

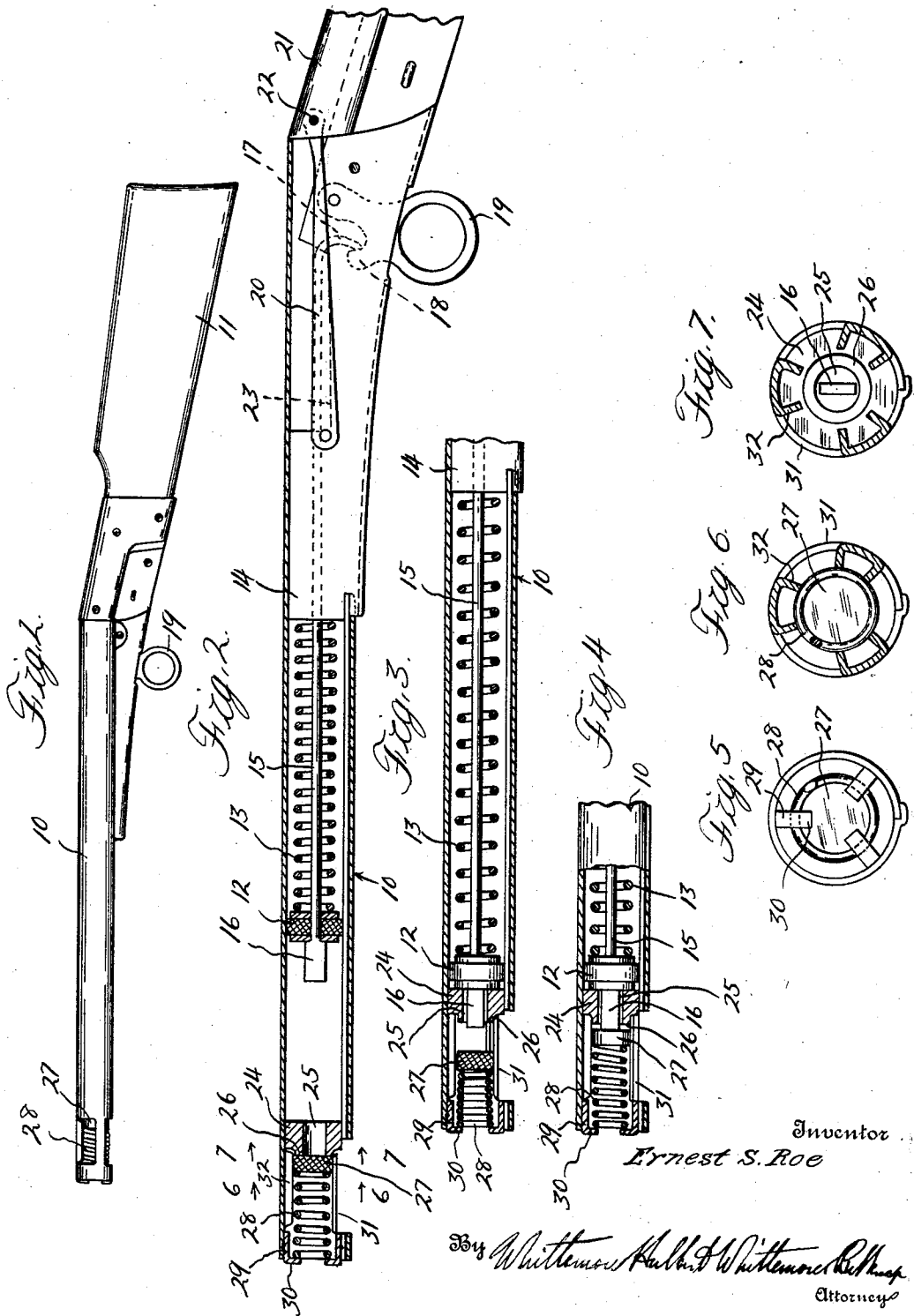
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E. S. ROE

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POPGUN

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ERNEST S. ROE, OF PLYMOUTH, MICHIGAN, ASSIGNOR TO THE KING MANUFACTURING COMPANY, OF PLYMOUTH, MICHIGAN, A CORPORATION OF MICHIGAN

POPGUN

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This invention relates to pop guns and has as one of its primary objects to provide a device of this character distinguished by its simplicity of construction and operation which not only renders the device more economical to manufacture but provides a design of a strong and durable nature and one in which the number of parts are reduced to a minimum.

Pop guns as now commercially produced require the presence of a cork or other suitable stopper within the forward end of the barrel to produce the desired noise. The function attributed to the stopper is merely to cooperate with the usual reciprocable plunger to form an air chamber so that when the plunger is caused to move forward toward the stopper the air within the chamber is compressed and operates to discharge the stopper from the barrel. While this arrangement is satisfactory for producing the desired report, it has been found to be objectionable not only due to the inconvenience experienced in the necessity of placing the stopper within the barrel each time the gun is operated, but also owing to the fact that the stopper frequently becomes lost.

It is therefore one of the objects of this invention to provide a gun of the above character which will produce a report or audible noise without discharging a projectile from the barrel of the gun thereby eliminating the necessity of the usual cork stopper with the accompanying inefficiency thereof and providing a commercially satisfactory article conducive of advantages not possible with the above described type of pop gun.

The several objects, advantages and novel details of construction of this invention will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings wherein:

Figure 1 is an elevational view of a pop gun constructed in accordance with this invention;

Figure 2 is an elongated longitudinal sectional view through the barrel;

Figure 3 is a view similar to Figure 2 showing the parts in operative position;

Figure 4 is a fragmentary sectional view showing the several parts in released position;

Figure 5 is an end elevation of the barrel; and

Figures 6 and 7 are cross sectional views taken substantially on the lines 6—6 and 7—7 respectively of Figure 2.

Referring now to the drawings wherein like reference characters indicate like parts, it will be noted that in Figure 1 there is illustrated an air gun consisting of a barrel 10 and stock 11. Arranged within the barrel 10 is a plunger 12 normally urged to the position illustrated in Figure 3 by means of a spring 13 which engages at its rear end, the channel-shaped housing 14. Extending through the convolutions of the spring 13 and through the plunger 12, is a rod 15 having an enlarged portion 16 at its forward end and terminating at its rear end in a depending hook 17 which, in the cocked position of the gun, engages the projection 18 formed upon the trigger 19. Any suitable mechanism may be employed for drawing the plunger 12 rearwardly against the tension of the spring 13 to cock the gun, herein shown as comprising a pair of links 20 that are terminally connected at one end to the stock casing 21 by means of the bolt 22 and at the opposite end to a transversely extending pin 15. As shown, this pin rests on the upper edges 23 of the housing 14 and operates, when the gun is discharged, to form an abutment for the hook 17 upon the rod 15.

Sleeved within the forward end of the barrel is a member 24 having an aperture 25 therein, of a sufficient diameter to receive the enlarged portion 16 of the rod 15. Extending around the periphery of the opening 25 is an annular shoulder 26 constituting a seat for the gasket 27 which, in the normal position of the parts, is held firmly against the seat by means of the coil spring 28. For holding the coil spring 28 within the barrel I provide a series of members 29 secured to the forward end of the barrel and having inwardly projecting portions 30 engageable with the forward end of the spring 28. The barrel, opposite the spring 28 is provided

with a series of circumferentially spaced elongated slots 31, the edges of which being turned inwardly as at 32 for positioning the member 24 within the barrel and to prevent a relative movement thereof. The inwardly extending portions 32 also function as a guide for the gasket 27 so that the latter will accurately engage its seat and properly seal the opening 25.

Assuming that the gun has been cocked and the parts are in the position illustrated in Figure 2, the trigger 19 is swung rearwardly releasing the hook 17 from the projection 18 of the trigger whereupon the plunger 12 is moved forwardly by the spring 13 compressing the air within the barrel until the enlarged portion 16 of the rod passes through the opening 25 and unseats the gasket 27 against the tension of the spring 28 whereupon the compressed air is instantaneously released from the barrel adjacent to the slots 31 giving the desired "pop" noise.

From the foregoing, it will be readily apparent that the present invention not only provides a structure which may operate with facility but one in which the cost of manufacture is reduced to a minimum.

What I claim as my invention is:

1. In a gun of the class described, a barrel having a restricted opening therein, a member permanently arranged within the forward end of the barrel for sealing said opening, a plunger reciprocally mounted within said barrel and cooperating with the member aforesaid to form an air chamber, and means carried by said plunger and engageable with the said member for moving the same away from said opening to permit the air within said barrel to escape.

2. In a gun of the class described, a barrel having a restricted opening adjacent the forward end thereof, a member permanently positioned within said barrel for closing said opening, a spring actuated plunger also within said barrel and movable toward the said member to compress the air within the barrel against the member, and means operable upon a predetermined movement of the plunger to positively engage said member for instantaneously moving the same away from said opening to permit the compressed air to escape.

3. In a gun of the class described, a barrel, a member having an opening therein sleeved within said barrel, a seat formed on said member adjacent to said opening, a spring influenced member normally engageable with said seat for sealing said opening, a reciprocable plunger within said barrel, and means carried by said plunger and operable upon a predetermined movement of the plunger toward the spring influenced member to instantaneously move the latter from its seat.

4. In a gun of the class described, a barrel

having a series of slots therein adjacent the forward end thereof, a member sleeved within said barrel and positioned to the rear of said slots, said member having an opening therein, a second member normally closing said opening, a plunger movable within said barrel and cooperating with the last mentioned member to form an air chamber, and means operable upon a predetermined movement of the plunger toward said second mentioned member to engage the latter for positively moving the same away from said opening to permit the air within said chamber to escape adjacent to said slots.

5. In a gun of the class described, a barrel, a member positioned within said barrel having a restricted opening therein and having an annular seat surrounding said opening, a member permanently arranged within said barrel and normally held in engagement with said seat, a plunger reciprocally mounted within said barrel cooperating with the members aforesaid to form an air compression chamber, and means carried by the plunger operable after the plunger has compressed the air contained within said chamber to engage the second mentioned member and positively move the latter away from said seat.

6. In a gun of the class described, a barrel, a member having an opening therein sleeved within said barrel and permanently secured thereto, guides arranged within the said barrel in advance of said member and constituting an abutment therefor, a second member engageable with said guides and normally sealing the opening aforesaid, and means for moving said second member away from said opening for producing a report.

7. In a gun of the class described, a barrel having a series of slots adjacent the forward end thereof provided with inturned flanges constituting guides, a member having a restricted opening therein permanently secured within said barrel in rear of said slots and guides, a second member slidably mounted upon said guides and normally sealing the opening aforesaid, and means for moving said second member out of sealing engagement with the member aforesaid to produce a report.

8. In a gun of the class described, a barrel, a member having a restricted opening therein sleeved within the barrel and positioned adjacent the forward end of the latter, a spring influenced element normally closing said opening, and ribs projecting inwardly from said barrel in advance of said member constituting an abutment for the latter and guides for the spring influenced element.

9. In a gun of the class described, a barrel having a series of longitudinally extending slots adjacent the forward end thereof, a member having a restricted opening therein sleeved within the barrel and positioned to

the rear of said slots, a spring influenced element normally closing said opening, and projections extending inwardly from the longitudinal edges of said slots constituting an abutment for said member and a guide for
5 the said spring influenced element.

In testimony whereof I affix my signature.
ERNEST S. ROE.

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