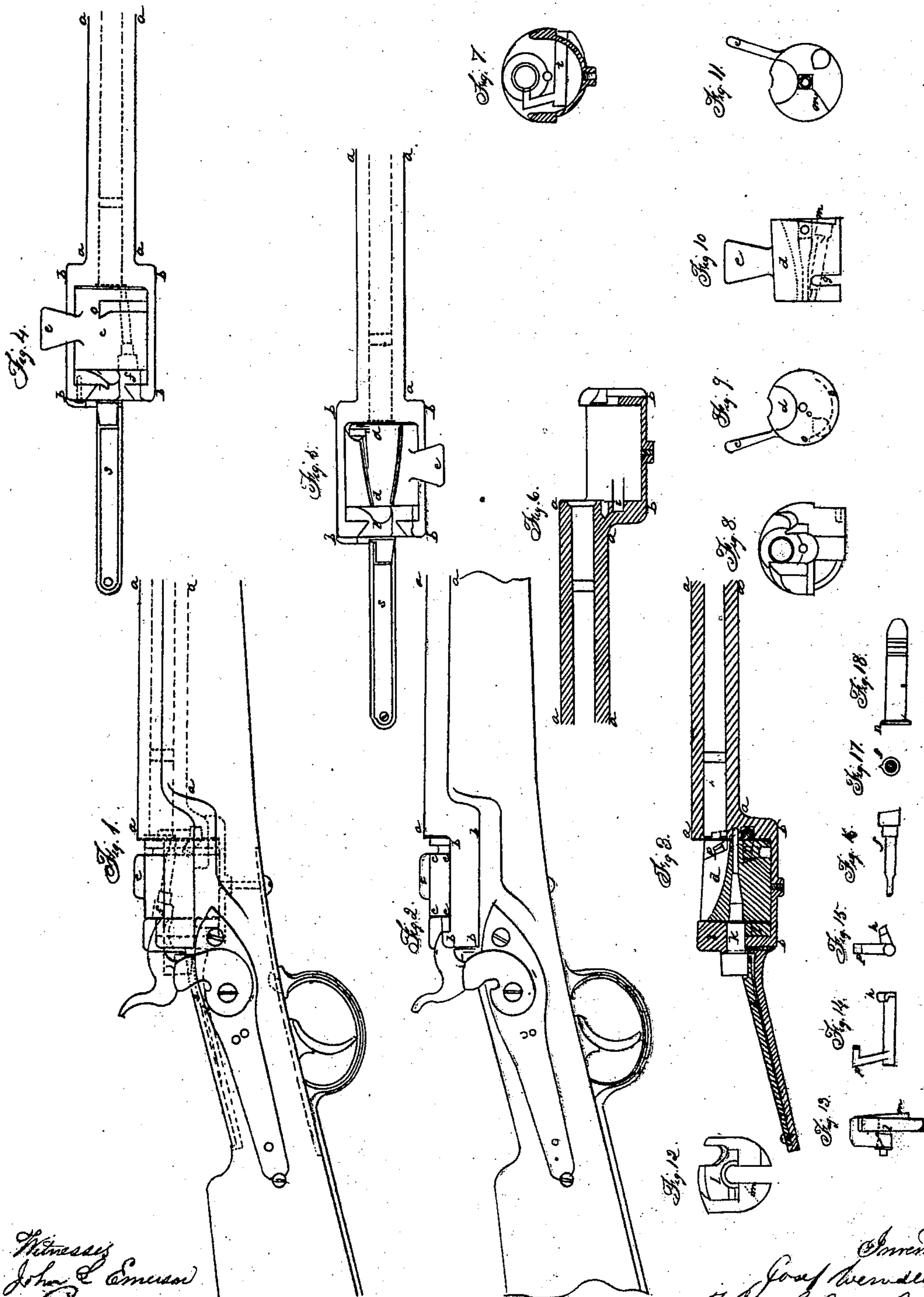


J. Werndl.

Breech-Loading Fire-Arm.

N^o 74737

Patented Feb. 18, 1868.



Witnesses
John C. Emerson
Per. A. L. L.

Inventor
J. Werndl
Thos. G. Ellis Attorney

United States Patent Office.

JOSEF WERNDL, OF STEYER, AUSTRIA.

Letters Patent No. 74,737, dated February 18, 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, JOSEF WERNDL, of Steyer, Upper Austria, in the Empire of Austria, have invented a new and improved Breech-Loading Fire-Arm; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings.

Figure I shows a side view of the visible and concealed parts of the arm, when put together.

Figure II shows the visible parts of the rifle.

a a is the breech end of the barrel, to which a prolongation, *b b*, is attached, containing the locking-apparatus, the upper part of which is visible at *c c*. This prolongation forms a cylindrical chamber.

Figure III is a longitudinal section of the rifle, open, showing the axis *k*, which passes through the locking-cylinder, resting in the barrel, under the bore, and also passing through the slide *l*, (Figs. III, XII, and XIII.)

By Figs. III, V, and IX, it will be seen that this cylinder has a recess, *d d*, upon one side. In order to load the rifle, the handle *e* is turned upwards, by which the recess *d*, Fig. III, is placed before the barrel, in such a way as to be opposite the bore, when the cartridge is to be inserted. This done, the cylinder is replaced, by turning back the handle *e* to the position it has in Figs. I, II, and IV, and the arm is ready for firing.

On the back part of the cylinder is an inclined or screw plane, *m*, Figs. X, XI, which fits a similar plane in the sliding piece *l*, which forms the breech-block, against which the cylinder recoils, (Figs. XII and XIII.) By this means, the cylinder, in being turned to secure the charge, is moved closer to the barrel, and presses in the cartridge as tight as possible. I suppose a copper cartridge to be used for the charge, having a rim, to prevent its falling through the barrel, (Fig. XVIII.) In the middle or rim of the base, *n*, of the cartridge, is placed the fulminate. The discharge of the arm is effected by the cock striking a firing-pin, which transfers the shock to the fulminate. This firing-pin passes through the cylinder, and is shown at *f*, Figs. I and IV.

To remove the cartridge, I make use of the following arrangement: An angle-lever, with movable arms, is inserted in the rear end of the barrel, in such a way that the rim of the cartridge rests on one of the arms. This lever rests in the recess *i*, Figs. VI and VII. The groove *g*, Figs. IX and X, on the outside of the cylinder, allows the end of the lever *h*, Figs. XIV and XV, to pass, until it strikes the end, *o*, of the groove, which strikes the arm *h*, and presses out the other arm, *p*, to throw out the shell of the cartridge. The end of the axis *k* is squared outside of the slide *l*, and the flat sides rest on the spring *s*, when the locking-cylinder is open or closed, the spring *s* serving to hold the cylinder in its position when open or shut.

This invention relates to breech-loading fire-arms, and has for its object a novel arrangement for opening and closing the breech. For this purpose, I form or fix at the breech-end a recessed or concave block or seat, which may be described as forming an extension of the lower part of the barrel. In this seat works a turning-piece or block, which forms the closure of the breech, and which is hollowed, concave, or recessed at one part of its surface. It turns or works on, or as if on, an axis or pivot, its real or imaginary axis of rotation being in the longitudinal direction of the barrel. It must be observed that the turning-piece or closure, when worked in either direction, always remains and works in its seat, and therefore is always in a line with the barrel, instead of being hinged to the seat of the side. It is worked by a thumb-piece or other convenient appliance. When the breech is to be opened, the turning-piece or closure is turned in such direction as to bring its recessed part uppermost, or so that such part shall be directed toward and in a line, or nearly in a line, with the bore of the barrel. In this position, a cartridge may be readily introduced therein. When the breech is to be closed, the turning or closing-piece is turned in the contrary direction to that of its opening or first motion, in such manner that a solid part of the turning-piece or closure is brought close against the opening of the barrel, whereby it is closed.

When cartridges having rims or flanges are used, a spring-piece may be fitted at the breech-end of the barrel, so as to engage under the rim of the cartridge, when forced home; and when the breech is opened, the spring-piece, being released, pushes the spent cartridge backward.

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

1. The oscillating cylindrical breech-block, provided with a recess or groove for admitting the cartridge into the chamber of the barrel, and moved forward by an oblique or spiral shoulder on its base-pin, when constructed and operating substantially as described.

2. I also claim the combination of the barrel *a*, the hollow cylinder *b*, the locking-cylinder *c*, the firing-pin *f*, the groove *g*, the ejecting-lever *h p*, the axis *k*, with its squared end, the spring *s*, and the sliding breech-block *l*, with its inclined surface, *m*, the whole being constructed and arranged substantially as described, for the purpose of a breech-loading fire-arm.

JOSEF WERNDL.

Witnesses:

HUGO VOOT,

DAVID F. KORHAMMER.