Dec. 29, 1931. R. J. WISMER 1,838,243

CATAPULT

Filed Nov. 29, 1930 4 Sheets-Sheet 1

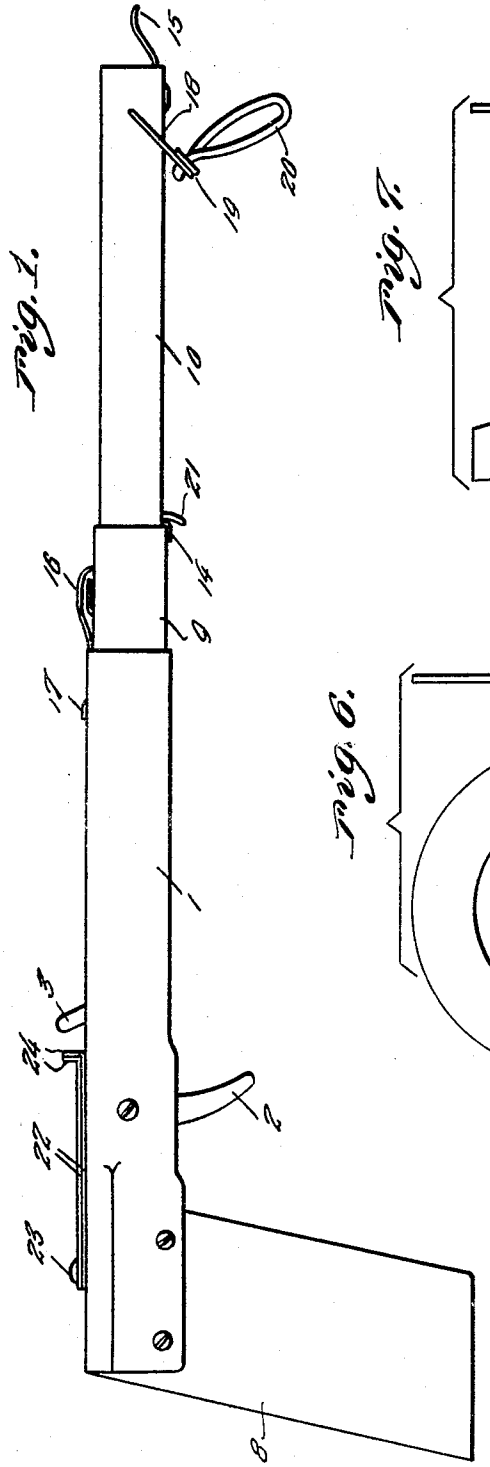


Fig. 1.

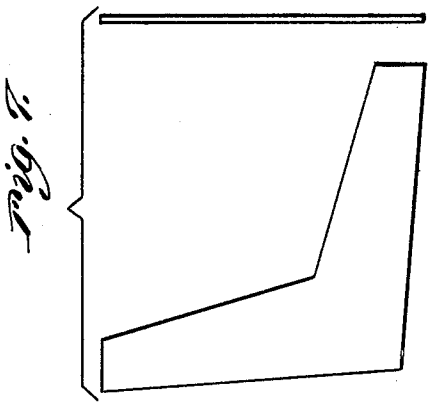


Fig. 2.

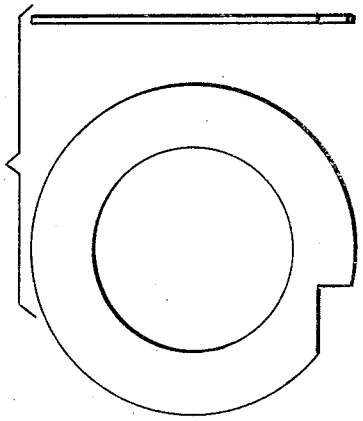


Fig. 3.

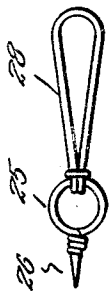


Fig. 4.

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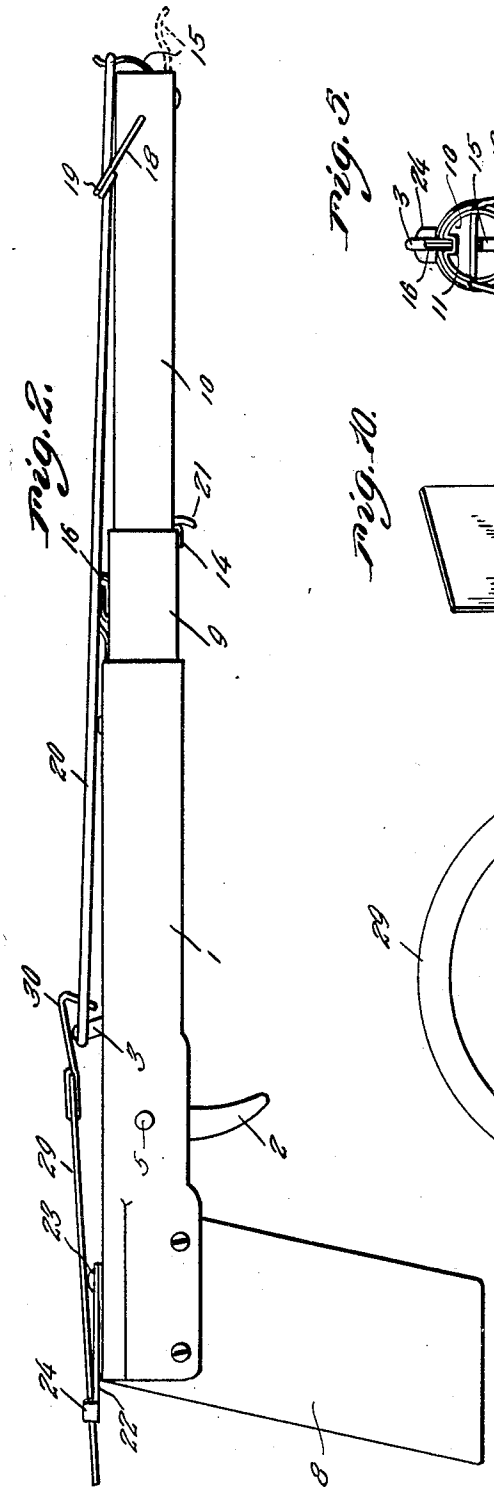


Fig. 5.

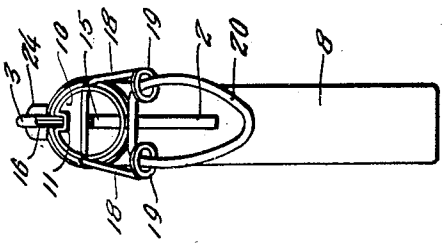


Fig. 6.

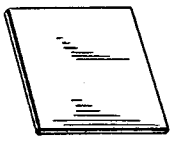
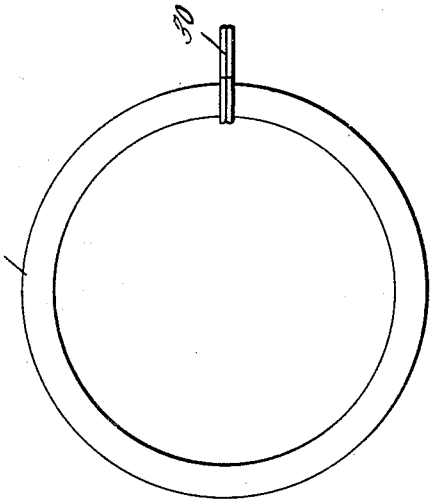


Fig. 7.



Fig. 8.



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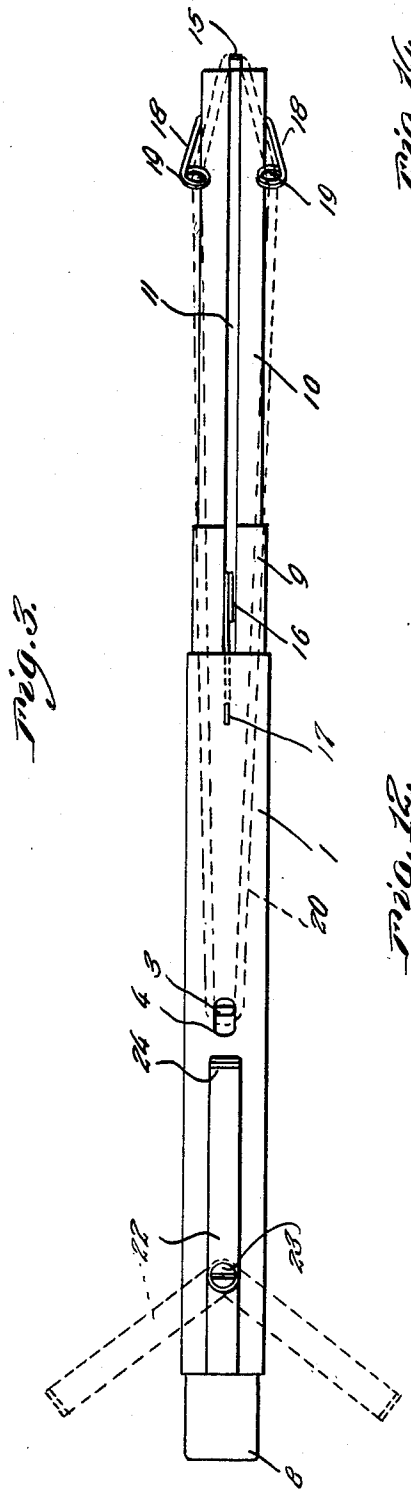


Fig. 5.

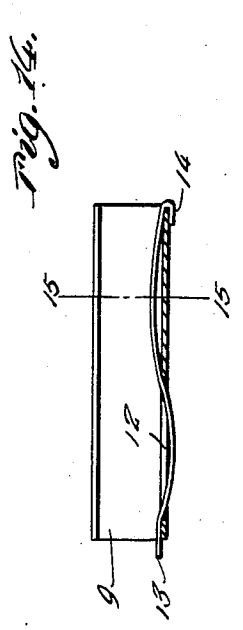


Fig. 14.

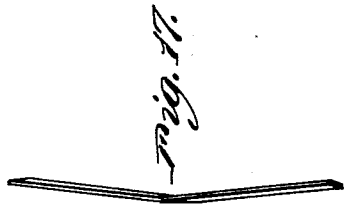


Fig. 17.

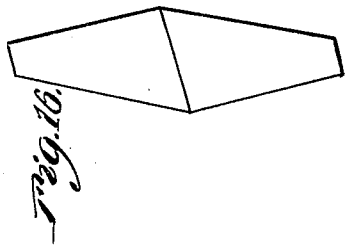


Fig. 16.



Fig. 15.

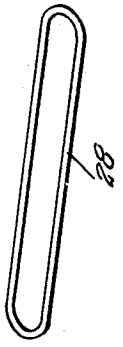


Fig. 12.

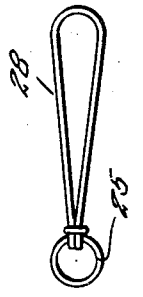


Fig. 13.

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CATAPULT

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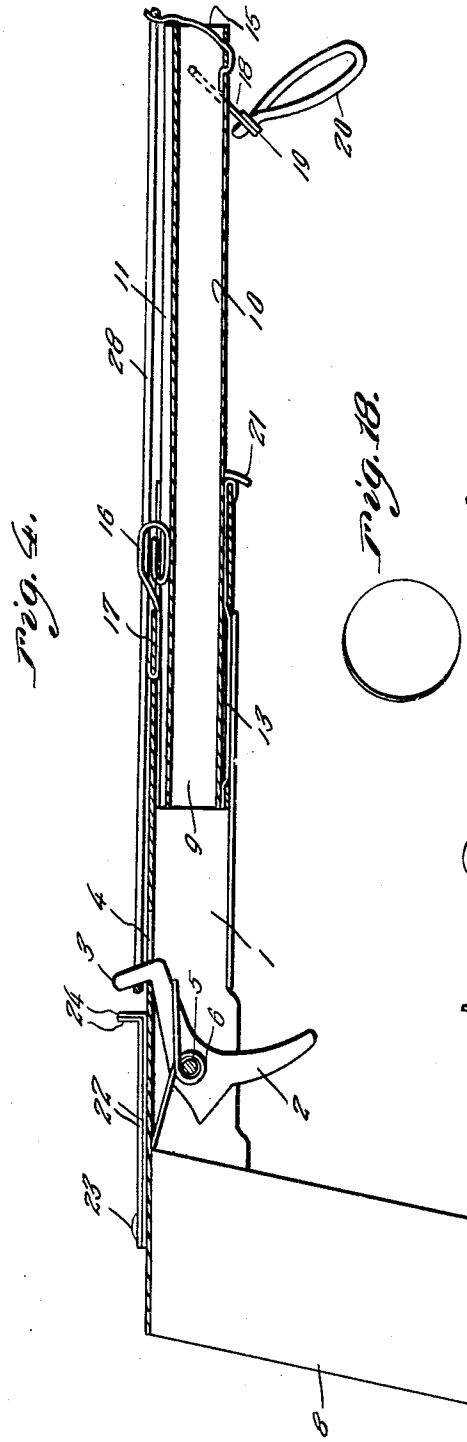


Fig. 4.

Fig. 5.

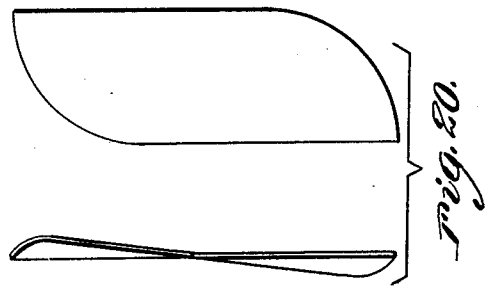


Fig. 6.

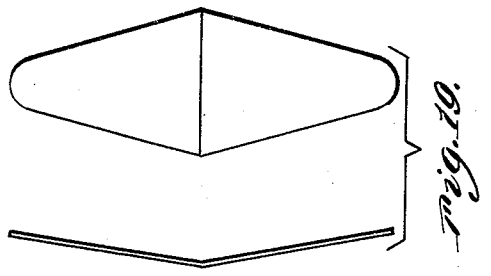


Fig. 7.

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UNITED STATES PATENT OFFICE

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CATAPULT

Application filed November 29, 1930. Serial No. 499,050.

This invention relates to new and useful improvements in catapults and has for an important object to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction and arrangement of parts whereby numerous different types or forms of projectiles may be thrown therefrom for providing considerable amusement and instructions for persons who may operate the device, particularly children.

Other objects of the invention are to provide a catapult of the character described which will be simple in construction, strong, durable, efficient and reliable in use and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention may become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in side elevation of a catapult in accordance with this invention.

Figure 2 is a view in side elevation showing the device in position to project or throw one form of projectile which is used therewith.

Figure 3 is a view in top plan showing the device ready to project another form of projectile.

Figure 4 is a view in vertical longitudinal section showing the device in position to project a rubber band.

Figure 5 is a view in elevation looking at the discharge end of the device.

Figures 6 to 13, inclusive, and 16 to 20, inclusive, are views showing different types of projectiles which may be used with the catapult.

Figure 14 is a detail view in longitudinal section through the sleeve which adjustably connects the barrel to the stock of the device.

Figure 15 is a cross sectional view taken substantially on the line 15—15 of Figure 14.

Referring to the drawings in detail, it will be seen that the reference numeral 1 designates a hollow metallic stock having pivotally mounted at an intermediate point therein a trigger 2 provided with an integral hook or the like 3 on one end which is operable through an opening 4 in the upper side of the stock 1. The trigger 2 is mounted on a pivot pin 5 which extends transversely between the side walls of the stock 1. The convolutions of a spring 6 encircle the pivot pin 5 between the side walls of the stock 1 and one end portion of the spring 6 is engaged with the trigger 2 for yieldingly maintaining said trigger in operative position, as illustrated to advantage in Figure 4 of the drawings. The other end portion of the spring 6 is disposed at an acute angle and abuts the upper wall of the stock 1. A suitable pistol grip handle 8 is fixed on one end portion of the stock 1 and depends therefrom.

A split connecting sleeve 9 is mounted for longitudinal adjustment in the other end portion of the stock 1 and projects forwardly therefrom. An elongated, hollow metallic barrel 10 is mounted for longitudinal adjustment in the connecting sleeve 9 and has its upper side provided with a longitudinally extending groove 11 which is in registry or in communication with the longitudinal split in the sleeve 9. The groove 11 extends from end to end of the barrel 10. The portion of the connecting sleeve 9 which is disposed in the stock 1 has its lower side provided with a longitudinally extending slot 12 through which projects an outwardly curved portion of a leaf spring 13, said outwardly curved portion of the leaf spring 13 being adapted for frictional engagement with the adjacent wall of the stock 1 for retaining the connecting sleeve 9 in adjusted position in the stock. The spring 13 is also provided with an inwardly curved portion for frictional engagement with the barrel 10 for retaining said barrel 10 in adjusted position in the connecting sleeve 9. This is best seen in Figure 14 of the drawings. The forward end portion of the spring 13 is bent or hooked over the forward end portion of the connecting sleeve 9 as indicated at 14.

A resilient hook 15 is anchored in any suitable manner in the forward end portion of the barrel 10 and on the lower side of said barrel 10 and projects from the free end of

the barrel, as clearly illustrated in the drawings. The purpose of the hook 15 will be presently set forth. A resilient projectile retaining clip or clamp 16 is disposed longitudinally in the split in the connecting sleeve 9 and the groove 11 of the barrel 10 and is provided with an extension hook 17 which is engaged through an opening provided therefor in the stock 1 for securing the clip or clamp in position.

A pair of arms 18 are mounted for swinging movement on opposite sides of the free end portion of the barrel 10, and the free end portions of the arms 18 are looped in a manner to provide the integral eyes 19 through which a rubber band 20 slidably extends. A retaining hook 21 depends from the intermediate portion of the lower side of the barrel 10 over which the rubber band 20 is engaged when said rubber band 20 is not being used. A pair of supporting brackets 22 are pivotally mounted, as at 23, on the upper side of the stock 1 rearwardly of the trigger 2 and are provided with upturned free end portions 24. The brackets 22 are adapted to be swung to any desired position as illustrated in broken lines in Figure 3 of the drawings and the purpose of said brackets 22 will also be presently set forth.

In use, the projectiles of the type exemplified by Figures 6, 7, 10, 11, 16, 17, 18, 19 and 20 are mounted in position in the groove 11 of the barrel 10 and secured by the clip or clamp 16, said projectiles, of course, extending vertically through the split in the connecting sleeve 9. The arms 18 are then swung forwardly and upwardly from the position illustrated in Figure 1 of the drawings to the position illustrated in Figures 2 and 3 of the drawings and the rubber band 20 is stretched and one end thereof is engaged over the hook or the like 3 of the trigger 2 and the other end thereof is engaged with the resilient hook 15 which is bent upwardly as illustrated. In this position the rubber band 20 extends on opposite sides of the projectile which is mounted in position, as will be apparent. The trigger 2 is then actuated in a manner to swing the hook 3 downwardly through the opening 4 to release the rubber band 20 and said rubber band will engage the projectile and propel the same longitudinally through the groove 11 and throw the projectile from the end of the barrel 10, as will be obvious. When the rubber band 20 is released by the trigger 2 the arms 18 and the resilient hook 15 swing forwardly and downwardly to the position illustrated in Figure 1 in order that the passage of the projectile will not be obstructed. The arrangement of the projectiles in the groove 11 is such that said projectiles will be engaged by the rubber band 20 in a manner to impart a reverse spin or rotation to the projectiles when the same are thrown from the barrel 10 for causing the projectiles to execute various movements in the air. Certain of the projectiles are of a configuration to cause the same to return approximately to the point of launching, such as is illustrated in Figure 7 of the drawings.

In Figures 8, 12 and 13 of the drawings the rubber band constitutes the projectile itself or a portion of the projectile and when the same are used one end of the rubber band is engaged with the free end portion of the resilient hook 15. If only a rubber band is to be used as a projectile, as illustrated in Figure 12 of the drawings, the other end of the rubber band is engaged over the hook 3 on the trigger 2 in the manner clearly illustrated in Figure 4. The tension of the rubber band will flex the hook 15 upwardly in a manner to project above the barrel 10 and in this position the upper end of the hook 15 may be utilized as a sight for aiming the device. When the rubber band is released from the trigger 2 the hook 15 springs forwardly and downwardly out of the path of the rubber band and also in a manner to assist in projecting the rubber band. In Figures 8 and 13 of the drawings a metallic ring 25 is secured on one end of the rubber band and is engaged over the hook 3 of the trigger 2 and the weight of the metallic ring will materially increase the distance traversed by the projectile. The projectile illustrated in Figure 8 of the drawings is provided with a spur 26 on the ring 25 which is adapted to anchor itself in a target or the like to facilitate determining the accuracy of the shot. In Figures 8, 12 and 13 of the drawings the rubber band is designated by the reference numeral 28.

The projectile illustrated in Figure 9 of the drawings comprises a flat annulus 29 which is adapted to be supported on the brackets 22 when said brackets 22 are swung to the position illustrated in broken lines in Figure 3 of the drawings. The position of the annulus 29 is also illustrated to advantage in Figure 2 of the drawings. A hook 30 is mounted on the annulus 29 for engagement by the rubber band 20 to project said annulus 29 when the rubber band 20 is released from the hook 3 of the trigger 2.

It is believed that the many advantages of a catapult in accordance with this invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction may be had and different types or forms of projectiles may be used other than those illustrated without departing from the spirit and scope of the invention as claimed.

What is claimed is:—

1. A catapult of the character described

comprising a stock, a handle on one end portion of the stock, a connecting sleeve mounted for longitudinal adjustment in the other end portion of the stock, a barrel mounted for longitudinal adjustment in the sleeve, means for supporting a projectile in position on the barrel, and trigger controlled resilient means for projecting the projectile from the barrel.

2. A catapult of the character described comprising a hollow stock, a handle rigidly mounted on one end portion of the stock, a split, resilient, metallic sleeve mounted for longitudinal adjustment in the other end portion of the stock, an elongated barrel mounted for longitudinal adjustment in the sleeve, means for supporting a projectile in position on the barrel, trigger controlled resilient means for throwing the projectile from the barrel.

3. A catapult of the character described comprising a hollow stock, a handle rigidly mounted on one end portion of the stock, a split, resilient, metallic sleeve mounted for longitudinal adjustment in the other end portion of the stock, an elongated barrel mounted for longitudinal adjustment in the sleeve, means for supporting a projectile in position on the barrel, trigger controlled resilient means for throwing the projectile from the barrel, the sleeve being provided with a longitudinal slot in one portion thereof, and a leaf spring mounted longitudinally in the sleeve and having a curved portion projecting through the slot and frictionally engaged with the stock for frictionally maintaining the sleeve in adjusted position in the stock, said spring further having an oppositely curved portion frictionally engaged with the barrel for retaining the barrel in adjusted position in the sleeve.

4. A catapult of the character described comprising a stock, a trigger operatively mounted on the stock, a handle fixed on one end portion of the stock and depending therefrom, a pair of supporting brackets pivotally mounted for swinging movement on the upper side of said one end portion of the stock, a barrel mounted on the other end portion of the stock, a pair of arms mounted for swinging movement on one end portion of the barrel, a resilient band connected to the arms and adapted for releasable engagement with the trigger, a projectile mounted on the brackets and comprising an annulus, and a hook mounted on the annulus for engagement by the resilient band when said resilient band is released by the trigger in a manner to throw the projectile from the brackets.

5. A catapult of the character described comprising a stock, a pivoted trigger operatively mounted on the stock, a handle fixed on one end portion of the stock, a resilient, split sleeve mounted for longitudinal adjustment in the other end portion of the stock, an elongated barrel mounted for longitudinal adjustment in the sleeve and having a longitudinally extending groove in its upper side for the reception of a projectile, the sleeve being provided with a longitudinally extending slot in a portion thereof, a resilient spring mounted longitudinally in the sleeve and having an outwardly curved portion projecting through the slot and frictionally engaged with the stock for retaining the sleeve in adjusted position therein, said spring being further provided with an inwardly curved portion frictionally engaged with the barrel for retaining said barrel in adjusted position in the sleeve, a resilient clip secured on the stock and disposed in the groove in the barrel for releasably retaining a projectile in position therein, a pair of arms pivotally mounted for swinging movement on the forward end portion of the barrel, eyes on the free ends of the arms, a resilient band connected to the eyes and adapted for releasable engagement with the trigger, said band adapted to engage the projectile when released by the trigger in a manner to throw the projectile from the barrel.

In testimony whereof I affix my signature.

RALPH J. WISMER.