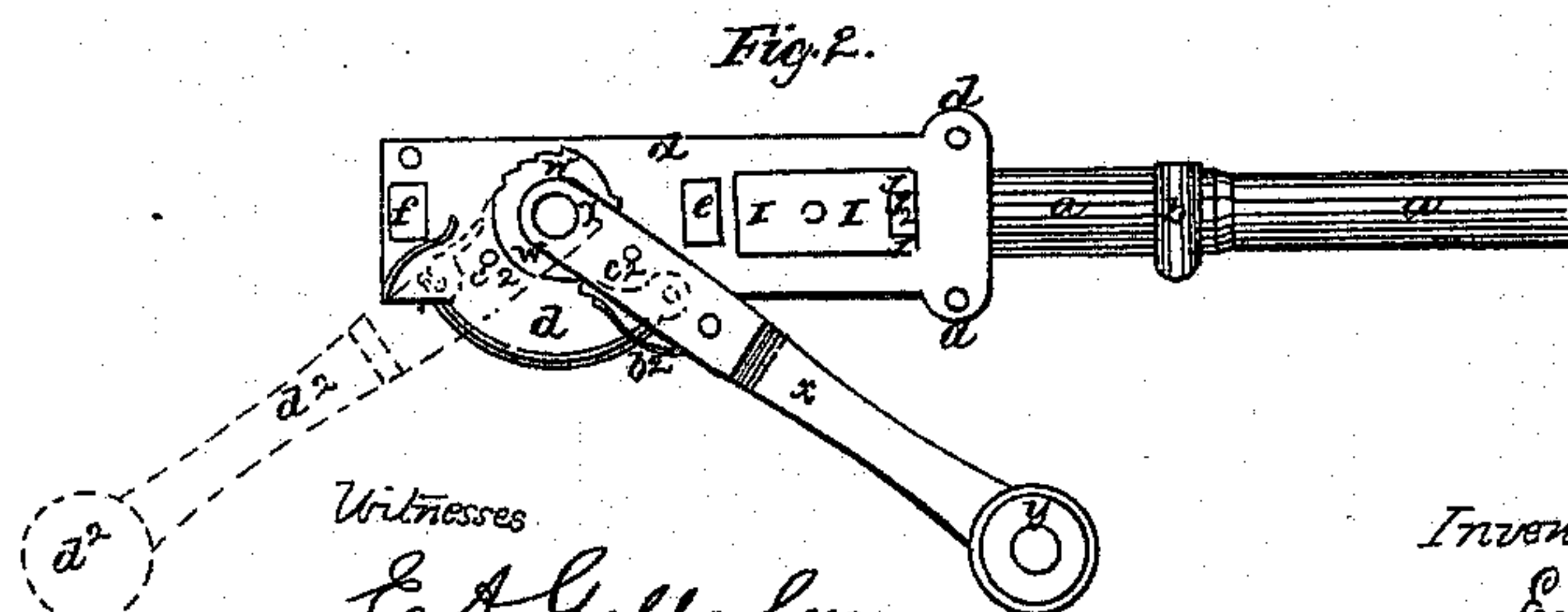
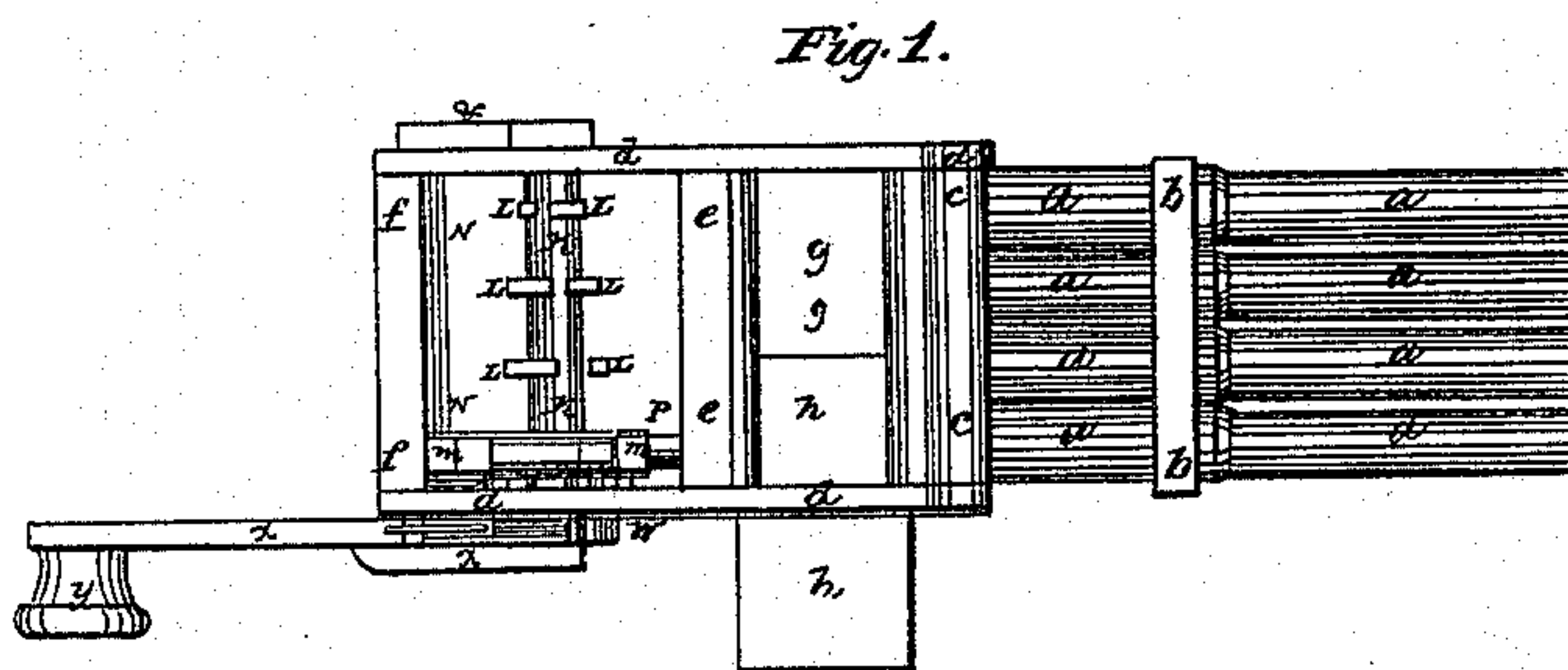
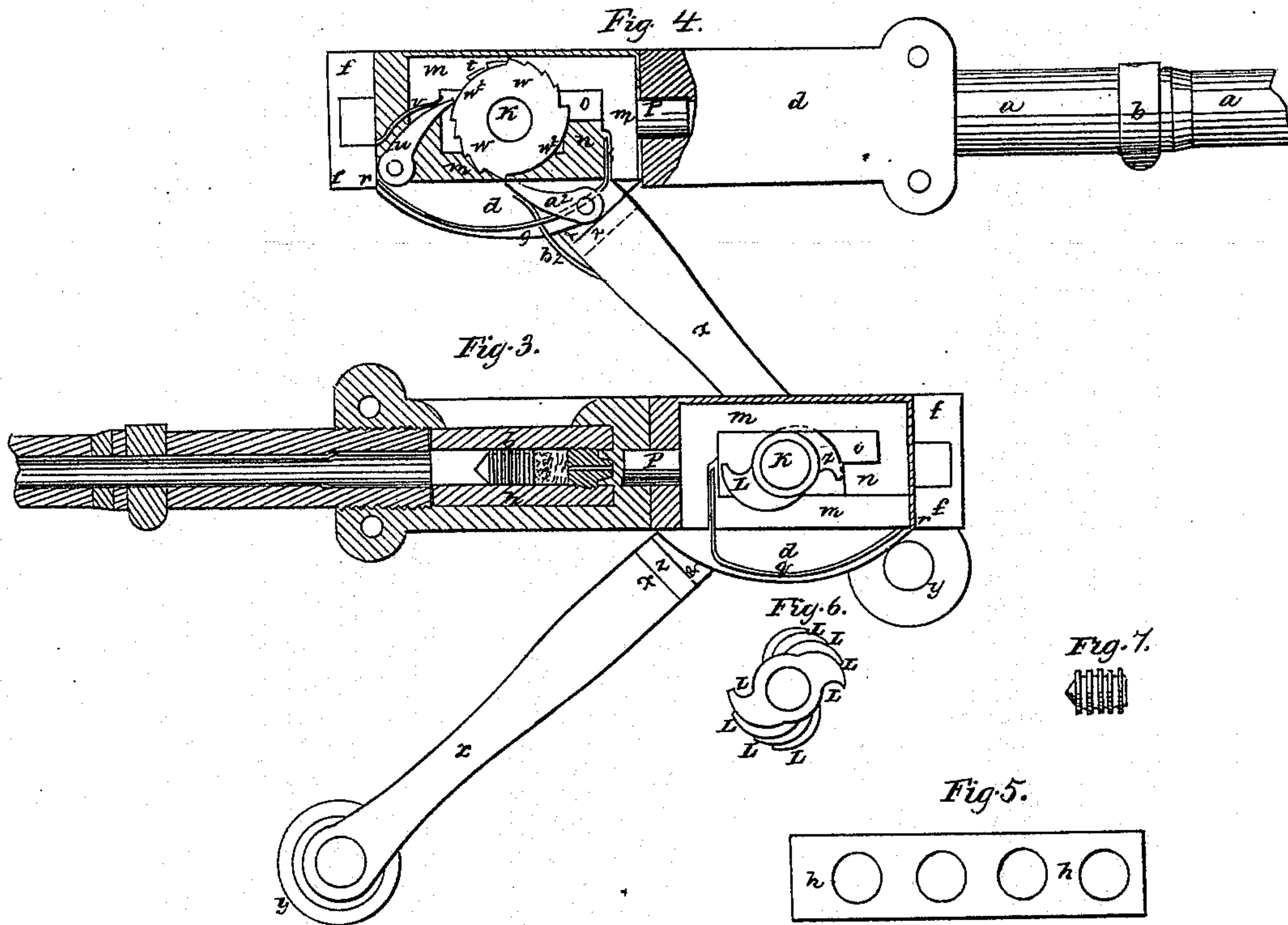


Machine Gun.

No. 62,281

Patented Feb. 19, 1867



Witnesses

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ENRIQUE A. MEJIA, OF MEXICO.

Letters Patent No. 62,281, dated February 19, 1867.

IMPROVEMENT IN MANY-BARRELLED GUNS.

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, ENRIQUE A. MEJIA, of the city and republic of Mexico, have invented and made certain new and useful improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a top view of the fire-arm.

Figure 2 is a longitudinal side view.

Figure 3 is a longitudinal sectional view, exposing a portion of the mechanism and the cartridge.

Figure 4 is a partial sectional view, also showing the mechanism.

Figure 5 is a front view of the detachable cartridge chamber or charge magazine.

Figure 6 is a view of the cam cylinder or trigger device.

Figure 7 represents the peculiar-formed bullet or projectile used in connection with my breech-loading fire-arms.

The nature of my improvements in breech-loading fire-arms relates more particularly to the construction and arrangement of the new devices for loading and discharging a series of two or more parallel barrels, connected on to a suitable frame in such a manner as to admit of using, by hand in a portable manner, said fire-arm as a weapon of defence in travelling through unsafe regions of country by stage or other conveyance.

The construction and operation of my improvement I will herewith describe, so as to enable others to make and use the same.

In fig. 1, *a a a a* mark four gun or pistol barrels, of suitable size, arranged parallel to each other, being confined together near the middle of their length by a cross-tie piece, *b b*, the but-ends of the barrels being inserted securely into the end rail *c' c'* of a frame, *d d d d*, *e e*, *f f*, formed with a compartment enclosed with a bottom or under-framing, *g g*, within which compartment is fitted, to slide in and out when desired, the detachable chamber or magazine *h h*, which enters through a smoothly-fitting mortise formed in the right-hand side of the frame, as marked by *i i*, *J J*, in fig. 2. At *K K* is indicated an axle, of suitable diameter, having formed around its circumference at equal intervals S-like or double cams, *L L L L*, the ends of which, as arranged, are not in one and the same right line or plane, but in different planes, which are at equal distances from each other, the ends of each cam lying in a right line or plane of its own, as will be seen more distinctly by reference to fig. 6. At *m m* is a plunger block or hammer head, mortised or cut through horizontally, as indicated by the dark or shaded formation in figs. 3 and 4, leaving a small notch or step-like formation, *n*, and a recess, *o*, said plunger block having formed on or attached to one end a plunger, *p*, of required length and of corresponding diameter to the bore or cartridge chamber. The plunger block *m m* is also mortised through vertically, as may be seen by reference to the smaller fig. 1, and each double-cam *L L* works or rotates within one of said plunger blocks, although but one is represented in the drawings, while four cams are represented as designed, said cams being arranged to rotate in the longitudinal direction of the movement of the plunger block *m m*. At *q r s* is marked a wire spring, either flat or round, one end of which is inserted securely into the but-end rail of the frame *f f*, as shown in figs. 3 and 4; said spring being bent or curved as shown, the forward portion being bent upwardly, vertically, and lying or pressing within a groove or depression formed in the vertical mortise of the plunger block, as indicated at *s*, in figs. 3 and 4. Between the side of the plunger block *m m* and the framing *d d* is arranged a continuous or circular ratchet-wheel, *t*, faintly shown in figs. 1 and 4, the teeth of which are opposite the rear end of the frame *f f*. Against the teeth of said ratchet rests a small detent, *u*, pressing against which is a wire spring, *V*, and to the end of the axle *k k*, on the outside of the framing *d d*, is secured an interval ratchet-wheel *w*, formed with two series of five teeth, at equal intervals between each series or set of teeth, as shown in figs. 2 and 4. At *x x y* is shown a winch handle or trigger hammer, connected to a cross-strip, *z z*, fig. 1, and indicated by the dots in figs. 3 and 4, this cross-strip passing beneath the frame *d d*, and connected on to a short strip, &c., (figs. 1, 3, and 4,) the end of the axle *K* being fastened or tensioned therein, thus making a yoke-like connection of the winch handle *x x* with the axle *K*, as seen in fig. 1. Attached to the inner side of the winch handle *x x* is a suitable moving detent or pawl, *a²*, fig. 4, with a wire spring, *b²*. The two circular dots, *c¹² c¹²*, indicate small holes, one in the winch handle and one in the side of the frame *d d*, for the insertion of a pin to hold or lock the winch handle back in position, so as to keep the plunger block *m m* at full

cock, when the winch handle is in the back position indicated by the dots $d^2 d^2$, fig. 2, and as shown in fig. 1. At fig. 5 is shown a full-size detachable chamber, or magazine, with the four circular perforations within which the charges or cartridges are deposited. In fig. 2, at $i i$, J J, is shown an end view of the detachable chamber, and J² marks the form of a groove or channel made through the length of the rear side, and within which groove, opposite each bore, is secured a nipple or cap piece, as shown in the sectional view, fig. 3. At fig. 7 is shown my peculiar-shaped bullet, formed with a series of five collars or rings, and having a short, abrupt cone end, the base of the cone not any greater in diameter than the body of the bullet. In order to securely attach the cartridge case to the bullet, the butt end thereof must be formed with a suitable shoulder or rabbet, onto which the cartridge case, enclosing the charge of powder, may be tied or secured in any suitable manner. The spaces between each ring or collar must be the same width as the surface of the collars, whilst the rise of the collars above the surface of the cylinder of the bullet, must be from one-half to three-fourths the width of the collar. The object of this form of bullet is to admit of being used in a smooth-bore chamber, which is slightly larger in diameter than the bore of the barrel, and also to dispense with entirely enclosing the bullet in the cartridge case, and thereby also to allow the bullet to pack or ram itself securely and closely to the bore of the gun, thus preventing windage or escape of the force of the powder around the body of the bullet as it passes through the bore of the gun; for each collar or ring will fold backward, over on to the main body of the bullet, and thereby produce greater force, in conforming closely to the bore of the barrel. In fig. 3 the bullet is shown within the chamber of the detachable magazine, with a sectional view of the cartridge case, showing the charge of powder and the nipple d^2 screwed into the detachable magazine $h h$, which is shown in figs. 1, 3, and 5. In the use of my improvements it is designed to have in readiness a number of the detachable chambers or magazines $h h$ loaded with the bullets and cartridges, so that when the charges of one are expended, another loaded one can be in readiness to be inserted through the mortise $i i$, J J, as shown in fig. 2, and as represented partially inserted in fig. 1, and as seen in section, fig. 3.

The operation of my improvements is as follows, viz: To cock the mechanism, the winch handle $x y z$ is pressed forward towards the barrels, as seen in figs. 2, 3, and 4, which movement brings the detent a^2 immediately against the teeth of the ratchet $w w$, when a half backward movement of the winch makes the half cock, when a second whole movement forward and a second slight backward movement lets the plunger fly forward, thus exploding the charge. In figs. 1 and 3 the plunger p is withdrawn from the cartridge chamber. In fig. 3 the double cam L L is in position of full cock, the end resting against the notch or step n of the plunger block $m m$, and as the winch handle $x y z$, fig. 3, is drawn backward towards the butt end $f f$ of the frame, the double cam L L rotates partially, when the end is released from the notch m , and there being a space at o , the plunger block $m m$ drives forward, forcing the plunger p against the nipple d^2 by the action of the spring $q s$. Owing to the intervals or blank spaces $w^2 w^2$ of the ratchet $w w$, the detent a^2 only catches at intervals against the teeth, whilst the checking or locking detent u will act all the time against the rotating ratchet t , figs. 1 and 4, the object of which is to prevent the axle K and the double cams L L from turning backward, as the winch handle $x y z$ is moved forward, and its interval ratchet $w w$ is rotated. It will be observed that the winch handle $x y z$ has not a continuous rotating movement, but is reciprocated, or moved back and forth, whilst the repeated backward movement causes the detent a^2 to rotate forward the interval ratchet $w w$, and the axle K, with its several cams L L L L. In my improvements I dispense entirely with the gun-lock, trigger, and hammer, and other delicate and intricate mechanism.

I am well aware that two or more, or a series of parallel gun barrels or cannon have been arranged together, and the several charges thereof have been exploded and discharged simultaneously, by devices termed "trip-hammers" and simultaneously-acting triggers; but such parallel arrangements, trip-hammers, and triggers, I do not claim, as they are well known. But what I do claim is as follows, viz:

I claim the construction of a rotating axle provided with and having thereon a series of double cams, L L L L, of the shape shown, and so arranged or disposed around the circumference of said axle as that their ends are situated in different planes, or right lines, relative to each other, as in figs. 1 and 6, each of said cams being situated and working within a vertical-slotted and side-mortised plunger block or hammer-head, $m m$, $n o$, together with the interval ratchet-wheel $w^2 w^2$, the continuous ratchet t , the detents $a^2 u$, the main-spring $q r s$, and the ratchet-spring $b^2 v$; the whole combined with and operated by a hand trigger or winch handle $x y z$, whereby and through all of which the charges or loads of a series of gun barrels or detachable magazines may be exploded and discharged in rapid succession by the backward and forward movement of said winch handle $x y z$, substantially as set forth and described.

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Witnesses:

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