

(No Model.)

W. HALLETT.

CAR COUPLING.

No. 258,058.

Patented May 16, 1882.

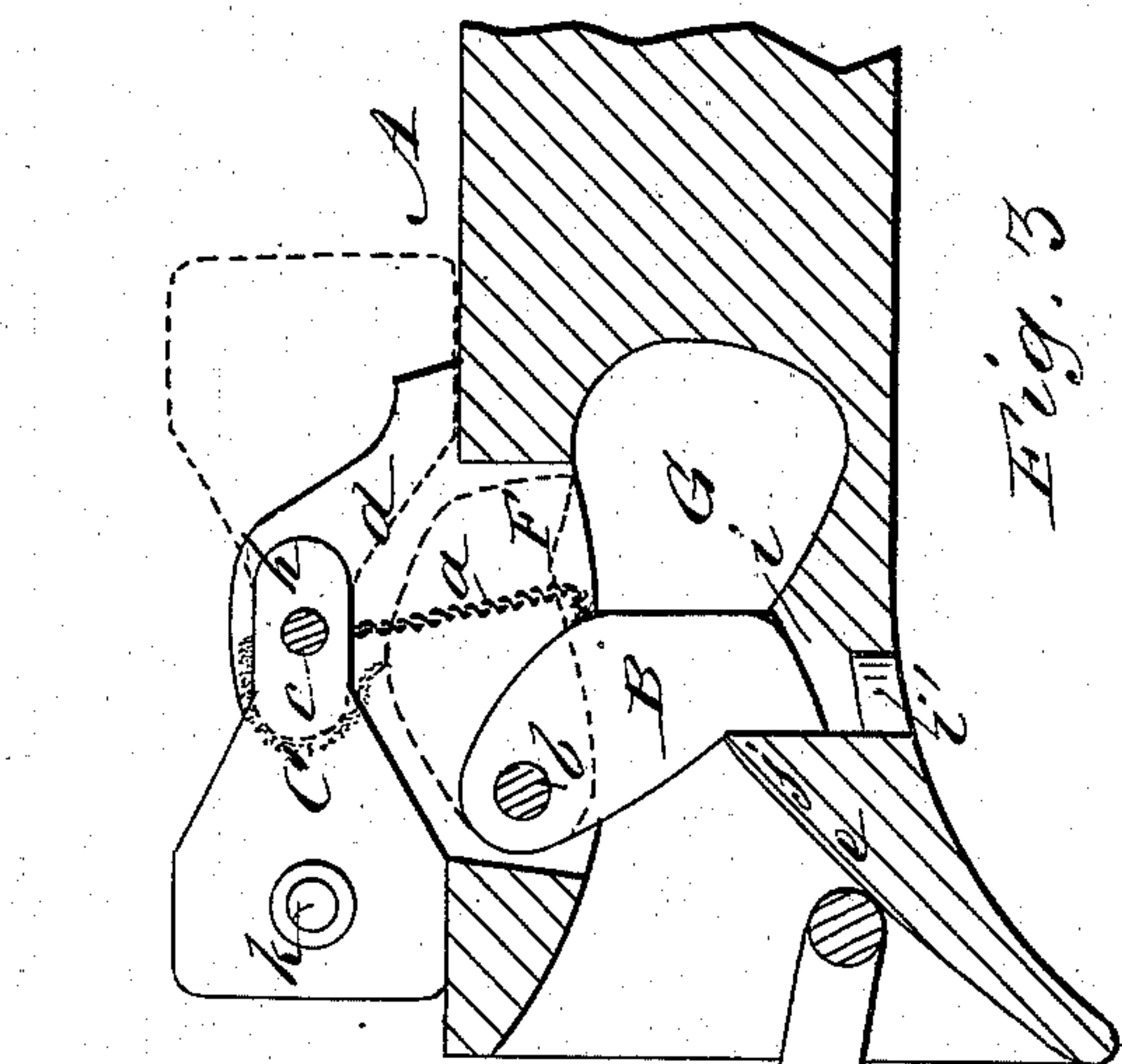


Fig. 1

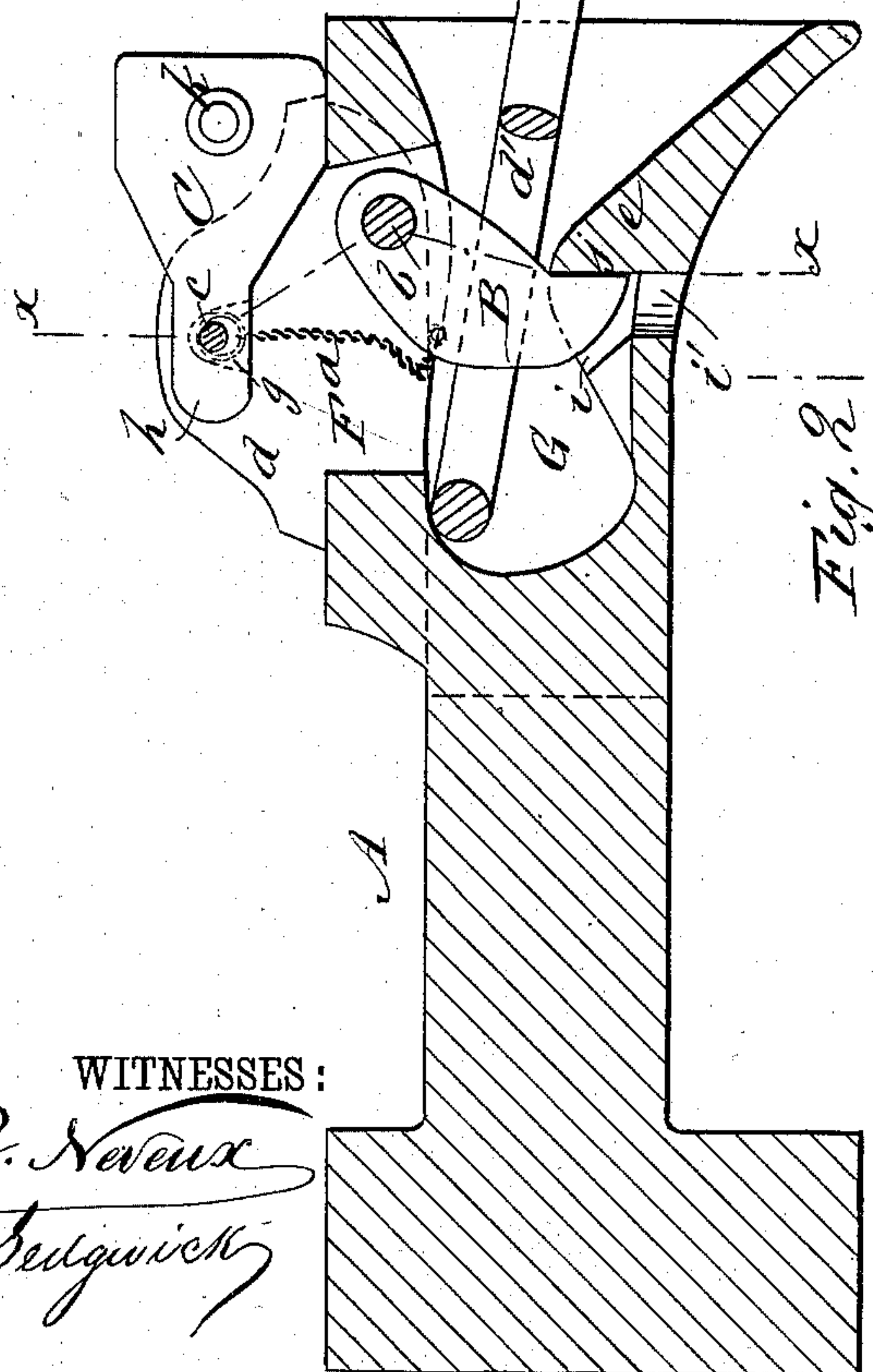


Fig. 2

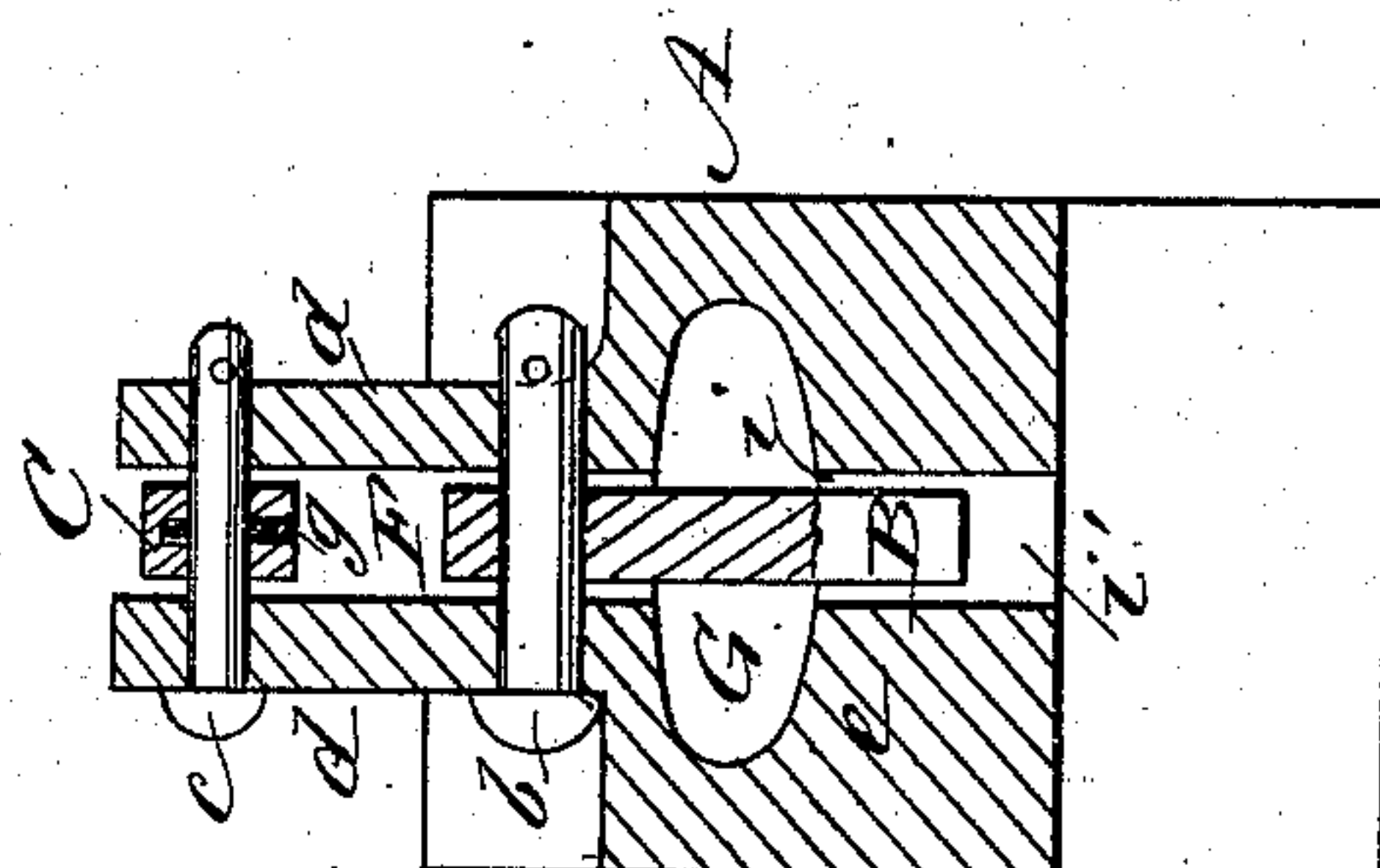
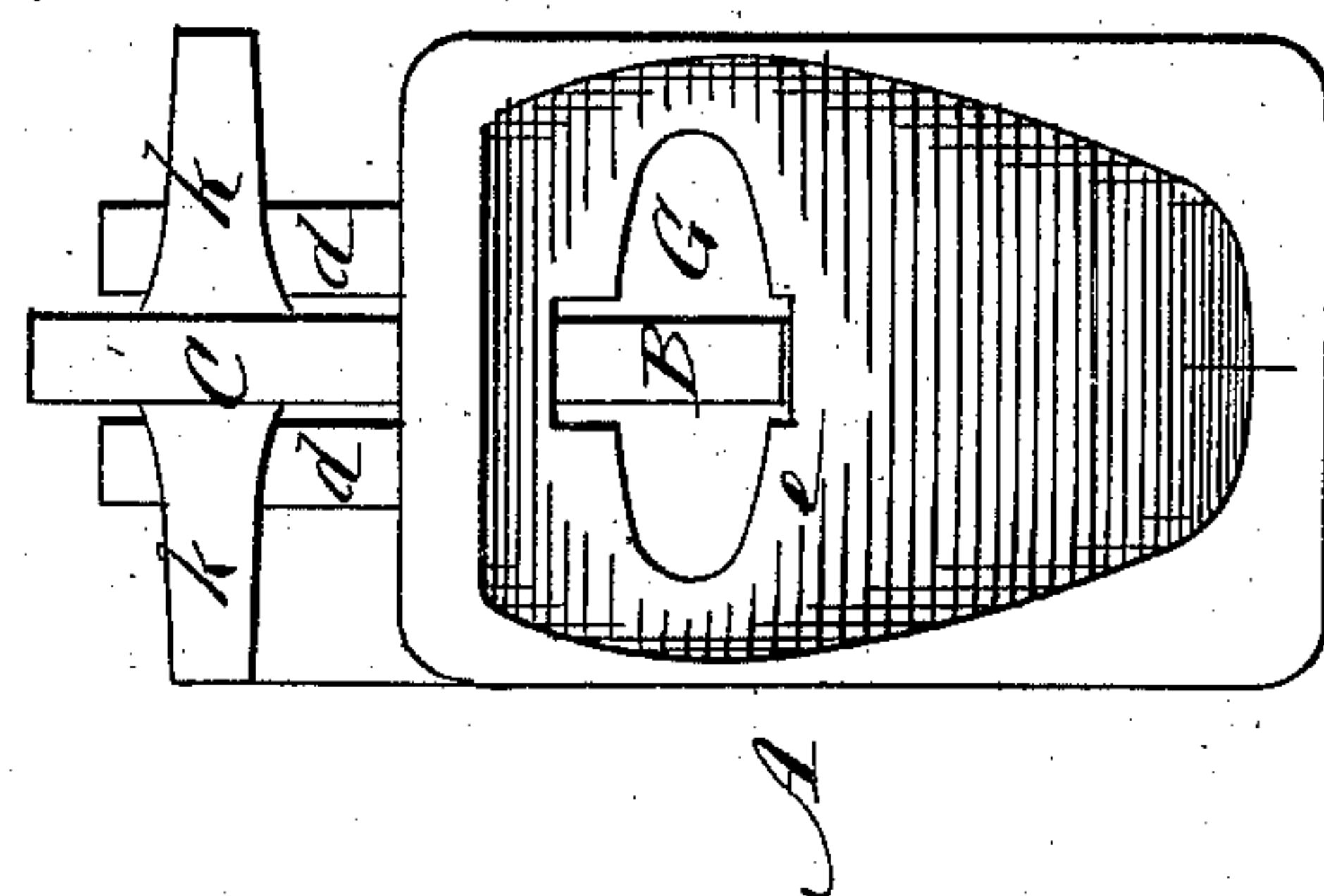


Fig. 3



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 258,058, dated May 16, 1882.

Application filed January 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HALLETT, of Truro, in the county of Colchester, Nova Scotia, Canada, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The object of my invention is the production of an automatic car-coupling which shall be certain in its action and cheap, simple, and durable in its use and construction.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of my improved automatic car-coupler. Fig. 2 is a front elevation of one of the draw-heads, showing the pawl and tumbler. Fig. 3 is a sectional elevation taken on the line *xx* of Fig. 1.

A A represent the draw-heads; *B B*, the pawls which are pivoted in the draw-heads; *CC*, the tumblers pivoted upon the draw-heads and connected with the pawls by the flexible connections *aa*; and *D* represents the connecting-link between the faces of the draw-heads.

The draw-heads are cast with the upward projections or fins *d d*, which are perforated for the passage of the pins *b* and *c*, upon which pins the tumblers and pawls are pivoted and held between said projections or fins, as clearly shown in Fig. 3; and the passages *F*, between the said projections or fins, lead down through the draw-heads into the throats *G G* of the draw-heads, and form recesses for receiving and entirely inclosing the pawls when raised for uncoupling the cars, as shown in dotted lines in Fig. 1. The throats *G G* of the draw-heads are reduced in their vertical diameter by the formation of the swells or enlargements *ee*, and these enlargements are cut away within the throats, as shown at *ii*, to form the lips or detents *jj* for retaining the lower ends of the pawls for holding the connecting-link. In rear of the enlargements *ee* the throats *G G* are enlarged both vertically and horizontally, and the walls are circular, so that when the end of the connecting-link strikes the wall upon either side of the pawl the link will be deflected and centered in the throat in position to receive the pawl, thus making the engagement of the pawl with the link certain in

every instance. In front of the pawls the draw-heads are concaved and circular in form in every direction leading to the throat, as clearly shown in Fig. 2, so that the link will be guided to the throat of the draw-head whatever the relative position of the cars and draw-head may be, whether the draw-heads are upon the same level or not, or whether the cars be brought together upon a straight or curved track.

The flexible connections *aa* are preferably small chains, and are permanently connected at one end to the pawls, the other ends being provided with rings to be slipped upon the pins *cc*, upon which the tumblers are pivoted, the tumblers being slotted through from one side to the passages through which the pins *cc* pass, with the slots *g*, as shown in full lines in Fig. 3 and in dotted lines in Fig. 1, for the reception of the rings. The tumblers are extended beyond the pivots *cc*, as shown at *hh*, Fig. 1, and these extended portions act as levers for elevating the chains and pawls when the tumblers are tipped or thrown back upon the draw-heads. The tumblers are of greater weight than the pawls, and the tumblers need only be turned upon their pivots until the center of gravity passes the pivots, when the weight of the tumblers will automatically elevate the pawls and disengage the links and uncouple the cars.

To arrange the couplers for coupling the cars, it is necessary only to place the connecting-link in one of the draw-heads. If there should be any difference in the height of the draw-heads, the link should be placed in the one which is the highest, and the tumblers should then both be turned forward upon the draw-heads in the position shown in full lines in Fig. 1. Then upon backing the cars together the link will enter the draw-head of the stationary car and pass under the pawl, which will automatically engage therewith, and thus couple the cars.

For uncoupling the cars, ordinarily it will be necessary only to tip one of the tumblers back upon the draw-head, as shown in dotted lines in Fig. 1. If the position of the cars should be such that the pawls of the couplers are held fast by the link, it is only necessary to raise or tip one of the tumblers back upon

its pivot as far as the chain will permit and back the cars so as to take the strain off the link, which will release the pawl, and the weight of the tumbler will then cause it to be elevated, and thus disengage the link and uncouple the cars.

The tumblers may be operated by means of suitable chains, rods, or other connections from the top, platform, or sides of the car, if desired; or they may be provided with the handles *k k*, to be operated by hand.

The cut-away places *i i* are extended through the draw-heads, forming the openings *i' i'* (shown clearly in Figs. 1 and 3) for the escape of any matter which may collect in the throats of the draw-heads and tend to prevent the proper seating of pawls B against the shoulders *j*.

The upper wall of the draw-heads and the crown of the swells or enlargements *e e* are arranged relative to each other in such manner that the link will not be permitted to droop too far when placed in one of the draw-heads for entering the draw-head of the opposing car.

When the pawls B are elevated in the recesses F by the chains of the tumblers it will be seen that the pawls are entirely inclosed, as shown in dotted lines in Fig. 1, and no point or part of the pawl projects into the throat of the

draw-head to in any manner interfere with the free insertion and withdrawal of the link; and it will be seen that when the cars are coupled the formation of the throat is such that the link is entirely free in the draw-heads, and is not liable to be cramped laterally or strained or bent by the movement of the cars up and down upon the track, or while the cars are turned out of line in rounding curves.

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

1. In a car-coupling, the pawl B, pivoted in a slot of the draw-head top, and the tumbler C, pivoted upon or above said top, said pawl and tumbler being flexibly connected, in combination with a draw-head having the perforated projections *d*, carrying the cross-pins *b c*, and forming the passage F, as shown and described.

2. A draw-head having a throat with the enlargements *e e* rising from the mouth to the point of contact with the pawls, then cut away at *i* to form lips *j*, and then descending to form a cavity behind the pawl, as described.

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Witnesses:

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