

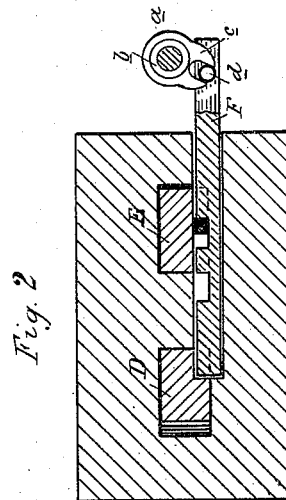
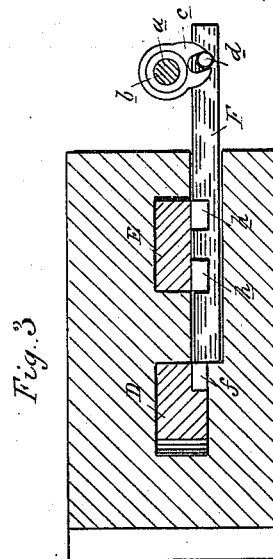
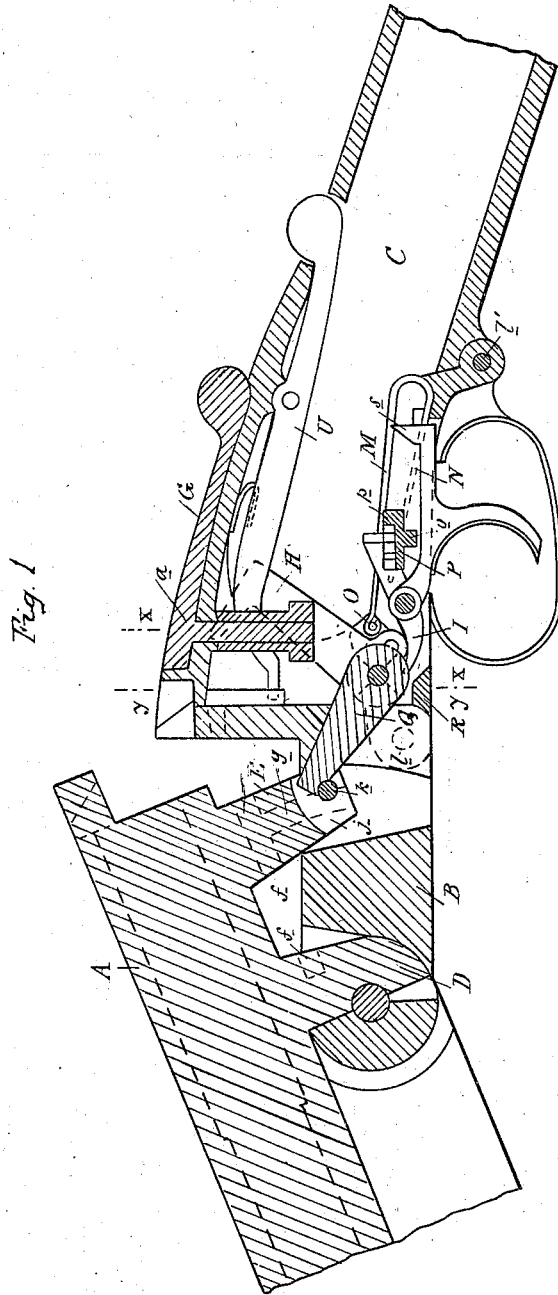
(No Model.)

2 Sheets—Sheet 1.

H. ALLENDER.
BREECH LOADING FIRE ARM.

No. 303,411.

Patented Aug. 12, 1884.



(No Model.)

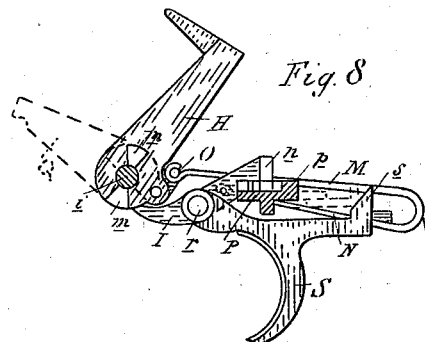
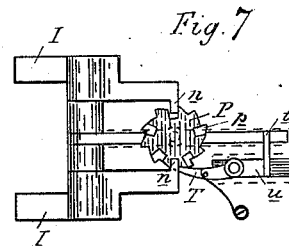
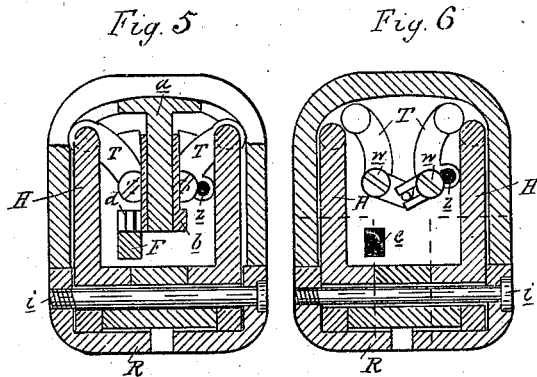
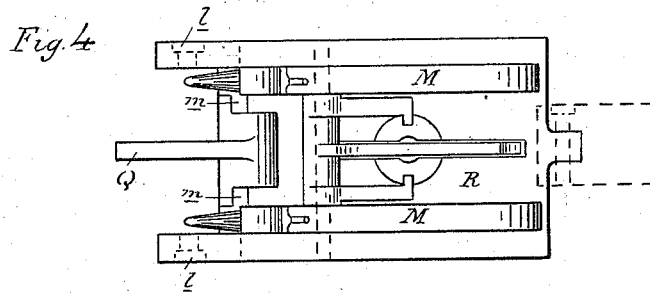
2 Sheets—Sheet 2.

H. ALLENDER.

BREECH LOADING FIRE ARM.

No. 303,411.

Patented Aug. 12, 1884.



Attest
J. Paul Mayer
Charles F. Hunt

Inventor
Henry Allender
By J. S. Sprague Atty

UNITED STATES PATENT OFFICE.

HENRY ALLENDER, OF DETROIT, MICHIGAN.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 303,411, dated August 12, 1884.

Application filed April 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY ALLENDER, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Hammerless Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improvement in breech-loading fire-arms, and refers more specifically to an improvement in that kind of fire-arms usually called "double-barreled shotguns," and in which the barrels are hinged to the breech-frame, and are tipped to insert the cartridges or remove the empty shells.

The invention hereinafter described refers, first, to an improvement in the action-bolt which retains the barrels in place; second, to improved devices for cocking the concealed hammers by the breaking down of the barrels; third, to an improved safety-guard; fourth, to devices for automatically alternating the action of the hammers; fifth, to the arrangement of the parts of the locks, so as to easily dismount them from the gun-stock.

In the drawings which accompany this specification, Figure 1 is a vertical central section of the breech. Figs. 2 and 3 are detached plans showing the action-bolt projected and retracted. Fig. 4 is a plan of the lock detached. Fig. 5 is a cross-section on line *x x*, Fig. 1. Fig. 6 is a cross-section on line *y y*, Fig. 1. Fig. 7 is a detached plan of the trigger and sears. Fig. 8 is a vertical central section of Fig. 7.

A is the rear end of the barrels, B the breech-frame, and C the stock. The barrels are hinged to the breech-frame in the usual manner.

D and E are two lugs on the under side of the barrels, and F is the action-bolt, which is moved by the action-lever G. This lever G is placed on top of the breech-frame, and is pivotally held in place by its pivot-pin, *a*, upon which is secured the sleeve *b*. This sleeve *b* is provided with a slotted toe, *c*, which engages with a pin, *d*, near the rear end of the action-bolt F. The action-bolt F is a rectangular bar, and slides in a corresponding recess, *e*, in the breech, and is also

adapted to engage with and slide laterally in corresponding recesses, *f f*, in the lugs D and E.

g is a radial groove in the lug E, and *h h* are recesses in the action-bolt F. When the action-bolt is projected, as shown in Fig. 2, it engages into the recesses *f f* of the lugs D and E, and firmly locks the barrels in place; but when retracted, as shown in Fig. 3, the barrels may be tipped, as the radial groove *g* in the lug E registers with the action-bolt. By the arrangement just described but little lateral movement of the action-bolt is required to firmly lock the barrels.

Q is a tumbler sleeved centrally upon the bolt *i*. Its forward end projects through the breech-frame and into a slot, *j* upon the lower end of the lug E, and engages therein upon the transverse pin *k*.

H H are the hammers sleeved upon the bolt *i*, one upon each side of the tumbler Q. They are concealed within the breech-frame, and are adapted to strike the cartridges through proper openings in the breech. The tumbler Q and the hammers H H engage with each other by means of their hubs, which are provided at their meeting faces with spurs or teeth *m*, in the manner of a clutch, with this difference, that there is a certain amount of lost motion in the engagement between the tumbler and the hammers, so that in operation, after the hammers are cocked by the tipping of the barrels, they will not be interfered with by the tumbler when released by the trigger.

I are the sears or dogs which hold the hammers in their cocked position. M are the mainsprings. N are the sear-springs, (which in the drawing form a continuation of the mainsprings,) and O are the swivels by means of which the mainsprings operate the hammers. The rear ends of the dogs or sears are provided with offsets *n*, which overhang the ratchet-disk P. This latter is supported upon the bed-plate R, and is provided on the under side with a pintle, *o*, around which it can revolve, in the manner of a turn-table. Around its periphery the disk P is provided with ratchet-teeth, and upon its top it has a series of lugs or projections, *p*, which are placed concentrically near the outer edge of the disk and form an odd number. S is a trigger. It is sleeved

centrally upon the same bolt, *r*, upon which the dogs are sleeved, and works through a slot in the bed-plate *R*. It is provided with the usual trigger-guard and does duty for both hammers.

5 The tail end of the trigger is turned up and provided with the incline *s*, which is adapted to engage with the pin *t*. This pin *t* is secured to a sliding plate, *u*, which is held to the bed-plate *R* by an undercut mortise, or in any other suitable way. *T* is a little pawl pivotally secured to the sliding plate *u*, and adapted to engage upon the ratchet-face of the disk *P*.

10 In practice the tipping of the barrels, for the purpose of loading or reloading, cocks both hammers; but it will be seen that the offsets *n* on the rear ends of the dogs are always in different positions in relation to the lugs *p* of the little disk underneath—that is, the end of one dog is right over one of these lugs, while the end of the other dog is over the interval between the two lugs, and when the trigger is actuated by the finger in the usual manner it will first impinge against the pintle *o* of the disk *P* and then lift the same up. This lifting up of the disk *P* will release that dog which happens to have a lug underneath its rear end, while the other dog will not be affected. Before the trigger, however, operates upon the disk *P* in the manner just described, its rear end has given to the disk *P* a turn of one tooth, owing to the action of the incline *s* of the rear projection of the trigger.

As the ratchet-teeth are just double the number of the lugs *p*, it is clear that the dogs will be alternately released by the trigger, and thus correct the evil habit of some sportsmen to use the same barrel right along for single shots. If the sportsman should, however, desire to use only one barrel, he can easily effect the desired object by lifting the trigger just enough to turn the disk *P* one notch without lifting it. The two actions of the trigger—that is, first, the turning of the disk *P* and then the lifting up of the same for releasing one of the dogs—are perfectly distinct and succeed each other; but in practice the same facility of discharging the shot is obtained as with the ordinary trigger.

50 The safety-guard consists of the two swinging shutters *T T*, which are pivotally secured to the breech-frame at *w*, as shown in Fig. 6. They have interlocking heels, so as to make them swing together, and one is provided with a little socket, *z*, into which the inner end of the hand-lever *U* is stepped. This hand-lever is concealed in the stock; but its free end projects outside and on top, so that when the gun is brought into firing position the hand which grasps the breech of the gun will naturally close over the projecting end of the lever and depress it sufficiently to make the shutters *T T* disclose the openings through which the hammers strike the cartridges. The tension of a little spring acting upon the hand-lever *U* will normally keep the shutters *T T* closed. The bed-plate *R* is hinged to the breech-frame by means of the bolts *l l*, and

if the bolt *l'* is withdrawn the bed-plate may be swung out of the breech-frame around the bolts *l*. Thus by withdrawing one bolt the whole lock of the gun can be exposed to view, and all the parts are accessible for the purpose of cleaning and oiling.

What I claim as my invention is—

1. In a device for alternately discharging the two barrels of a fire-arm by a single trigger and a pair of sears, a revolving table interposed between the trigger and the sears, and having a series of recesses in combination with a pair of sears, one end of one sear being arranged to be over a recess in said table when the end of the other sear is between two recesses in the same, and a trigger constructed and arranged to move said table and operate each sear alternately, substantially as described.

2. In a breech-loading fire-arm having tilting barrels, the combination of the lug *E*, depending from the rear of the barrel, having a lateral recess, *f*, and radial recess *g*, with the laterally-sliding action-bolt *F*, having recesses *h h*, all so arranged that the lug *E* may be disengaged from the action-bolt by making the latter register therewith, substantially as set forth.

3. The device for cocking the gun by the tilting of the barrels, consisting of a tumbler engaging with the breech end of the barrel, and engaging also, by means of suitable devices, as *m*, with the hammers, which, together with said tumbler, are sleeved upon the same bolt, but independent from each other, substantially as set forth.

4. In a breech-loading fire-arm having tilting barrels, the combination, with the lug *E*, having slot *j* and pin *k*, of the tumbler *Q*, engaging with said slot and pin, of the bolt *i* and hammers *H*, and of interrupted clutches by means of which the hub of the tumbler engages with the hubs of the hammers, substantially as set forth.

5. In a device for alternately discharging the two barrels of a fire-arm by a single trigger and a pair of sears, a revolving table interposed between the trigger and the sears, and having a series of recesses, in combination with a pair of sears, one end of one sear being arranged to be over a recess in said table when the end of the other sear is between two recesses in the same, and a trigger constructed and arranged to move said table around its axis, and then lengthwise thereof and operate each sear alternately, substantially as described.

6. In a device for discharging alternately the two barrels of a breech-loading fire-arm by means of a single trigger, a turn-table acting directly upon the sears and placed between the rear ends of the same and the trigger, and adapted to receive and transmit, by contact, the motion of the trigger, in combination with the sliding plate *u*, arm *t*, attached thereto, and arranged to engage with the incline *s* of the trigger-arm, whereby said plate is recipro-

cated, and the pawl T, attached to said plate *u*, to transmit its motion to the turn-table for alternating the contacts between it and the sears by the initial motion of the trigger, substantially as set forth.

7. A device for alternating the discharges of a double-barreled fire-arm by means of a single trigger, consisting of the following combination of elements: ratchet-disk P, having a series of contacts and depressions upon its upper face, pintle *o* upon its lower face, trigger S, pivoted to engage with the lower end of the pintle *o*, and provided with an incline *s*, at its tail end, sliding plate *u*, provided with an arm, *t*, which engages with the incline *s*, pawl T, attached to the plate *u*, and engaging the ratchet-disk P, sears I, having offsets *n*, each of which is arranged to extend over the disk

P, the one directly over a contact, *p*, and the other over a recess between the said contacts, whereby when the table is elevated only one sear is disengaged from its hammer, as set forth.

8. In a safety-guard, the combination of the swinging shutters T T, having interlocking heels, with the hand-lever U, stepped into a socket, *z*, and having its free end projecting outwardly of the breech-frame on top, so that when the gun is held in firing position the hand will naturally close over said projecting end, substantially as set forth.

HENRY ALLENDER.

Witnesses:

H. S. SPRAGUE,
CHARLES J. HUNT.