

Sheet 1.

Major F. Wabbel's Invention
in

Drill Arms for Counter Bayonet Exercise,

PATENTED AUG 1 1871

2 Sheets
117702

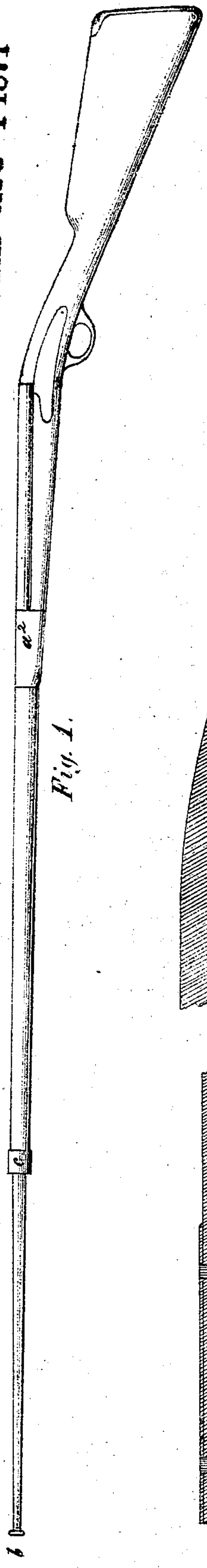


Fig. 1.

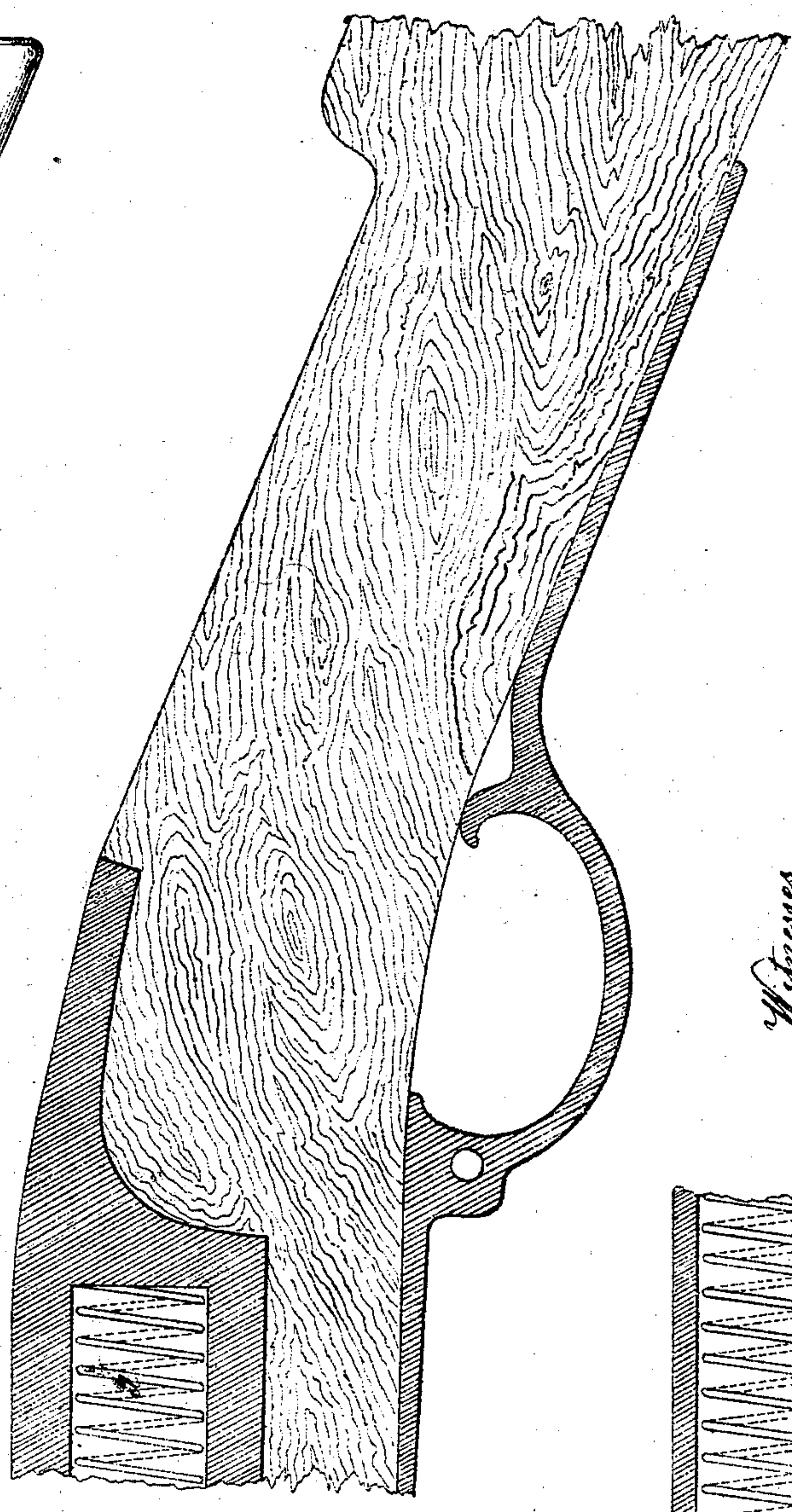


Fig. 2.

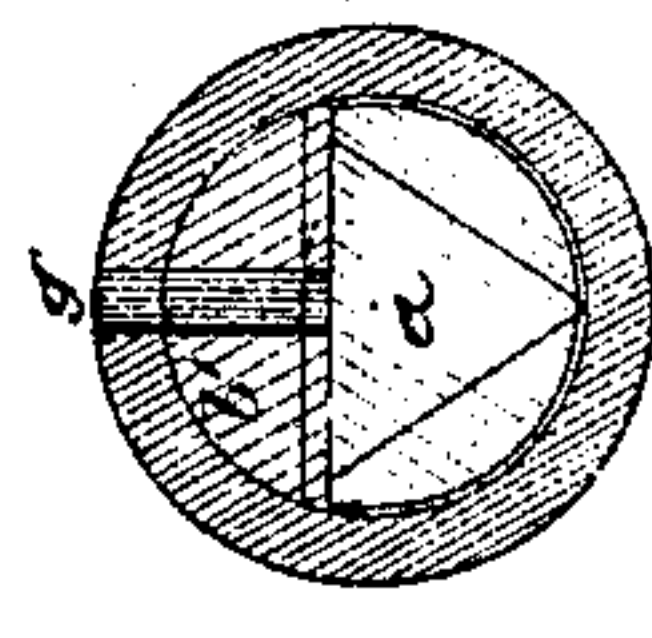


Fig. 3.

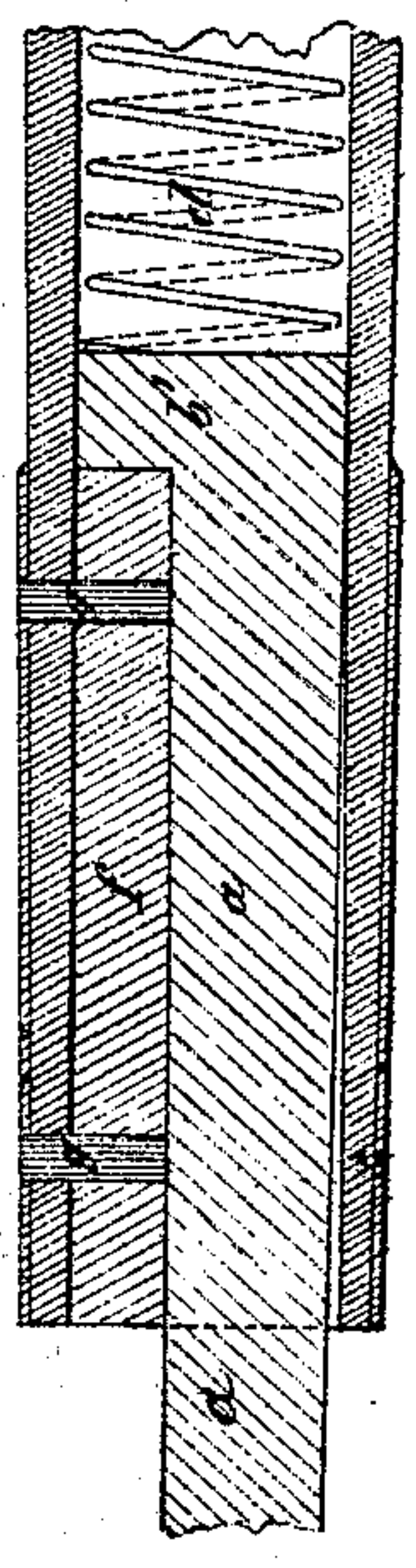
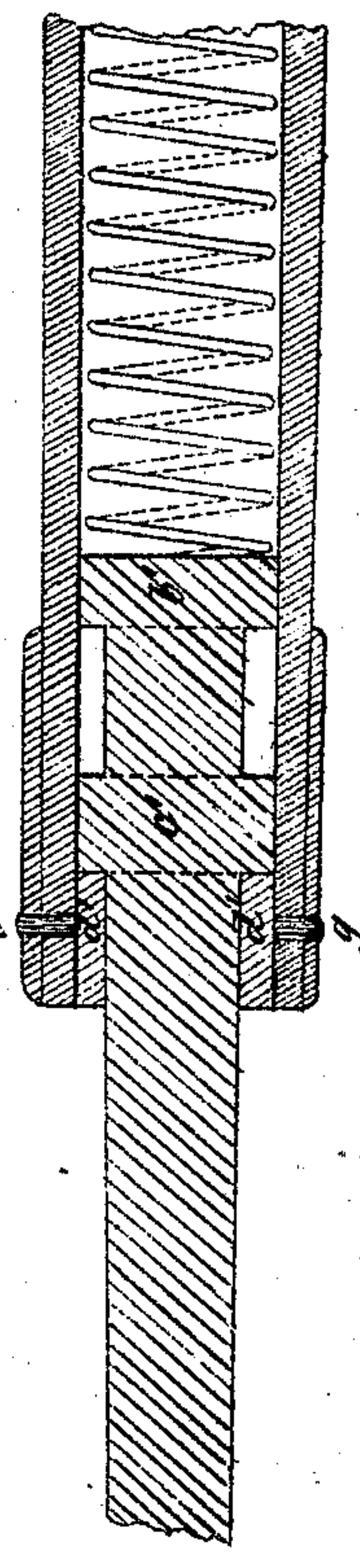


Fig. 4.



Witnesses
Oliver C. Young
Carl G. W. Lindberg

Inventor:
Fred Wabbel

Major E. Washfell's Invention
in
Drill Arms for Counter Bayonet Exercise,
II.

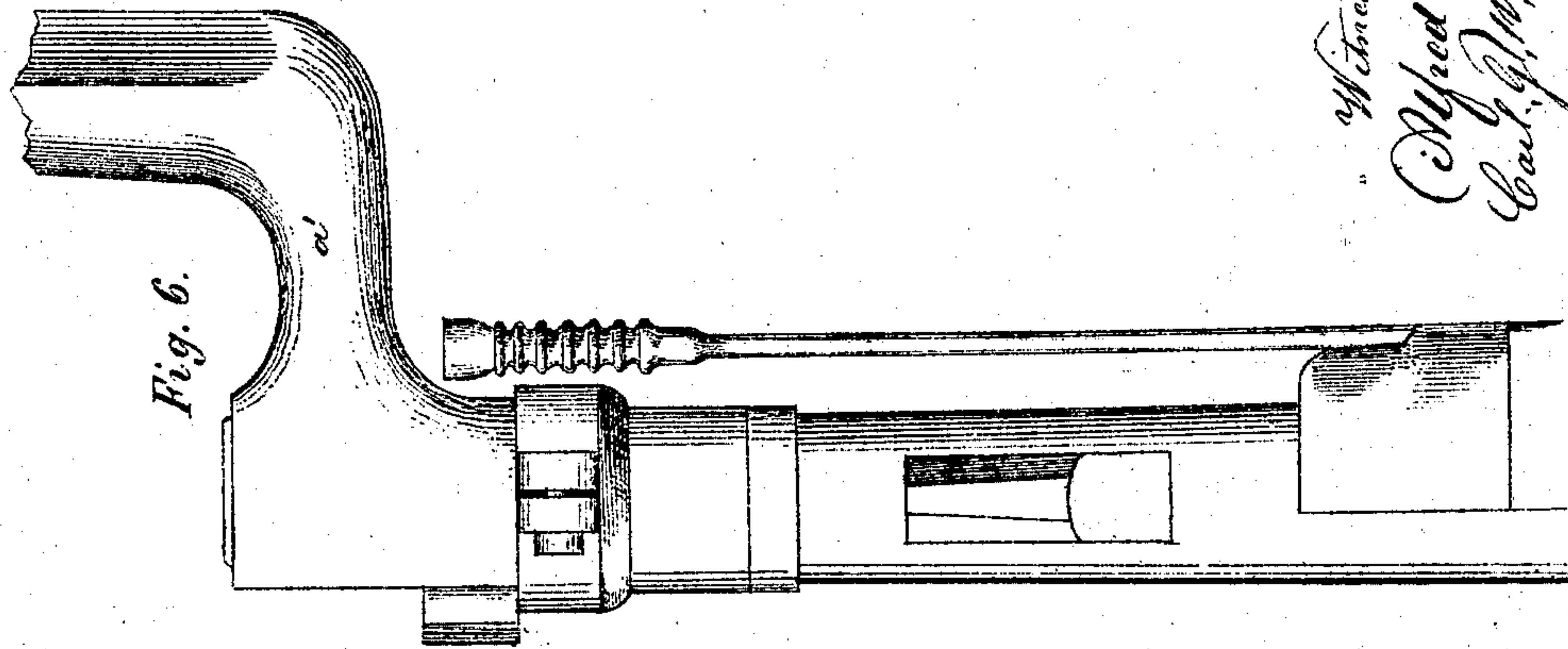


Fig. 6.

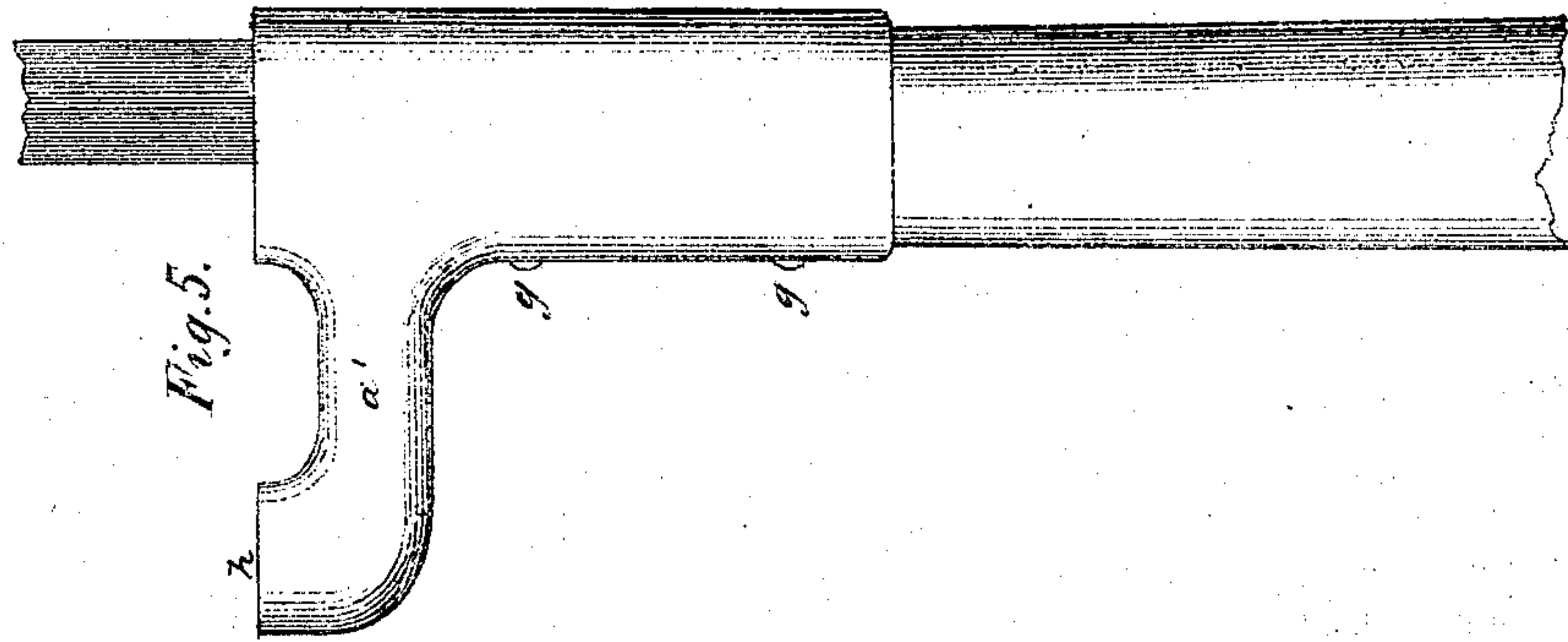


Fig. 5.

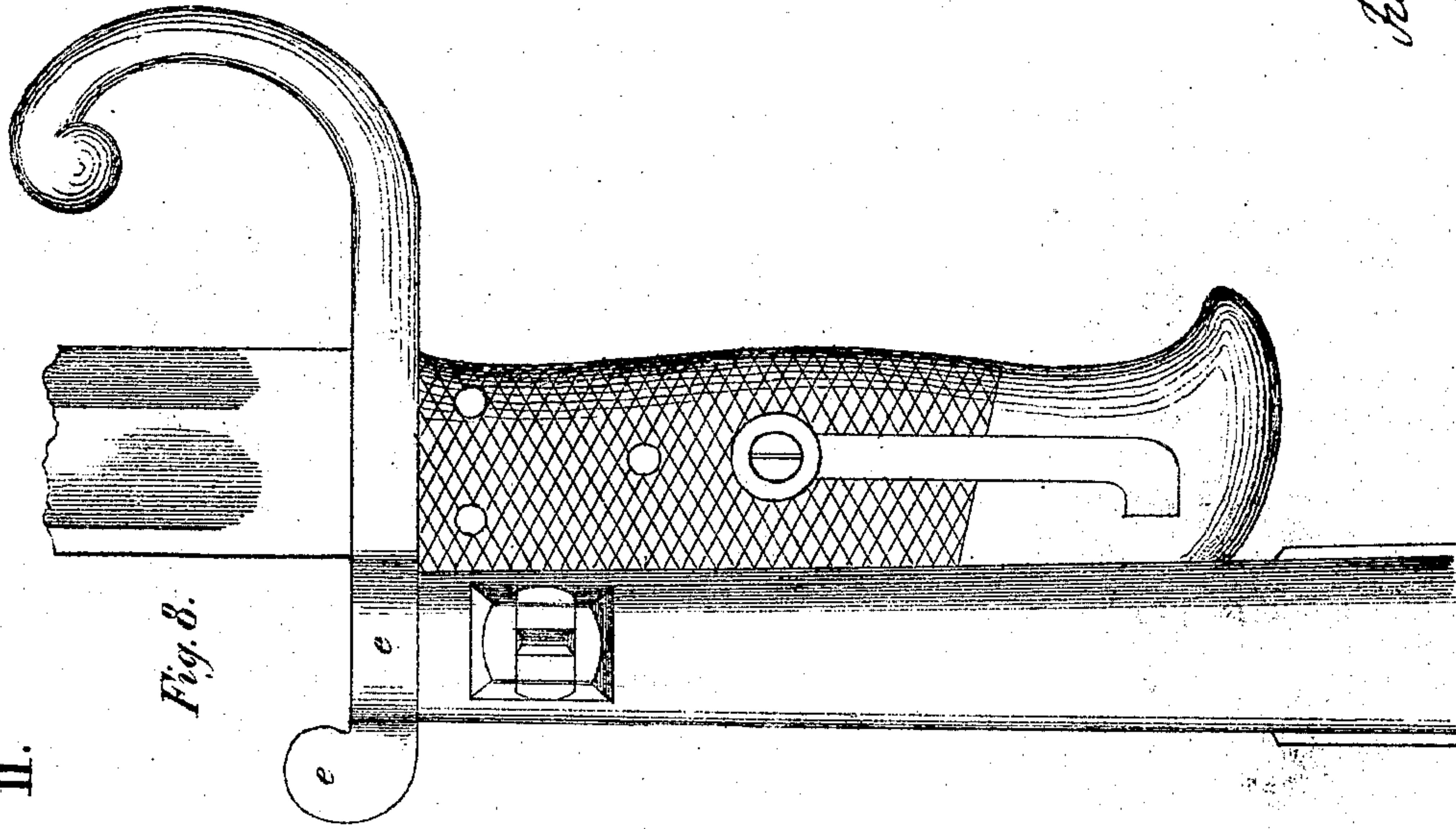


Fig. 8.

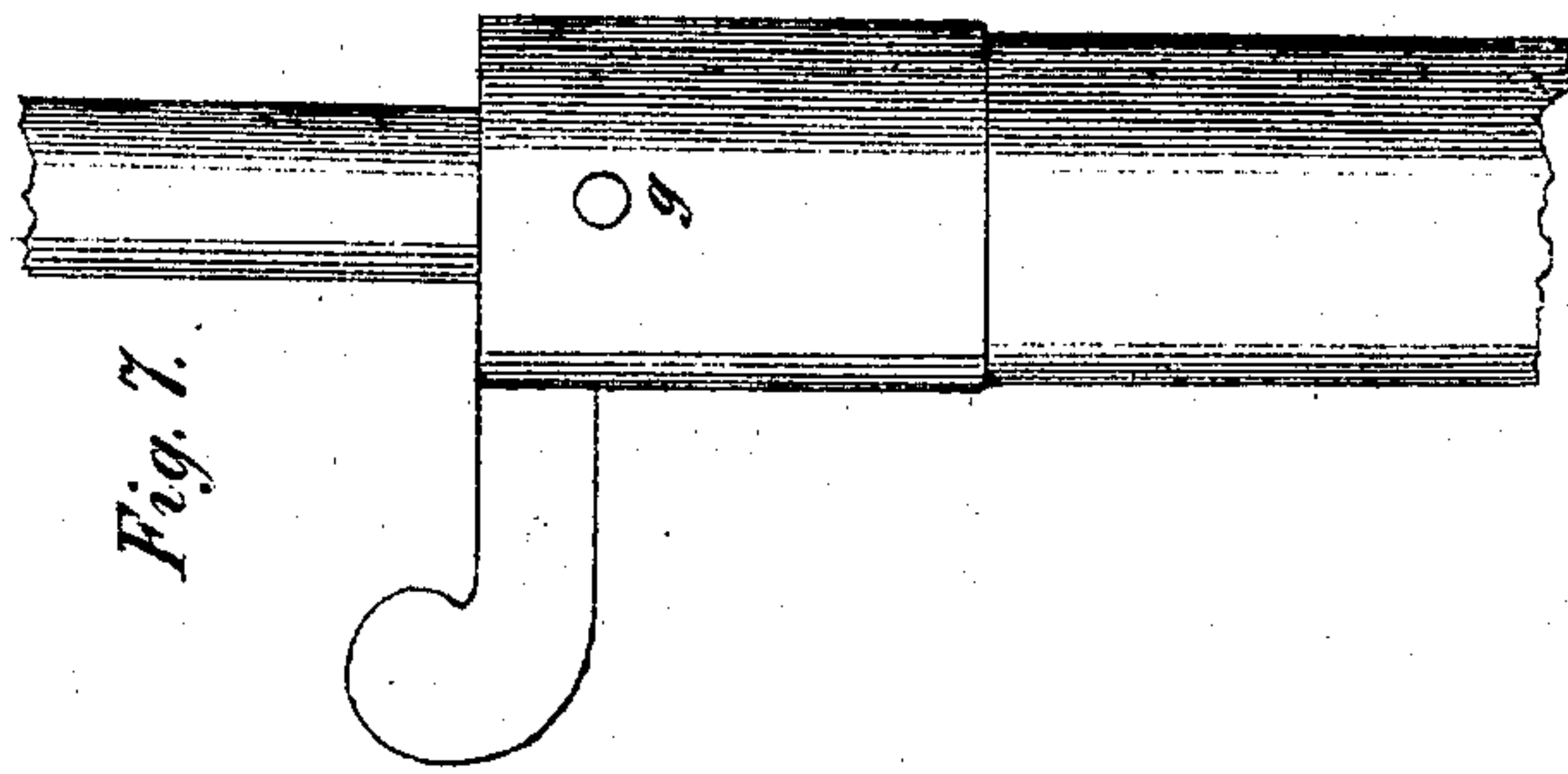


Fig. 7.

Witnesses
Clyde E. Young
Capt. J. W. Hamilton

Inventor:
Edwin H. H. H.

UNITED STATES PATENT OFFICE.

FREDRIK WAHLFELT, OF STOCKHOLM, SWEDEN.

IMPROVEMENT IN DRILL-BAYONETS.

Specification forming part of Letters Patent No. 117,702, dated August 1, 1871.

To all whom it may concern:

Be it known that I, FREDRIK WAHLFELT, a major in the royal Swedish army of Stockholm, in the Kingdom of Sweden, have invented a new and useful Improvement in Drill-Arms, of which the following is a specification:

My invention consists of a gun for use in bayonet-drill, in which the bayonet is made to slide in the barrel of the gun, being held by a coiled spring, and is provided with a round knob, so that when the point of the bayonet comes in contact with any object it will slide into the barrel, and be thrust out of the same again after the contact by means of the spring. It further consists in a certain method of altering small arms and their bayonets unfit for further service to such drill-arms.

In the drawing, Figure 1, sheet 1, is a side elevation of my improved drill-arm for bayonet-exercise. Fig. 2, sheet 1, is a longitudinal central section of the same. Fig. 3, sheet 1, is a vertical cross-section in line *x x*, Fig. 2. Fig. 4, sheet 1, is a longitudinal central section of part of the barrel and altered bayonet, showing a modification. Figs. 5, 6, 7, and 8, sheet 2, are side elevations of the muzzle portion of the gun-barrel and bayonet, showing my method of altering small arms unfit for other service to drill-arms.

In course of time a large number of small arms of standing and other armies becomes unfit for service, and if injured beyond reasonable repair has to be thrown aside or sold for what can be got for the material.

My invention has for its object the utilization of such arms for further active service by altering them to drill-arms, by the use of which the constant use of the serviceable arms may be avoided and thus much of their wear and tear obviated.

I alter such arms in the following manner: The lock is entirely removed and the plate merely replaced to cover the opening in the stock where the lock was placed. Of the mountings of the gun the butt, side plates, and bow are retained, and the rest of the mountings, inclusive of the ramrod, entirely removed. Having determined the center of gravity of the gun after the necessary alterations, the fore part of the stock is cut off five inches from said center of gravity. The remaining part is then reduced at the end and with the barrel surrounded or inclosed from such

center of gravity outward with a thin iron ferrule, *a*², made to fit over the parts. Such ferrule may be made of any of the removed mountings, if they can be made to fit. If the bayonet is sufficiently strong yet to be used in this alteration, a small circular knob, *b*, is secured or formed on its point, and the edges of the bayonet ground down so that the bayonet assumes the triangular shape shown at *a*, Fig. 3. The socket of the bayonet is cut off and riveted around the muzzle of the gun, as shown at *c*, to strengthen it, while its arm or bend *a*¹, Fig. 6, is straightened, and part of it forged into a disk, *b'*, of such diameter as to slide freely within the barrel of the gun, the said disk *b* extending upwardly beyond the round body of the rear part *a*¹ of the bayonet, so as to form a shoulder, which, when the bayonet is extended out from the barrel, bears against a small iron piece, *f*, held in the muzzle of the gun by rivets *g*, and which prevents the bayonet from sliding entirely out from the barrel of the gun. A coiled or spiral spring, *d*, bearing with one end against the breech inside of the barrel and with the other against the disk *b* of the bayonet, keeps the latter always in an extended position. Should the bayonet of the gun so altered be too weak or otherwise unfitted for the purpose, a steel rod may be cheaply formed to take its place; and such rod may be formed round and with two disks, one, *b'*, to form a bearing for spring *d*, and another, *c'*, to form a bearing against a steel ring, *d'*, welded into the muzzle of the gun or held in it by rivets *g*, as clearly shown in Fig. 4. The muzzle of the gun may be in either case fitted with a small cap or piece welded or otherwise held in it, having an opening of the shape and size of the bayonet used, and through which the same may slide in and out, and which cap or piece serves as a guide to keep the bayonet-blade steady and in a proper line. Fig. 5 shows a slight modification. The same changes are made as described and shown in Figs. 2 and 3, but with so large a portion of the bayonet-arm or bend *a* remaining on the socket that the surface *h* of the cut falls into the same plane with the muzzle of the gun after the socket has been riveted around it, and this remaining part of the arm or bend *a*¹ is used in drilling the parrying, which is done with the arm or bend of the usual bayonet, as shown in Fig. 6. In Fig. 7 the same object is shown as attained when the saber-bayonet is

used with the gun. In this case nothing but the ring part *e* of the bayonet can be used.

I can give to this improved drill-arm a still greater resemblance to the original arm, in which the bayonet is not in a concentric line with the barrel, but outside of the same, by merely reducing the size of the socket of the bayonet so that the same will slide inside of the barrel instead of outside, and by providing the barrel of the gun with a longitudinal slot or slit, in which the arm or bend of the bayonet is free to move, so that when the bayonet-point in the drill strikes any object the bayonet-socket compresses the spiral spring and the arm or bend glides back through the slit in the barrel, leaving the bayonet-blade outside. But as this construction tends to weaken the arm and does not allow any rigidity of the bend, which is used in parrying, this form of alteration is not so recommendable, as it fits the weapon for the drill in bayonet-thrusts only, rendering it unfit for the teaching or practice in parrying.

The great advantages gained by this improvement are, great saving in the arms for active service, which need not be used at all except during practice in firing, on duty, or at parades, and which, consequently, escape all use and accidental injury in bayonet and other exercise; and also the utilization of an immense number of small arms which have become unfit for service, beyond repair, and which, in their altered state, are a great deal lighter, and consequently enable the soldier to drill with a great deal less fatigue than the use of the complete serviceable arm admits of.

What I claim as new, and desire to secure by Letters Patent, is—

Small arms for drill having the bayonet sliding on the inside or outside the entire length of the gun-barrel, and provided with a spring to operate the bayonet, substantially as described.

Witnesses: FREDRIK WAHLFELT.

ALFRED ELFVING,
CARL. G. W. LINDBERG.