

(No Model.)

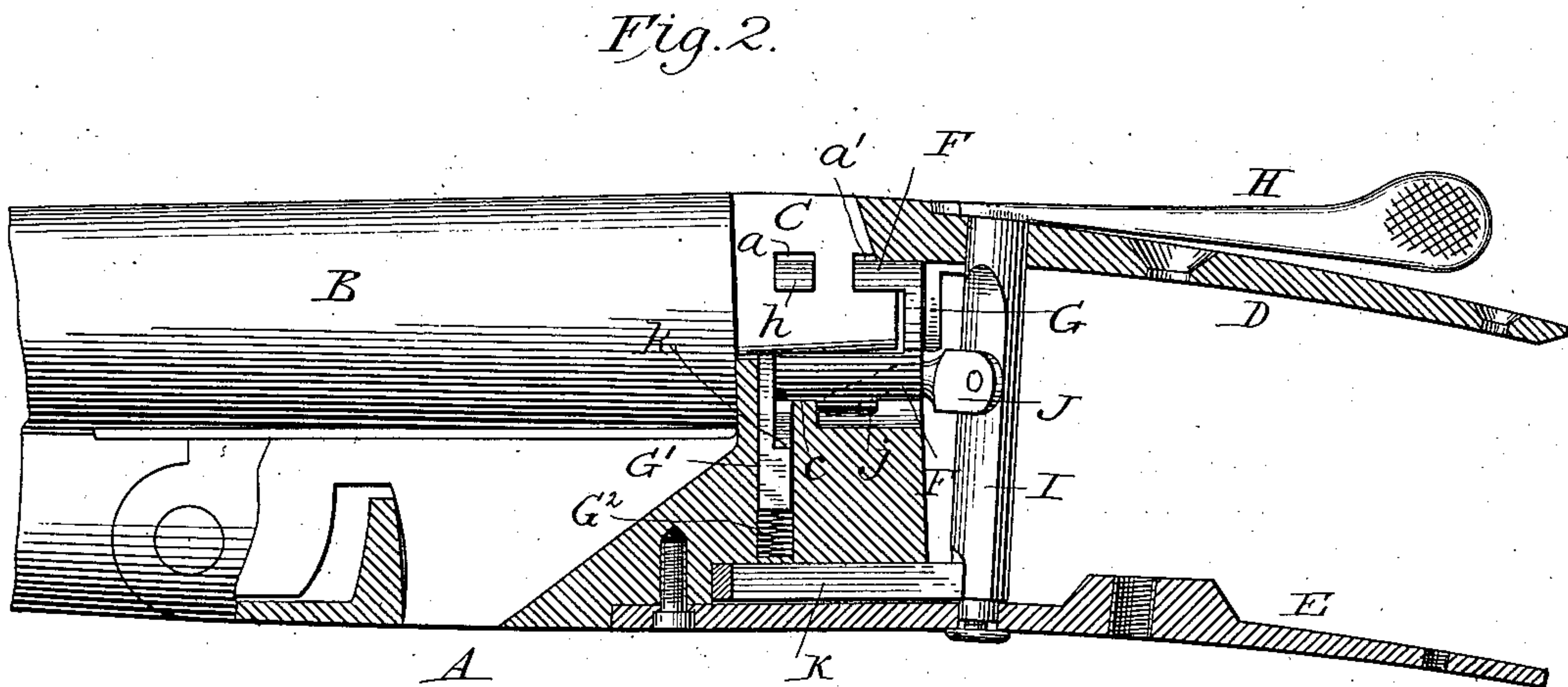
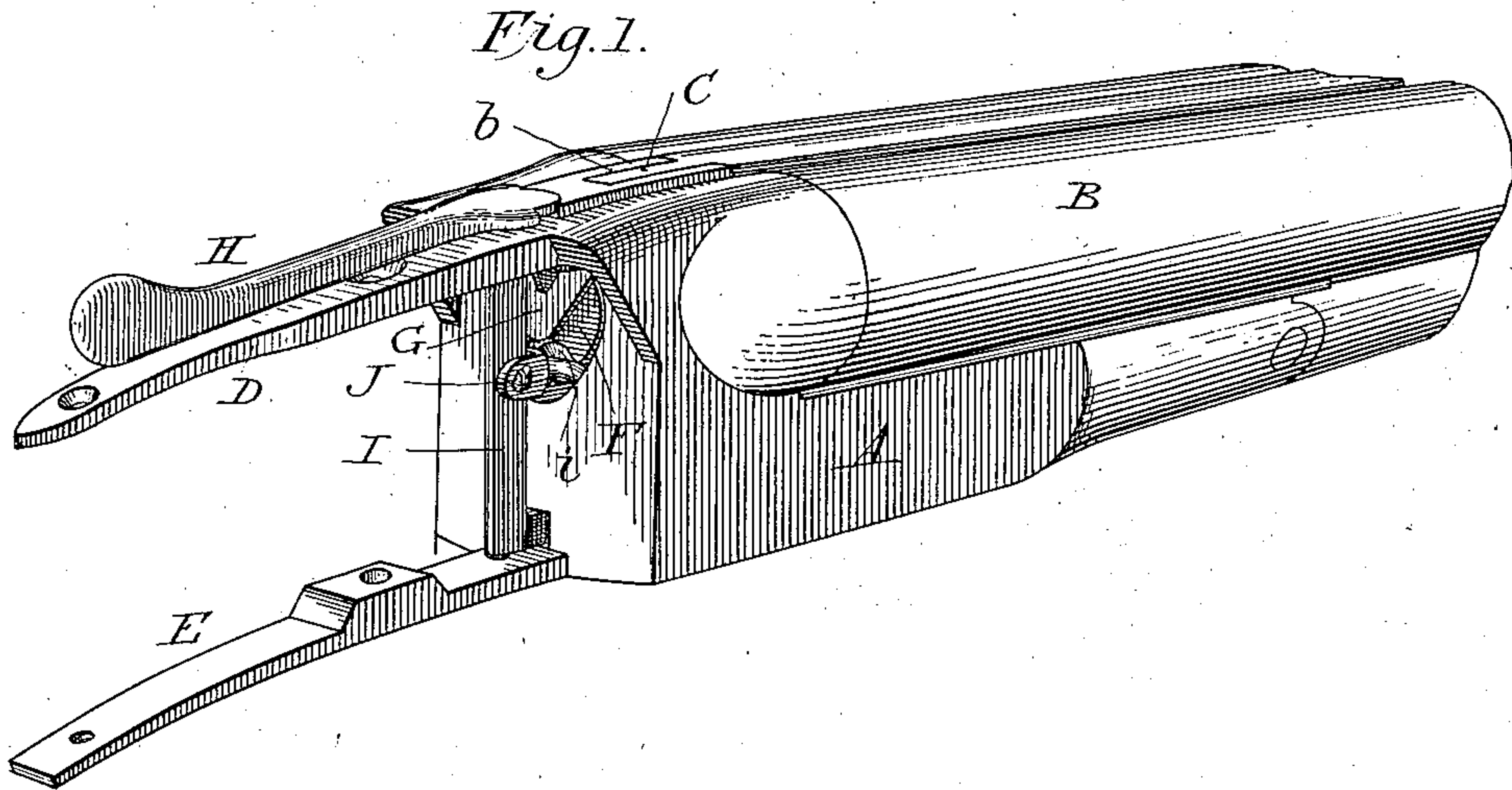
2 Sheets—Sheet 1.

W. LEISTIKO.

BARREL LOCKING BOLT FOR BREAKDOWN GUNS.

No. 564,525.

Patented July 21, 1896.



Witnesses  
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Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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*Fig. 3.*

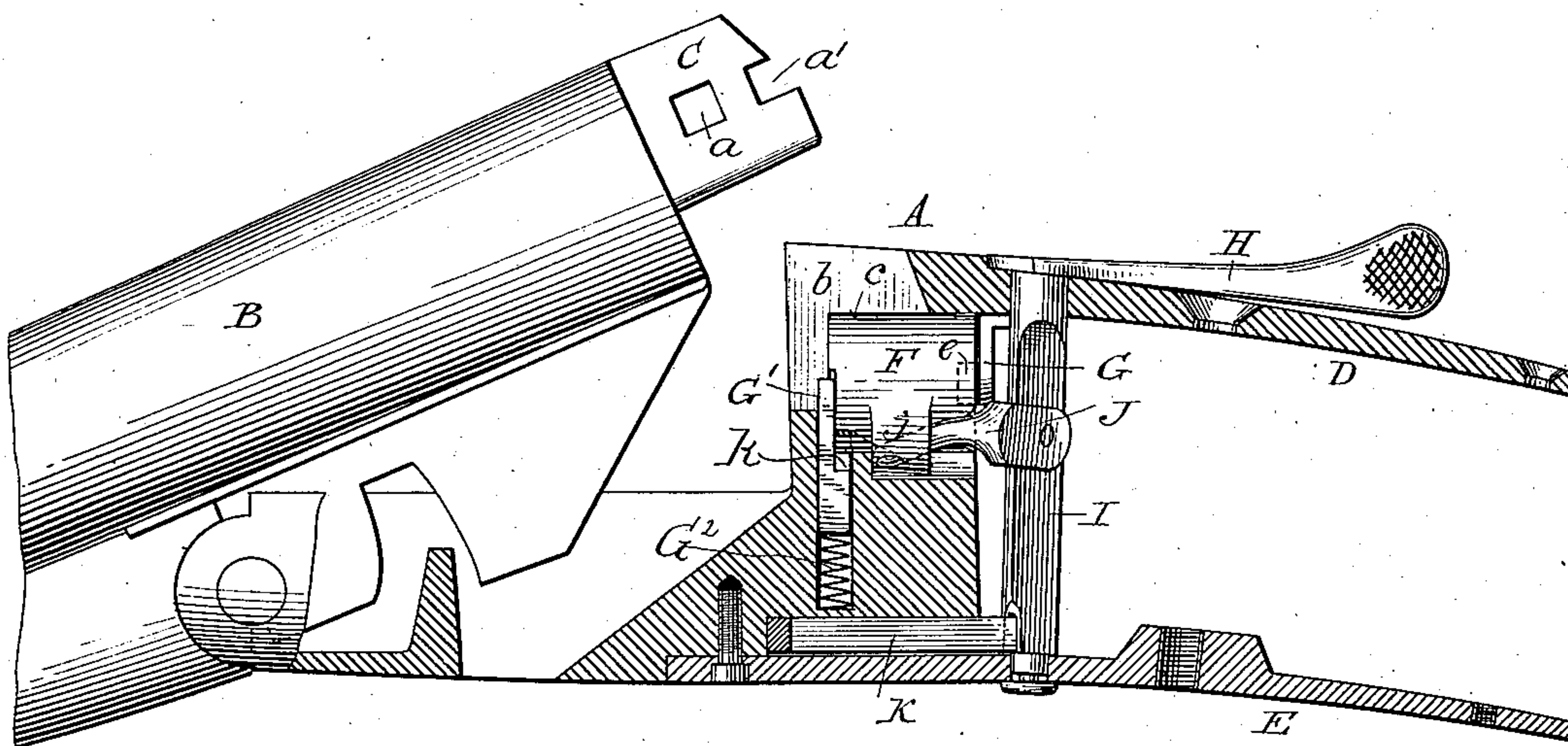
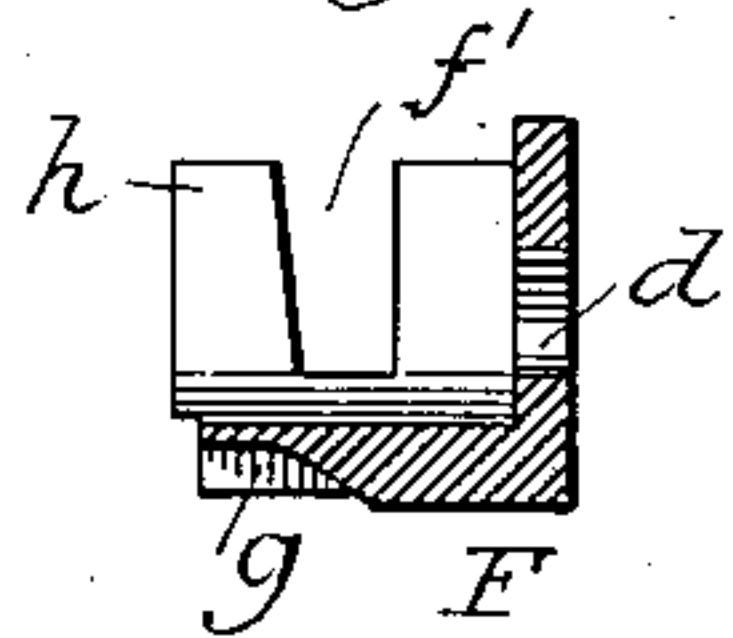
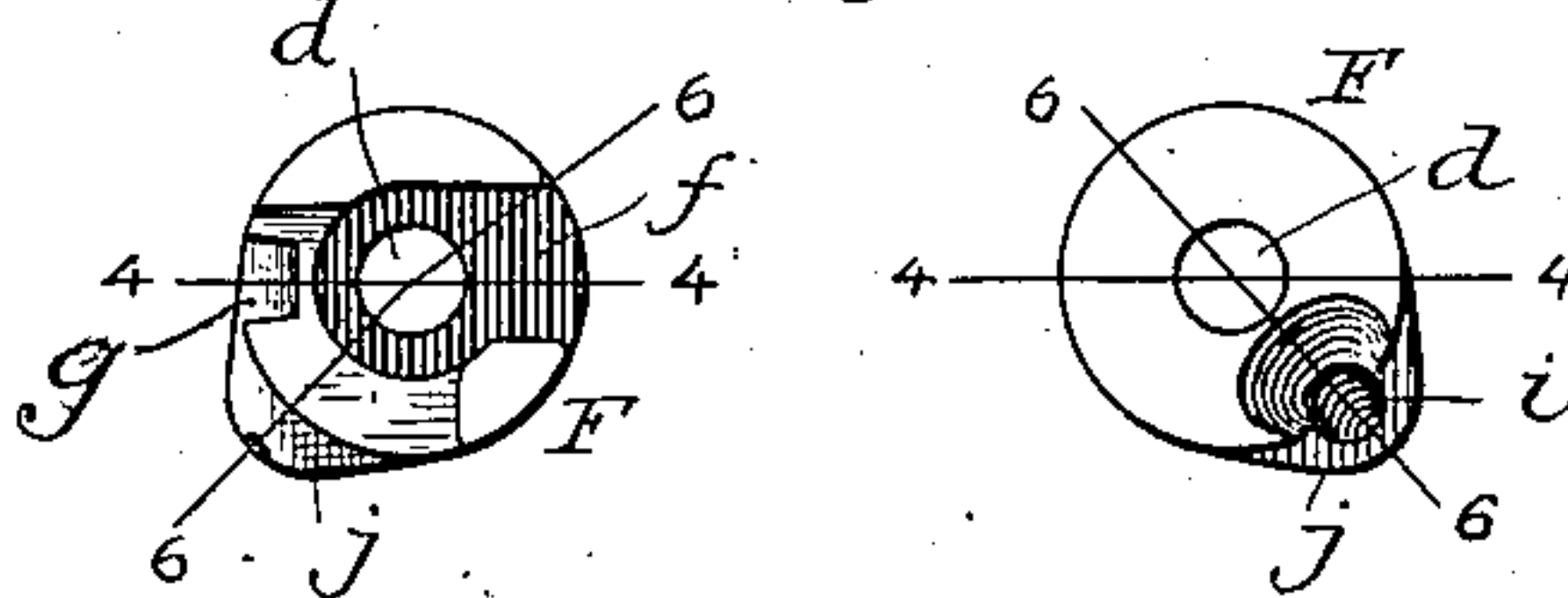


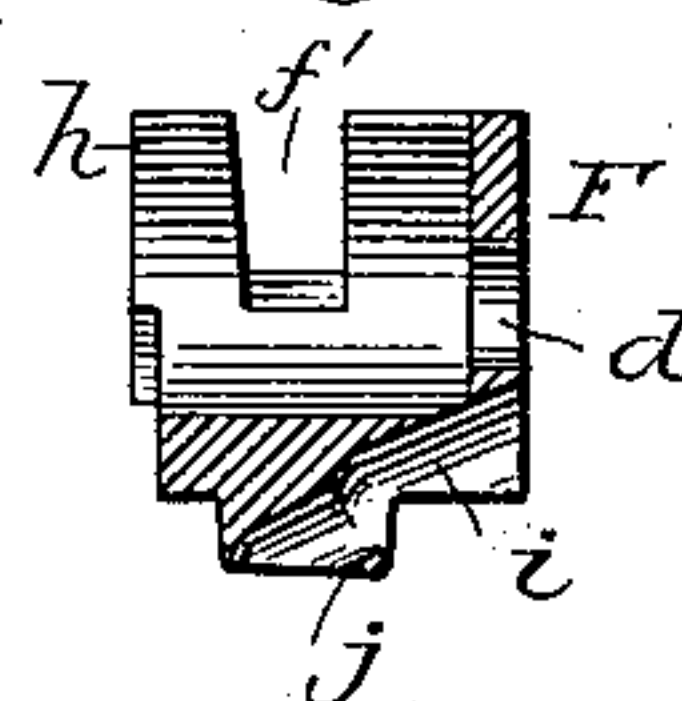
Fig. 4.



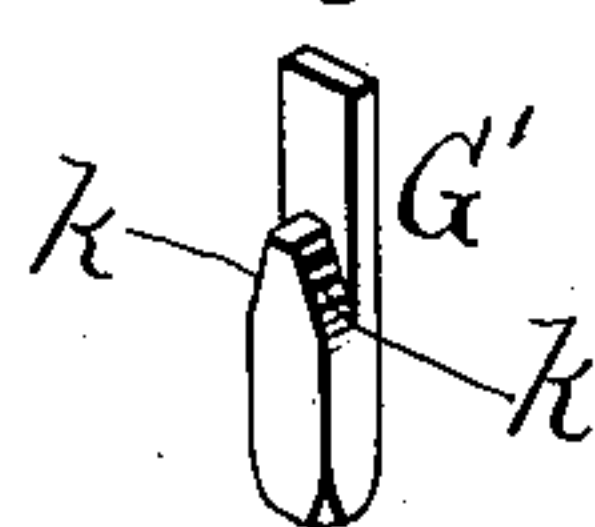
*Fig. 5.*



*Fig. 6*



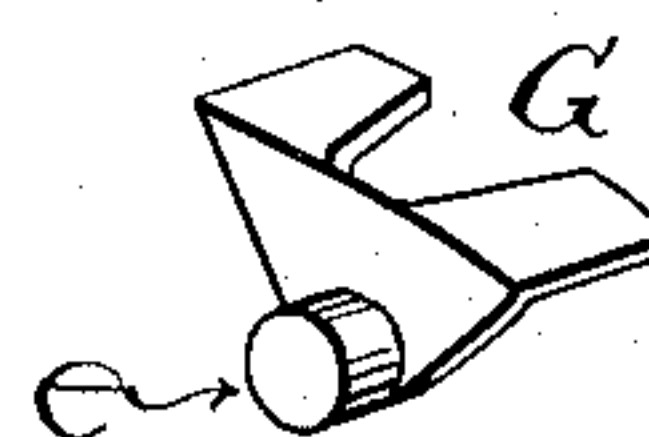
*Fig. 8.*



*Fig. 7.*



*Fig 9*



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# UNITED STATES PATENT OFFICE.

WILLIAM LEISTIKO, OF GLENCOE, MINNESOTA.

## BARREL-LOCKING BOLT FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 564,525, dated July 21, 1896.

Application filed February 28, 1896. Serial No. 581,168. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM LEISTIKO, a citizen of the United States, residing at Glen-  
coe, in the county of McLeod and State of  
5 Minnesota, have invented certain new and  
useful Improvements in Breakdown Guns, of  
which the following is a specification.

My invention relates to breakdown guns,  
and more particularly to the locking device  
10 for the barrels thereof.

In the accompanying drawings, Figure 1 is a  
perspective view of the breech-block and a  
portion of the barrels in their locked position;  
Fig. 2, a longitudinal vertical section of Fig.  
15 1; Fig. 3, a similar view showing the barrels  
unlocked; Figs. 4, 5, and 6, detail views of  
the rotary locking-bolt; and Figs. 7, 8, and 9  
are detail views of several of the parts.

The invention relates to that class of break-  
20 down guns which are designed to be unlocked  
through the medium of a top lever. It em-  
bodies the use of an oscillating lock mounted  
within the breech-block and operated by the  
top lever through intermediate connections.  
25 Under all prior constructions of which I am  
aware, wherein a locking-block of the same  
general character as the one employed by me  
has been used, the block has been mounted  
in and supported and guided wholly by the  
30 walls of the recess forming its seat. From a  
practical experience of many years in the  
handling and repair of such guns I have found  
that in many instances the parts become  
wedged or jammed and the gun rendered use-  
35 less. My present invention is designed to  
obviate such difficulties.

Referring to the annexed drawings, A in-  
dicates the breech-block; B, the barrels suit-  
ably pivoted thereto; C, the extension-rib of  
40 the barrels; D, the tang of the breech-block,  
and E the trigger-plate.

The extension-rib is provided with a lateral  
opening *a* and a notch or recess *a'*, both of  
which are designed to be engaged by the os-  
45 cillating bolt when the rib is seated with the  
mortise or channel *b*, formed in the breech-  
block for the reception of said rib.

F indicates the oscillating bolt. It is sup-  
ported and guided at its forward end in a  
50 circular seat *c*, formed in the breech-block,  
while its rear end or wall is provided with a  
central opening *d*.

G denotes a bracket removably secured to  
the tang D, having a laterally-extending arm  
or lug *e* designed to fit within the opening *d* 55  
and form a pivot and support for the rear end  
of the oscillating bolt F.

It will be noticed upon reference to Figs. 2  
and 3 that the bolt F does not come into con-  
tact with the wall of the breech-block which 60  
surrounds it, except at its extreme forward  
end, where the seat *c* is formed. Being sup-  
ported and guided both at its rear and for-  
ward ends, and being free from contact with  
the parts surrounding it throughout its length, 65  
there is no possibility of its becoming cramped  
or locked against movement. The bolt for  
the greater portion of its length is hollow, and  
on its upper side is provided with a slot *f*, a  
second slot *f'* extending laterally therefrom, 70  
forming a tongue *h*. The slot *f* is designed  
to allow the lower part of the extension-rib  
to pass into the central hollow portion of the  
bolt when the barrels are closed. Upon rota-  
tion of the bolt the tongue *h* enters and passes 75  
through the opening *a*, while the side wall of  
the slot *f'* enters the recess *a'*.

A seat or notch *g* is formed in the bolt at  
its front end in line with the slot *f'*, and is  
adapted to be engaged by a spring-pressed 80  
latch or pin G' when the barrels are unlocked.  
This pin is angular, preferably square, in  
cross-section, and the recess within which it  
is seated is also of a similar shape, so that  
the pin cannot turn, and must of necessity 85  
occupy its proper position. The spring G<sup>2</sup>  
tends at all times to keep the pin in its ele-  
vated position unless it is forced downward  
by the rotation of the bolt.

The side faces of the pin G' are cut away, 90  
forming the inclined faces *k k*. These faces  
permit an easier action of the rotary bolt F  
upon the pin and facilitate the entrance of  
the pin into the recess *g* and its being forced  
therefrom when the bolt is moved. 95

The forward portion of the latch extends  
up in front of the bolt into the slot *b* when  
the barrels are open, and is designed to be  
depressed by the extension-rib when the bar-  
rels are closed, thus unlocking the bolt and 100  
permitting it to be rotated and lock the bar-  
rels in place.

H designates the top lever, secured to the  
end of an upright shaft I, which is pivotally



secured at its lower end to the trigger-plate. A lever or arm J, provided with a bifurcated or forked end, is pivotally secured to the shaft I, its inner end entering a seat or bearing *i*, formed in an extension or enlargement *j* on the bolt. This enlarged portion or extension *j* is formed on one side of the bolt about midway of its length, so that the end of the arm or lever will exert the same power or have the same leverage upon both the forward and rear bearings of the bolt. The power of the arm being applied farther from the axis of the bolt than could be done had the arm its bearing in the main body of the bolt, greater leverage for turning said bolt is secured, which is a point of material consequence. To permit free rotation of the bolt, the breech-block is cut away at this point, as will be clearly seen upon reference to Figs. 1, 2, and 3.

Upon reference to Fig. 6 it will be seen that the outer end of the lever or arm J is so formed or bent down that it stands at about an angle of forty degrees to the remainder of the arm.

To secure proper clearance of the parts, the pivot-point of the arm or lever J is below the axis of rotation of the bolt, but the inclination or bend given to the outer end of the arm causes the axis of the bent portion and the axis of the bolt to coincide at a point in the vertical shaft I in line with the axis of rotation of said bolt.

The bolt being supported at both ends and free from contact with the breech-blocks throughout its length, and the power required for its rotation being applied at the center of its length between the supports, there is no possibility of the bolt becoming cramped or jammed and the gun rendered useless.

A spring K is secured between the breech-block and the trigger-plate, its end bearing against one side of the vertical shaft and tending to normally hold the bolt in its locked position.

Having thus described my invention, what I claim is—

1. In a breakdown gun, the combination of the breech-block; a rotary locking-bolt mounted therein; a bearing in the breech-block for the front end of the bolt; a journal-support for the rear end thereof; and means for rotating said bolt arranged to act thereon intermediate of its end bearings.

2. In a breakdown gun, the combination

of the breech-block, a rotary locking-bolt mounted therein, a bearing for each end of the bolt; an extension on said bolt midway of its length; and means for rotating said bolt applied to said extension.

3. In a breakdown gun, the combination of the breech-block, a rotary locking-bolt mounted therein; a bearing for each end of said bolt; an extension on said bolt midway of its length; a top lever and vertical shaft connected thereto; and an arm or lever pivoted to the vertical shaft and bearing in the extension on the bolt.

4. In a breakdown gun, the combination of the breech-block; a recess formed therein; a rotary locking-bolt mounted within but out of contact with said recess; and bearings or supports for the ends of the bolt.

5. In a breakdown gun, the combination of the breech-block; a rotary locking-bolt mounted therein; supports or bearings for the ends of the bolt; an extension on said bolt midway its length; a seat or bearing within said extension; a top lever and a vertical shaft connected thereto; an arm pivotally secured to the vertical shaft, the outer portion or section of said arm being bent downwardly and having its end seated in the bearing formed on the bolt.

6. In a breakdown gun, the combination of the breech-block; a rotary locking-bolt mounted therein; a bearing formed in the breech-block for the forward end of said bolt; and a removable bracket secured to the tang of the breech-block and forming the bearing or support for the rear end of the bolt.

7. In a breakdown gun, the combination of the breech-block; a rotary locking-bolt mounted therein; an angular recess or socket formed in the breech-block contiguous to the rotary bolt; and an angular locking-pin seated within said recess or socket.

8. In a breakdown gun, the combination of the breech-block; a rotary locking-bolt mounted therein; a polygonal recess or socket formed in the breech-block contiguous to the rotary bolt; and a polygonal locking-pin seated within said recess or socket and provided with the inclined faces *k k*, as and for the purposes set forth.

In witness whereof I hereunto set my hand in the presence of two witnesses.

WILLIAM LEISTIKO.

Witnesses:

F. B. DEAN,  
GOTTEID C. NEUBAUER.