

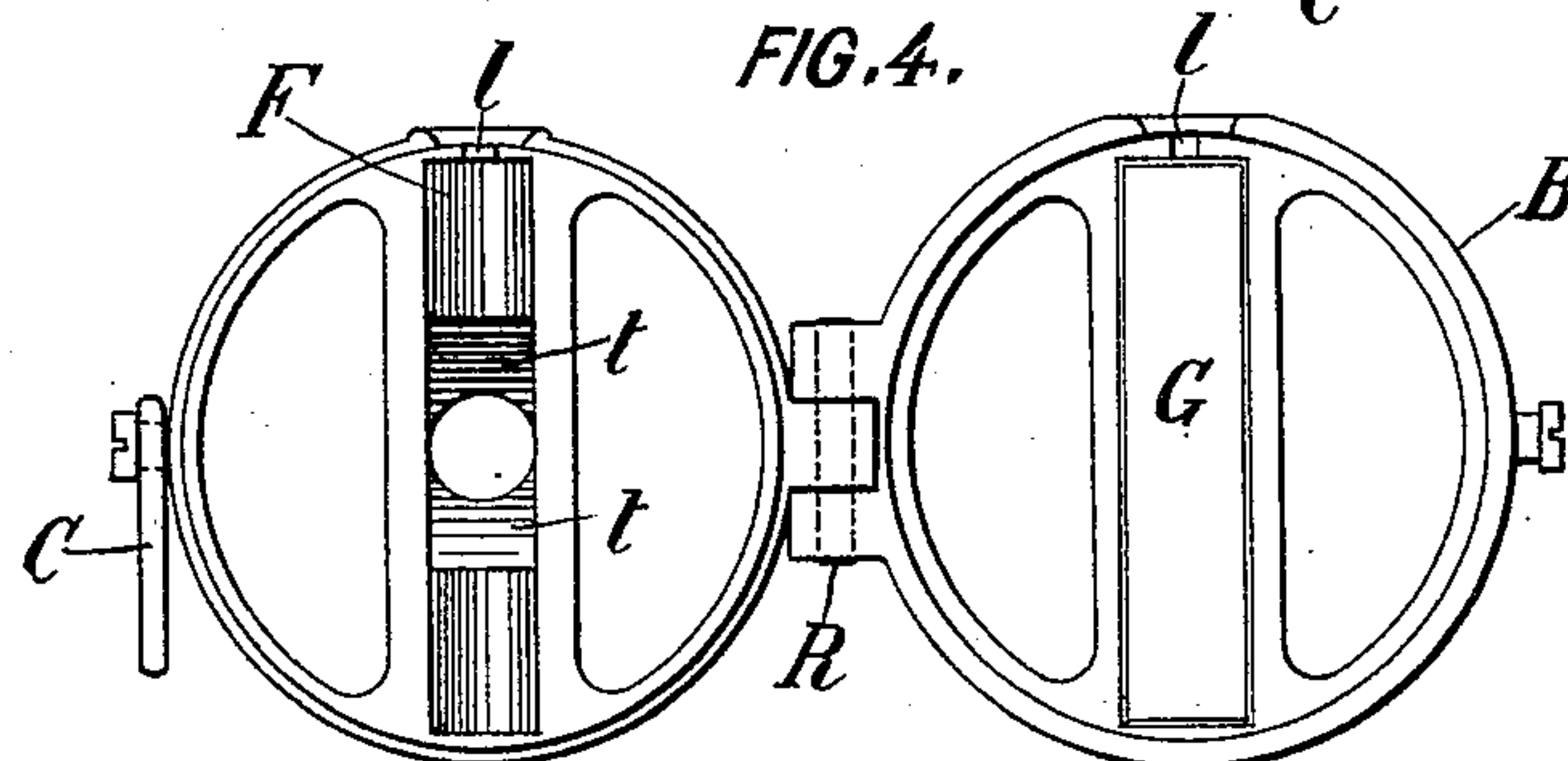
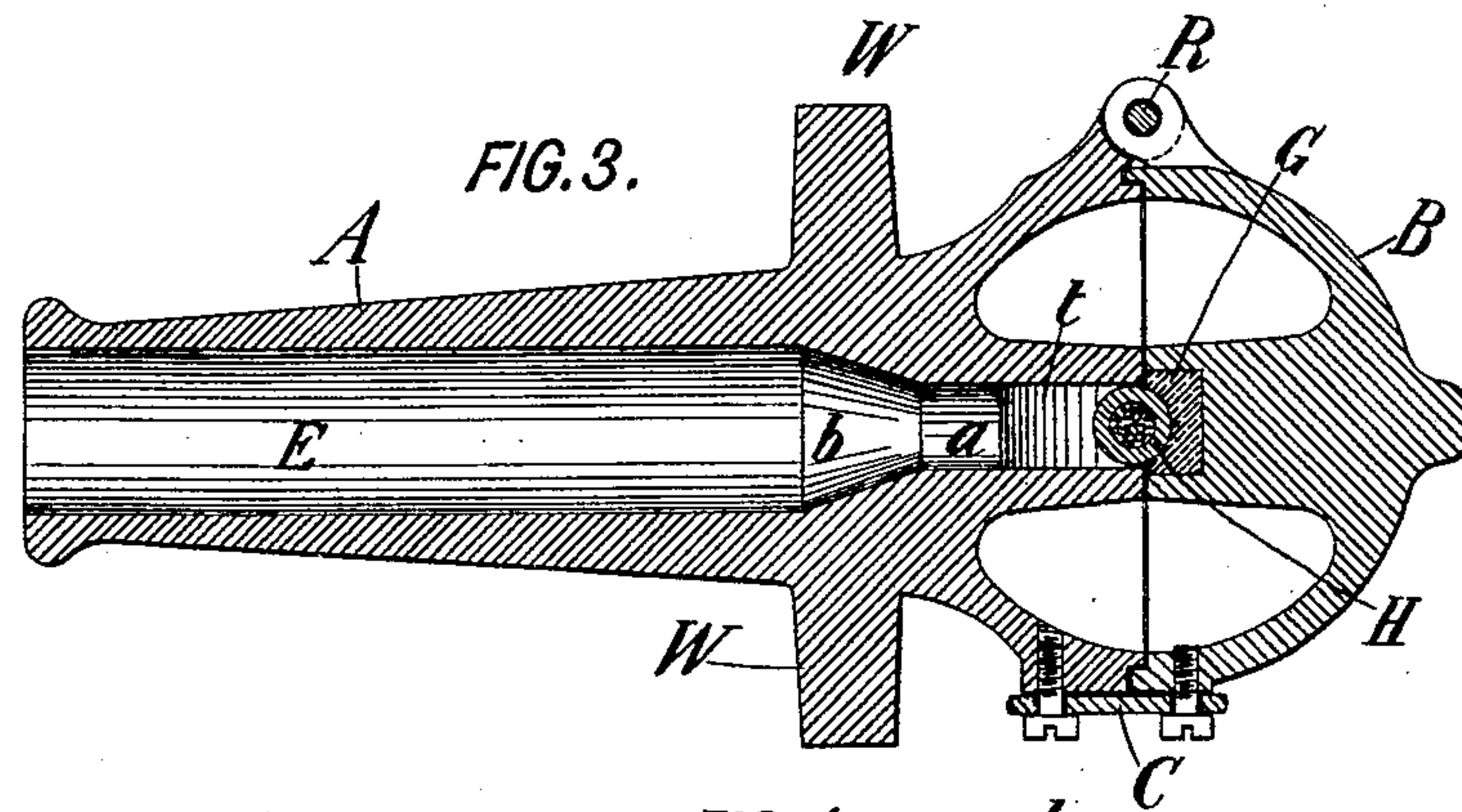
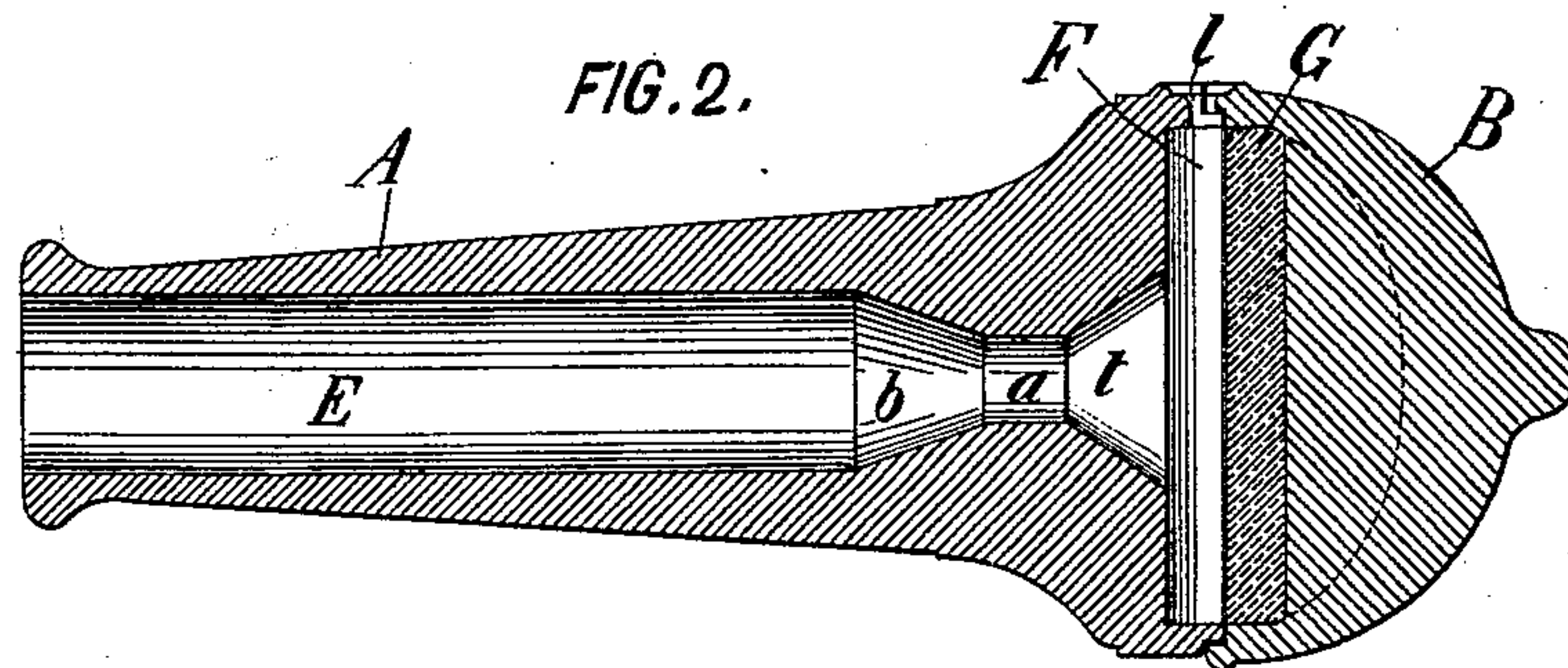
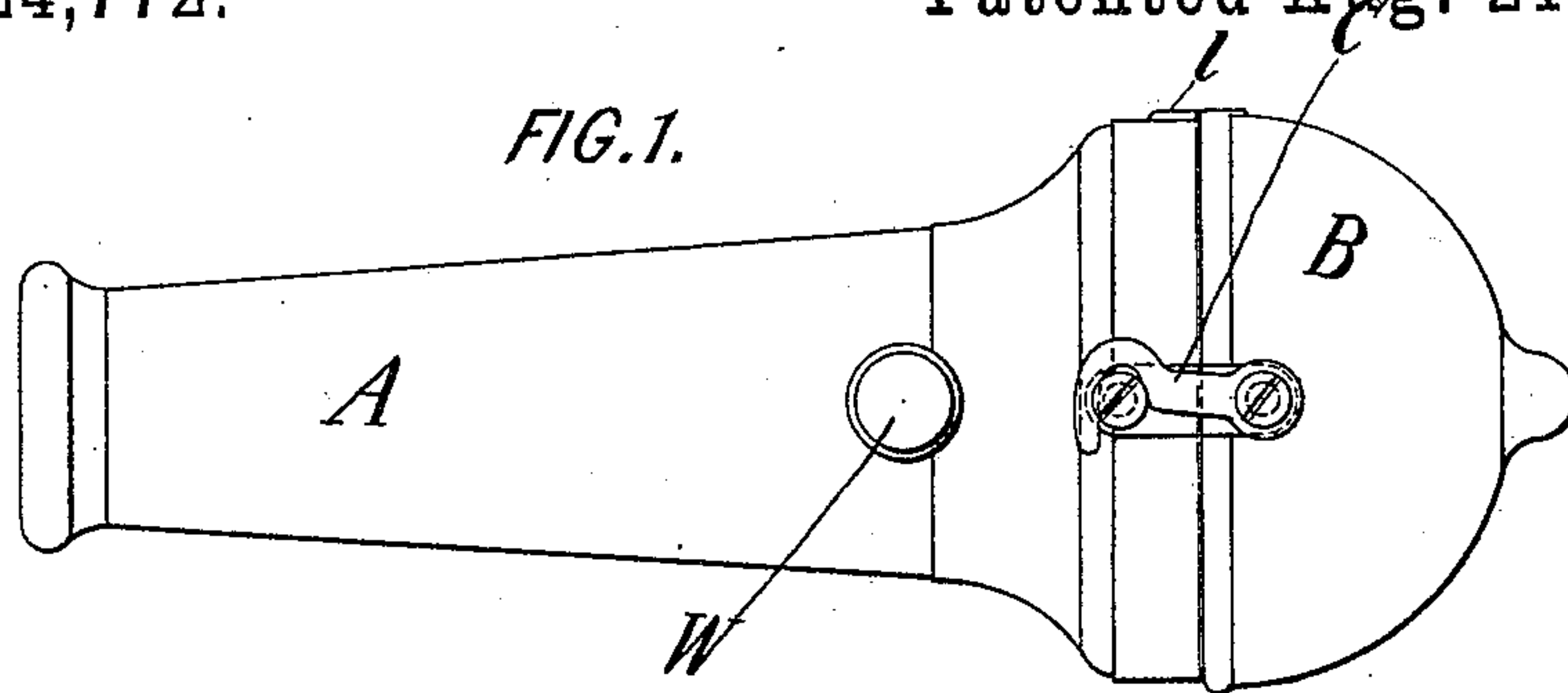
(No Model.)

2 Sheets—Sheet 1.

C. M. VAN BUREN.  
TOY CANNON.

No. 524,772.

Patented Aug. 21, 1894.



Witnesses:  
John Decker  
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Inventor:  
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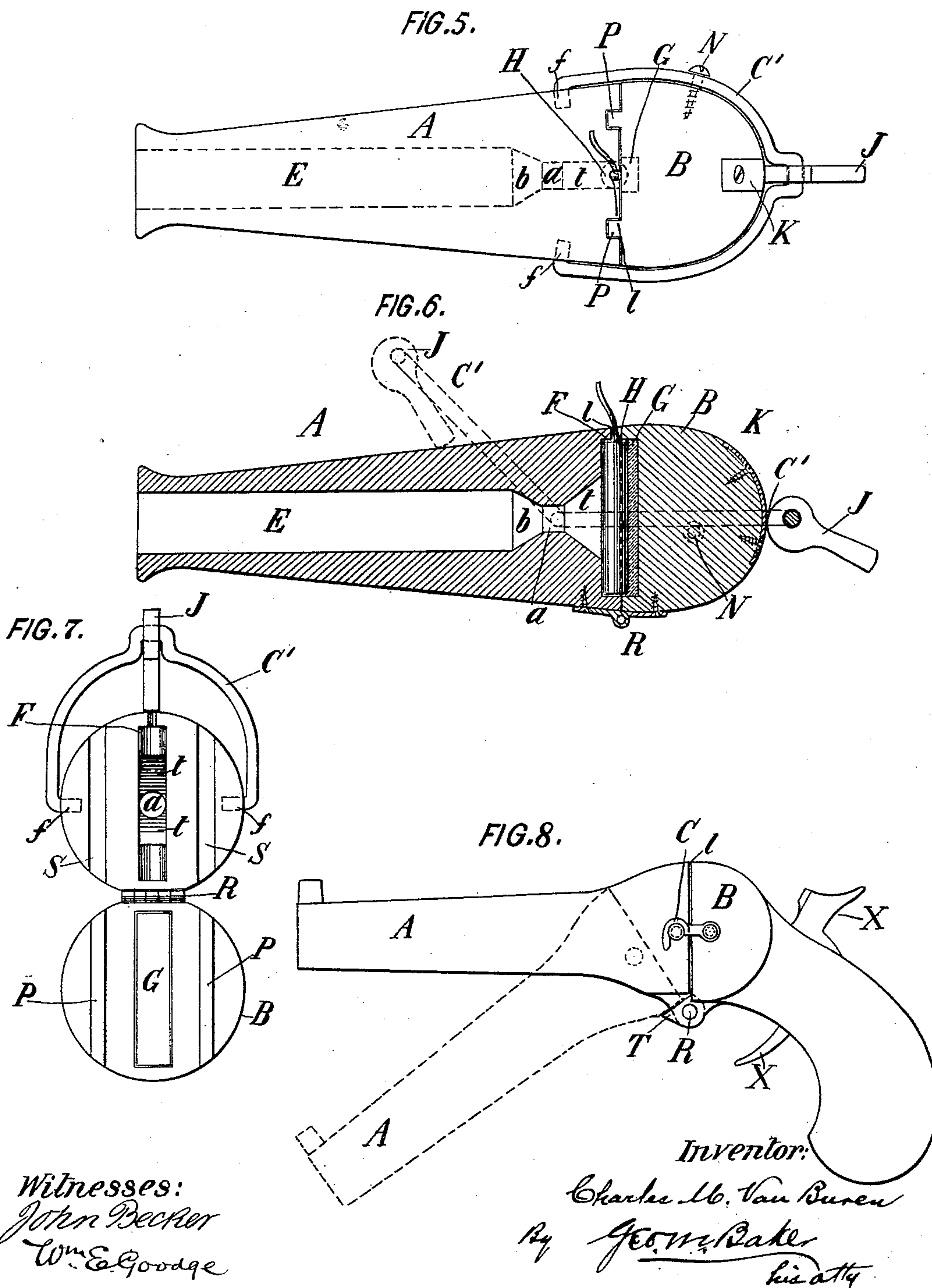
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2 Sheets—Sheet 2.

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# UNITED STATES PATENT OFFICE.

CHARLES M. VAN BUREN, OF PATERSON, NEW JERSEY.

## TOY CANNON.

SPECIFICATION forming part of Letters Patent No. 524,772, dated August 21, 1894.

Application filed May 22, 1893. Serial No. 475,113. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES M. VAN BUREN, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Toy Firearms, of which the following is a specification.

My invention relates to breech-loading guns and pistols which are adapted for the explosion of fire-crackers; and the object of my invention is to provide a breech-loading toy firearm that may be charged with a firecracker, and be perfectly safe and harmless in its use. I accomplish this by the novel construction and arrangement of parts shown in the accompanying drawings, in which—

Figure 1 is an elevation of a toy cannon embodying my invention. Fig. 2 is a vertical longitudinal section of the same through the axis of the barrel. Fig. 3 is a horizontal longitudinal section through the same axis, the cannon being shown charged with a firecracker. Fig. 4 is a rear view of the cannon showing the breech opened. Fig. 5 is a plan view of a cannon showing a modification of my invention. In this figure the cannon is shown charged with a firecracker. Fig. 6 is a vertical longitudinal section of the cannon shown in Fig. 5 through the axis of the barrel. Fig. 7 is a rear end view of the cannon shown in Figs. 5 and 6 showing the breech opened, and the breech clamping device thrown up. Fig. 8 is an elevation of a toy pistol embodying my invention.

A is the barrel.

B is the breech which is hinged to the barrel portion of the cannon.

C and C' are devices for holding the breech closed.

E is the bore.

F is a transverse recess cut into the rear end of the barrel portion of the cannon, which together with a similar recess in the breech form the chamber for the firecracker.

H is the firecracker.

J is an eccentric with which to tighten the clamping device C'.

By referring to the drawings, it will be seen that my improved toy is essentially a breech-loading firearm with a chamber formed where the breech and barrel portion come together, for the reception of a firecracker, the fuse of

the latter protruding through the touch hole, and means for keeping the breech closed. But in order that the device may be operated successfully, its several parts must be constructed and adjusted in a particular manner.

It is essential that the firecracker be so confined within the gun that it shall explode at about its center and only on the side directly in front of the bore. This is necessary to prevent sparks and smoke from escaping through the breech, and also to force the flame and smoke through the bore and gain the desired result.

In constructing the chamber for the firecracker, I make that part of the chamber which is in the barrel portion of the gun, of a depth sufficient to receive about two thirds of the firecracker. That part of the chamber in the breech I prefer to make a trifle wider than that in the barrel portion and to fill it with some packing material, such as rubber, that will, when pressed against the firecracker, for the time being, conform to the shape of the latter as shown in Fig. 3 at G. The rubber should project slightly above the recess, so that when the breech is closed the firecracker will not only be held tightly, but its back part will be entirely covered by the rubber or other material, which will form an air-tight packing on the rear of the firecracker. The recess F in the barrel portion of the gun opens at its center directly into the bore, which latter is contracted intermediate the recess F and the main bore E, as shown in the drawings.

I find that the best results are obtained by constructing the bore in substantially the manner shown in Fig. 2. The extreme inner or rear end of the barrel is comparatively large and opens flaringly into the firecracker chamber, as shown at *t*, so as to insure the full explosion of the firecracker into the barrel; just beyond this rear portion of the barrel, and in the direction of the muzzle, the bore is considerably contracted, as shown at *a*, for a short distance and then suddenly widens out into the main barrel, as shown at *b*. The gases arising from the explosion of the firecracker are concentrated in passing through the contracted portion *a* and then suddenly escape into the outer barrel and thence into the air with a loud report.



The breech may be kept closed by means of any suitable device. In Figs. 1 and 8, I have shown a hook, C. In Figs. 5, 6 and 7 I have shown a bail C', the ends of which are sprung into the sides of the barrel, as shown at f, which bail is adapted to be slipped over the breech and tightened by the eccentric J.

From the foregoing, the operation of my improved device is apparent. Unhook the hook C, or throw upward the bail C', as shown in Fig. 7, and in dotted lines in Fig. 6, and allow the breech B to drop; then insert a firecracker allowing the fuse to protrude through the touch hole l, close the breech and fasten it by means of the hook C, or the bail C' as above described. The gun is then ready to be discharged.

The toy may be constructed of metal or of wood. To avoid any lateral motion or wobbling of the breech, the latter, if made of metal, is preferably cast with a flange as shown in Figs. 1 to 4. If it be of wood then I provide tongues or projections P upon the face of the breech which are adapted to fit into corresponding grooves or sockets S in the barrel portion when the breech is closed, as shown in Figs. 5 and 7.

When the bail C' is used I provide a pin or stop N, see Fig. 5, to prevent the bail from dropping too low. When the device is constructed of wood it is desirable to have a metallic plate K on the rear of the breech, see Figs. 5 and 6, against which the eccentric J may act and thus prevent the cutting or wearing away of the wood.

My invention may also be embodied in forms of firearms other than guns, as pistols. In Fig. 8 I have shown my device in the form of a pistol. In order that the finger may not be pinched between the trigger X and the barrel A, I provide a stop T on the hinge R to prevent the barrel dropping down too far.

It is obvious that there may be substitutes for some of the parts I have described, and that the form and arrangement may be changed without departing from my invention. For example, the shape of the bore may be altered; the shape and mode of applying the packing G may be varied, and other changes may be made without affecting the principle of my invention.

What I claim is—

1. In a toy breech-loading firearm, the combination of the barrel portion and breech, with a chamber at the breech running transversely to the longer axis of the barrel, and having a touch-hole, and communication from its center into the barrel, said chamber being provided with some pliable material, as rubber, and adapted to receive a firecracker the fuse of which protrudes through the touch-hole, substantially as shown and described.

2. In a toy breech-loading firearm, the combination of the barrel portion with the breech portion, each being provided with a recess

cut in its face at the breech, transversely to the axis of the barrel, the recess in the breech portion being filled with some pliable material, as rubber, which recesses when the breech is closed, form together a chamber for a firecracker, and means for keeping said breech closed, substantially as shown and described.

3. In a toy breech-loading firearm, the combination of the barrel portion and breech, with a chamber at the breech running transversely to the longer axis of the barrel, and having a touch-hole, and communication from its center into the barrel, said chamber being adapted to receive a firecracker, and the bail C' secured to the barrel portion and provided with the eccentric J and adapted to keep the breech closed, substantially as shown and described.

4. In a toy breech-loading firearm, the combination of the barrel portion and breech, with a chamber at the breech running transversely to the longer axis of the barrel, and having a touch-hole, and communication from its center into the barrel, said chamber being provided with some pliable material, as rubber, and adapted to receive a firecracker, and the bail C' secured to the barrel portion and provided with the eccentric J, and adapted to keep the breech closed, substantially as shown and described.

5. The toy breech-loading firearm consisting of the combination of the barrel A, the bore of which is contracted near its rear end and widens out again at its rear end, said barrel being provided with the recess F, communicating exteriorly through the touch hole l, and opening at about its center into the bore of the barrel, the breech B, provided with a corresponding recess filled with packing material G, and means for keeping the breech closed, substantially as shown and described.

6. The toy breech-loading firearm consisting of the combination of the barrel A, the bore of which is contracted near its rear end and widens out again at its rear end, said barrel being provided with the recess F, communicating exteriorly through the touch-hole l, and opening at about its center into the bore of the barrel, the breech B, provided with a corresponding recess filled with packing material G, and the bail C' provided with the eccentric J, substantially as shown and described.

7. The toy breech-loading pistol consisting of the combination of the barrel A, the bore of the same being contracted near its rear end and widening out again at its rear end, the breech B hinged to the barrel A, the firecracker chamber, and the stop T on said hinge, substantially as shown and described.

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Witnesses:

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