Patents

Improvement in battery-guns

US47631A
United States

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Worldwide applications

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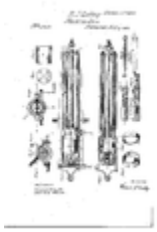
Application events

1865-05-09	Application granted
1865-05-09	Publication of US47631A
1882-05-09	Anticipated expiration
Status	Expired - Lifetime

Info: Cited by (2), Similar documents

External links: USPTO, USPTO Assignment, Espacenet, Global Dossier, Discuss

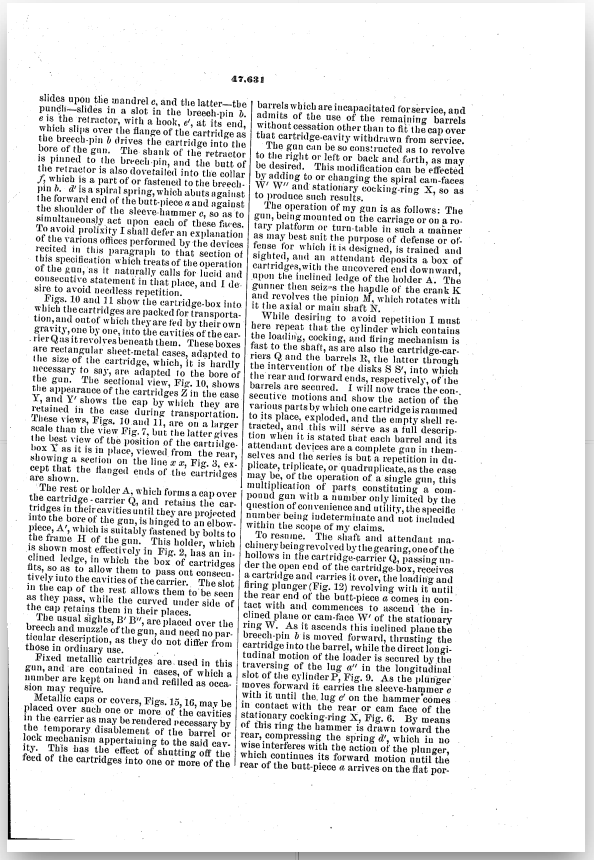
Images (4)




Classifications

F41A9/36 Feed mechanisms for revolving-cannon guns

Description



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slides upon the mandrel *c*, and the latter—the punch—slides in a slot in the breech-pin *b*. *e* is the retractor, with a hook, *e'*, at its end, which slips over the flange of the cartridge as the breech-pin *b* drives the cartridge into the bore of the gun. The shank of the retractor is pinned to the breech-pin, and the butt of the retractor is also dovetailed into the collar *f*, which is a part of or fastened to the breech-pin *b*. *d* is a spiral spring, which abuts against the forward end of the butt-piece *a* and against the shoulder of the sleeve-hammer *c*, so as to simultaneously act upon each of these faces. To avoid prolixity I shall defer an explanation of the various offices performed by the devices recited in this paragraph to that section of this specification which treats of the operation of the gun, as it naturally calls for lucid and consecutive statement in that place, and I desire to avoid needless repetition.

Figs. 10 and 11 show the cartridge-box into which the cartridges are packed for transportation, and out of which they are fed by their own gravity, one by one, into the cavities of the carrier Q as it revolves beneath them. These boxes are rectangular sheet-metal cases, adapted to the size of the cartridge, which, it is hardly necessary to say, are adapted to the bore of the gun. The sectional view, Fig. 10, shows the appearance of the cartridges Z in the case Y, and Y' shows the cap by which they are retained in the case during transportation. These views, Figs. 10 and 11, are on a larger scale than the view Fig. 7, but the latter gives the best view of the position of the cartridge-box Y as it is in place, viewed from the rear, showing a section on the line *x x*, Fig. 3, except that the flanged ends of the cartridges are shown.

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While desiring to avoid repetition I must here repeat that the cylinder which contains the loading, cocking, and firing mechanism is fast to the shaft, as are also the cartridge-carriers Q and the barrels R, the latter through the intervention of the disks S S', into which the rear and forward ends, respectively, of the barrels are secured. I will now trace the consecutive motions and show the action of the various parts by which one cartridge is rammed to its place, exploded, and the empty shell retracted, and this will serve as a full description when it is stated that each barrel and its attendant devices are a complete gun in themselves and the series is but a repetition in duplicate, triplicate, or quadruplicate, as the case may be, of the operation of a single gun, this multiplication of parts constituting a compound gun with a number only limited by the question of convenience and utility, the specific number being indeterminate and not included within the scope of my claims.

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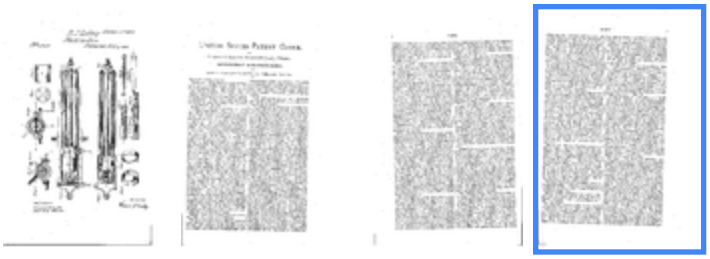
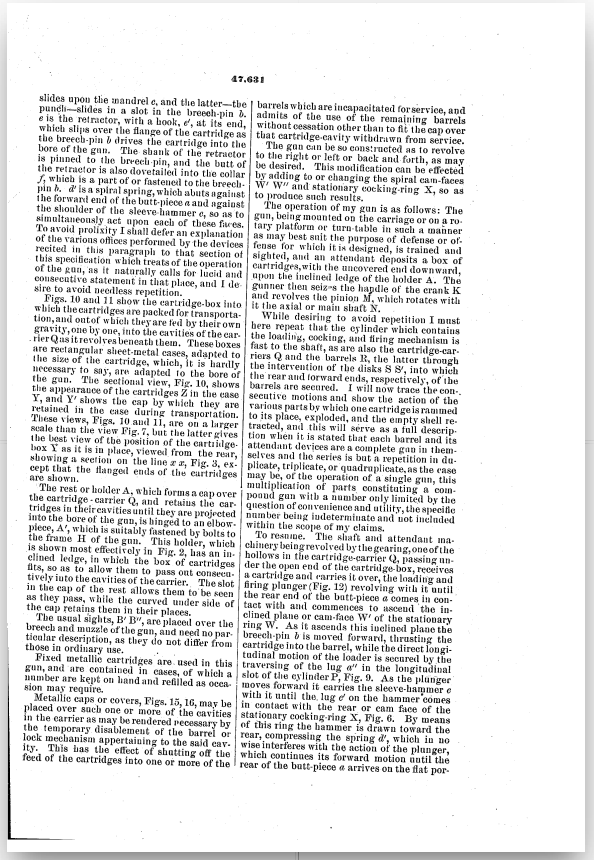


Similar letters of reference indicate corresponding parts in the several figures.

The main characteristic of my invention is a gun having, a series of barrels with a 'carrier and lock-cylinder rigidly fastened to the main shaft and rotating simultaneously'and Fig. ll is a top view ot' the.

Fig. 14 is a rear view ot'thc gun with the' continuously under the rotation of suitable gearing, the cartridges being fed into the cavities ot' the carrier. vdriven endwise into the barrels, then exploded, and the empty cartridgecases withdrawn without any



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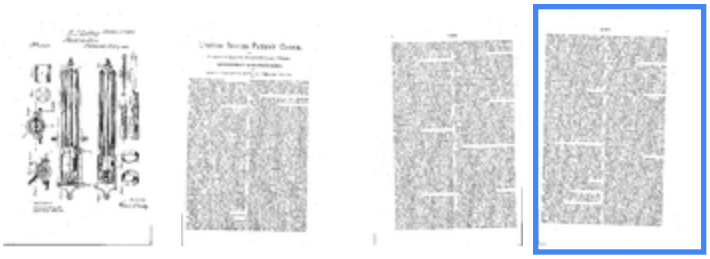
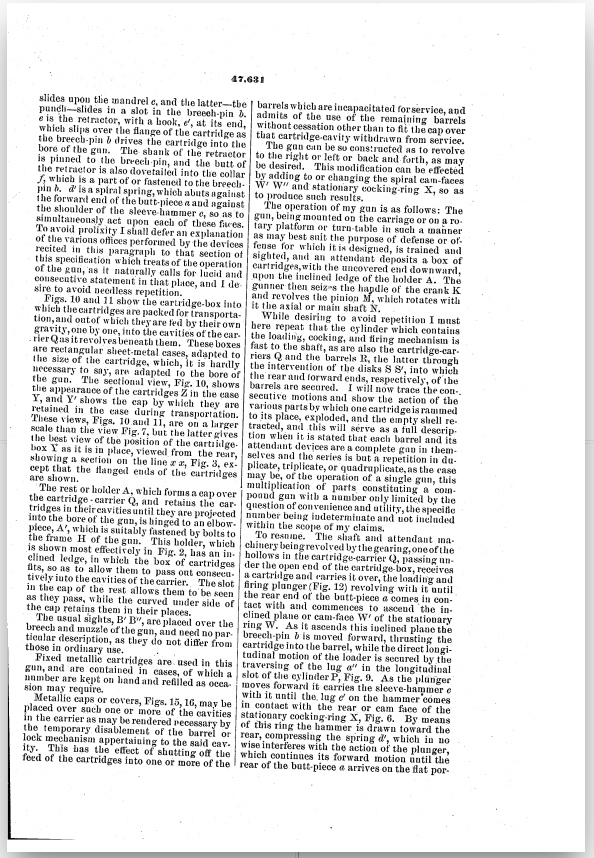


The gun, speaking ot' it in general terms, is mounted upon ils carriage, consisting ot' the wheels B B and the trail C, and is secured thereon by the usual cap,l),over thetruiiiiiions F, which project laterally froin the frame H, by which the gun is supported and within which it revolves. The breech is raised and lowered by the elevating-screw E. The revolving portion, consisting ot' the lock-cylinder carrying the loading andtiring

mechanism, the cartridge-carrier` and the barrels, is attached to and supported by an axial or main shaft. N, whose forward end is journaled in the end piece of the frame H, and the rea-r end ina diaphragm or partition, I, within the casing J, which is



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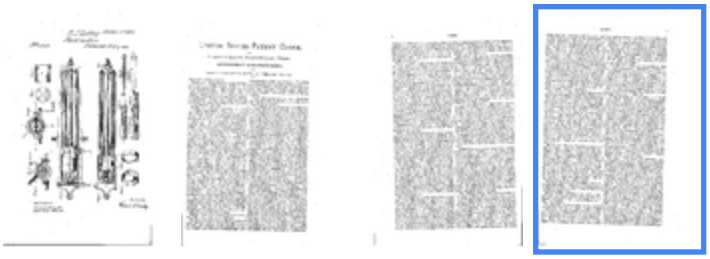
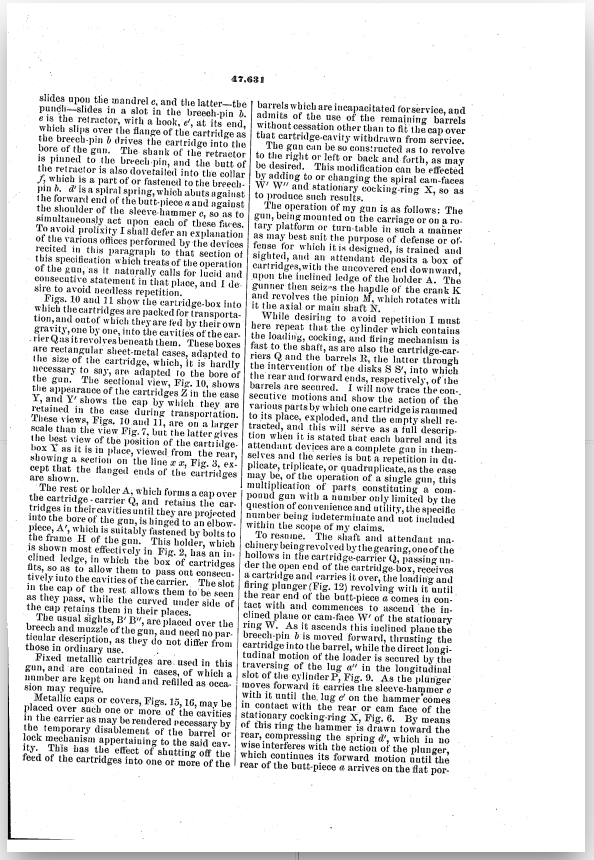


in each end, the purpose'of which' slotsand orifices will he presently explained, the sections, Figs. 3 and 4, only show the detached parts which arel cnt by the section, and do not give so correct an impression of its forni and character as Figs. 8 and 9.

In the rear immediate neighborhood of 'the cylinder P, but not in connection therewith, is a cani-ring, \V. (Shown in perspective in Fig. 5, and also in its place in the sections Figs. 3 and 4.) This camringW abuts at its rear upon and is bolted to the diaphragm I,



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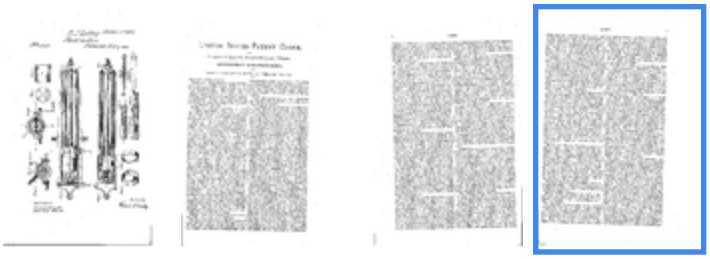

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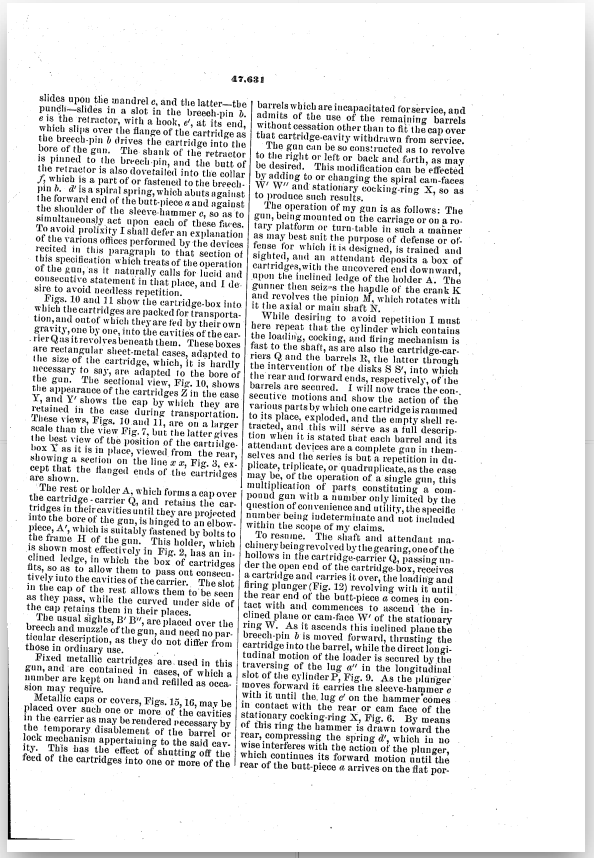

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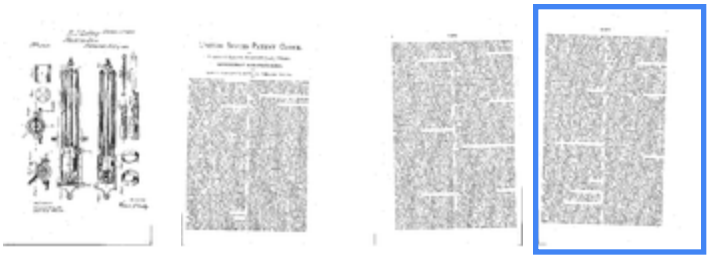

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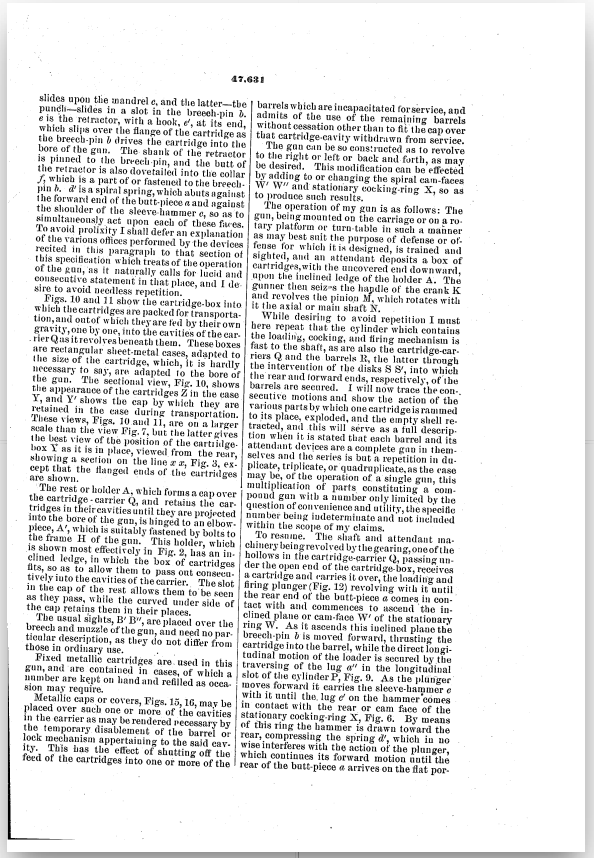

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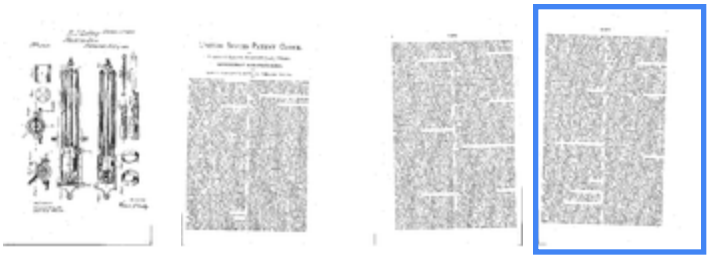
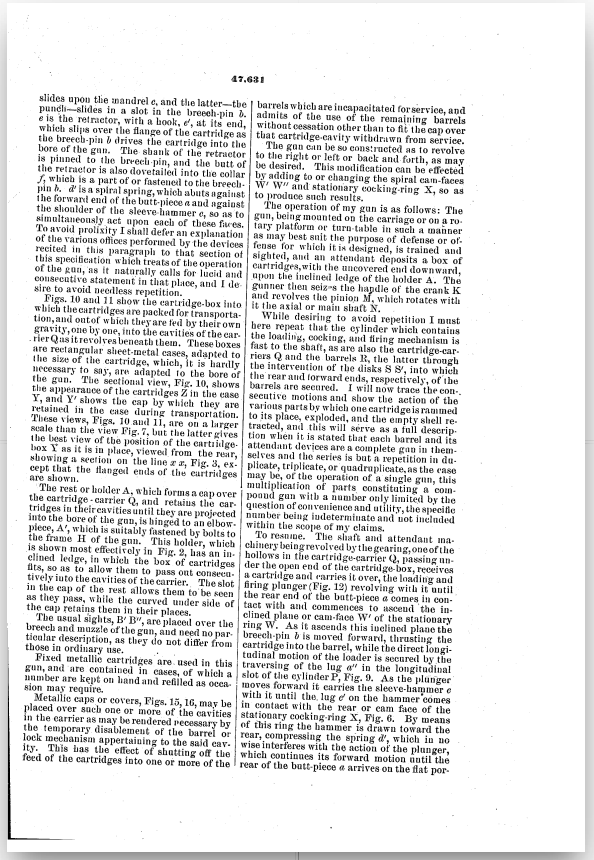


To proceed with the description of the ino tion, after this apparent digressioii, iii which the status of the different parts at the point of flring has been considered, we shall find that the luge of the hammer has been withdrawn rearwardly to the end of the cam on the cooking-ring X X', Fig. 6, when by the continued revolution it is freed to the action of Y the spring d', and the. hammer c forcibly 4driven against the collar d of the

exploding-punch, closing the space between d and f, and causing the point of the punch to indent the tiange of the cartridge, which contains the fulminate, and explodes the charge. The two surfaces which come together with force in this



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Having thus fully, clearly, andexactly described the construction and operation of my invention, the following is what I claim as new therein and desire. to secuieby Letters Patent:

1. Making the series of barrels with their appropriatelocks and cartridge-cavities to revolve ou an axis, while the requisite motions to perform the loading directly into the

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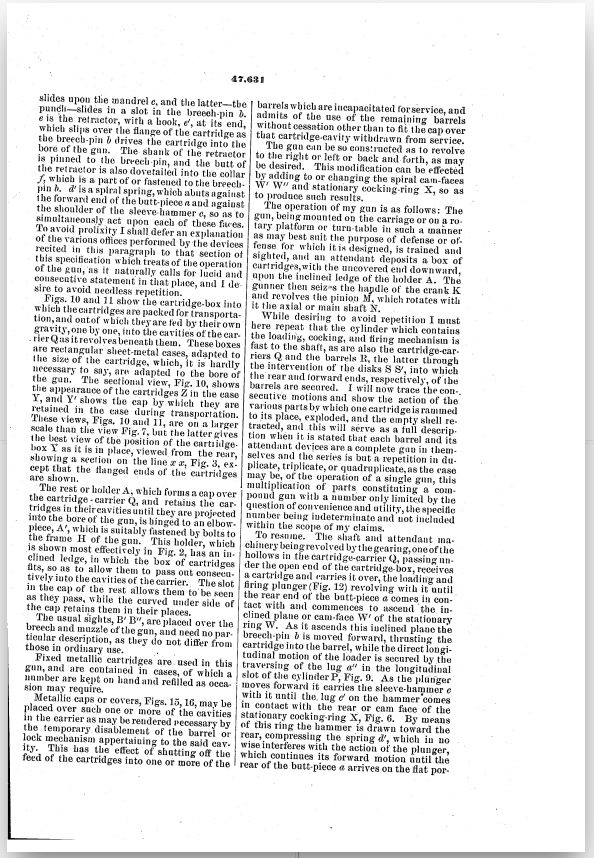

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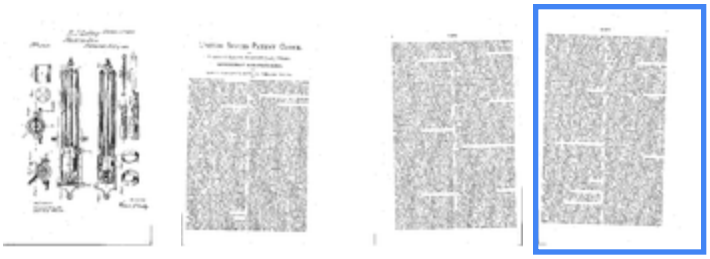
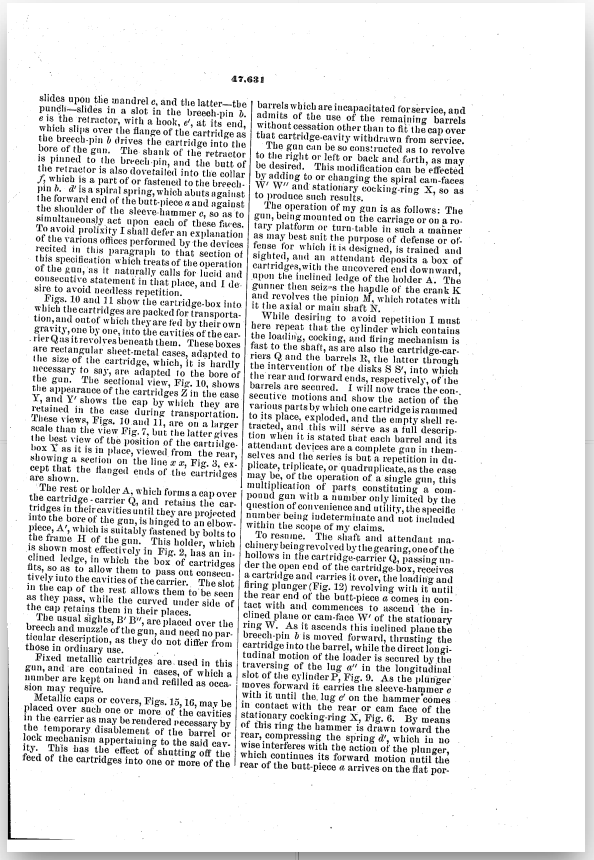


Similar Documents

Publication	Publication Date	Title

Publication	Publication Date	Title
US125563A	1872-04-09	Improvement in revolving-battery gums



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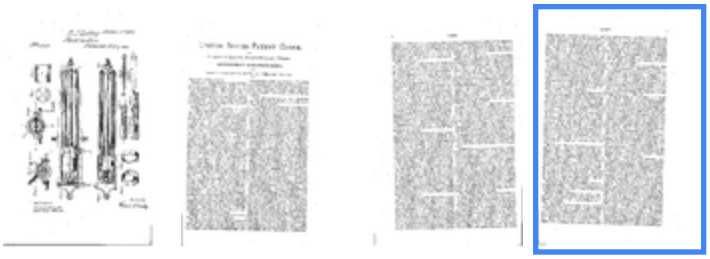
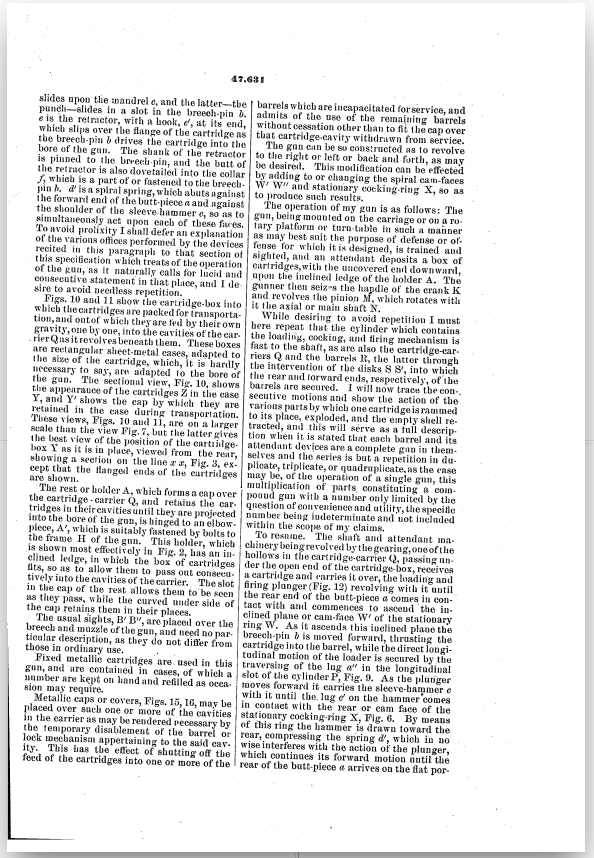


US772345A	1904-10-18	Breech-loading ordnance.
US2004925A	1935-06-18	Machine gun
US165318A	1875-07-06	Improvement in machine-guns

Publication	Publication Date	Title
US319595A	1885-06-09	maxim



slides upon the mandrel *c*, and the latter—the punch—slides in a slot in the breech-pin *b*. *e* is the retractor, with a hook, *e'*, at its end, which slips over the flange of the cartridge as the breech-pin *b* drives the cartridge into the bore of the gun. The shank of the retractor is pinned to the breech-pin, and the butt of the retractor is also dovetailed into the collar *f*, which is a part of or fastened to the breech-pin *b*. *d* is a spiral spring, which abuts against the forward end of the butt-piece *a* and against the shoulder of the sleeve-hammer *c*, so as to simultaneously act upon each of these faces. To avoid prolixity I shall defer an explanation of the various offices performed by the devices recited in this paragraph to that section of this specification which treats of the operation of the gun, as it naturally calls for lucid and consecutive statement in that place, and I desire to avoid needless repetition.

Figs. 10 and 11 show the cartridge-box into which the cartridges are packed for transportation, and out of which they are fed by their own gravity, one by one, into the cavities of the carrier Q as it revolves beneath them. These boxes are rectangular sheet-metal cases, adapted to the size of the cartridge, which, it is hardly necessary to say, are adapted to the bore of the gun. The sectional view, Fig. 10, shows the appearance of the cartridges Z in the case Y, and Y' shows the cap by which they are retained in the case during transportation. These views, Figs. 10 and 11, are on a larger scale than the view Fig. 7, but the latter gives the best view of the position of the cartridge-box Y as it is in place, viewed from the rear, showing a section on the line *x x*, Fig. 3, except that the flanged ends of the cartridges are shown.

The rest or holder A, which forms a cap over the cartridge-carrier Q, and retains the cartridges in their cavities until they are projected into the bore of the gun, is hinged to an elbow-piece, A', which is suitably fastened by bolts to the frame H of the gun. This holder, which is shown most effectively in Fig. 2, has an inclined ledge, in which the box of cartridges fits, so as to allow them to pass out consecutively into the cavities of the carrier. The slot in the cap of the rest allows them to be seen as they pass, while the curved under side of the cap retains them in their places.

The usual sights, B' B'', are placed over the breech and muzzle of the gun, and need no particular description, as they do not differ from those in ordinary use.

Fixed metallic cartridges are used in this gun, and are contained in cases, of which a number are kept on hand and refilled as occasion may require.

Metallic caps or covers, Figs. 15, 16, may be placed over such one or more of the cavities in the carrier as may be rendered necessary by the temporary disablement of the barrel or lock mechanism appertaining to the said cavity. This has the effect of shutting off the feed of the cartridges into one or more of the barrels which are incapacitated for service, and admits of the use of the remaining barrels without cessation other than to fit the cap over that cartridge-cavity withdrawn from service.

The gun can be so constructed as to revolve to the right or left or back and forth, as may be desired. This modification can be effected by adding to or changing the spiral cam-faces W' W'' and stationary cocking-ring X, so as to produce such results.

The operation of my gun is as follows: The gun, being mounted on the carriage or on a rotary platform or turn-table in such a manner as may best suit the purpose of defense or offense for which it is designed, is trained and sighted, and an attendant deposits a box of cartridges, with the uncovered end downward, upon the inclined ledge of the holder A. The gunner then seizes the handle of the crank K and revolves the pinion M, which rotates with it the axial or main shaft N.

While desiring to avoid repetition I must here repeat that the cylinder which contains the loading, cocking, and firing mechanism is fast to the shaft, as are also the cartridge-carriers Q and the barrels R, the latter through the intervention of the disks S S', into which the rear and forward ends, respectively, of the barrels are secured. I will now trace the consecutive motions and show the action of the various parts by which one cartridge is rammed to its place, exploded, and the empty shell retracted, and this will serve as a full description when it is stated that each barrel and its attendant devices are a complete gun in themselves and the series is but a repetition in duplicate, triplicate, or quadruplicate, as the case may be, of the operation of a single gun, this multiplication of parts constituting a compound gun with a number only limited by the question of convenience and utility, the specific number being indeterminate and not included within the scope of my claims.

To resume. The shaft and attendant machinery being revolved by the gearing, one of the hollows in the cartridge-carrier Q, passing under the open end of the cartridge-box, receives a cartridge and carries it over, the loading and firing plunger (Fig. 12) revolving with it until the rear end of the butt-piece *a* comes in contact with and commences to ascend the inclined plane or cam-face W' of the stationary ring W. As it ascends this inclined plane the breech-pin *b* is moved forward, thrusting the cartridge into the barrel, while the direct longitudinal motion of the loader is secured by the traversing of the lug *a''* in the longitudinal slot of the cylinder F, Fig. 9. As the plunger moves forward it carries the sleeve-hammer *c* with it until the lug *c'* on the hammer comes in contact with the rear or cam face of the stationary cocking-ring X, Fig. 6. By means of this ring the hammer is drawn toward the rear, compressing the spring *d*, which in no wise interferes with the action of the plunger, which continues its forward motion until the rear of the butt-piece *a* arrives on the flat por-