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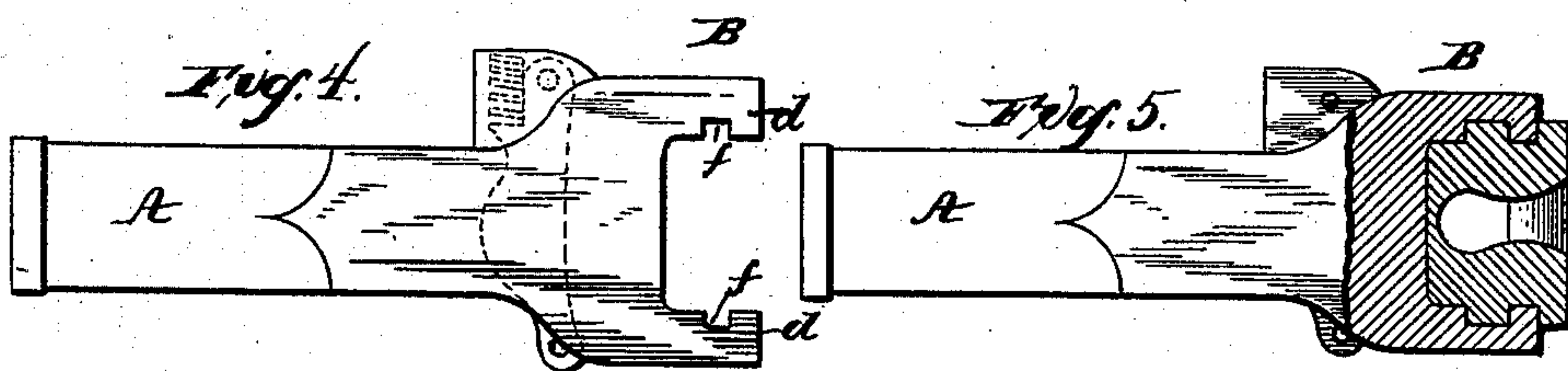
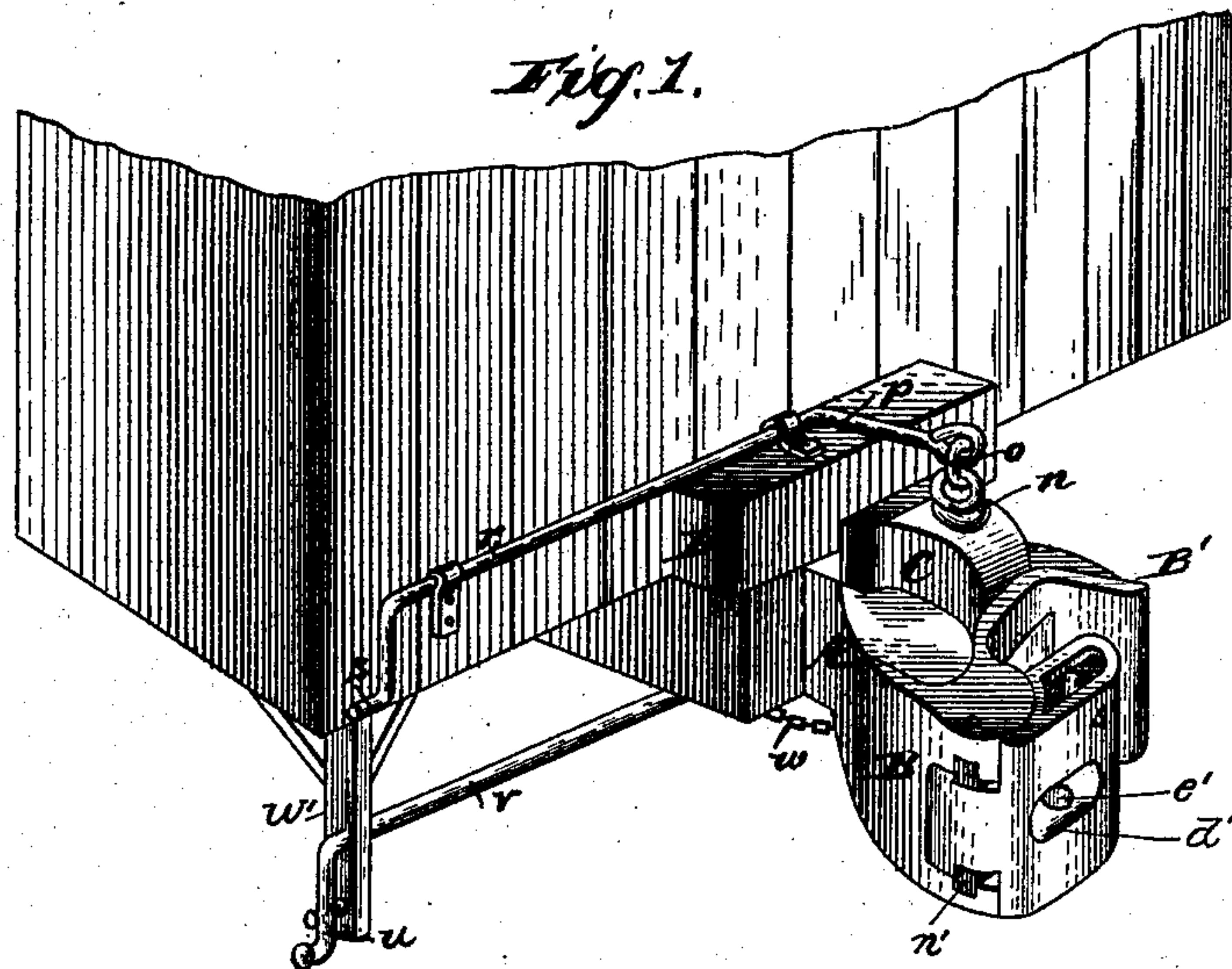
2 Sheets—Sheet 1.

J. A. HINSON.

CAR COUPLING.

No. 389,510.

Patented Sept. 11, 1888.



Witnesses—
Victor J. Evans.
James S. Smith.

Inventor—
James A. Hinson.
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Atty.

(No Model.)

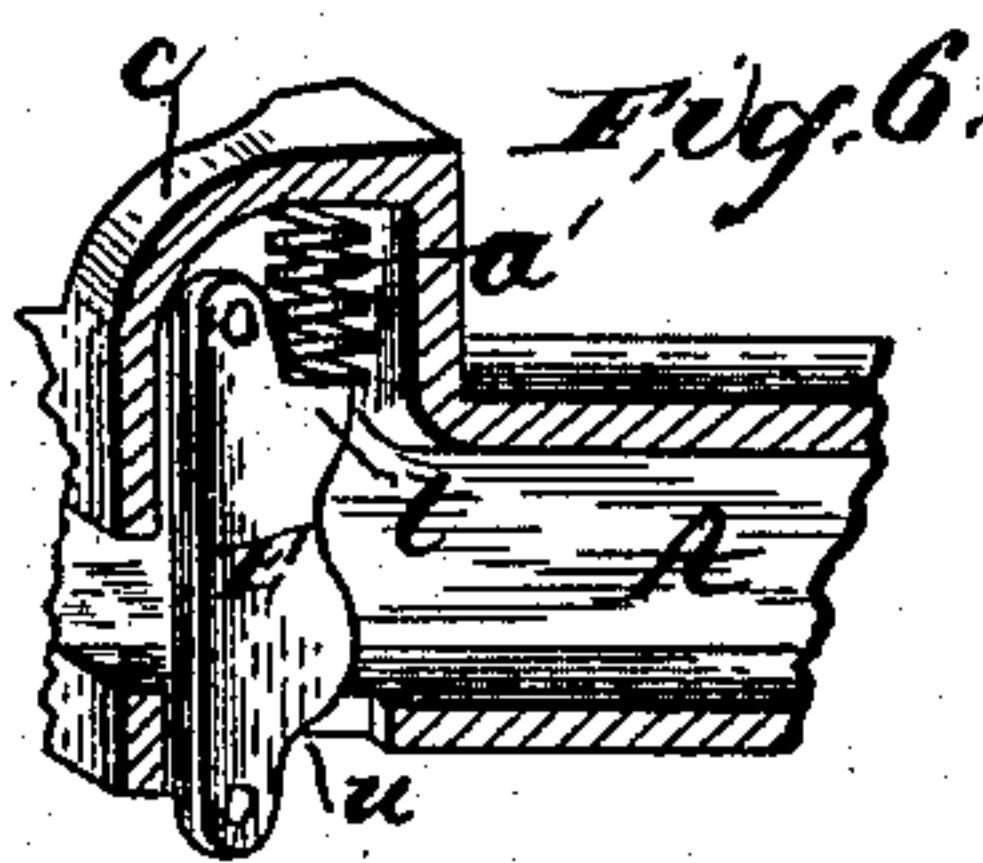
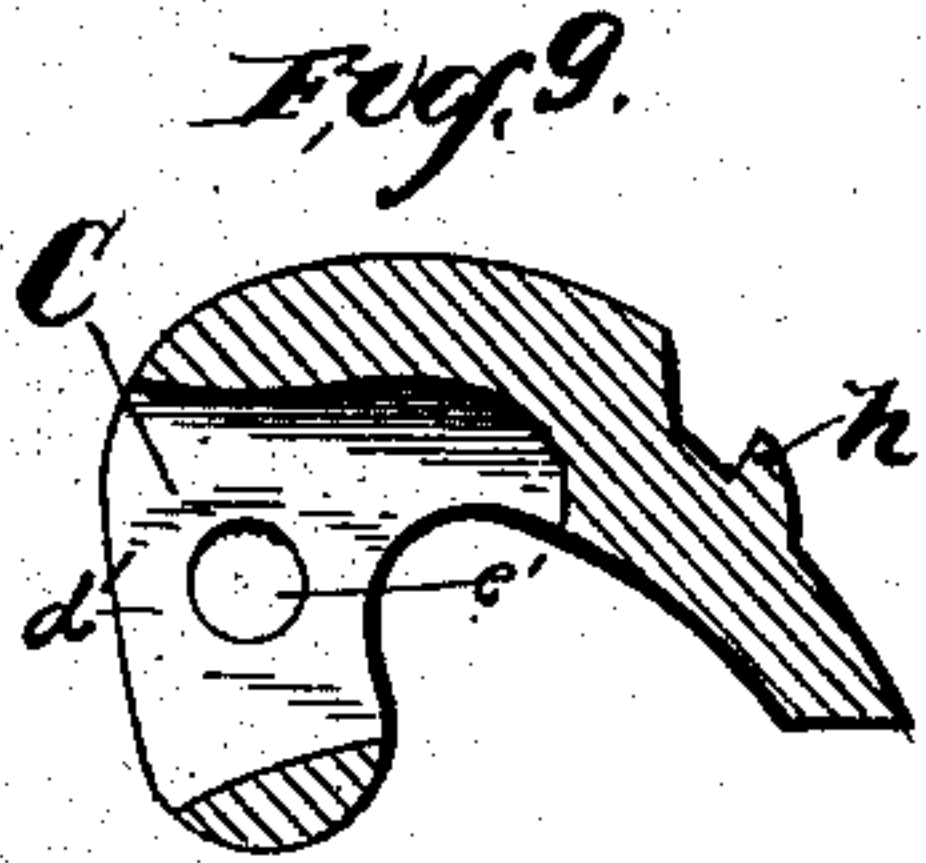
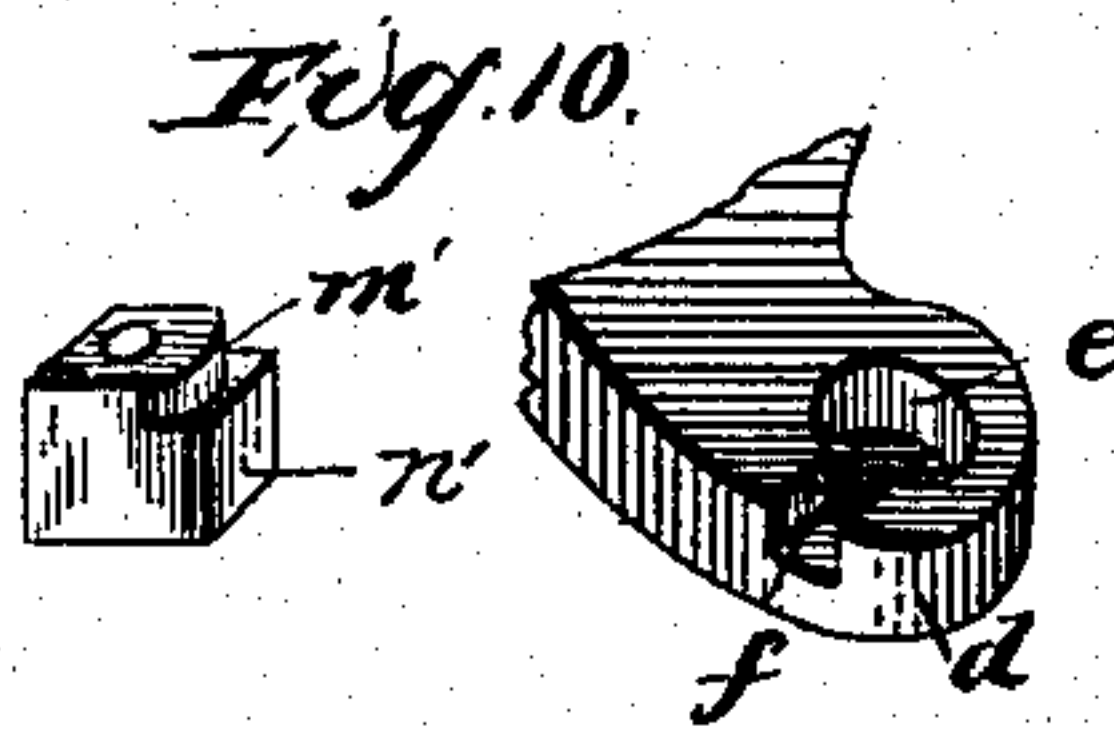
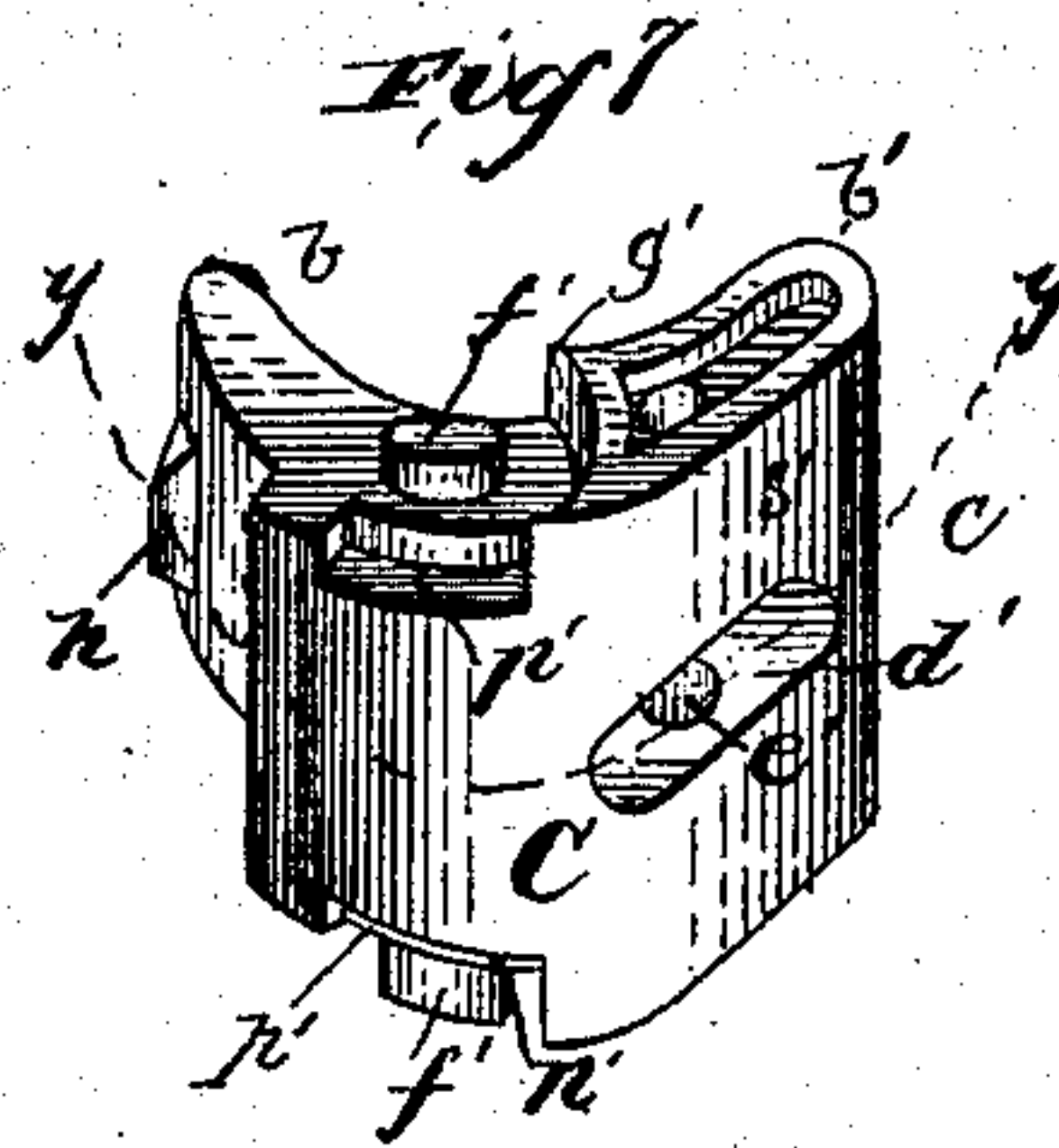
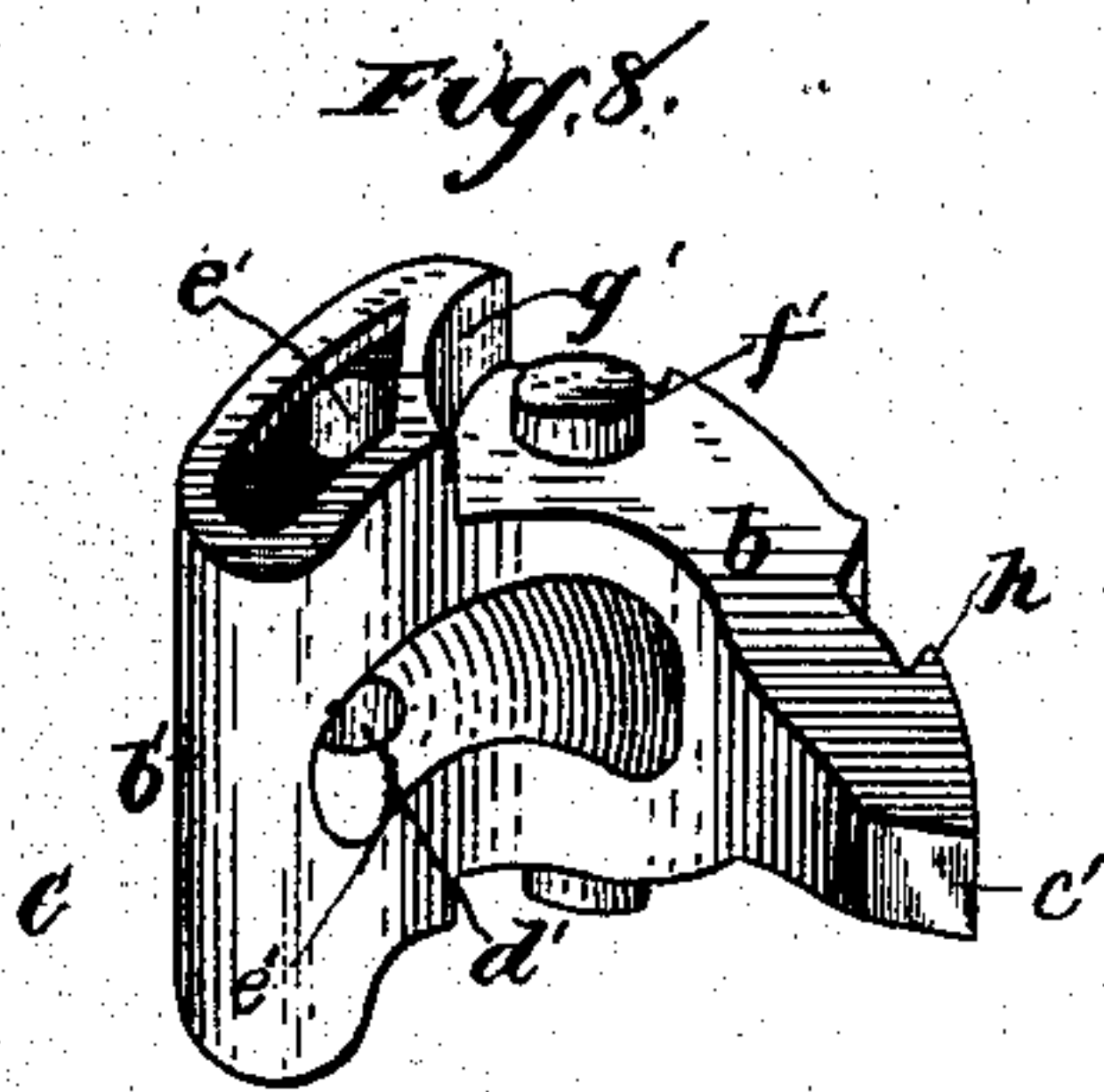
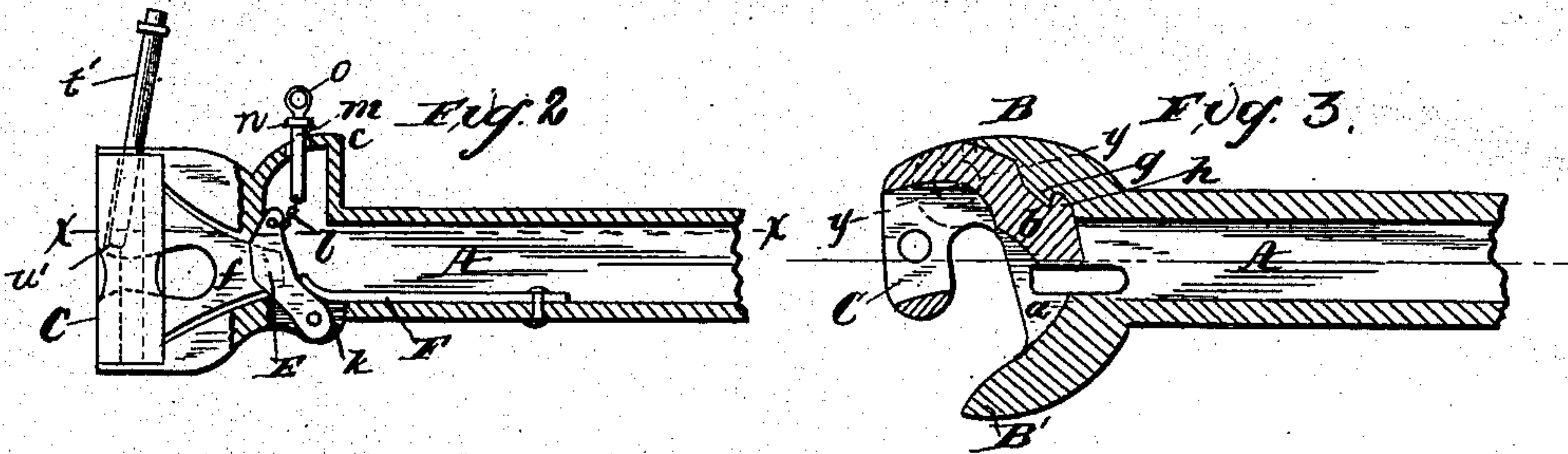
2 Sheets—Sheet 2.

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CAR COUPLING.

No. 389,510.

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Inventor—
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UNITED STATES PATENT OFFICE.

JAMES A. HINSON, OF DES MOINES, IOWA, ASSIGNOR TO THE HINSON CAR-COUPLER COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 389,510, dated September 11, 1888.

Application filed May 4, 1888. Serial No. 272,777. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. HINSON, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Car-Couplers; and I 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.

My invention relates to car couplers of that type known as "twin jaws," in which jaws pivoted in the draw-bars interlock to couple the cars; and it has for its object to provide a very simple and durable coupler of but few parts, which will automatically couple, and which may be uncoupled from the side of the car at the end almost instantly and with great ease; and it consists of the parts and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of my improved coupler in position on the end of a car; Fig. 2, a vertical longitudinal section through the draw-bar; Fig. 3, a horizontal section on the line *x x*, Fig. 2; Fig. 4, a side view of the draw-bar; Fig. 5, a like view partly broken away to show the means for securing the movable jaw to the draw-bar; Fig. 6, a detail view showing a modified arrangement of the latch; Fig. 7, an end front perspective view of the movable jaw; Fig. 8, a perspective view of the movable jaw, looking toward its inner side; Fig. 9, a horizontal section on the line *y y*, Fig. 7; and Fig. 10, a detail view of the end of one of the arms and a block.

Similar letters refer to similar parts throughout the several views.

A represents the draw-bar, which is made hollow, and so connected to the car as to have a limited longitudinal movement, its rear end being cushioned against a spring to deaden the effects of concussion, as is customary. At the front end of the draw-bar two flaring arms, B B', the latter being merely a guard-arm, are cast, between which is a recess, *a*, to receive the branch *b* of the movable jaw C, as will be explained hereinafter. A hollow offset, *c*, is also cast integral with the draw-bar, which forms a shoulder to abut against the front beam,

D, of the car, as shown in Fig. 1, when the draw-bar is driven back. The arm B of the draw-bar is cast with flanges *d*, having circular recesses *e* formed in their contiguous faces and slots *f* entering said recesses from the outer edges of said flanges, for a purpose which will be described hereinafter. On the inner face of the arm B, at a suitable distance from its end, a wedge-shaped recess or depression, *g*, is formed to receive the hook-shaped projection *h* on the branch *b* of the movable jaw C when the coupling is made. In the lower part of the draw-bar, immediately beneath the offset *c*, a recess, *k*, is formed, in which the lower end of the latch E is pivoted, as shown in Fig. 2, and a spring, F, having one end bearing against said latch, is adjustably secured in the draw-bar in the rear of said latch. The upper end of the latch extends into the hollow offset *c*, and is connected to one end of a short chain, *l*, the other end of said chain being attached to a pin, *m*, having a collar, *n*, and an eye, *o*, cast thereon, said pin passing through an opening in the upper part of the offset *c* to make the connection. The collar *n* prevents the entrance of dirt in the offset. To the eye *o* of the pin the crank-arm *p* of the rod *r* is attached, said rod being suitably attached to the end of the car, so as to be easily turned by its handles *s* to lift the pin, and thus draw the latch backward against the spring and release the branch *b* of the movable jaw to uncouple.

The spring F will hold the latch normally in the position shown in Fig. 2, and will throw it back into such position after the latch has been forced back by the branch *b* in coupling or by the rod *r* in uncoupling, so that the latch will be always in position to lock the branch *b* in place.

In Fig. 6 I show the latch E provided with a shoulder, *t*, and pivoted at its upper end in the offset *c* and its lower end projecting through a slot, *u*, formed in the bottom of the draw-bar, and connected to a rod, *v*, by means of a chain, *w*, said rod *v* being suitably journaled to a hanger, *w'*, extending from the car, so that upon turning the rod the latch will be drawn back to release the branch *b* of the movable jaw, while a spiral spring, *a'*, in the offset *c*, and resting on the shoulder *t*, will throw the latch forward or into its normal position again when the same is released. It

will be understood that both the rods *r v* are not to be used at the same time, although they are both shown in Fig. 1 to more clearly explain the means for operating the latch E when pivoted above and below.

As shown best in Figs. 7, 8, and 9, the movable jaw C is formed with branches *b* and *b'*, the former, when the jaw is in position on the draw-bar, extending back into the recess *a* in said draw-bar and having the projection or hook *h* on its outer face and its end *e'* tapering off, so that it will the more readily slip past the latch in coupling the cars. The branch *b'* is rounded or curves on its outer face, as shown at *s'* in Fig. 7, to form a buffer, and has a slot or pocket, *d'*, formed through the same to receive a link when one of the cars it is desired to couple together is not provided with my improved coupler, but only with the ordinary link, and an opening or perforation, *e'*, is formed vertically through branch *b'* at right angles to the pocket *d'* to receive a pin, *t'*, to secure the link in position and complete the coupling. This pin rests on a shoulder, *w'*, (shown in dotted lines in Fig. 2,) which is cast in the front side of opening *e'*, so that when the draw-heads come together in coupling the shock or concussion will jar the pin off of the shoulder and cause the same to drop into the opening *e'* and through the link.

On the body of the jaw C, at the junction of the branches *b b'*, oblong journals *f'* are cast. As will be noticed, the branch *b'* is wider or longer than branch *b*, and the reduction of the latter leaves shoulders *g'* at the ends of the branch *b'*, which are curved or hollowed out, so as to fit the rounded ends of the flanges *d* of arm B snugly, and the journals *f'* are at right angles to said curved shoulders. The journals are adapted to fit the recesses *e*, formed in the flanges *d*, they being inserted endwise therein through the slots *f* and the jaw given a short turn, so as to bring the journals lengthwise across the inner ends of the slots *f*, and thus prevent their accidental displacement. To guard more securely against any displacement, I form the curved grooves *p'* in the jaw immediately opposite the journals *f'* and fit a perforated block, *n'*, having a shoulder, *m'*, into the slot *f*, and there secure it by a screw or bolt entering its perforation through a perforation formed in the jaw, while its shoulder *m'* enters the groove *p'* and serves to limit the swinging movement of the jaw.

Thus it will be seen that the strain in drawing the cars is borne by the latch and hook *h*, and that I provide a very strong coupler, there being but three pieces practically forming the same, and that the means employed to effect the journaling of the jaw to the draw-head forms a very secure and strong attachment which is not liable to break or get out of repair.

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

1. The combination, in a car-coupler, of the draw-bar having the hollow offset *c*, the arms B B', the former having the flanges *d* cast integral therewith, the recesses *e*, formed in said flanges, the slots entering said recesses, the movable jaw C, having the branches *b b'*, the oblong journals cast with said jaw, the pivoted latch, and means for operating said latch, substantially as described.

2. The combination, in a car-coupler, of the hollow draw-bar having the offset *c* and arms B B' cast therewith, the latch E, pivoted in said draw-bar, the spring bearing against said latch, the chain connected to said latch, a rod connected to said chain, and the movable jaw pivoted to said arm B and having the branches *b b'*, one of said branches being adapted to swing against the latch, substantially as described.

3. A movable jaw for a car-coupler, consisting of the branches *b b'*, the former having the hook *h* cast therewith and its end tapered, the oblong journals formed at the junction of the branches *b b'*, the curved shoulders formed on the ends of branch *b'*, the slot or pocket formed in said branch, the opening or perforation intersecting said slot or pocket, and the curved grooves *p'*, formed in the edge of said jaw, substantially as described.

4. The combination, in a car-coupler, with a draw-bar having the arm B, provided with flanges having recesses therein and slots entering said recesses, of the movable jaw having branches *b b'*, the oblong journals cast with said jaw, a latch pivoted in said draw-bar, and means for swinging or moving said latch, substantially as described.

5. The combination, in a car-coupler, with a draw-bar having an arm, B, provided with flanges having circular recesses therein and slots entering said recesses, of the movable jaw having the oblong journals cast therewith and curved grooves formed in the edge of said jaw, and the perforated block *n'*, having a curved shoulder adapted to fit said groove, substantially as described.

6. The combination, in a car-coupler, of the hollow draw-bar having flaring arms and a recess between said arms, the wedge-shaped recess *g*, formed on the inner side of one of said arms, the flanges *d*, having circular recesses and slots entering said recesses, the hollow offset *c*, the latch pivoted in said draw-bar, the spring bearing against said latch, the chain and rod for operating said latch, the movable jaw having the oblong journals, the branch *b*, having the hook *h* and tapering end, the curved slots formed in said jaw, the branch *b'*, having the rounded outer face and provided with the slots or pocket, the opening intersecting said pocket, and the curved shoulders *g'*, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. HINSON.

Witnesses:

W. A. REDMOND,
N. DUMONT.