

(No Model.)

R. MORRIS.  
AUXILIARY RIFLE BARREL.

No. 252,241.

Patented Jan. 10, 1882.

FIG: 3.

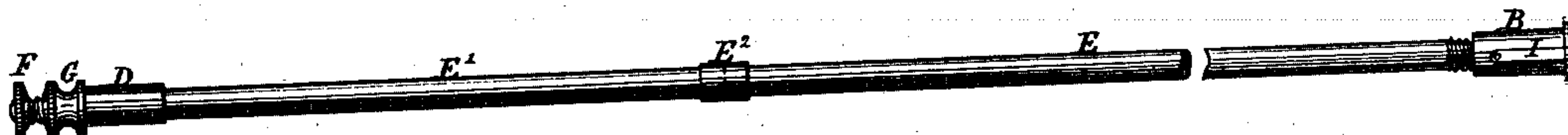


FIG: 1.

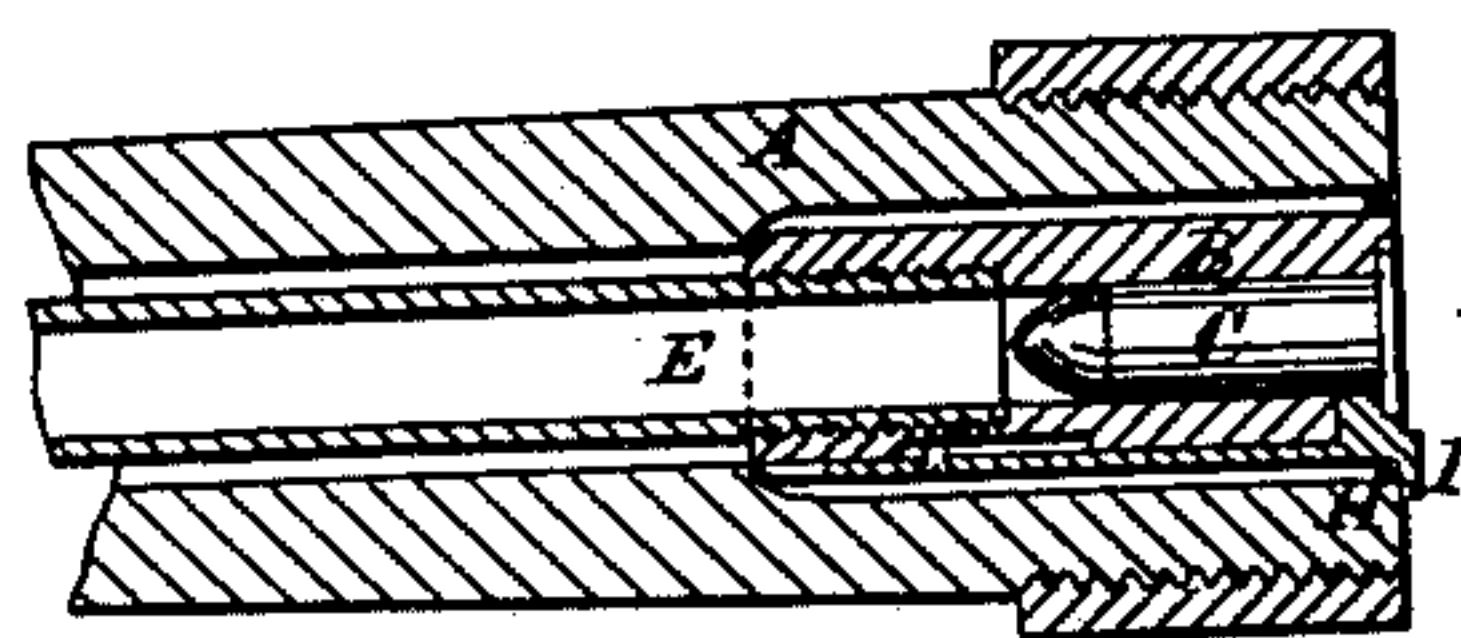
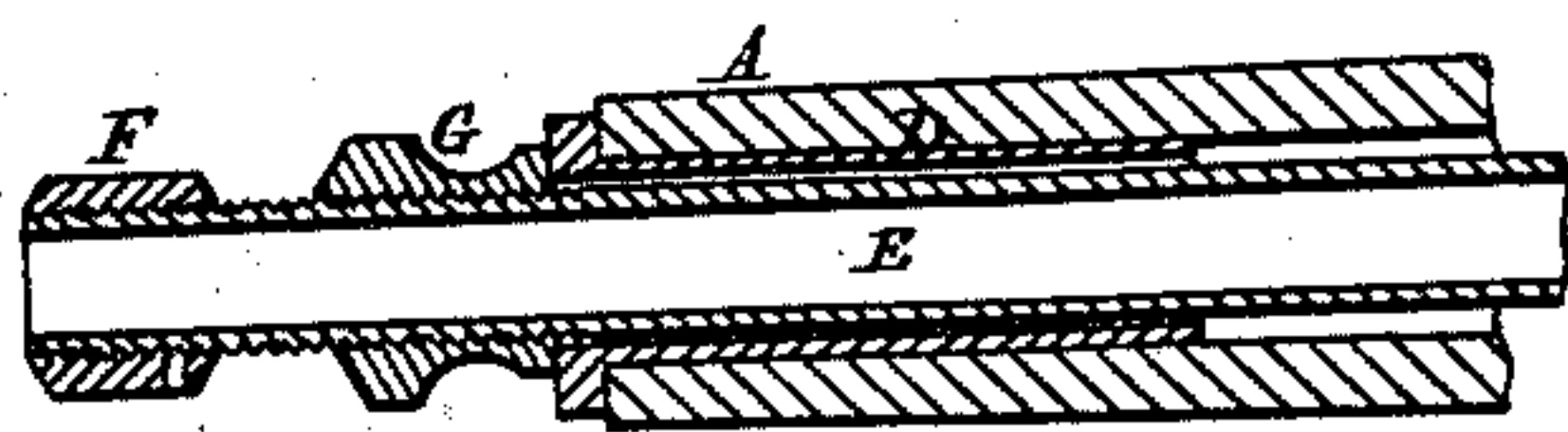


FIG: 2.

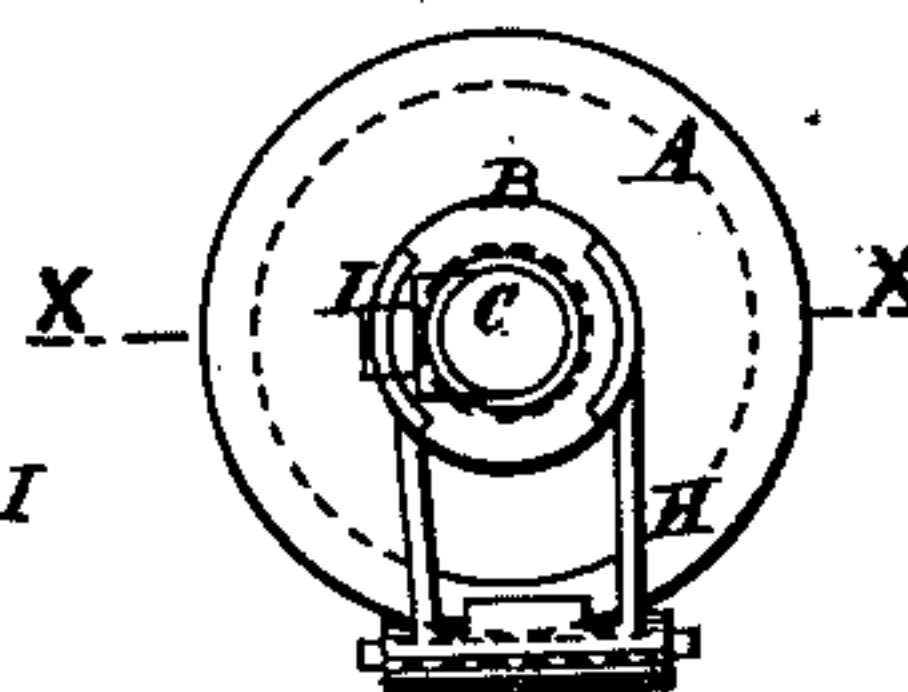
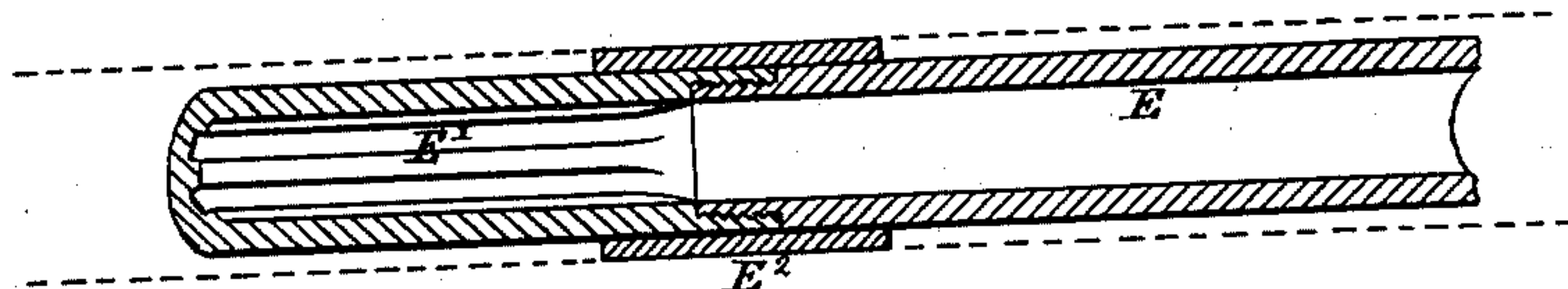


FIG: 4



Witnesses,

J. A. Rutherford  
Robert Everett

Inventor,  
Richard Morris.

By James L. Norris.  
Atty.



# UNITED STATES PATENT OFFICE.

RICHARD MORRIS, OF LEWISHAM, COUNTY OF KENT, ENGLAND.

## AUXILIARY RIFLE-BARREL.

SPECIFICATION forming part of Letters Patent No. 252,241, dated January 10, 1882.

Application filed October 5, 1881. (No model.) Patented in England April 25, 1881, and in Italy June 30, 1881.

*To all whom it may concern:*

Be it known that I, RICHARD MORRIS, a citizen of England, residing at Lewisham, in the county of Kent, England, have invented an improved appliance to breech-loading fire-arms for facilitating practice in sighting and aim, and for other purposes, (for which I have obtained a patent in Great Britain, No. 1,773, bearing date April 25, 1881, and in Italy, bearing date June 30, 1881,) of which the following is a specification.

My invention relates to an improved construction of inner barrel for breech-loading rifles and other fire-arms, either for enabling small cartridges to be employed therein for aiming and sighting practice in rifle drill or for converting smooth large bore fire-arms into rifles.

In fitting inner barrels to fire-arms, heretofore these have been made of a single piece inserted at the breech end of the barrel, and this has necessitated the removal of the sliding breech-bolt or otherwise removing the breech mechanism before the inner barrel could be inserted or removed. According to my present invention I obviate this inconvenience by forming the breech end of the inner barrel of a separate piece, of a length equal to or less than that of the ordinary-sized cartridge, so that this part of the inner barrel can be inserted into the breech-chamber of the rifle-barrel in the same manner as an ordinary cartridge, while the other part of the inner barrel is passed in through the muzzle of the rifle and is screwed with its inner end into the front end of the other part, after which the combined tube is fixed securely in the barrel by a screw-nut at the nozzle end. The breech part of the inner tube is by preference provided with a sliding piece, that is acted upon by the ordinary extractor of the gun, so as to cause it to extract the small cartridge-case from the inner barrel. In cases where the small cartridges employed are fired by percussion at their edges the hole in the breech-block and the lining-tube are made so much eccentric to the bore of the rifle as to bring the edge of the small cartridge in line with the striker.

Figure 1 of the accompanying drawings shows a longitudinal section of a rifle-barrel on line X X, Fig. 2, with an inner tube applied to it

for the purposes of my before-described invention. Fig. 2 shows an elevation of the breech end thereof.

Into the breech end of the rifle-barrel A is slid the block B, taking the place of the ordinary cartridge, fitting the breech-chamber and bored to receive a very small cartridge, C. Into the muzzle of the barrel is slid, first, a flanged tube, D, and through this is passed a small tube or barrel, E, the bore of which corresponds with the bore of the block B, into which its inner end is screwed, as shown, the front end being made to project some distance through the barrel A, and provided with a head, F, by which it can be turned for this purpose. The front end of the barrel E has an external screw-thread, on which is a nut, G, so that when it has been screwed into the block B both parts can be securely held in the rifle-barrel, without any special appliance to the latter, by screwing up the nut G so as to bear against the flanged end of the tube D.

It is preferred to provide means for extracting the case of the small cartridge by means of the ordinary extractor, H, of the rifle. For this purpose the block B may be provided with a sliding piece, I, the inner edge of which passes under the rim of the small cartridge C, while its outer edge passes in front of the extractor H, (to leave room for the fork of which the block has grooves formed on each side, as shown,) so that the forward motion of the latter will at the same time cause the slide I to push out the small-cartridge case.

It will be evident that the slide I might be dispensed with if the base of the small cartridge be provided with a disk of a diameter corresponding with that of the base of the ordinary-sized cartridge used with the rifle, so that the extractor H can act directly on such disk.

It will be seen that the above contrivance can be easily and rapidly attached to and detached from the rifle, and be adapted for use with any description of breech-loading rifle, whether with central or rim fire. It may also be applied with advantage for converting a gun of large and smooth bore—such as a fowling-piece—into a rifle.

As it would be very difficult and expensive to manufacture the entire part E of the inner



barrel of steel with rifling grooves, I prefer to construct it of two separate lengths, as shown at Figs. 3 and 4, of which the rear part, E, is of copper, while front part, E', only is of steel. The tube E has a smooth bore of a diameter equal to that of the bullet, while the diameter of E' at the bottom of the rifling grooves is the same as that of E, the rifling-lands therefore projecting inward from such diameter. The joint of the two tubes may either be formed by screwing, as shown to an exaggerated scale at Fig. 4, or by soldering or brazing, and the rifle lands of the tube E' are rimed off so as to die away to nothing at the joint, as shown, so that the bullet takes the rifling gradually as it passes the joint. The joint is by preference covered by a sleeve, E', soldered on, the outer diameter of which fits the bore of the rifle, as indicated by the dotted lines, Fig. 4, thereby preventing any sagging of the tube within the barrel.

The copper tube E may with advantage be made equal to two-thirds and the steel tube one-third of the entire barrel.

Having thus described the nature of my invention and in what manner the same is to be performed, I claim—

An inner barrel for rifles or small arms, consisting of a removable tube, E, inserted from the muzzle end and screwed into a breech-block, B, inserted from the breech end and secured by a screw-nut, G, substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 16th day of September, A. D. 1881.

RICHARD MORRIS.

Witnesses:

CHAS. D. ALEEL,  
OLIVER IMRAY.