

W. C. DODGE.

Breech Loading Fire Arm.

No. 113,408.

Patented April 4, 1871.

Fig 1

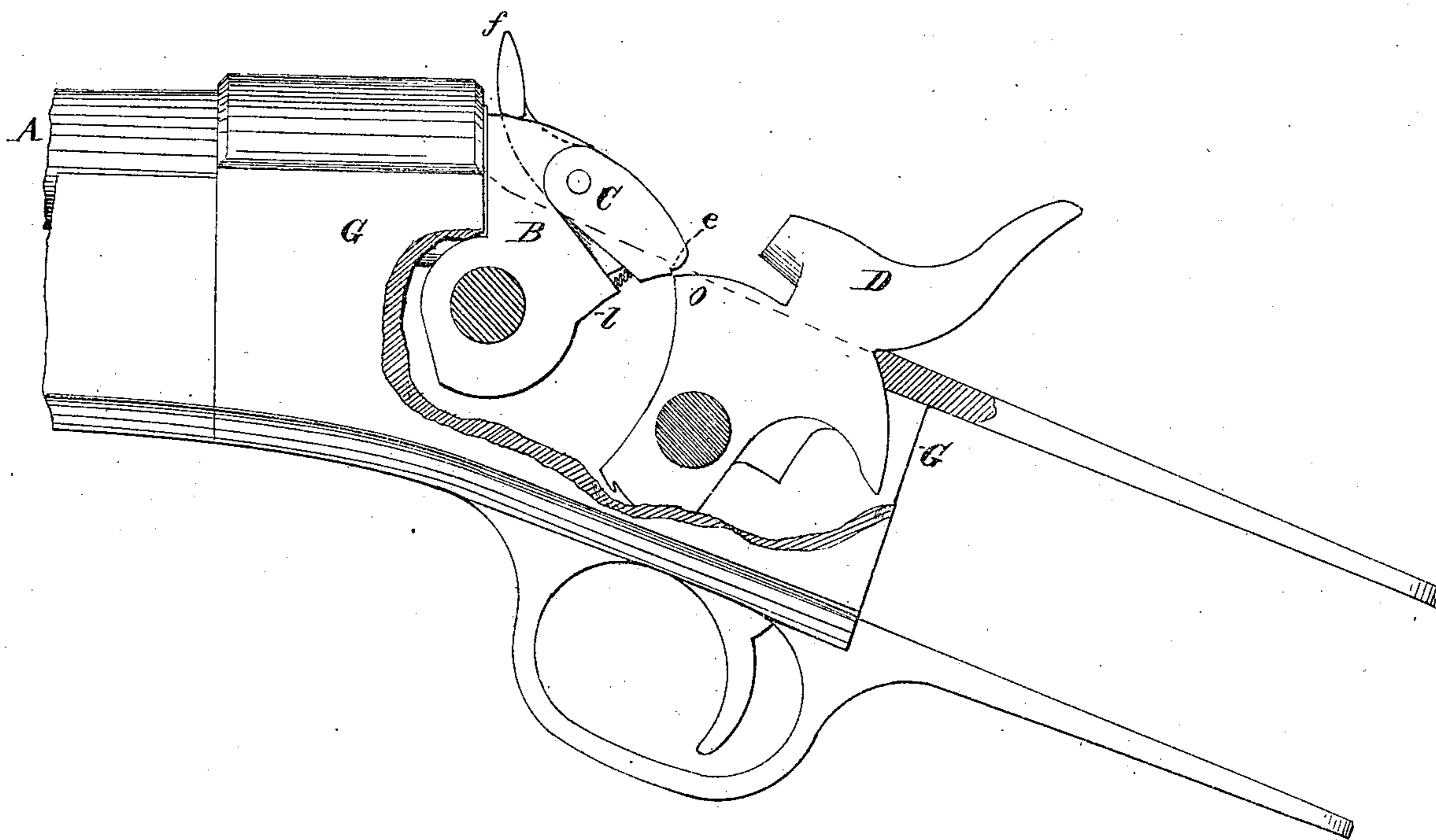


Fig 2

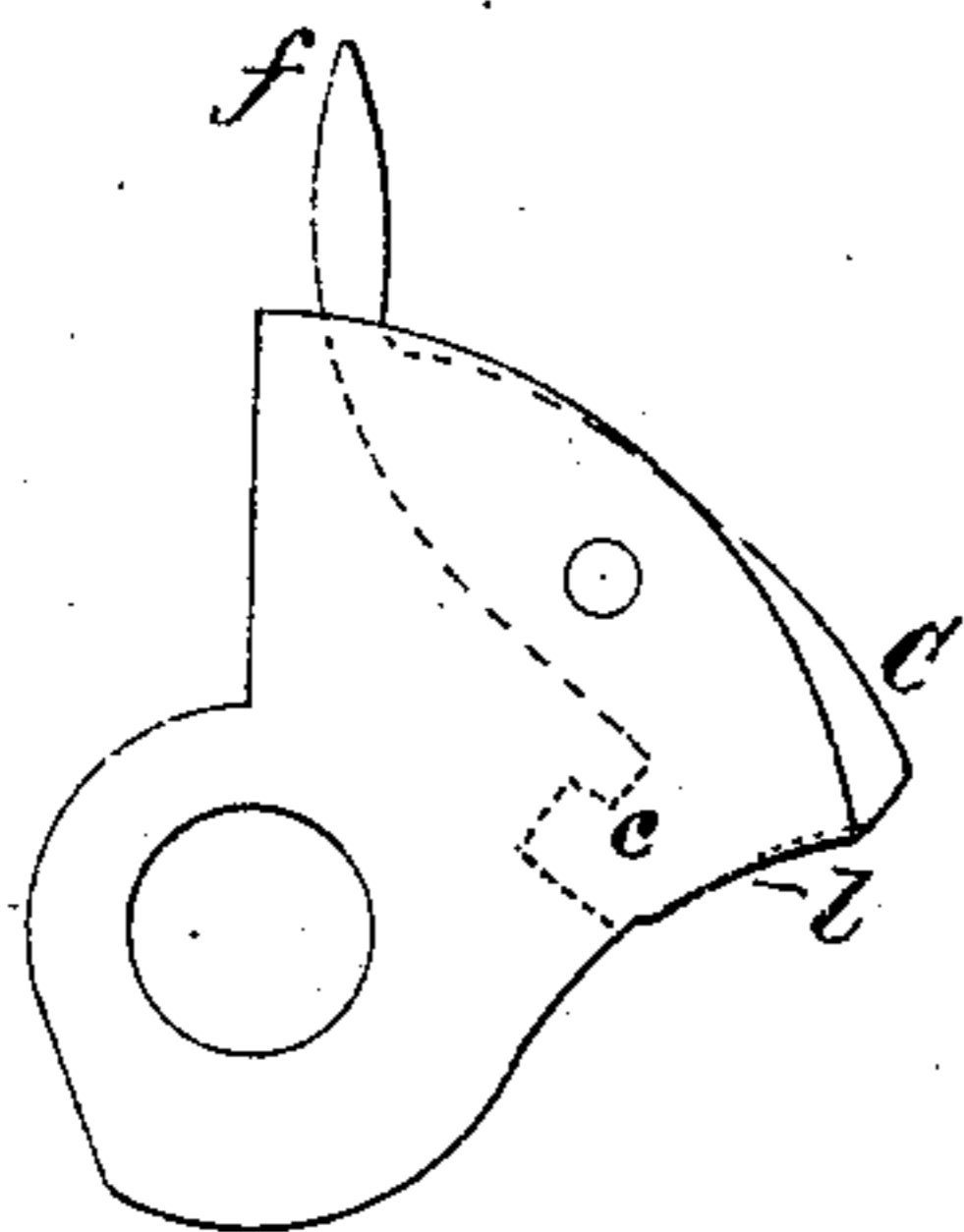
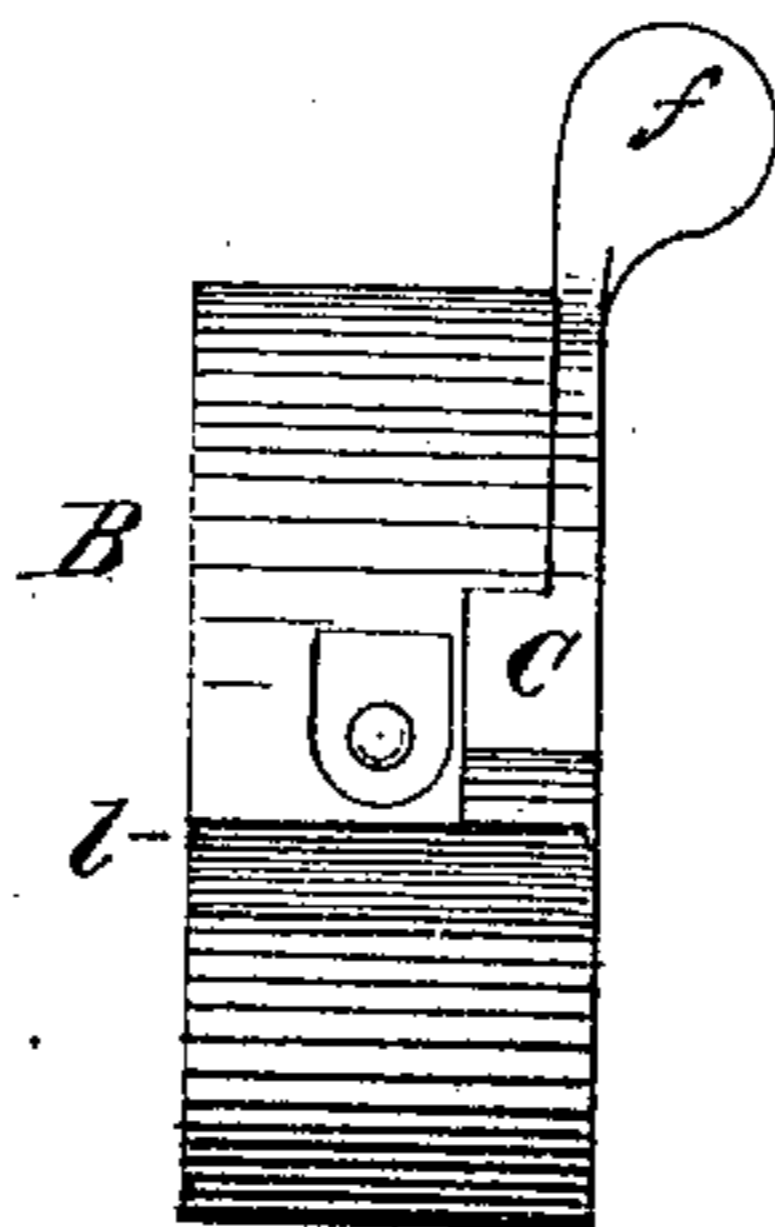


Fig 3



Witnesses

Harry King.  
Phil. S. Dodge,

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William C. Dodge



# United States Patent Office.

WILLIAM C. DODGE, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 113,408, dated April 4, 1871.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same:

*To all whom it may concern :*

Be it known that I, WILLIAM C. DODGE, of Washington, in the county of Washington and District of Columbia, have invented certain Improvements in Breech-loading Guns, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to breech-loading fire-arms; and

The invention consists in attaching to the swinging breech-block a locking brace, arranged as hereinafter described, so that if the breech-block should be forced back by a premature or accidental explosion it will be locked against a swinging shoulder in its rear, and thus prevented from opening, as hereinafter more fully explained.

Figure 1 is a side elevation of the breech portion of a gun containing my improvement, a portion of the frame being broken away to more clearly illustrate the improvement.

Figures 2 and 3 represent the same idea in a modified form.

This invention is intended for that class of guns which has a breech-block pivoted at the rear end of the barrel, and which is turned backward and downward to open the breech, and in which the breech-piece is held in place, when the gun is fired, by a swinging shoulder pivoted to the frame in rear of the breech piece. In this class of guns, as generally made, the breech is not locked closed until the hammer swings forward in the act of firing the gun; and, consequently, it frequently happens that serious accidents occur by the explosion of the cartridge in closing the breech, the latter being heavy, and forced home by a spring or lever, which causes it to strike the cartridge with considerable force. In such cases, if an explosion occurs, the breech-block is thrown back, it being entirely unlocked, and the charge with the cartridge-shell is forced out at the rear end of the barrel.

To prevent the possibility of such an occurrence I provide a lever or brace, C, and pivot it to the breech-block B, as represented in fig. 1; this brace C having an arm extending forward along one side of the breech-block B, and terminating in a thumb-piece, f, as represented, the general construction being similar to that described in the patent dated March 14, 1871, and issued to me.

In this case, however, the rear end of the brace C, instead of locking against cheeks on the frame G, is arranged to swing up in front of the shoulder o of the hammer D, as represented in fig. 1.

The under rear corner of the brace C is cut away on a curve concentric with the axis of the hammer, or so as to coincide with the rear curved face l of the breech-block B, in order to permit the shoulder o to

pass down under it and lock against the solid face l when the gun is fired.

The balance of the rear end or face of the brace C is so shaped as to permit it to swing up in front of the shoulder o, as represented in fig. 1, a spring of any suitable kind being arranged to throw or hold the rear end of the brace C up in front of the shoulder o when the breech is closed.

When thus arranged it will be seen that if an explosion were to occur from any cause the breech-block, instead of being blown open, would be simply moved far enough to bring the rear end of the brace C against the front edge of the shoulder o, and thereby lock it firmly in place, the shoulder o being itself locked firmly in position, having the back side of the hammer bear against the top of the frame, as shown in fig. 1.

In order to prevent the brace C from slipping off the shoulder o I cut a small groove or notch, e, across its rear face transversely in line with the edge of the shoulder o, as represented in fig. 1; or the same result may be accomplished by cutting off the extreme front point of the shoulder o on a line with the rear flat end of the brace C and roughening the faces of each, so that, as the breech-block is forced back, with the rear end of the brace elevated, the flat faces of the end of the brace and of the point of the shoulder will meet and rest fairly one upon the other; but this I do not consider as safe or as certain as to use the notch above described.

It is obvious that the locking brace C may be variously modified in its form and in its mode of attachment to the breech-block without departing from the spirit of my invention, the only requisites being that it shall be so formed and attached as to resist the force of the explosion, and stand in proper position to lock on the shoulder when forced back, and be capable of being forced or swung down against the breech-block, to permit the latter with the brace to swing down in front of the hammer or shoulder to open the breech.

In figs. 2 and 3 I have represented the brace in a modified form. It is there shown as fitting in a recess cut in one side of the face l of the breech-block, instead of extending entirely across the face l, as in fig. 1. The brace C in this case will be pivoted and arranged to swing in the same manner as in fig. 1, so as to lock against the shoulder in the same way, and it will be made of sufficient thickness to securely lock the breech-block in place. By this method it will be seen that the face l for one-half or more of its width is left unbroken, and that, therefore, the shoulder o, as it swings forward, will have a bearing against this unbroken portion of the face l clear out to its extreme edge; whereas, in the other case, the extreme or upper portion of the face l is cut away to make room for the rear end of the brace. This modified form of brace



is simpler and therefore cheaper to construct, and, if properly made, may be made to answer the desired purpose fully.

In order to prevent the possibility of the rear end of the brace C being forced up as it comes in contact with the edge of the shoulder *o* when forced back against it, the brace C may be formed with a hooked arm, *e*, as represented in dotted lines in fig. 2, this arm engaging in a corresponding recess formed for it in the block B, by which means it is prevented from rising beyond a certain point.

The operation and manipulation of the arm being the same as that described in the patent referred to, need not be further described.

Having thus described my invention,  
What I claim is—

The combination in a breech-loading gun of the swinging breech-block and the locking-brace C, or its equivalent, with the swinging shoulder *o*, substantially as described, whereby the breech-block is prevented from being blown open by an accidental or premature explosion, as set forth.

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Witnesses:

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JOSEPH G. PARKINSON.