Sept. 4, 1928.

1,683,574

J. R. MURPHY

ARROW SHOOTING GUN

Filed Dec. 22, 1926

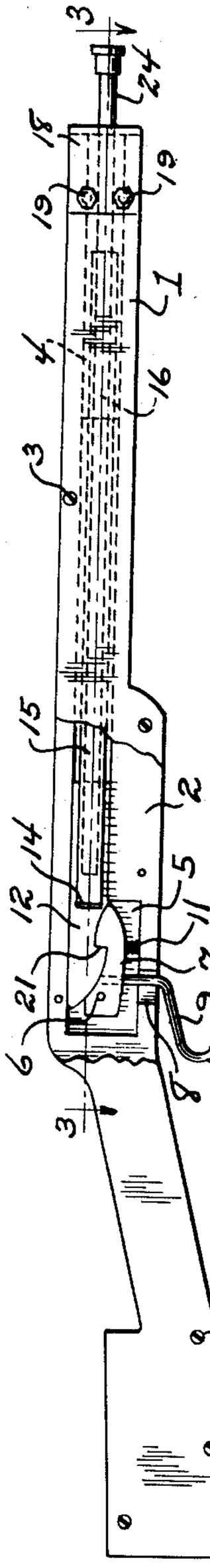

Fig. 1.

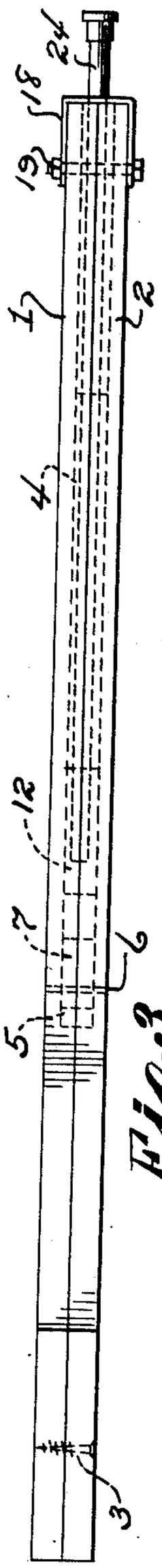

Fig. 2.

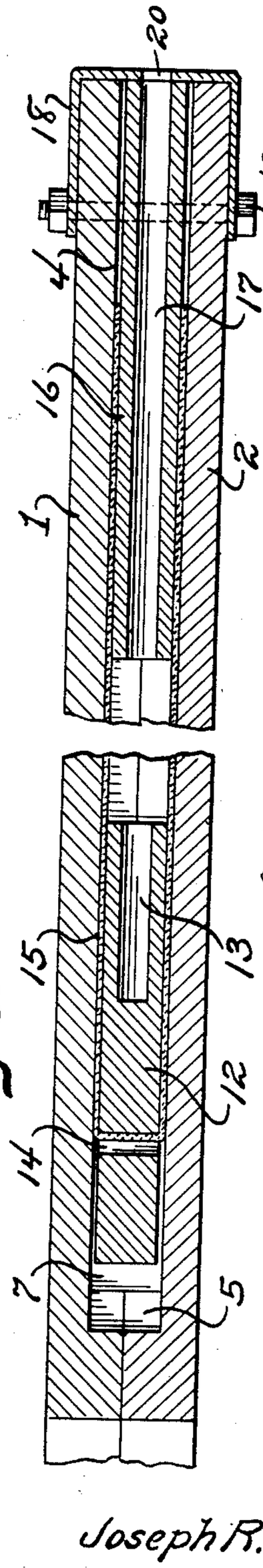

Fig. 3.

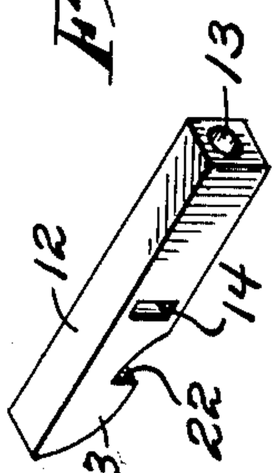

Fig. 4.

WITNESS: John Doran

Joseph R. Murphy
INVENTOR

BY Victor J. Evans
ATTORNEY

Patented Sept. 4, 1928. 1,683,574

UNITED STATES PATENT OFFICE.

JOSEPH R. MURPHY, OF SHELBYVILLE, TENNESSEE.

ARROW-SHOOTING GUN.

Application filed December 22, 1926. Serial No. 156,351.

This invention relates to toys, and its general object is to provide a toy gun of the projectile ejecting type, that is extremely easy to operate and will eject a projectile a great distance with considerable accuracy.

A further object of the invention is to provide a toy gun of the projectile ejecting type, that includes a rubber strip for its ejecting power, that can be replaced when worn or broken in an easy and expeditious manner with very little effort.

Another object of the invention is to provide a toy gun that is simple in construction, includes few parts, is inexpensive to manufacture and is efficient in operation and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a side elevation of the toy gun forming the subject matter of the present invention with a part broken away.

Figure 2 is a top plan view thereof.

Figure 3 is a sectional view taken approximately on line 3—3 of Figure 1, looking in the direction of the arrows.

Figure 4 is a perspective view of the projectile plunger.

Referring to the drawings in detail it will be noted that the stock and barrel portion of the gun are formed from a pair of cooperating sections 1 and 2 shaped to simulate a gun and held together through the instrumentality of screws or like securing elements 3.

The portion of the sections which provide the barrel of the gun are each formed with an elongated recess to provide a bore 4 when the sections are secured to each other as shown in the drawings. The recesses communicate at their inner end with relatively large recesses which form a chamber 5, and pivotally secured in the chamber by a pivot pin 6 is a trigger 7 having extending therefrom and passing through an opening 8 is the trigger control arm 9 having a curved finger portion 10. Arranged in the chamber and having its end convolution engaging the trigger 7 and the bottom wall of the chamber respectively is a coil spring 11.

Mounted for slidable movement in the bore 4 is a plunger 12 which is provided with a bore 13 arranged longitudinally therein and transversing the plunger 12 is an opening 14 through which is passed an elastic strip 15. The elastic strip 15 extends forwardly in parallel portions in a manner to have the end portions thereof clamped between the opposite sides of a block 16 and the walls of the bore 4, as best shown in Figure 3 of the drawings. The block 16 is provided with a bore 17 adapted to register with the bore 13 of the plunger 12, and in order to positively clamp the end portions of the rubber band in the manner as shown, a substantially U-shaped clamp 18 is secured to the ends of the sections by bolt and nut connections 19 which pass through the sections as well as grooves formed in the side walls of the block 16 so as to retain the block in its operative position. The clamp 18 is formed with an opening 20 disposed in registration with the bore of the block.

The trigger 7 is notched to provide a shoulder 21 which cooperates with the shoulder 22 formed in the plunger which is provided with a cam surface 23 so that when the plunger is forced inwardly by a projectile 24, against the tension of the elastic strip 15, the engagement of the cam surface 23 with the trigger will allow the shoulders of the trigger and plunger to be disposed in contacting engagement so as they will be interlocked as best shown in Figure 1. The coil spring 11 acts to retain the trigger in its operative position with the plunger.

From the above description and disclosure of the drawings, it will be obvious that I have provided a toy gun that is extremely simple in construction, and when it is desired to operate the same, the projectile 24 is positioned in a manner to have its inner end arranged in the bore 13 of the plunger 12, the outer end of the projectile is arranged on the ground or other supporting means and by applying weight to the gun, it will be apparent that the projectile will cause the plunger to be moved to its interlocked position with respect to the trigger as best shown in Figure 1. This action stretches the elastic strip and puts the same under tension for ejecting the projectile which is ejected by merely pulling upon the trigger arm 9. In the event the elastic strip should become worn or broken, it can

be replaced by merely removing the clamp 18 and the screws 3 which will allow the sections to be separated so that access may be had to the interior thereof.

The gun may be formed from any material desired, and while I have shown the same provided with flat walls, it can be provided with a round in cross section barrel with a stock portion formed in the usual manner.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:

A toy gun of the character described comprising a pair of like sections, formed with recesses to provide a bore and a chamber, a trigger pivotally mounted in said chamber, a trigger arm extending therefrom and passing through an opening formed in the sections, a plunger mounted for slidable movement in said bore and being formed with a shoulder to be received by the trigger for holding the plunger in operative position, an elastic strip passing through said plunger, a bored block arranged in the bore of the sections and securing the end portions of the strip therein, and a projectile adapted to be arranged in a bore formed in the plunger for putting the elastic strip under tension and securing the plunger to the trigger, clamping means for retaining the bored block in operative position and being formed with an opening for the passage of said projectile, and screws cooperating with said clamping means for holding the sections together.

JOSEPH R. MURPHY.