

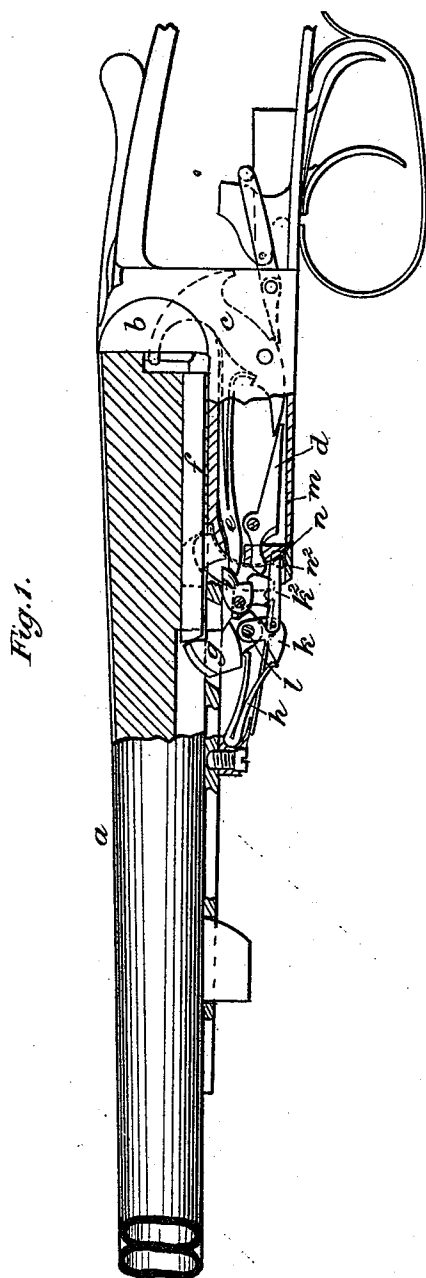
(No Model.)

2 Sheets—Sheet 1.

C. H. MALEHAM.
EJECTOR FOR DROP-DOWN SMALL ARMS.

No. 499,131.

Patented June 6, 1893.



Witnesses:—

Joseph H. Starnes
Frederick Lawton

Inventor:—

Charles Henry Maleham

(No Model.)

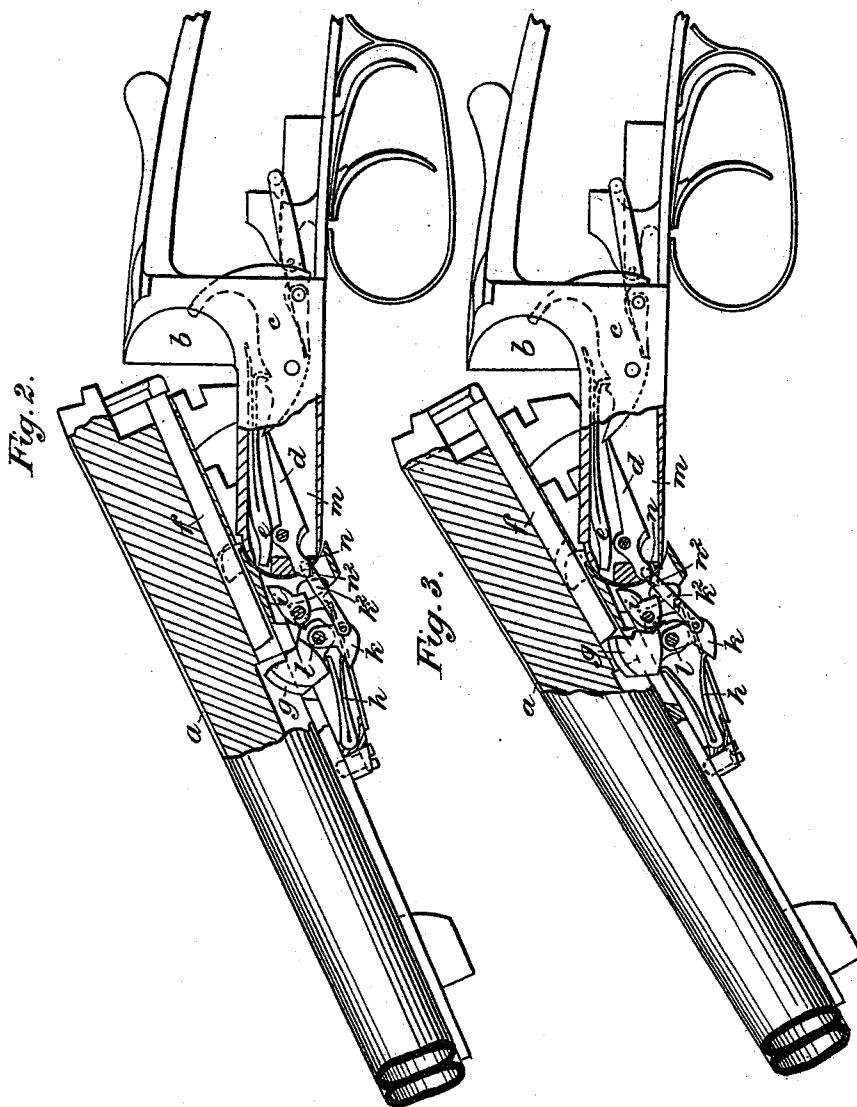
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EJECTOR FOR DROP-DOWN SMALL ARMS.

No. 499,131.

Patented June 6, 1893.



Witnesses:-

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Inventor:-

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UNITED STATES PATENT OFFICE.

CHARLES HENRY MALEHAM, OF SHEFFIELD, ENGLAND.

EJECTOR FOR DROP-DOWN SMALL-ARMS.

SPECIFICATION forming part of Letters Patent No. 499,131, dated June 6, 1893.

Application filed January 6, 1893. Serial No. 457,463. (No model.) Patented in England December 15, 1891, No. 21,900.

To all whom it may concern:

Be it known that I, CHARLES HENRY MALEHAM, a subject of the Queen of Great Britain, residing at Sheffield, England, have invented certain new and useful Improvements in the Ejector Mechanism of Drop-Down Small-Arms, (for which I have obtained Letters Patent of Great Britain, No. 21,900, dated December 15, 1891;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention consists of the following improvements in or additions to certain kinds of the ejector mechanisms of drop down small arms the object of my said improvements or additions being to facilitate the closing of the gun or small arm.

My invention has reference to those kinds of ejector mechanisms of drop down small arms in which the ejection of the cartridge case from the barrel on the opening of the gun is effected by the action of an ejector hammer or vertical arm upon the end of the rod or leg of the extractor the said ejector hammer being released by the taking out of bent of a sear by means of mechanism brought into action on the opening of the gun. The ejector hammer is operated by a V or doubled spring resembling a main spring. In the ordinary arrangement the expanded spring of the ejector hammer is fully compressed on the closing of the gun.

My invention consists principally in adding to or combining with ejector mechanisms of the kind described of a lever so constructed and arranged and acted upon by the joint end of the body that on the opening and closing of the gun the said lever is made to act upon the lower limb of the ejector hammer spring and either raise and fully compress the spring or permit the said limb to take its expanded position. The lever which I use turns upon the same center as the ejector hammer. Its rear arm extends to the joint end of the body and bears against a flat abutment or cut away part at the said joint end, and the end of the forearm of the lever, which end is inclined on its upper side, is situated under and supports the lower limb of the

ejector hammer spring. The lower limb of the ejector hammer spring is free instead of being fixed to the box or case in which it is situated as usual. The said lower free limb of the spring is thus made capable of being raised and the spring fully compressed or permitted to take its expanded position. When the gun is opened to extract and eject the empty cartridge case, the action of the flat abutment at the joint end of the body upon the rear arm of the lever causes its fore arm to rise and lift the lower limb of the spring and bring the said spring into its fully compressed state ready on the release of the ejector hammer to cause the latter to act upon the extractor leg and eject the cartridge case as is well understood. When the gun is closed, the fore arm of the lever descends, followed by the free lower limb of the ejector hammer spring, which limb takes its expanded position, the upper limb of the spring being at the same time partly compressed by the cocking of the ejector hammer. Thus, the compressing of the ejector hammer spring is effected partly by the opening and partly by the closing of the gun instead of fully compressing the spring by the closing of the gun as usual. Hence the closing of the gun is facilitated.

I will now describe with reference to the accompanying drawings the manner in which my invention is to be performed.

Figures 1, 2 and 3 represent in longitudinal vertical section the breech end of a double barrel drop down gun containing mechanism constructed and arranged according to my invention for compressing the ejector hammer spring of the ejector mechanism on the opening of the gun for ejecting the spent cartridge case. In Fig. 1 the barrels are represented shut down and the cock discharged, the ejector hammer spring being in its partly compressed condition. In Fig. 2 the gun is represented opened nearly to its full extent and the ejector hammer spring in its fully compressed state, the ejector hammer being about to be released by the releasing mechanism of the gun and in Fig. 3 the gun is represented fully opened and the rod or leg of the extractor projected outward for ejecting the spent cartridge case by the action of

the ejector hammer, the spring of the said ejector hammer being in its fully expanded state.

The same letters of reference indicate the same parts in the several figures of the drawings.

a, a are the barrels of the gun and *b* the break off.

c is the cock or hammer, cocked by the opening of the gun through the action of the fore end of the gun upon the dog or lever *d* as usual.

e is the sliding main spring of the hammer *c*.

f is the leg or rod of the extractor fork and *g* is the ejector hammer which when discharged gives a sharp blow to the said extractor leg or rod *f* for ejecting the spent cartridge case as is well understood.

h is the *V* or doubled spring of the ejector hammer the lower limb of which is free instead of being fixed to the box or case on the fore end as usual.

The ejector hammer *g* is held in its cocked position by the sear lever *i* taking into a bent in the said ejector hammer, the said sear lever being put into bent by the advance of the sliding main spring *e* (see Fig. 1) on the fall of the hammer *c* to discharge the gun, the said sliding main spring *e* being provided at its bent end with a projection which operates upon the said sear lever; and the ejector hammer is released on opening the gun by the projection *n*² on the body *m* striking against the tail end of the sear lever *i* and taking it out of bent with the ejector hammer.

The mechanism for putting the sear lever into bent and for releasing the ejector hammer *g* constitutes no part of my invention and other mechanism than that represented may be employed for those purposes.

The lever for compressing the ejector hammer spring *h* is marked *k, k*² and turns on the same center *l* as the ejector hammer *g*. The rear arm *k*² of the spring compressing lever is jointed to the fore arm *k* of the said lever, the said jointed rear arm *k*² extending to the joint end of the body *m* and bearing against a flat abutment or cut away part *n* at the joint end of the body. The fore arm *k* of the spring compressing lever *k, k*² is inclined on its upper side and is situated under and supports the lower free limb of the ejector hammer spring *h* as represented. By this arrangement the lower free limb of the ejector hammer spring *h* is made capable of being raised to the upper limb and the spring fully compressed as represented in Fig. 2 or permitted to take its expanded position as represented in Fig. 1 ready to be compressed on the opening of the gun.

When the parts of the gun are in the respective positions represented in Fig. 1 the opening of the gun causes the ejector hammer to be discharged and its spring compressed. In the said Fig. 1 it will be seen that the upper limb of the ejector hammer spring *h* has been compressed on the closing of the gun by the action of the leg or rod *f* of the extractor upon the ejector hammer *g* and the sliding main spring *e* has been brought, by the fall of the hammer *c* to discharge the gun, into its operating position for putting the sear lever into bent with the ejector hammer.

When the gun is being opened as represented in Fig. 2, the action of the flat abutment *n* at the joint end of the body *m* upon the jointed rear arm *k*² of the spring compressing lever *k, k*² causes the fore arm *k* of the said lever to rise and lift the lower limb of the said spring toward the upper limb and bring the said spring into its fully compressed state. On the gun being fully opened the ejector hammer *g* is released and the compressed spring *h* acting upon it causes it to strike the extractor leg or rod *f* a sharp blow and eject the spent cartridge case as represented in Fig. 3; where the spring *h* of the ejector hammer after it has operated the said hammer, is represented in its fully expanded state. On closing the gun the fore arm *k* of the spring compressing lever takes the position represented in Fig. 1 and the lower limb of the spring travels upon the said fore arm *k* and takes its expanded position, the upper limb of the said spring being at the same time partly compressed by the cocking of the ejector hammer as seen in Fig. 1. The principal compressing of the ejector hammer spring being thus effected by the opening of the gun the closing of the gun is much facilitated.

Having now particularly described and ascertained the nature of my invention and the manner in which the same is to be performed, I declare that I claim as my invention—

The combination with the ejector mechanism of a drop-down gun, and an ejector-hammer-spring, of a jointed lever-mechanism, having a front part arranged under and supporting the free lower extremity of said spring, and a rear part acted upon by a part of the joint end of the gun on opening the latter to lift the lower extremity of the spring and fully compress the latter for discharging the ejector-hammer, substantially as described.

CHARLES HENRY MALEHAM. [L. S.]

Witnesses:

JOSEPH HARDY,

C. FREDERICK LAWTON.