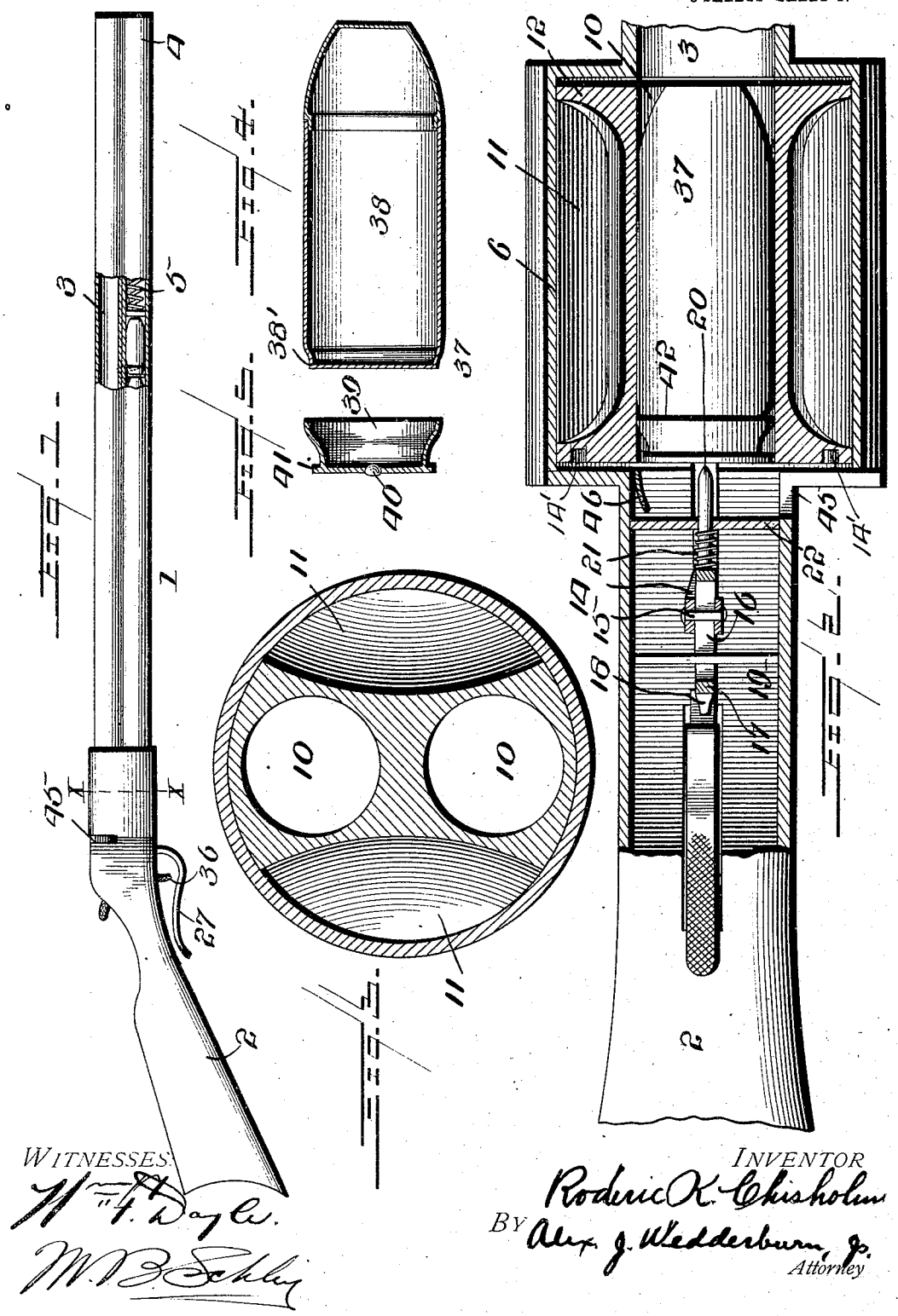
No. 789,355. PATENTED MAY 9, 1905.

R. K. CHISHOLM.

FIRE EXTINGUISHING GUN.

APPLICATION FILED JUNE 13, 1903.

3 SHEETS—SHEET 1.



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PHOTO-LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK

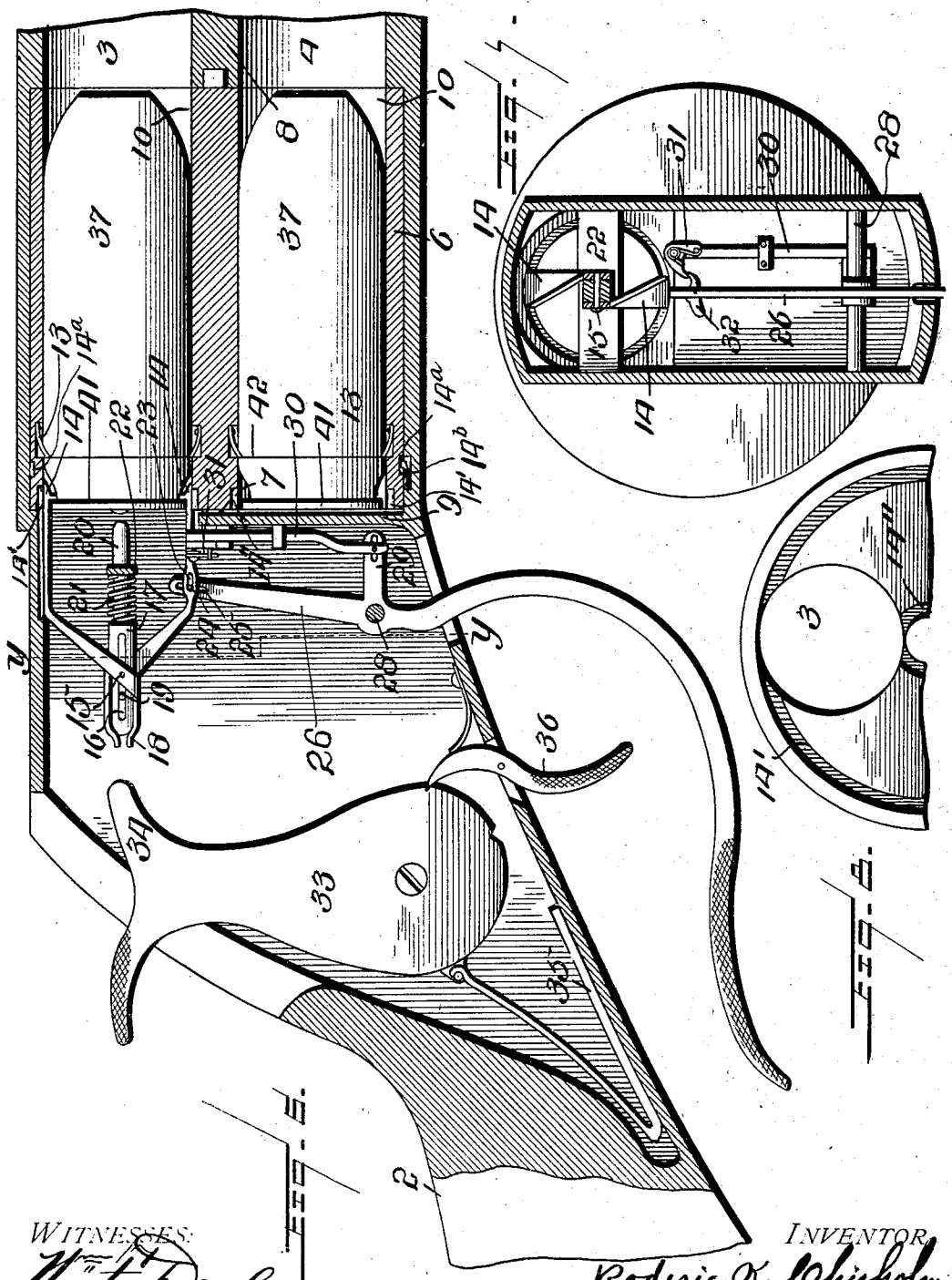
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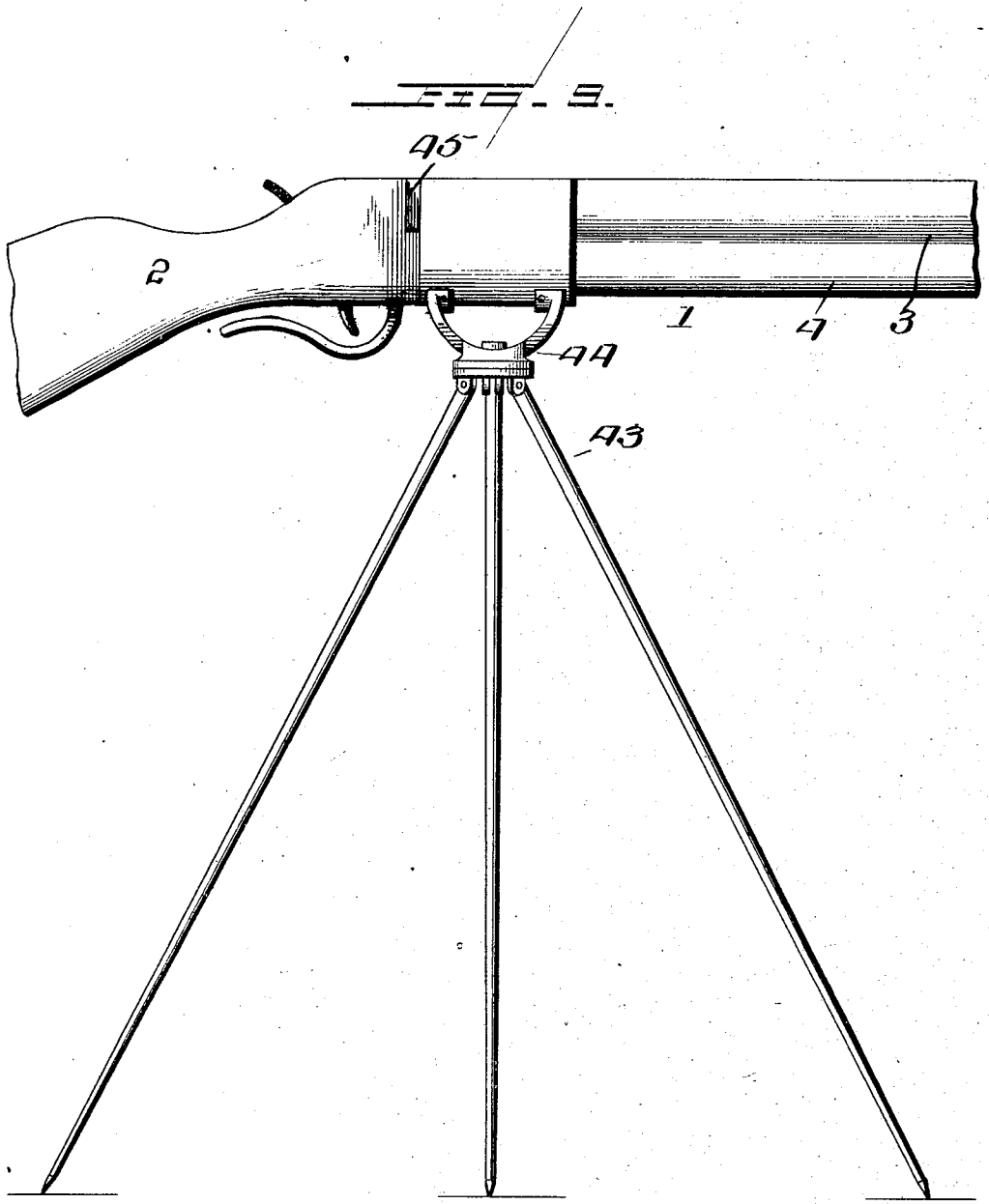
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3 SHEETS—SHEET 3.

Fig. 9.



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No. 789,355. Patented May 9, 1905.

UNITED STATES PATENT OFFICE.

RODERIC K. CHISHOLM, OF MAXTON, NORTH CAROLINA.

FIRE-EXTINGUISHING GUN.

SPECIFICATION forming part of Letters Patent No. 789,355, dated May 9, 1905.

Application filed June 13, 1903. Serial No. 161,367.

To all whom it may concern:

Be it known that I, RODERIC K. CHISHOLM, a citizen of the United States, residing at Maxton, in the county of Robeson and State of North Carolina, have invented certain new and useful Improvements in Fire-Extinguishing Guns, of which the following is a specification.

My invention relates to an improvement in fire-extinguishing guns.

The object of the invention is to provide a magazine-gun adapted to fire a shell loaded with a fire-extinguishing fluid.

Another feature resides in producing a gun of the character described which may be fired with great rapidity.

Finally, the object of the invention consists in providing a gun that will be strong, durable, efficient, and comparatively simple and inexpensive to manufacture and one in which the several parts will not be likely to get out of working order.

With the above and other objects in view the invention consists in the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the annexed drawings, wherein—

Figure 1 is a side elevation of the gun with a portion broken away to show the interior of the magazine and the barrel. Fig. 2 is a partial top plan view with a portion of the gun-frame broken away. Fig. 3 is a cross-section through the cylinder, taken on the line *x x* of Fig. 1. Fig. 4 is a vertical section of the fire-extinguishing shell. Fig. 5 is a vertical section of the firing-shell. Fig. 6 is a partial longitudinal sectional view showing the firing mechanism and the cylinder. Fig. 7 is a cross-sectional view taken on the line *y y* of Fig. 6. Fig. 8 is a partial end view of the cylinder, and Fig. 9 is an elevation showing the gun mounted upon a tripod.

In the drawings the numeral 1 designates the gun generally, which may be of any suitable style and finish. It comprises the ordinary stock 2, barrel 3, and magazine 4, which latter is provided with the usual feeding-spring 5, Fig. 1. In the breech of the gun a revolving cylinder 6 is mounted upon trunnions 7, supported at one end in the walls 8 of the barrel 3 and at the other end upon an abutment-wall 9. The cylinder 6 is formed with two bores 10 and is cut away intermediate its ends 12 at 11 to lighten its weight. The bores 10 are provided with spring-dogs 13, adapted to hold the shell in the cylinder. Projecting a short distance into the upper bore 10 is a pair of extractor-hooks 14, adapted to be retracted and project into the grooves 14′ and 14″ in the end face of the cylinder when the same is revolved. These hooks 14 extend rearwardly and are bent, crossing each other and pivoted upon a pin 15, which passes through a slot 16 in the firing-pin 17, the said hooks embracing the firing-pin and terminating in curved portions 18, against which the firing-pin abuts. The firing-pin 17 slides upon a rod 19 and is provided with a pointed shank 20, encircled by a coiled spring 21, impinging a bar 22, through which the pin passes. The lower hook 14 is provided with a slot 23, in which slides a pivot-pin 24, headed at both ends and passing through a similar slot 25 in the upper end of the extractor-lever 26, thus connecting the said lever with the hooks. The lever 26 is formed with a handle 27 and pivoted upon a rod 28, extending across the gun-casing. An integral arm 29 projects from the lever and is pivoted to a vertically-reciprocating bar 30, carrying a spring-pressed pawl 31 at its upper end, which normally lies beneath one of the teeth of a ratchet 32, formed on the end of the trunnion 7. The pawl 31 is adapted to slip past the tooth on the upward movement of the bar 30, but catches on the downward movement and revolves the cylinder 6 a half-revolution, the next tooth of the ratchet impinging the top of the pawl and preventing further revolution of the cylinder. The gun is provided with a hammer 33, formed with a nose 34 and operated by a spring 35 and a trigger 36.

The shell 37 fired by the gun is composed of two separate compartments or shells 38 and 39, the former containing a suitable fire-ex-

tinguishing liquid and adapted to burst upon striking and the latter filled with powder and provided with a percussion-cap 40 and adapted to eject the fire-extinguishing shell 38 from the gun when exploded. The shells are secured together by reducing the end 38′ of the shell 38 and fitting it in the mouth of the shell 39, which latter is formed with a reduced head, having an annular flange 41, adapted to be engaged by the extractor-hooks 14. It will be noticed that the joint between the shells forms a groove 42, in which the dogs 13 catch, thus holding the shell in the cylinder 6.

In Fig. 9 I have shown a tripod 43 and a support 44 for the gun, pivoted upon the tripod for the purpose of facilitating the manipulation of the gun and its mechanism.

The operation of the gun is quite simple and will be readily understood from the following: Referring to Fig. 6, where the hammer is shown as half-cocked and shells in the bores 10 of the cylinder 6, to fire the gun it is only necessary to cock the hammer and pull the trigger, thus causing the nose 34 to spread the ends 18 of the hooks 14 and strike the firing-pin 17, driving it forward against the percussion-cap 40, which action explodes the shell 39 and expels the shell 38 from the gun. To extract the exploded shell 39 and bring a loaded shell 37 into firing position, the hammer 33 is full-cocked and the handle 27 of the operating-lever 26 is grasped by the operator. The lever 26 is swung downward and outward upon its pivot 28, which action moves the extractor-hooks 14 rearwardly until their pivot-pin 15 abuts the rod 19, when the shell 39 will register with an opening 45 in the side of the gun-casing, through which it will be ejected by a flat spring 46, located in the wall of the gun-casing opposite the opening 45. As the lever 26 moves to extract the shell 39 the arm 29 of the said lever forces the reciprocating bar 30 upward, the pawl 31 slipping by the tooth of the ratchet 32, and thus not disturbing the cylinder 6; but as the lever is pulled upwardly to return the extractor-hooks to their normal position the bar 30 is driven downward. Upon the downward movement of the bar the pawl 31 engages the tooth of the ratchet 32 and revolves the cylinder 6 a half-revolution, the next tooth catching upon the top of the pawl 31 and stopping the cylinder with the flange 41 of a fresh shell between the hooks 14, when the operation of firing may be repeated, and so on until the magazine is emptied.

The frame of the gun carries a spring-pawl 14^a, and the cylinder has recesses 14^b opposite the bores 10 with which the pawl engages to hold the bore in registry with the barrel.

From the foregoing it will be evident that I have provided a gun which may be placed in range of a burning building and caused to fire shells containing a fire-extinguishing liquid into the same, and thereby putting out the fire without the necessity of firemen going near the burning structure.

I do not desire to limit myself to the exact details of construction and operation herein set forth, as I may make various changes in the same without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fire-extinguishing gun, the combination with the gun-barrel and the magazine, of a revolving cylinder, an extractor operating in conjunction with the cylinder, and comprising a pair of arms having their outer ends formed in parallel contracted extensions, a firing-pin supported therein, means for actuating said firing-pin, and means for sliding said extractor means.

2. In combination with the gun-barrel, the magazine and the revolving cylinder, a shell-ejector comprising a plurality of arms pivoted together and extending rearwardly from their pivoted portions and terminating in curved portions, a firing-pin slidably mounted on the pivot of said arms, means for forcing said firing-pin in its operative direction, means for retracting the same, means for moving both of said arms simultaneously for extracting the shell, and means for revolving said cylinder.

3. In a fire-extinguishing gun, the combination with a magazine, of a revolving cylinder adapted to hold shells, dogs for retaining the shells in the cylinder, a firing-pin impinging the shells, extractor-hooks sliding upon the firing-pin, a pawl-and-ratchet mechanism for revolving the cylinder, and a lever for operating the extractor-hooks and the pawl-and-ratchet mechanism conjunctively, substantially as described.

4. In a fire-extinguishing gun, the combination with a magazine, of a revolving cylinder adapted to hold shells fed from the magazine, dogs in the cylinder for retaining the shells therein, a firing-pin adapted to impinge the shells, extractor-hooks sliding upon the firing-pin, a ratchet formed on the cylinder, a spring-pressed pawl engaging the ratchet, a reciprocating bar carrying the pawl, and a lever pivotally connected to the extractor-hooks and the bar for operating the same, substantially as described.

5. In a fire-extinguishing gun, the combination with a magazine, of a revolving cylinder having bores adapted to hold shells fed from the magazine, dogs in the bores adapted to engage a groove in the shells to retain them therein, a slotted firing-pin adapted to impinge the shells, angular extractor-hooks sliding upon the firing-pin, a ratchet formed

on the cylinder, a spring-pressed pawl engaging the ratchet, a reciprocating bar carrying the pawl, an arm pivotally connected to the bar, and a lever carrying the arm and pivotally connected to one of the extractor-hooks, said lever operating the parts conjunctively, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

RODERIC K. CHISHOLM.

Witnesses:
J. C. WILKINSON,
A. A. MCLEAN.