'*, by which it engages with the pin *f'* in swinging the lever forwardly to open the movable jaw, and thereby pulls on the pin *f'* and swings the movable jaw to the open position, as shown in Fig. 2. When the lever is closed against the spring, the latter holds

the movable jaw closed and extends with its bent free end beyond the pin f' , as represented in Fig. 1.

Referring to Figs. 4 to 6, I represents the lever by which the movable jaw is closed and which is pivoted by a pin i between lugs i' , formed on the thill-iron. The lever is provided with a short arm or cam i^2 , which bears against the spring K between the fixed and the free ends thereof. The spring is secured at its front end to the thill-iron by a bolt k' or other suitable fastening and passes rearwardly between the lugs i' , to which the lever is pivoted, and extends with its straight free rear end through the slot or space between the pin f^3 and the under side of the movable jaw. The pin f^3 is secured to lugs f^4 on the under side of the movable jaw, as in the construction represented in Figs. 1 to 3, but is arranged somewhat farther from the pivot of the movable jaw. When the lever is closed down upon the spring, as represented in Fig. 4, the latter presses upwardly against the movable jaw and holds the jaws upon the draft bolt or knuckle. In releasing the lever the spring bears downwardly against the pin f^3 and opens the jaw to the position shown in Fig. 5.

In both constructions the spring has a sliding connection with the movable jaw, which in bending the thill-iron permits the spring to move backward or forwardly on the movable jaw, and thereby prevents the movable jaw from being thrown out of alinement with the fixed jaw. In both constructions the spring in swinging the lever to the open position bears against the pin which forms the

under side of the transverse slot in the movable jaw and opens the latter by the action of the lever. The jaw itself is therefore not required to be separately handled for closing or opening the jaw.

I claim as my invention—

1. In a thill-coupling, the combination with the fixed and movable jaws and the tightening lever and spring, of a longitudinally-movable connection whereby the spring is attached to the movable jaw and the spring is enabled to change its position lengthwise with reference to the jaw and also is caused to open the jaw upon releasing the lever, substantially as set forth.

2. In a thill-coupling, the combination of a fixed jaw, a movable jaw provided with a transverse slot, a tightening-lever, and a tightening-spring which is operated by said lever and arranged with its free end in said slot and capable of lengthwise movement therein, substantially as set forth.

3. In a thill-coupling, the combination of a fixed jaw, a movable jaw provided with a transverse slot, a tightening-lever, and a tightening-spring which is attached to said lever and arranged with its free end portion in said slot and capable of lengthwise movement therein and which has its free end provided with a projection for opening the jaw, substantially as set forth.

Witness my hand this 14th day of February, 1902.

CHRISTOPHER C. BRADLEY.

Witnesses:

F. L. SCHARFF,
C. S. BUNNELL.