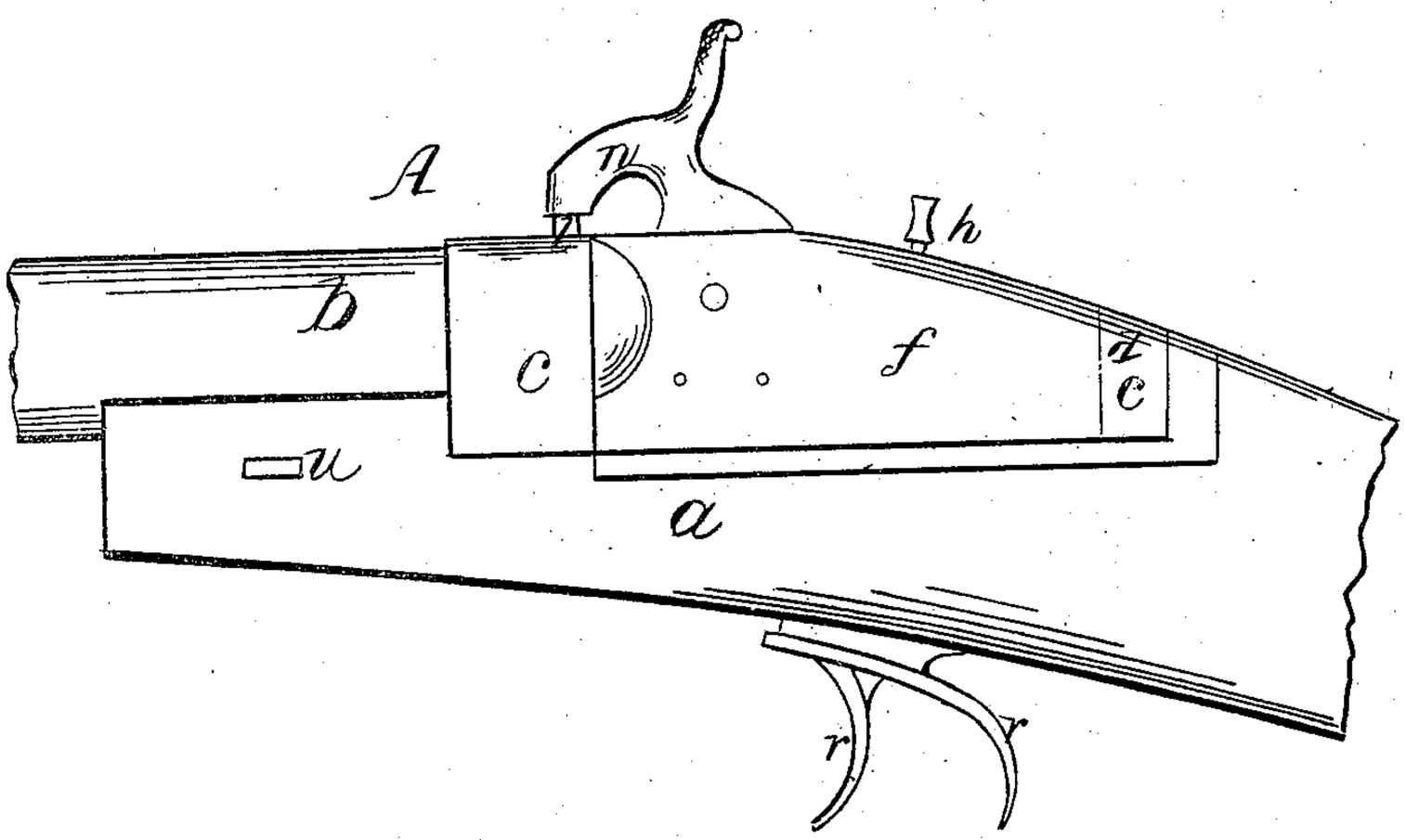
2. Sheets, Sheet 1.

C. Callaghan,
Breech Loader.

No. 74,888. Patented Feb. 25. 1868.



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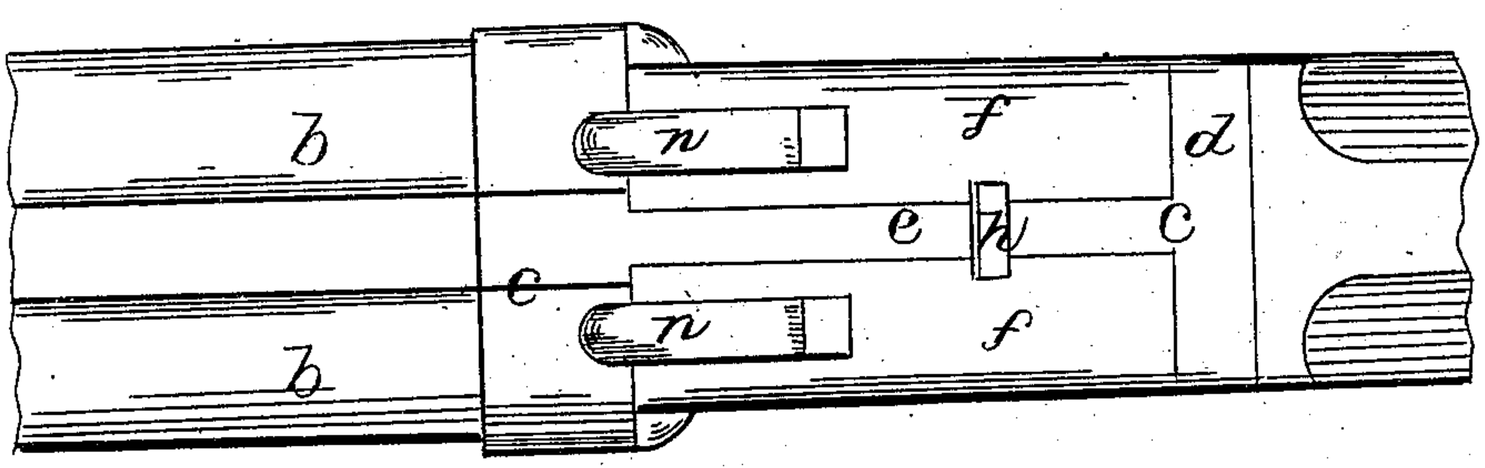
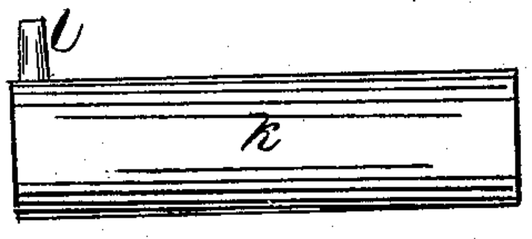




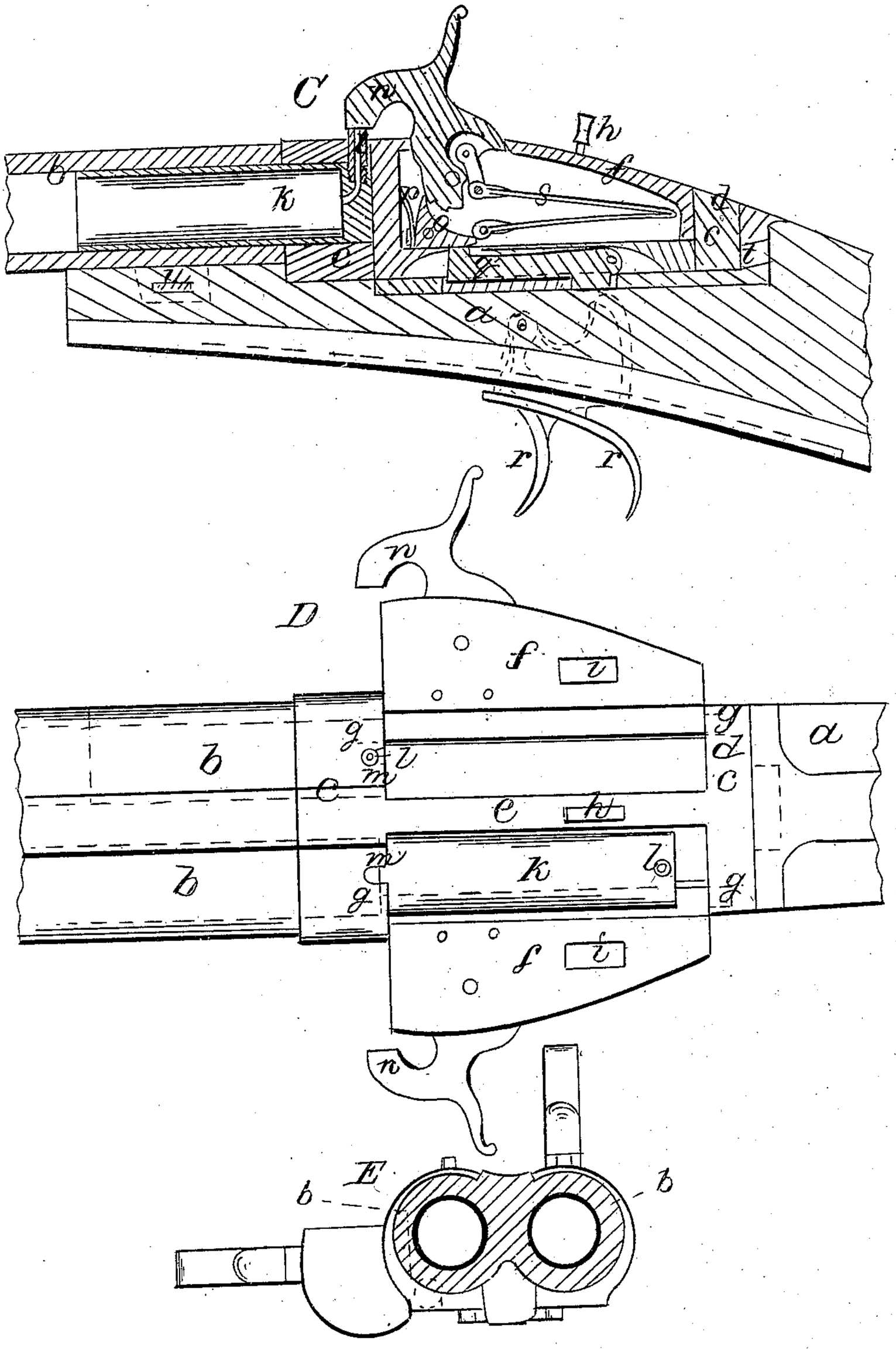
Witnesses,
Ab. W. Frothingham
L. Warren Brown

Cornelius Callaghan, by
Crosby, Halsted & Gould,
Attys.

2. Sheets. Sheet. 2.

C. Callaghan,
Breech Loader.

No. 74,888. Patented. Feb 25. 1868



United States Patent Office.

CORNELIUS CALLAGHON, OF GREAT BRITAIN.

Letters Patent No. 74,888, *dated February* 25, 1868.

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, CORNELIUS CALLAGHON, of Great Britain, residing at Boston, in the county of Suffolk, and State of Massachusetts, have invented Improvements in Breech-Loading Shot-Guns; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The invention relates to the construction of breech-loading shot-guns, particularly of that class in which the charge is wholly contained within a cylindrical tube or case, fitted to slide into and out from the rear of the barrel, and to receive successive charges of powder and shot.

The improvement consists primarily in combining with the two barrels of a double-barrelled gun, two breech-blocks, each hung at its opposite ends to the frame, and swinging outwardly, for insertion of the charged case, or the withdrawal of the empty shell, the two breech-blocks being locked (when closed) to a central rib or bridge connecting the barrels to the rear part of the metal frame, and each swinging-block piece containing the lock for exploding the cap or the cartridge of the barrel in line with it.

The invention also consists in so constructing the arm that the barrels, frame, and locks are so connected that they are capable of removal from and of connection with the stock, as one piece, or in combining the locks directly with and so as to be removed with the barrels.

The drawings represent those parts of an arm directly embodying my invention.

A shows a side elevation, and B a plan of the breech-block or blocks and frame, and the adjacent parts of the barrels and stock. C, a longitudinal vertical section through one of the hammers. D, a plan, showing the breech-blocks as thrown out, and one of the cartridge or charge-containing tubes as nearly withdrawn from the barrel. E, an end view of the barrels and frame, showing one breech-block as thrown out. *a* denotes the stock, *b b* the barrels, *c* the metal frame supporting the barrels and the lock-mechanism. From the rear piece *d* of this frame to the barrel *b* a vertical central rib, *e*, runs, and on each side of this rib, and in line with the barrels, are two swinging breech-blocks *f*, each hung by journal-pins *g* at its opposite ends, and swinging outwardly or transversely to the barrels, as seen at D and E. This central rib *e* is in height flush with the upper surface of the breech-blocks, and of such thickness and solidity, and so firmly secured as part of the frame, as to be of great importance in resisting the recoil upon the discharge of the gun. Without such rib the other parts of the frame would be altogether insufficient to resist this recoil, because of their comparatively lighter structure, and because they are not "in the line of fire;" nor would that part of the breech-blocks which is journalled in the frame be sufficient to resist the recoil, for the reason that it is located in too low a plane and much below the line of fire, while the breech-blocks themselves fail to resist the recoil, because they form no strengthening part between the front and rear of the frame, and they are not fastened to but are merely laid within the frame, for the specific purpose of being inserted and removed with facility without the need of screws. This central rib is not designed or used merely for the purpose of affording a convenient means for locking or securing in position the two breech-blocks, when closed, for these blocks could readily be caused to lock to each other, and by the same character of device which I now use to lock them to the rib; but I could not dispense with the rib without materially damaging the value and efficiency of my gun in the other important particulars above stated; and, moreover, if dispensed with, it would be necessary to make the stock in two pieces in order to insure that strength which metal alone can give, and which would in such case be required underneath the frame. When closed, each breech-block fits securely between the barrel and the frame-piece *d*, and closes firmly against the head of the charge-containing tube inserted into the barrel, the two blocks being locked in closed position by a button or bolt, *h*, (which, upon being turned, shoots into two notches or recesses, *i*, in the opposite breech-blocks,) or by any other suitable means. When either breech-block is thrown out it discloses and opens the barrel in line with it, and permits the insertion or removal of the cartridge or charge-containing tube *k*. This tube *k* is preferably formed of thin sheet metal, is made to fit closely into the barrel, and is of size sufficient to receive a maximum charge of powder and shot. At its rear or closed end it has a cone or nipple, *l*, for receiving the percussion-cap, this cone being fixed to and leading into the tube, as shown at C, and entering a slot, *m*, in the rear end of the barrel, (when the charged tube is slid into the barrel,) coming directly under or in position to receive the blow from the striking-face of the hammer *n*. Each hammer, *n*, is hung to or in

the breech-block on its side of the gun, and the block also contains the other mechanism of the lock, as seen at C, the sere *o* being pressed under the teeth or notches in the hammer or cock (when the hammer is raised to full or half cock) by the sere spring *p*, the sere being tripped by a lifter, *q*, acted upon by the trigger *r*, and the hammer being thrown down by its spring *s*, all as will be readily understood.

As before stated, the barrels, breech-frame, and breech-blocks have a permanent connection, together or with reference to the stock *a*, a tongue, *t*, projecting into a slot in the stock-piece, and a key, *u*, locking the barrels down to the stock. By removing this key, raising the barrels and moving them forward, the barrels, breech-frame, and swinging blocks, and with the blocks the percussion-locks, are all removed from the stock as one piece, this arrangement, for the purposes of construction, of repair, and of packing, being of material advantage.

The bearings in the frame for the reception of the journals of the swinging breech-blocks are open at the bottom, so that when the frame is removed from the stock and the blocks released from the rib, these blocks may at once be removed by simply taking their journals from these open bearings or sockets.

I claim the combination with a central rib, substantially such as described, of two breech-blocks swinging outwardly therefrom.

Also, the combination, with a removable frame, of the breech-blocks, substantially as described, so that when the frame is removed from the stock and the blocks released from the rib, the blocks are free to be removed from the frame, substantially as described.

CORNELIUS CALLAGHON.

Witnesses:

J. B. CROSBY,

FRANCIS GOULD.