

No. 776,423.

PATENTED NOV. 29, 1904.

J. PRESTELE & F. BLAMOSER.

COUPLING.

APPLICATION FILED JULY 6, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1

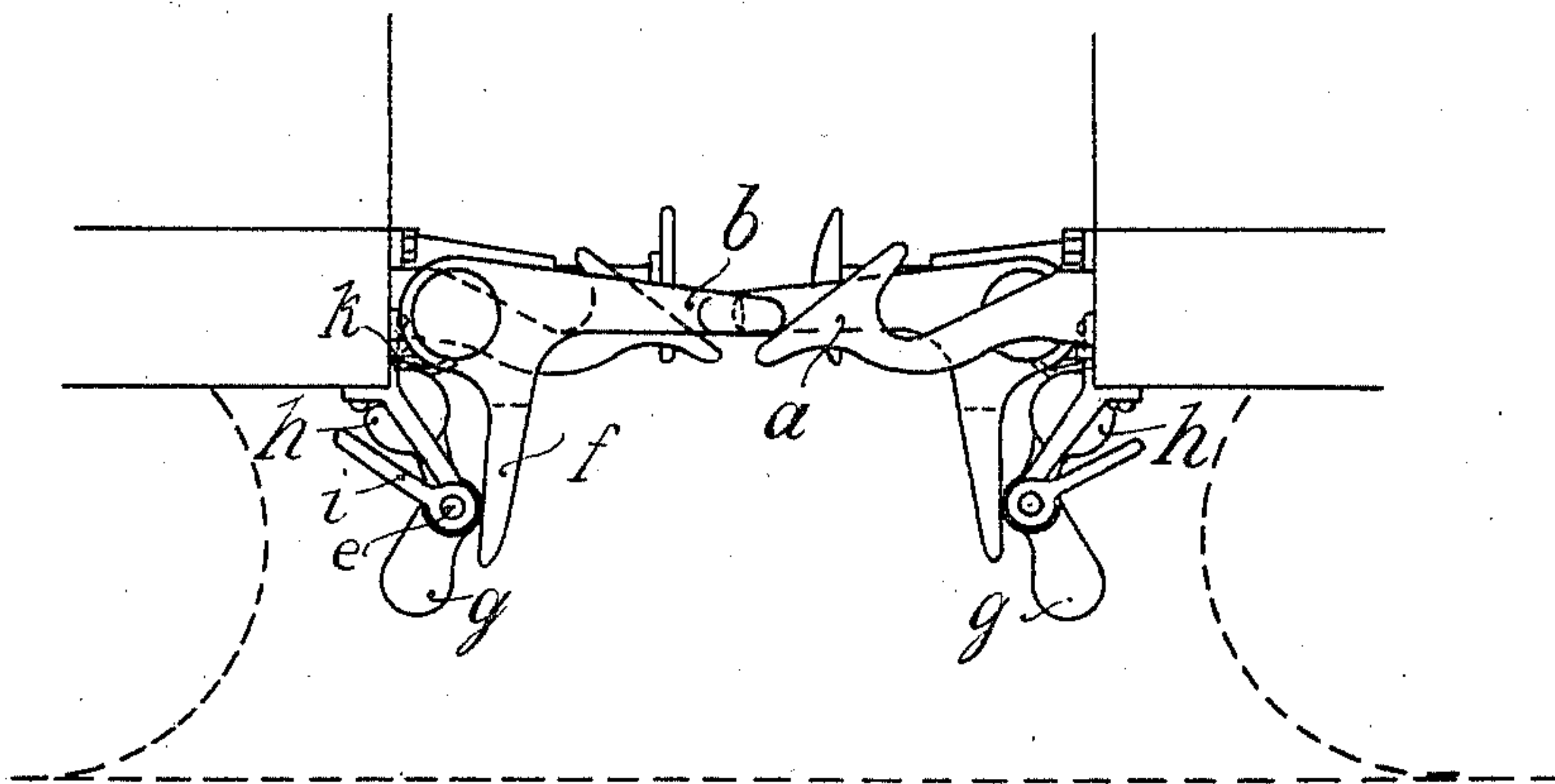
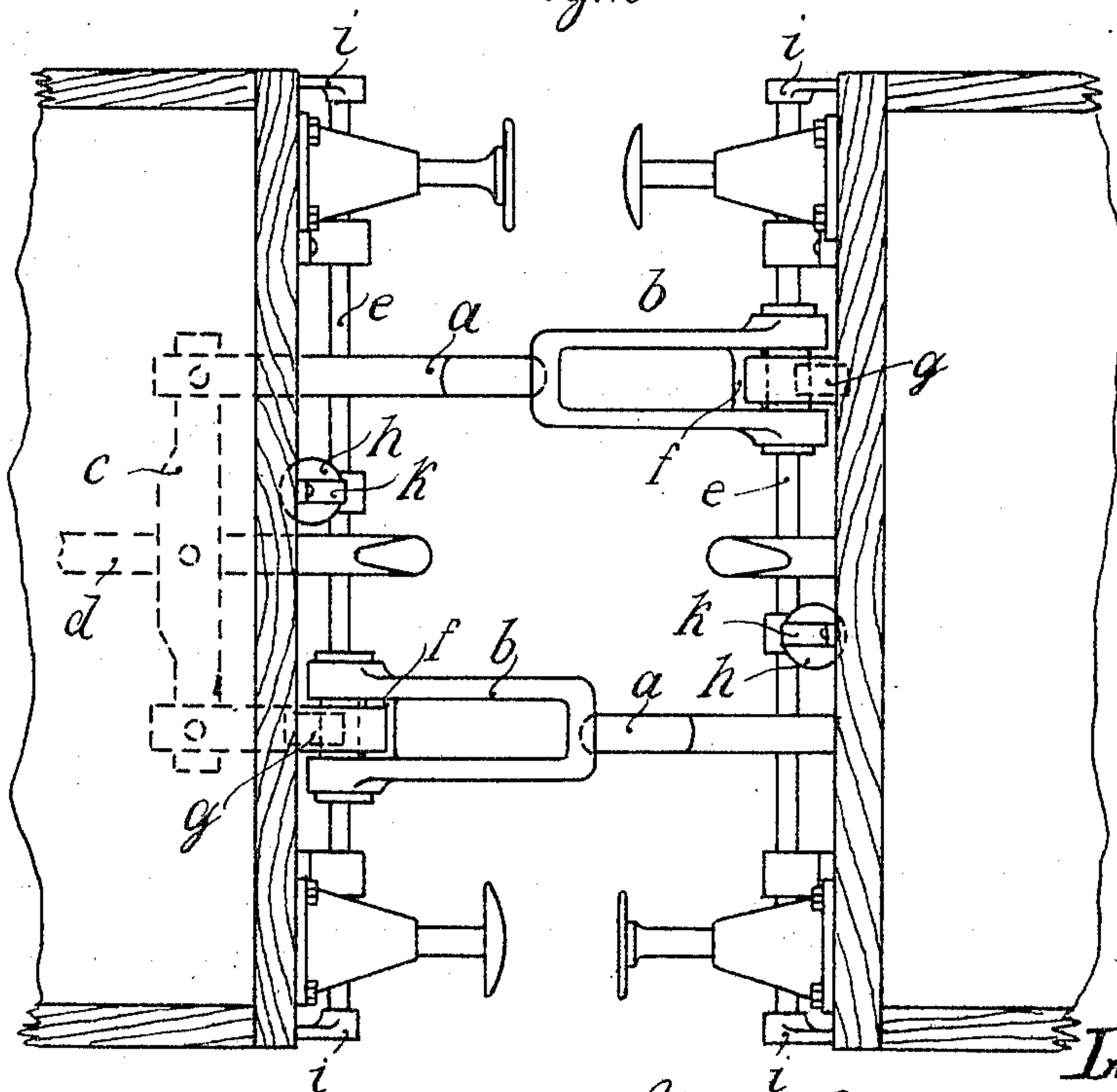


Fig. 2



Witnesses:

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H. F. Anderson

Inventors:

Joseph Prestele &
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their attorneys

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2 SHEETS—SHEET 2

Fig. 3

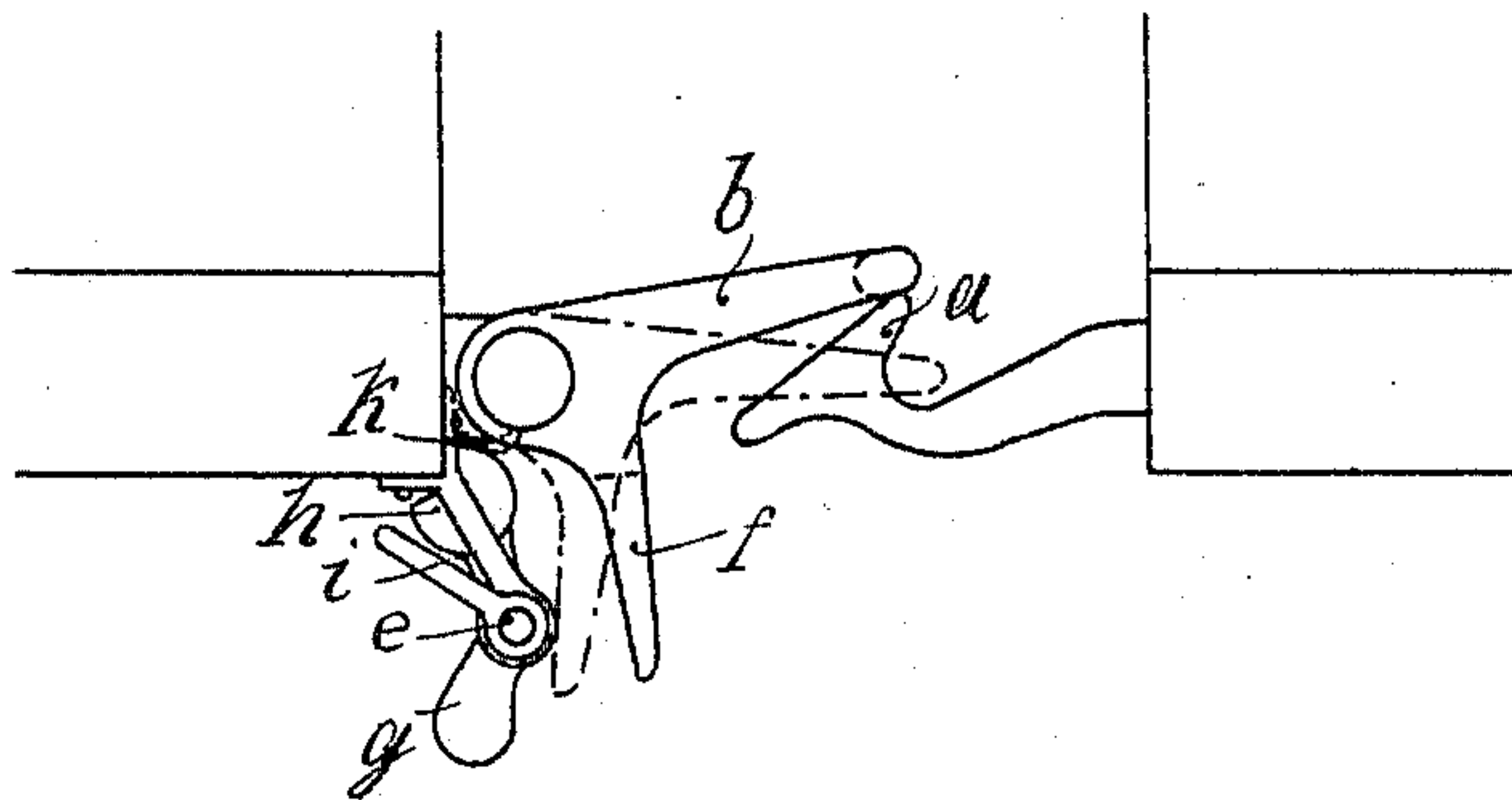


Fig. 4

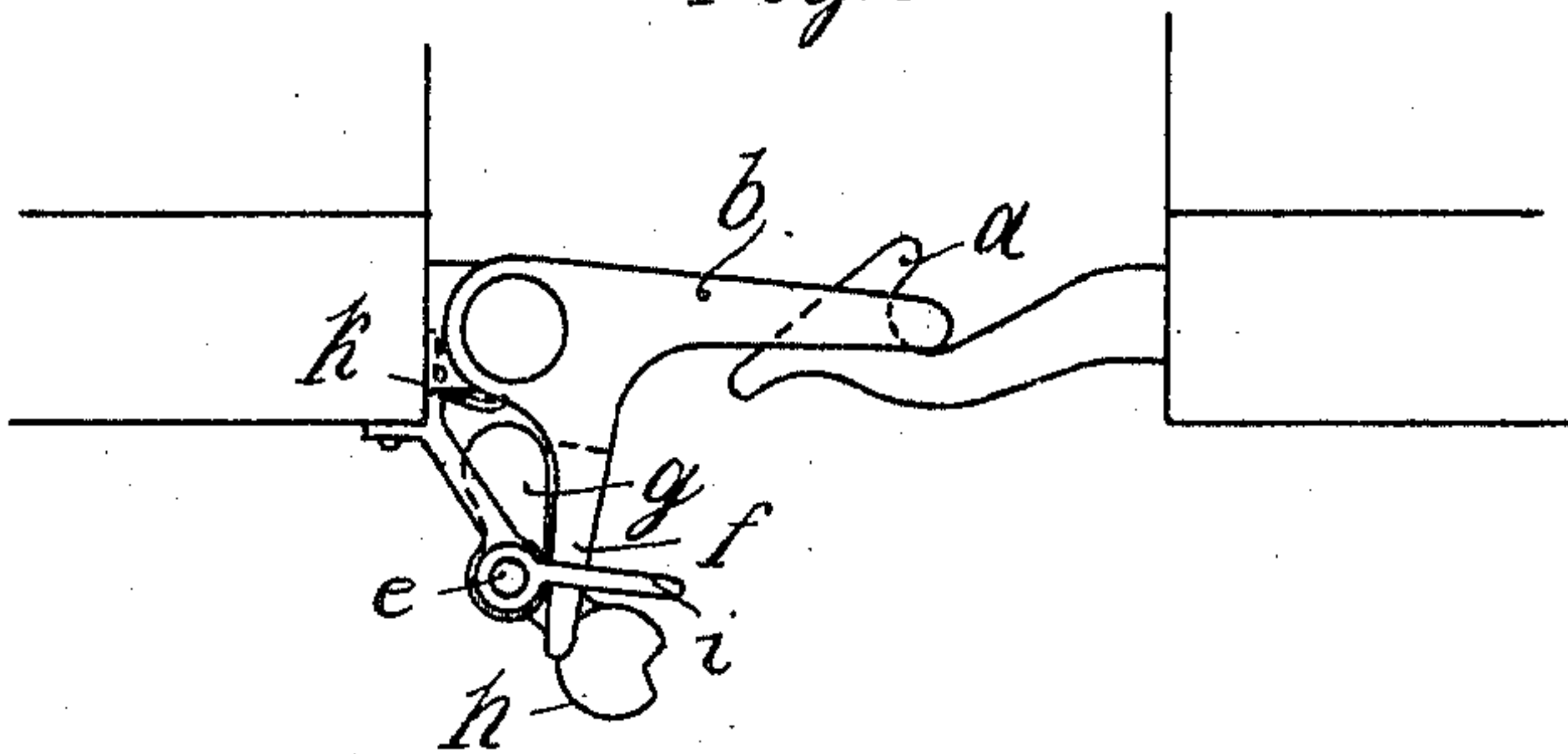
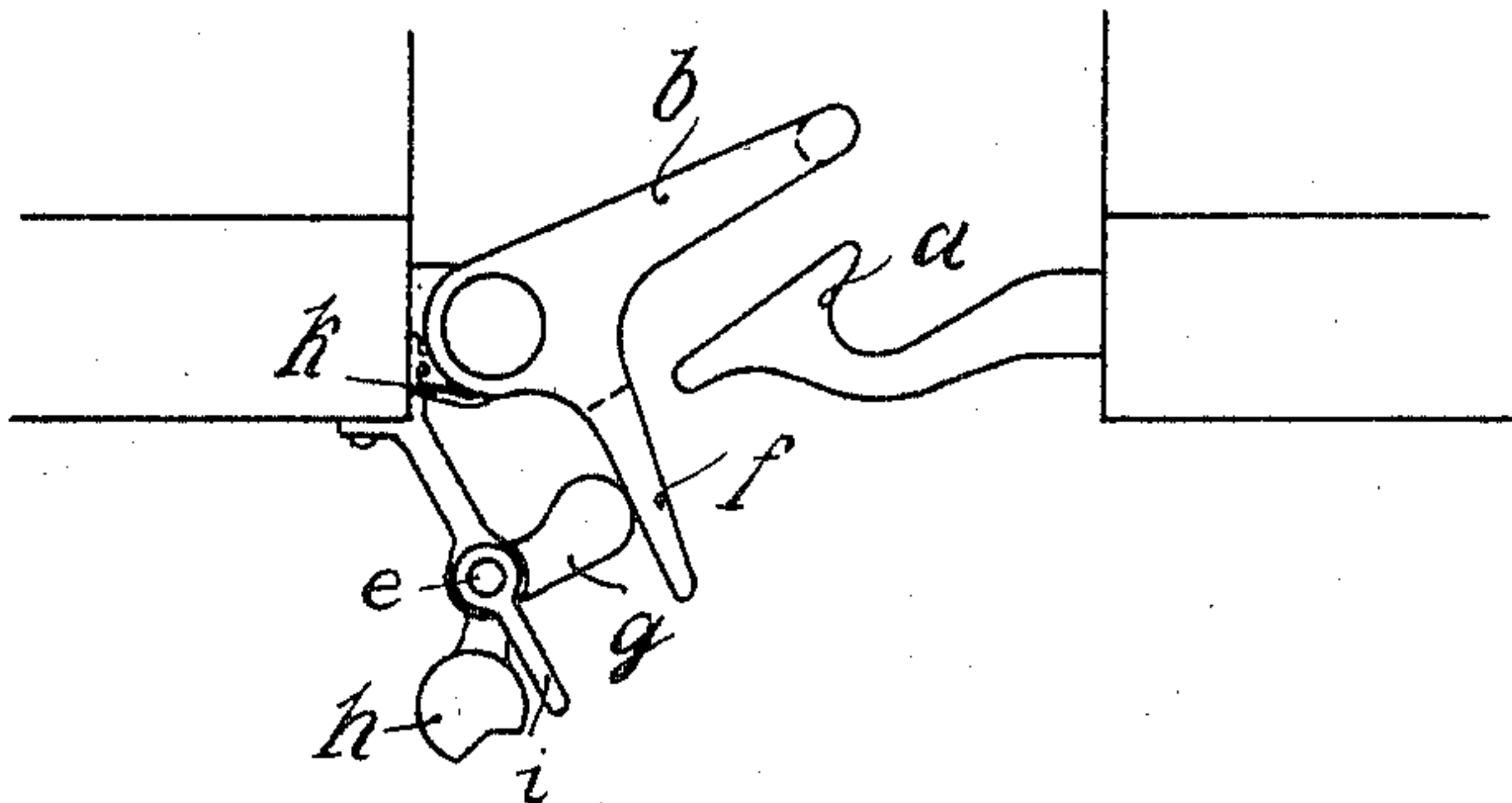


Fig. 5



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UNITED STATES PATENT OFFICE.

JOSEPH PRESTELE AND FERDINAND BLAMOSER, OF DEGGENDORF,
GERMANY.

COUPLING.

SPECIFICATION forming part of Letters Patent No. 776,423, dated November 29, 1904.

Application filed July 6, 1904. Serial No. 215,499. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH PRESTELE, a subject of the King of Bavaria, and FERDINAND BLAMOSER, a subject of the Emperor of Austria-Hungary, residing at Deggen-
dorf, Bavaria, Germany, have invented certain new and useful Improvements in Couplers; and we do hereby 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.

Our invention relates to couplers, and especially to an improvement therein whereby is attained a coupling arrangement characterized by strength, simplicity, safety to the operator, and interchangeability.

The peculiar features of our invention are fully set out in the description and claims following and are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the ends of two cars equipped with our improved coupler. Fig. 2 is a top plan view of Fig. 1, and Figs. 3, 4, and 5 are diagrammatic views showing the coupler in a coupling position, a coupled position, and an uncoupled position, respectively.

Referring to the figures of the drawings in detail, the coupler consists, essentially, of stationary horizontal hooks *a*, having an upward-sloping base or approach, and hinged loops *b*, opposed to the corresponding hook *a* and adapted to ride upward upon the sloping face and engage the hook. The hooks *a* and the loops *b* are each secured, the latter indirectly, to a horizontal cross-beam *c*, which is pivotally mounted upon the usual centrally-arranged draw-bar *d*. By this arrangement the coupler is adapted to accommodate itself to curves in the roadway and to an equalization of the draft upon two sides of the car. Moreover, the usual draw-bar arrangement is not interfered with and the well-known link-coupling can be used in case a car is placed in the train which is not provided with our improved coupling.

In order that the coupler may be operated with equal facility from either side of the car and without entering between the cars, a hori-

zontal shaft *e* is secured in suitable bearings upon the front of each car adjacent to the coupler and to the arm *f*, depending from the loop *b*. This shaft has mounted upon one end a cam-faced arm *g*, lying adjacent to the arm *f* and adapted to impinge against the same. A counterweight *h* is also secured to the shaft at an angle to the arm *g*, whose function it is to retain the arm *g* in the desired position. Upon the end of this shaft *e* is arranged an operating-lever *i*, by means of which the shaft may be rotated. A leaf-spring *k* is secured to the front of the car and is bent in such manner as to be deflected against its own tension by a counterweight *h* from either direction. It will be seen that when the counterweight is in the position shown in Fig. 3 it is prevented from moving farther backward by resting against the end of the car, while the tension of the spring *k* prevents the forward movement except under force positively applied to the lever *i*. When in an uncoupled position, the shaft *e*, with the arm *g* and the counterweight *h*, occupies the position shown in Figs. 1, 2, and 3. As two cars are brought together the loop *b* rides upward upon the beveled face of the hook *a* and drops into engagement therewith, the whole operation being entirely automatic. If it is desired to uncouple the cars, the lever *i* is thrown into the position shown in Fig. 4, when the arm *g* impinges against the arm *f*. As the shaft is further rotated into the position shown in Fig. 5 the arm *g* exercises pressure against the arm *f* and elevates the loop *b* so as to clear the hook *a*. In this position the loop will be held automatically by the counterweight *h* until the cars are separated, when the shaft *b*, with its parts, will be thrown again into the position shown in Fig. 3 and left in that position ready to be again automatically coupled when desired.

It will be understood that the ends of the two cars are exact counterparts, so that when brought into position the hook *a* will be in a position to engage the loop *b* on one side and the loop *b* to engage the hook *a* on the other. By the particular relative arrangement of the parts carried by the shaft *e* and the means

for holding the counterweight *h* against accidental disarrangement it will be seen that a secure coupling is effected, that the coupling operation is wholly automatic, and that the
5 coupler may be manipulated from a safe position with great facility.

What we claim, and desire to secure by Letters Patent of the United States, is—

1. In a coupler, the combination, with a stationary hook having an inclined approach, of
10 a pivotally-mounted loop arranged to engage said hook, an arm fixed to the loop, a rock-shaft provided with an arm arranged to impinge against the first arm to lift the loop out
15 of engagement with the hook, a counterweight arranged to hold the rock-shaft arm in or out of operation as may be desired, and a lever whereby the shaft may be rocked.

2. In a coupler, the combination, with a stationary hook having an inclined approach, of
20 a hinged loop arranged to engage the hook, an arm depending from the loop, a rock-shaft provided with an arm adapted to impinge against the depending arm and to lift the loop
25 out of engagement with the hook, a counterweight so arranged as to normally hold the shaft against rocking, a spring holding the counterweight against accidental movement, and a lever whereby the shaft may be rocked
30 against the influence of the spring and of the counterweight.

3. In a coupler, the combination, with a horizontal stationary hook having an upwardly-inclined approach, of a horizontal
35 hinged loop arranged to be opposed to and to engage the hook, an arm depending from the loop, a rock-shaft provided with a cam-faced arm adapted to impinge against the depending arm and to lift the loop out of engage-

ment with the hook, a counterweight arranged
40 upon the shaft at an angle to the arm, means for limiting the movement of the counterweight in one direction, a spring arranged to yieldingly oppose the movement of the counterweight in the other direction, and a lever
45 whereby the shaft may be rocked against the tension of the spring.

4. In a coupling apparatus, the combination, with a vehicle, a draw-bar, and a cross-beam pivotally connected therewith, of a hook carried
50 by one end of the cross-beam, a hinged loop carried by the other end of the beam, means for lifting the loop, a counterweight arranged to hold such means with the loop in its elevated or depressed position as desired,
55 and a spring holding the counterweight against accidental movement.

5. In a coupling apparatus, the combination, with a vehicle, a draw-bar, and a cross-beam pivotally connected therewith, of a stationary
60 hook carried by one end of the cross-beam, a hinged loop carried by the other end of the beam, an arm depending from the loop, a rock-shaft provided with an arm arranged to impinge against the depending arm and to
65 elevate the loop, a counterweight arranged to normally hold the shaft against rocking, a spring holding the counterweight against accidental movement, and a lever whereby the shaft may be rocked against the influence of
70 the spring and the counterweight.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

JOSEPH PRESTELÉ.
FERD. BLAMOSER.

Witnesses:

JOS. ELNER,
HANS SCHARL.