Sept. 29, 1953 J. SOWITSKY 2,653,592

SPRING GUN

Filed Dec. 26, 1950

Fig. 1.

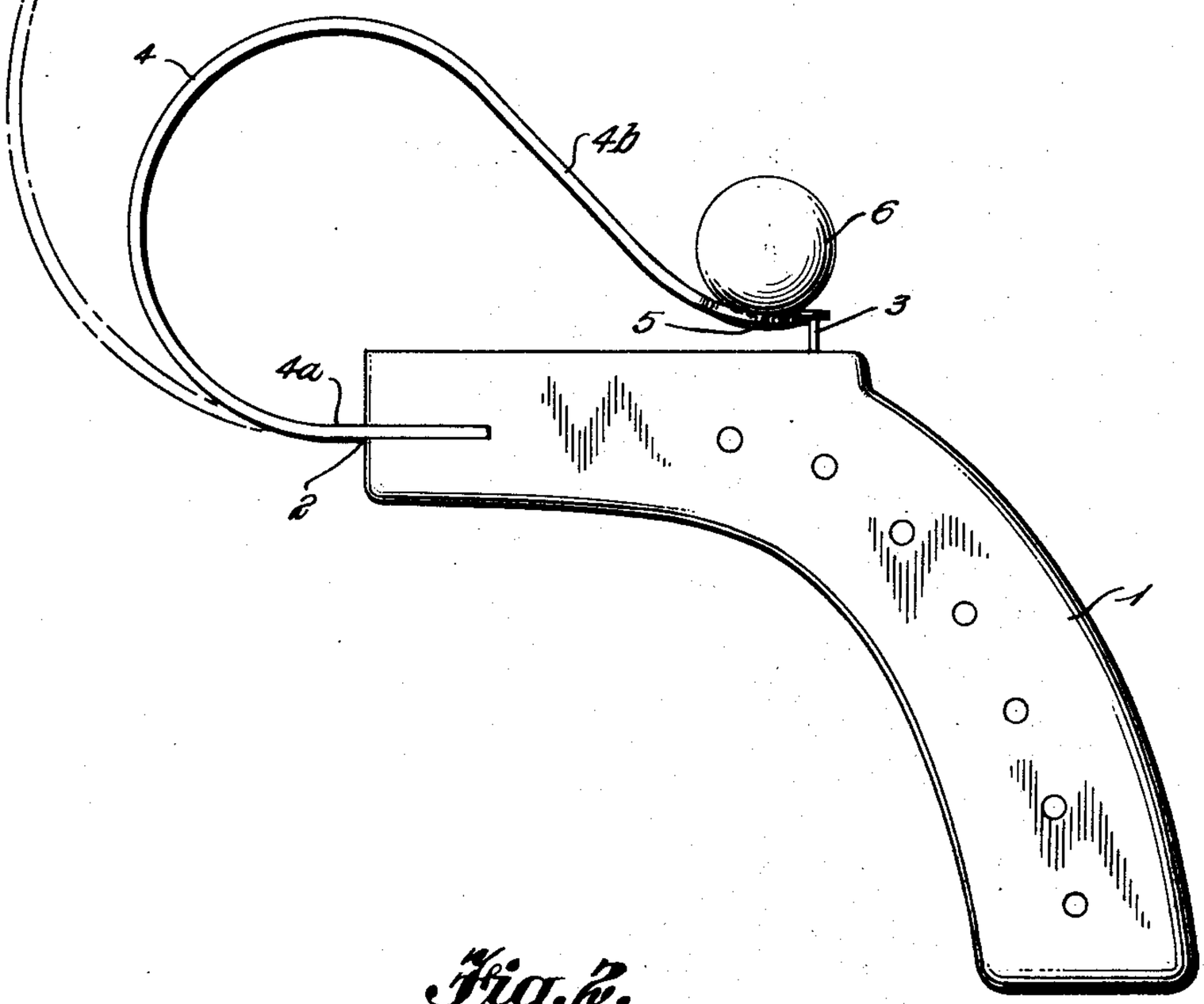
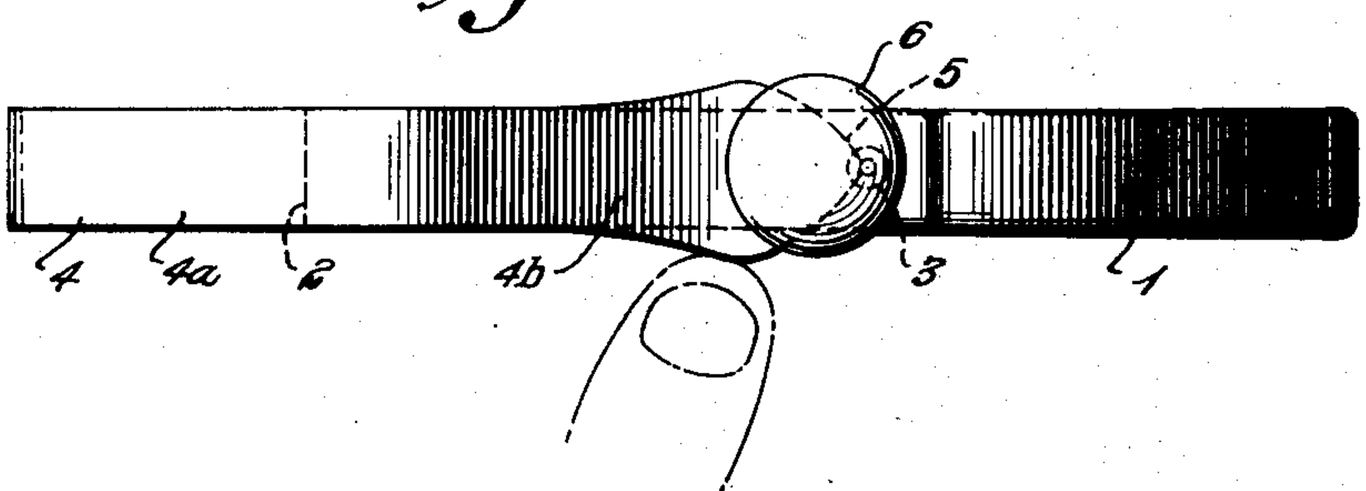


Fig. 2.



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Patented Sept. 29, 1953

2,653,592

UNITED STATES PATENT OFFICE

2,653,592

SPRING GUN

Joseph Sowitsky, Millville, N. J.

Application December 26, 1950, Serial No. 202,604

2 Claims. (Cl. 124—7)

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This invention relates to improvements in spring guns which can be used as toy guns of simple and cheap construction, and which are particularly adapted to shoot vertically small missiles such as balls and toy parachutes.

The features of this invention comprise a gun or pistol stock, combined with a loop-shaped flat spring, the loop of which has a substantial radius, secured at one of its ends to the foremost forward end of the stock or barrel, or to the gun mouth; when said spring is flexed in its springing position, it is looped backward rearwardly over the stock or barrel, the resulting loop first rising upward, then coming downward toward the gun handle, and terminating at its other end into a tip which engages a stationary stop member connected with said stock or barrel; the arrangement being such that, upon simple lateral pressure of a finger upon the spring near said tip, the spring is disengaged from said stop member and is sprung; a missile, such as a ball or toy parachute, is placed on said spring, at or near its tip; upon the aforesaid release of the spring from its stop member, the tip of the spring shoots the missile upwards in a substantially vertical direction.

Other features of this invention will appear from the following description and from the accompanying drawing, which are given merely by way of illustrative example.

In the drawing:

Fig. 1 is a side elevation of a device according to the invention;

Fig. 2 is a top plan view of said device.

Referring to the drawing, the device object of the invention therein illustrated comprises the stock 1 of the gun or pistol, which may be made of any suitable material, such as wood or plastic, and which comprises a hand piece and a barrel piece; on the upper face of the stock, there is secured, in any suitable manner, such as screwing or otherwise, a stationary stop member 3, which serves as a lock for the spring in its flexed position, as hereinafter described, and which is shown in the drawing as a flat-top screw. A flat spring 4 is secured by one of its ends 4*a* to the tip or mouth 2 of the stock or barrel 1; in its springing position, said spring, as shown in full lines in Fig. 1, is flexed rearwardly of the stock in the shape of a large-radius loop over said stock, said loop having a downwardly extending portion 4*b* which ends into tip 5 which engages stop member 3, whereby it is maintained in flexed springing position.

The shape of tip 5 of spring 4 is such that on

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the one hand, it can serve, alone or by adjunction of cup-shaped members (not shown), as a support for the missile 6, and on the other hand it can be disengaged from the stop member upon the application of simple lateral finger pressure on said tip.

In operating the device object of this invention, the spring 4 is flexed from its position of release, shown at 7 in dotted lines in Fig. 1, toward stop member 3, thereby forming a large-radius loop having a downwardly directed member 4*b*, the tip 5 of which is then engaged under the stop 3. A missile 6 such as a ball or toy parachute is then placed over the tip 5 of the spring; the device is then ready for operation; a simple finger pressure on the side edge of the spring near tip 5 disengages laterally the spring from the stop and permits uncoiling of the spring, which projects the missile substantially vertically upwards.

It will be understood that, in any event, taking into consideration other factors, such as the degree of resiliency of spring 4, the radius of the loop and curvature of said spring, and the downward slope of its branch 4*b* are such that, on release of the tip 5 from stop 3, the travel of the sprung tip is such as to project the missile 6 substantially vertically when the gun is aimed substantially horizontally. As an example of the spring design required for the purpose, without limitation, the downward arm 4*b* of the spring should have a slope making with the barrel or upper face of the stock an angle of between about 30 and about 60 degrees.

I claim as my invention:

1. A spring gun comprising: a stock consisting of a hand piece and a barrel piece; a stationary catch secured externally of said stock to the upper face of said barrel piece and rearwardly of the forward end of said barrel piece; a flat spring having a first end secured externally and forward of the mouth of said barrel piece and in a direction parallel to the axis thereof, and a second end forming a tip adapted to engage said catch; said spring, when engaging said catch, forming from said first end a loop having a substantial radius and located substantially entirely forward of, and above said mouth; said loop extending rearwardly toward said catch by a portion of said spring sloping downwardly at a substantial angle with said upper face and terminating into said tip; missile supporting means on said second end near said tip; said loop, said sloping portion and said tip being at all times external to said stock; said radius and said angle be-

ing such that a missile resting on said supporting means is projected substantially at right angle to said upper face when said tip is disengaged from said catch.

2. A device as claimed in claim 1, in which said tip engages said catch slidably and movably along a line parallel to said stock and in a direction substantially at right angle to the axis of said stock, and constructed and adapted to be disengaged from said catch solely by pressure applied on a lateral side of said second end near said catch.

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