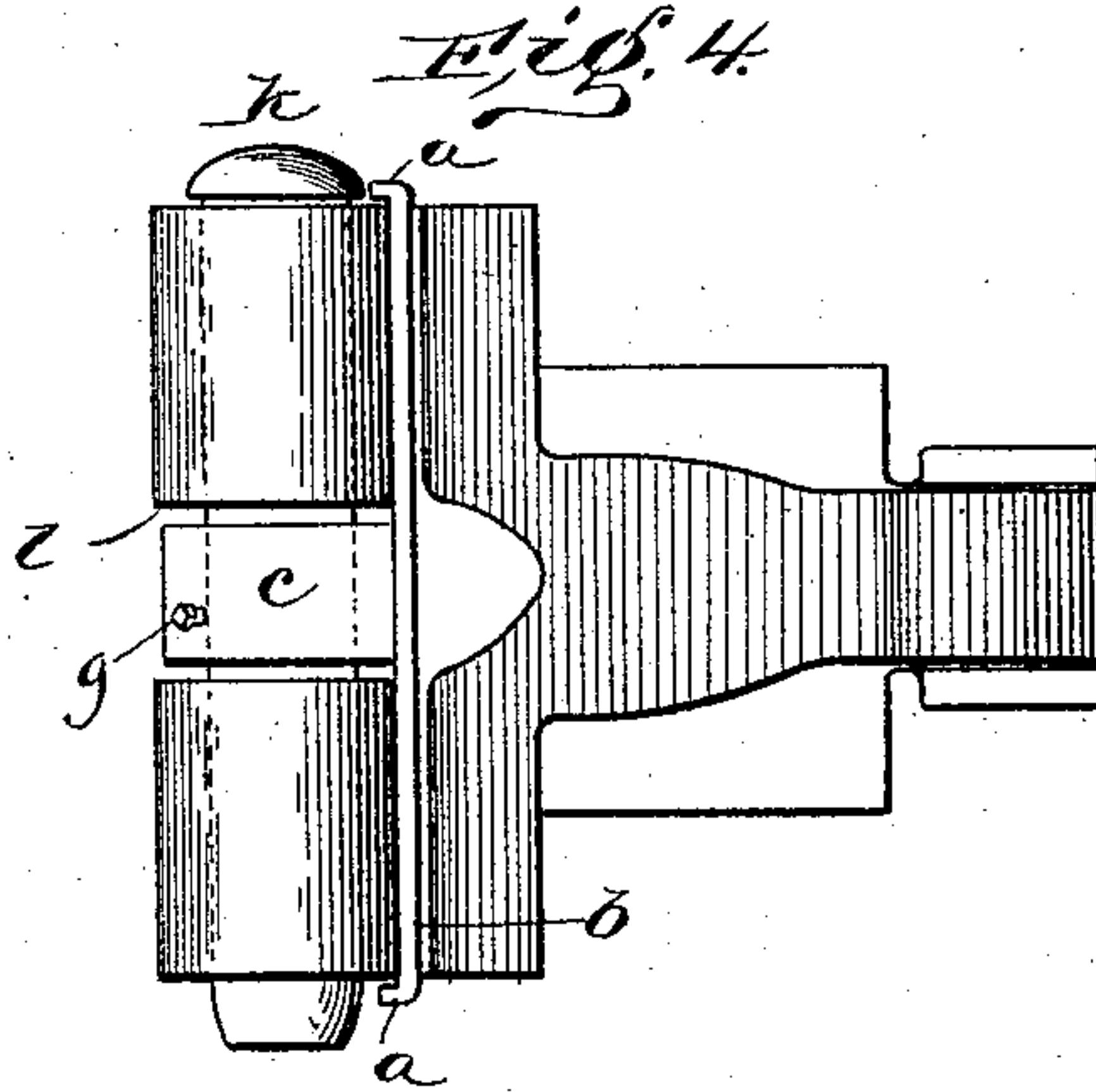
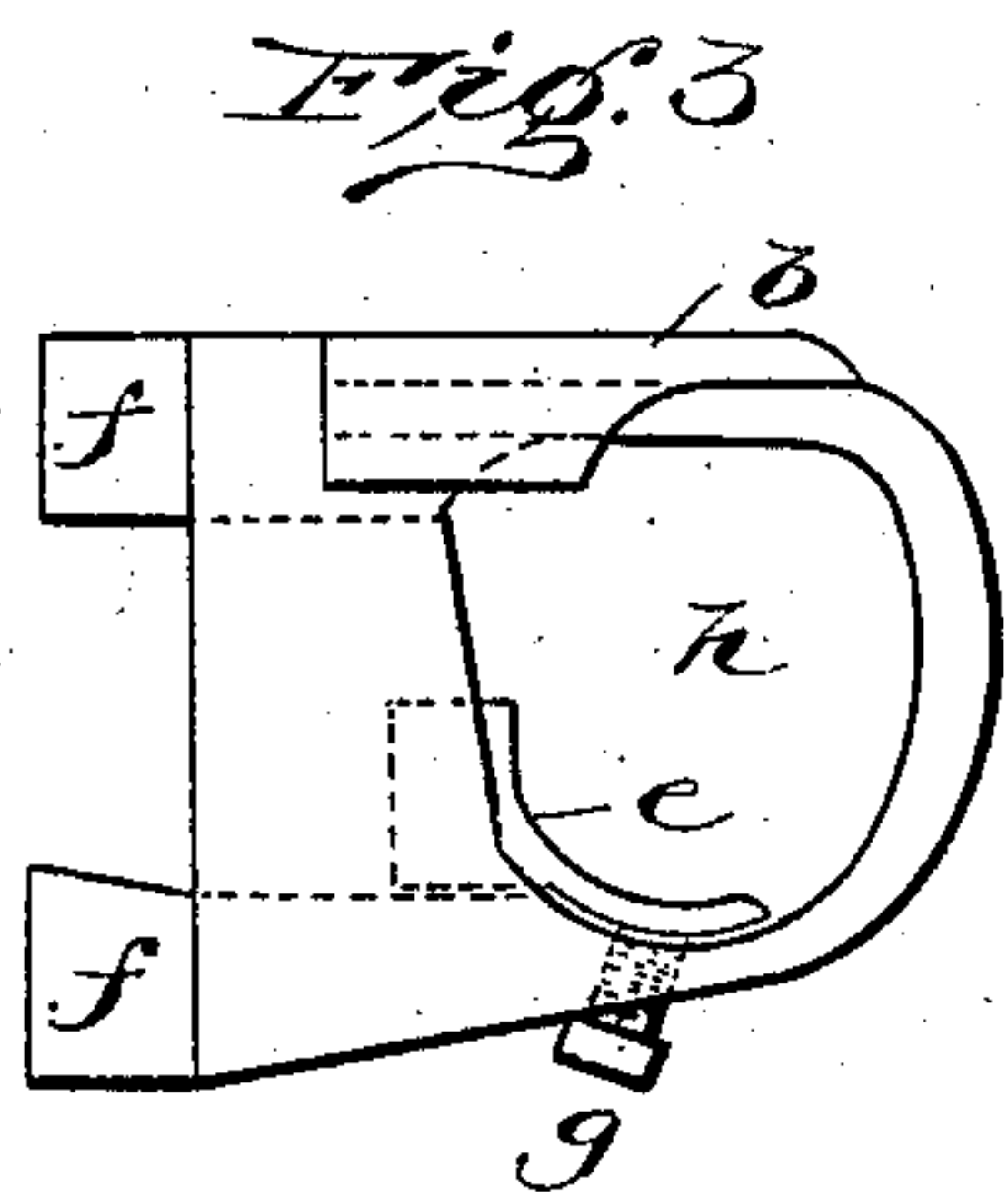
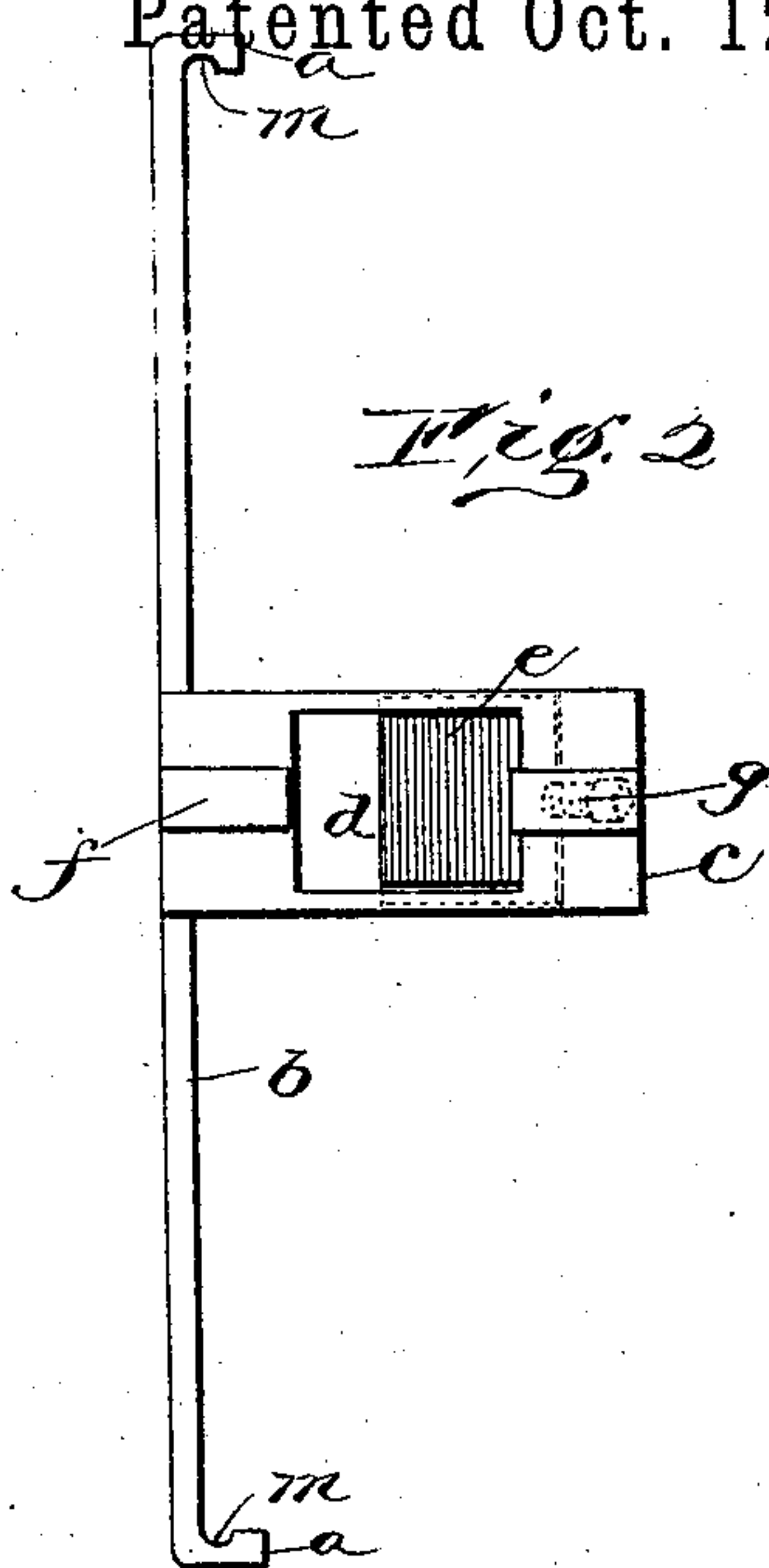
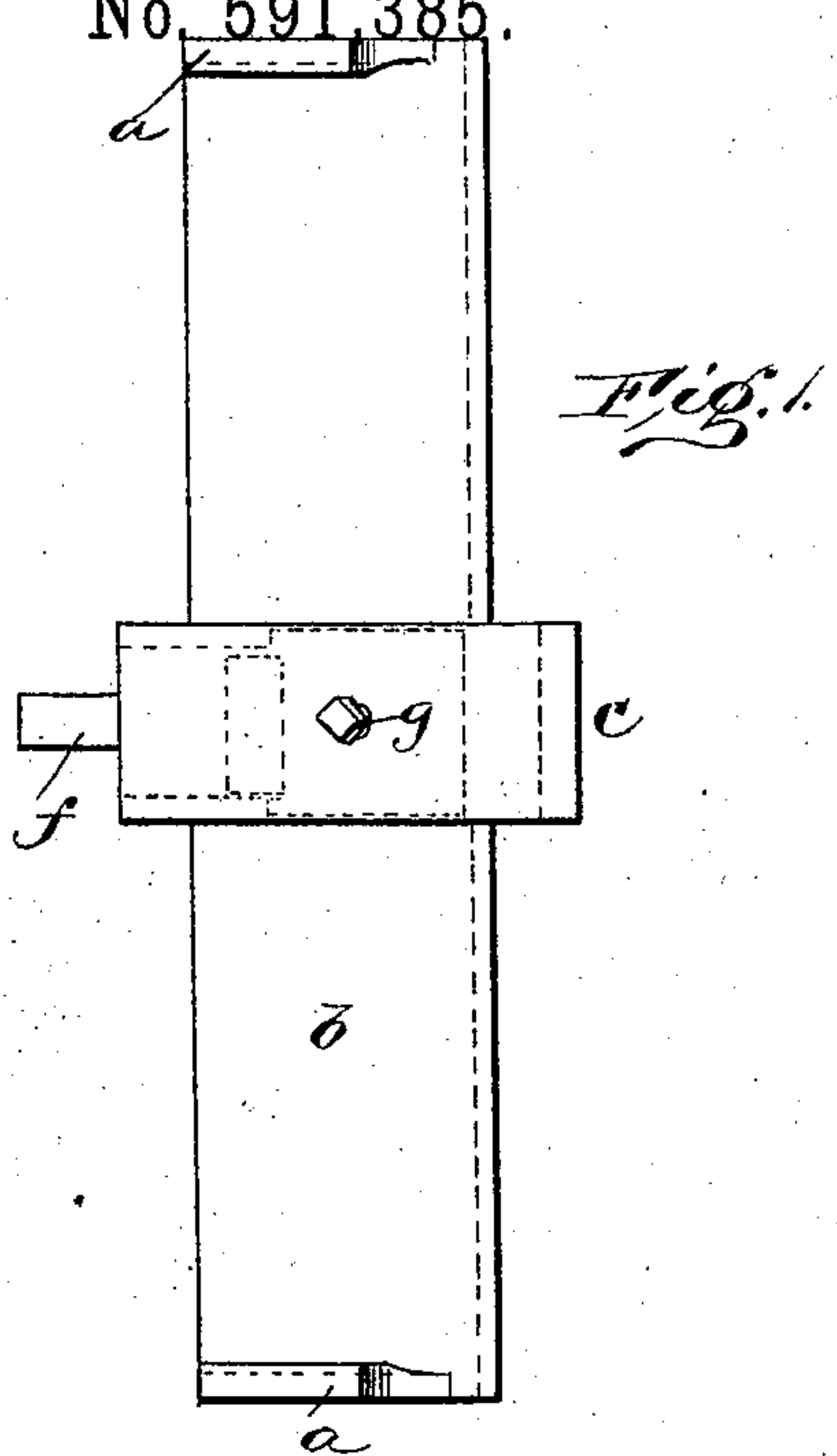


(No Model.)

L. COLLIS.
CAR COUPLING.

No. 591,385.

Patented Oct. 12, 1897.



Witnesses:
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UNITED STATES PATENT OFFICE.

LLOYD COLLIS, OF NEW YORK, N. Y.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 591,385, dated October 12, 1897.

Application filed March 31, 1897. Serial No. 630,124. (No model.)

To all whom it may concern:

Be it known that I, LLOYD COLLIS, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in that class of twin-jaw couplings having a horizontally-swinging knuckle or knuckles and a lock for retaining the knuckle or knuckles in their closed or coupled position, the object of the invention being to prolong the life of such couplings or to overcome the effects of wear and tear incident to usage.

The invention consists, primarily, in a wear-plate adapted to be clamped to the wearing face of the knuckle in position to receive and take up the wear incident to the use of the coupling and to preserve the lines of the original coupling as nearly as practicable, such wear-plate being held in position by a pin or through-bolt inserted through the opening ordinarily provided for adapting the coupling for use with the common link and pin.

The invention further consists in certain novel details of construction and combinations and arrangements of parts, all as will be now described, and pointed out particularly in the appended claims.

Referring to the accompanying drawings, Figure 1 is an elevation of a wear-plate constructed in accordance with my present invention. Fig. 2 is a similar view taken at right angles to Fig. 1. Fig. 3 is a top plan view. Fig. 4 is an elevation illustrating the application of the wear-plate to a knuckle. Fig. 5 is an elevation of a clamp plate or block preferably employed to lock the wear-plate in position, and Fig. 6 is a top plan view of the same.

Like letters of reference in the several figures indicate the same parts.

In carrying my present invention into practice I provide a vertical wear-plate adapted to be clamped against the inner wearing-face of the knuckle and preferably having overhanging lips or edges extending above and

below the knuckle for a purpose to be presently explained, although such overhanging portions are not essential, said wearing-plate being preferably clamped in position by a central enlargement or extension adapted to pass into the opening ordinarily left in the knuckle for the insertion of a link and held by a transverse pin or other suitable means, as will be readily understood. The central enlargement of the wearing-plate, extending as it does into an opening in the knuckle, is practically contained within the body of the knuckle itself, and hence there are no projecting parts liable to be deranged or to be broken in usage save the plate itself, and this is in such position that it is completely supported and braced by the knuckle and receives no strains save a compression and friction such as ordinarily wear away the inner face of the knuckle.

Referring to the accompanying drawings, *b* indicates a plate made of a length and width substantially corresponding to that portion of the inner face of the knuckle which receives the wear or rubbing action of the corresponding face of the cooperating knuckle. Arranged centrally and preferably formed integral with the plate *b* is an enlargement or extension *c*, approximating in cross-sectional area the area of the central opening in the knuckle adapted for the insertion of a link. This enlargement *c* may be substantially solid or of open-work, and in the preferred construction it is formed with two intersecting apertures, one, *h*, Fig. 3, adapted to fall in line with the vertical pin-opening in the knuckle, and the other, *d*, Fig. 2, adapted for the insertion of a locking plate or block *e*, the base of which extends into said opening, as shown in said Fig. 3, while its end projects into the opening *h* in position to bear against the pin *k*, Fig. 4, at a point opposite the plate *b* in order to draw said plate *b* firmly against the inner face of the knuckle. A set-screw *g* or other appropriate clamping mechanism may be employed for forcing the plate *e* against the pin, or, if desired, the plate or block *e* may be omitted and the clamping-screw or other well-known clamping device operate directly against the pin itself.

Extending out to one side of the central enlargement *c* are two projections *f*, adapted

to seat against the rear wall of the link-opening 7, Fig. 4, although it will be noted that the body of the enlargement *c* may be extended for this purpose, if so desired. The projections *f* are preferably employed, however, inasmuch as they may be made normally large and easily cut down by a file or otherwise to secure an accurate fit. To further insure a proper retention of the plate *b* under all conditions of use, I preferably form flanges *a* at top and bottom thereof adapted to take over the edges of the knuckle, such flanges being undercut or having grooves *m* therein to accommodate or receive any burs which may have been formed at the edges of the knuckle because of the wear and pressure thereon; but it will be noted that these flanges may be omitted, if so desired.

It will be observed that knuckles which have become so worn as to be practically useless may with the employment of my invention be restored to practically their original lines, and when one plate has been worn or broken another may be cheaply and quickly substituted, thereby practically prolonging the life of the knuckle indefinitely.

Having thus described my invention, what I claim as new is—

1. A wearing-plate for car-coupler knuckles having a vertically-elongated body portion conforming substantially to the lines of the wearing-face of the knuckle, a central enlargement on the rear face of said wear-plate having a vertical aperture therein for the reception of a pin and a lock working in said

aperture for locking the plate to the pin; substantially as described.

2. A wearing-plate for the knuckles of car-couplers having the vertically-elongated body conforming approximately to the lines of the wearing-surface of the knuckle, a central enlargement or projection on the rear face of said wear-plate and end flanges adapted to take over the bottom and top edges of the knuckle; substantially as described.

3. A wearing-plate for the knuckles of car-couplers having a vertically-elongated body and conforming approximately to the lines of the wearing-surface of the knuckle, a central projection or enlargement on the rear face of the wearing-plate and undercut end flanges for taking over the top and bottom edges of the knuckle; substantially as described.

4. The combination with the horizontally-swinging knuckle of a car-coupling having an ordinary link-opening in its forward portion and a pin-opening intersecting said link-opening, of a wear-plate having a wearing-face corresponding approximately to the lines of the wearing-face of the knuckle and a centrally-arranged projection on its rear face adapted to fit into the link-opening with an aperture adapted to register with the pin-opening and a pin passing through said opening to retain the wear-plate in position; substantially as described.

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Witnesses:

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