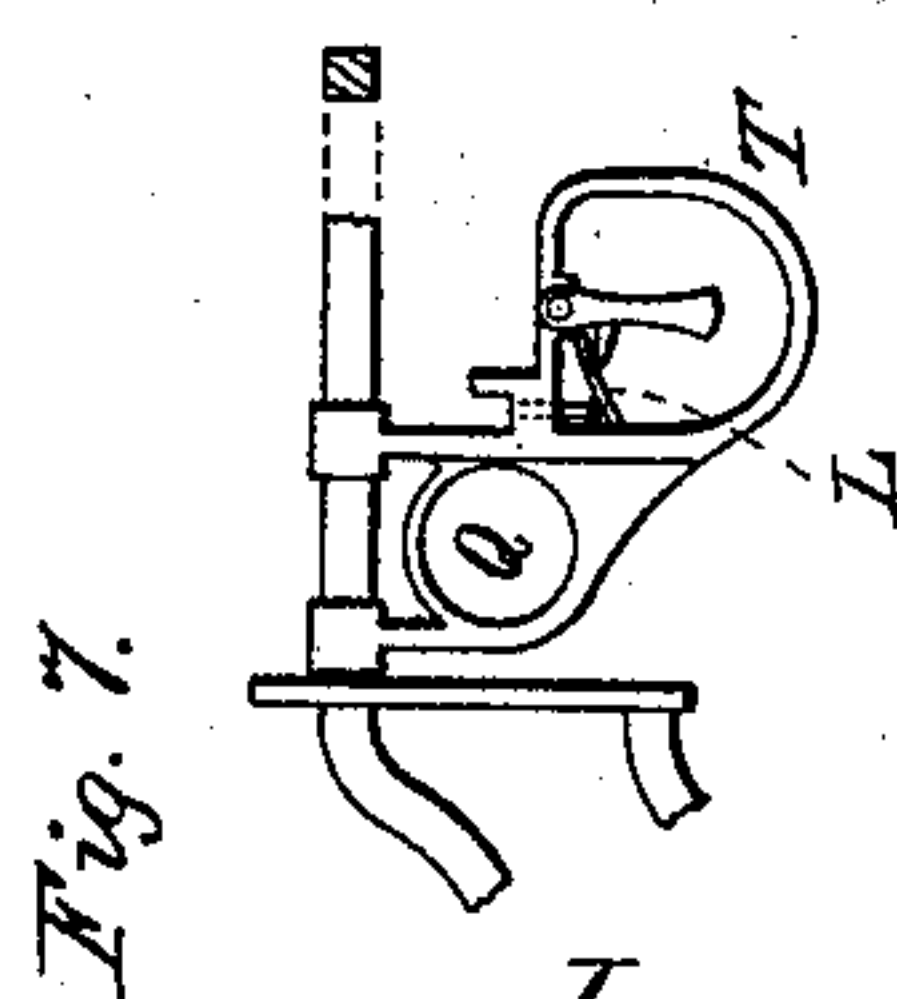
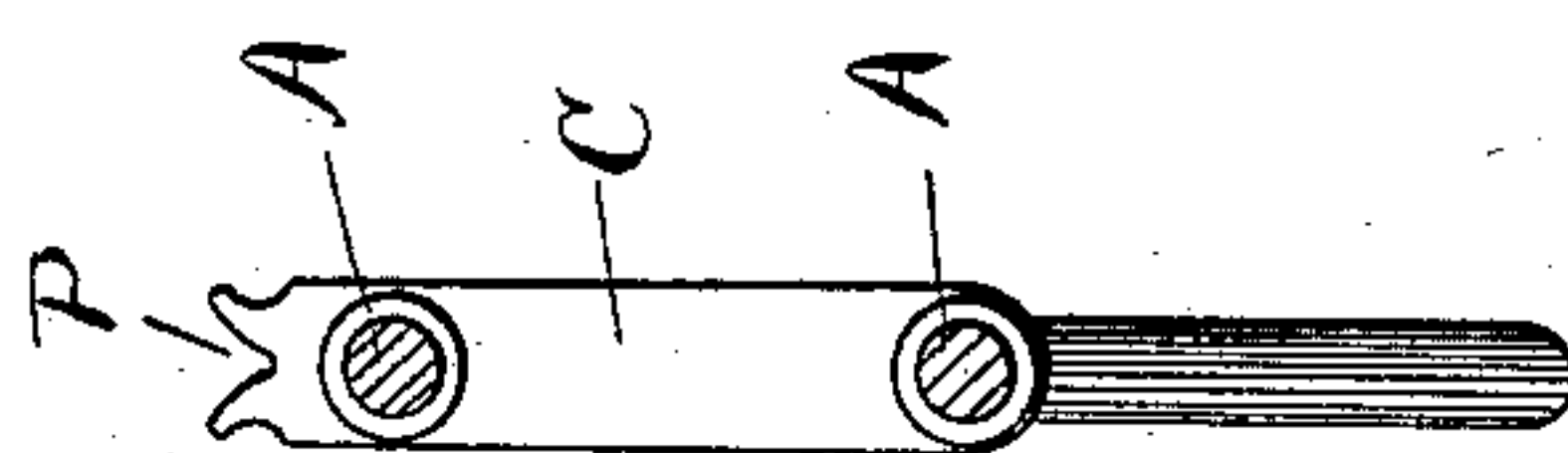
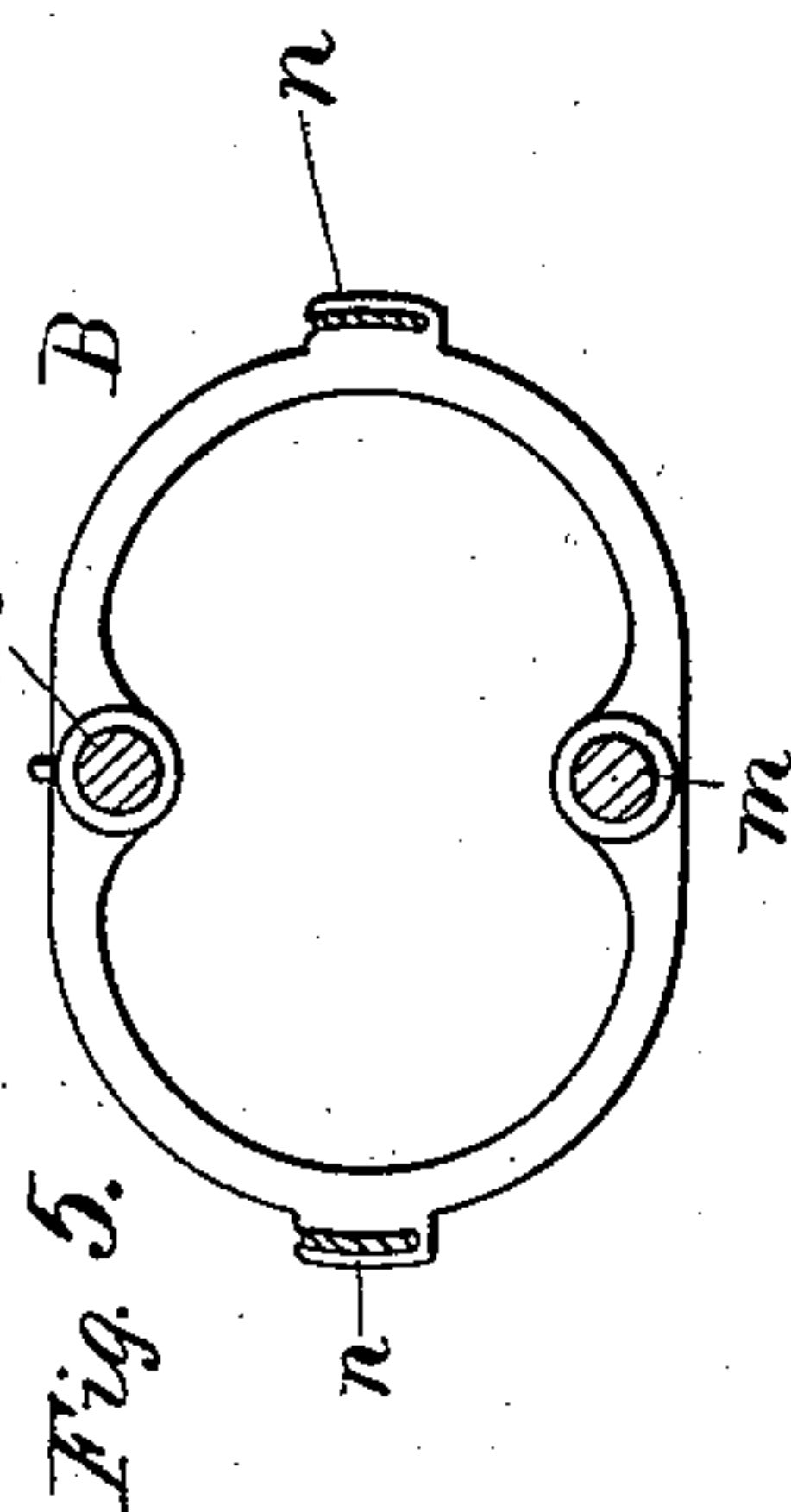
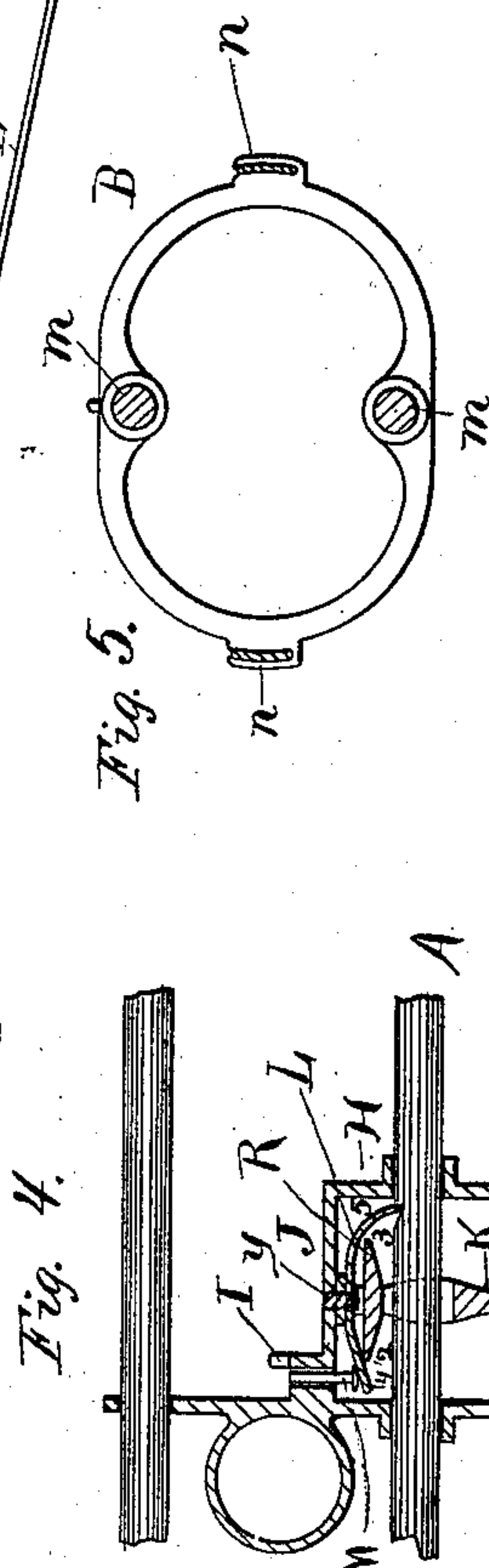
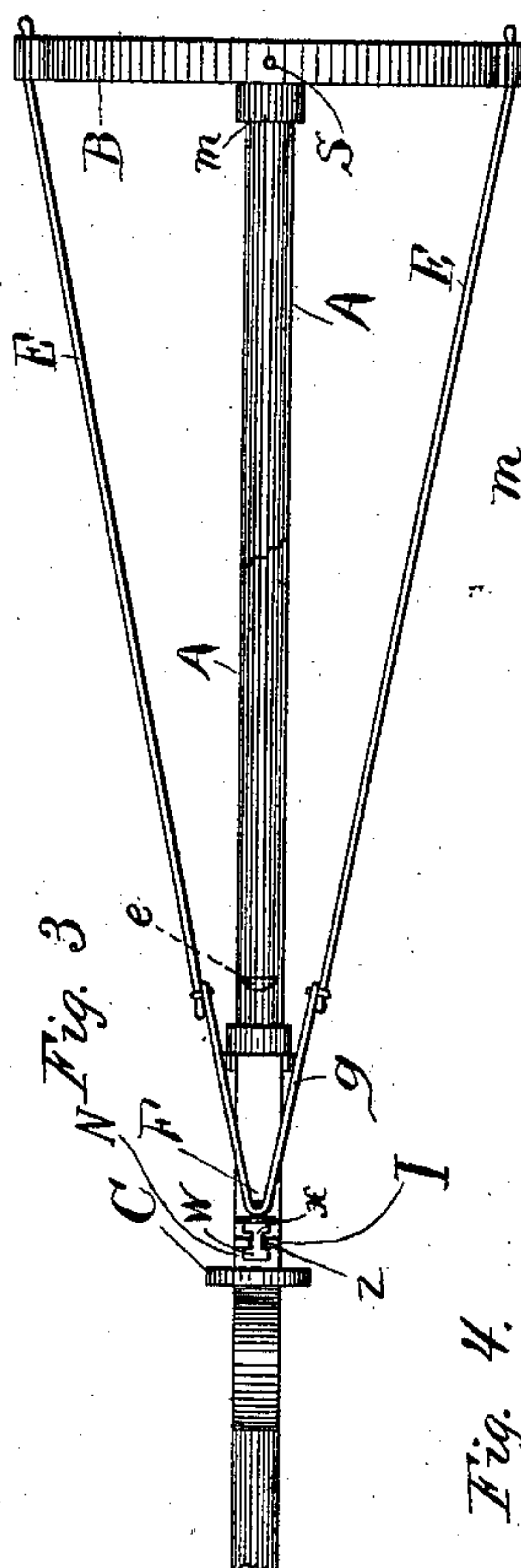
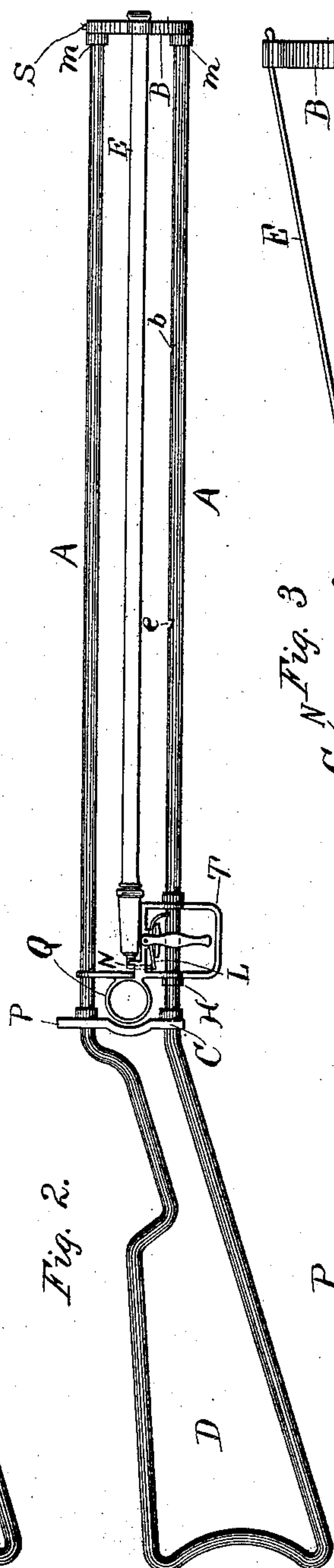
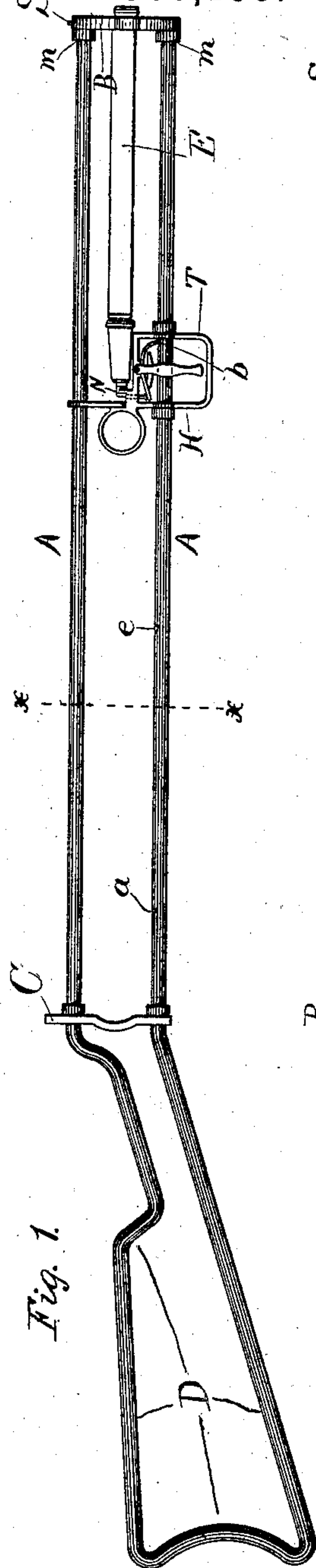


C. ALLEY.
SPRING GUN.

Patented Aug. 30, 1887.

No. 369,153.



O. M. Hill
W. P. Guise

Inventor:
Cassius Alley
by Wm. Hubbell Fisher,
his Attorney.

UNITED STATES PATENT OFFICE.

CASSIUS ALLEY, OF METAMORA, INDIANA.

SPRING-GUN.

SPECIFICATION forming part of Letters Patent No. 369,153, dated August 30, 1887.

Application filed October 30, 1886. Serial No. 217,570. (No model.)

To all whom it may concern:

Be it known that I, CASSIUS ALLEY, a resident of the town of Metamora, in the county of Franklin and State of Indiana, have invented certain new and useful Improvements in Target-Guns, of which the following is a specification.

The several features of my invention and the various advantages resulting from their use, conjointly or otherwise, will be apparent from the following description and claims.

In the accompanying drawings, making part of this specification, Figure 1 represents a side elevation of a gun embodying my invention and illustrating the position of the several parts before the elastic pieces are stretched. Fig. 2 represents a side elevation of the same gun, the elastic pieces being stretched and the parts in position ready for discharging the projectile. Fig. 3 represents an enlarged top view of the forward end of the gun, a portion of the upper rod being broken away to disclose the upper portion of the trigger-carrier and the connection between the elastic pieces and the trigger-carrier. Fig. 4 represents a vertical central longitudinal section of the trigger-carrier, portions of the guide-rods upon which it slides being shown in elevation. Fig. 5 is a front view of the frame and of the front ends of the guide-rods and of the elastic bands. Fig. 6 is a vertical cross-section of the gun, taken at the line xx of Fig. 1 and looking toward the rear or stock of the gun. Fig. 7 represents an elevation of a portion of my improved gun where one of the guide-rods is omitted and the carriage is applied to the single rod.

A A respectively indicate the guide-rods supported in a suitable manner. The preferred means for supporting the front ends of these rods consists of the frame B, the rods being respectively received into an opening, m , provided in this frame or otherwise connected thereto.

The means for supporting the rear ends of the rods consists, preferably, as shown, of the strap or bridge piece C, to which the latter are connected.

The stock D of the gun may be made of any suitable material and connected in any suitable manner to the forward portion of the gun. I have, however, invented a stock and

the combination thereof with the guide-rods, as follows: I form the stock out of and in one piece with the guide-rods by taking a single rod of sufficient length and forming the stock as shown, and the remaining or end portions of said rod forming the guide-rods. In such a construction the guide-rods extend rearward through the bridge-piece C.

The piece or pieces E, by whose elasticity the projectile is discharged, are preferably of rubber, and the forward ends of the elastic piece or pieces forming the "sling" are secured to the frame B.

The gun or frame B is preferably provided with a front bead or sight, S, and with an open or peep sight, P, (see more particularly Fig. 6,) at the rear upper part of the gun in front of the stock. So far as this part of my invention, which relates to the rods A and the elastic sling, is concerned, the latter may be operated therein and therewith by stretching it toward the rear end of the gun and there securing to a suitable catch, capable of being unlocked at will from its connection with the sling, thereby allowing it (the sling) to contract and impel forward and out of the gun the projectile placed in the sling previously to said catch being discharged.

In the more improved and perfect construction of my device, I provide the carriage H, sliding upon the guide-rods. This carriage is provided with a catch, I, for retaining the elastic sling E in position when strained; also a seat, J, on which the projectile to be fired is placed. A trigger is present, pivoted at P to the carriage H, and the usual trigger-guard, T, is preferably present around the finger part of said trigger.

The preferred means for operating the trigger to discharge the gun is as follows: On the rear end of the elastic sling E E is a detent-piece, N. This piece has a narrow neck, x , followed by an enlarged end, w . The catch I of the carriage has a slot, z . The detent N is fitted to engage the catch I, the neck x of the detent being passed into the slot z of the catch, and the enlarged end w of the detent passing behind the catch. The trigger K is provided with lever R. End 2 of the spring rests against the lower end of the firing-pin M. Pulling the finger portion of the trigger backward raises the end 2 of the spring and raises pin

M, which latter lifts the detent-piece out of and off from the catch, and the strained elastic spring, contracting to its normal length, propels the projectile from the gun. As pressure on the trigger-guard is relaxed, the arm 2 of the spring resumes its first position, in readiness for another discharge. The spring is suitably secured in position, preferably by means of a screw or rivet, *y*, screwed into the seat J.

In the lower rod A are two notches, *a* and *b*, and, preferably, also another notch, *e*, for a reason hereinafter mentioned. A spring, preferably a continuation of the spring L, as portion or end 5, presses upon the rod A.

For the purpose of more readily and conveniently engaging the elastic-sling and stretching it for the discharge, the carriage H is slid forward along the guide-rods A A until the rear end, 4, of the spring L enters the notch *b*, and further advance of the carriage H is prevented unless the end 3 of the spring is lifted, which last operation is unnecessary, as the detent N of the relaxed sling is now within reach of the catch without stretching the sling. The detent N is now placed in the catch I, as aforementioned. A bullet or other thing to be thrown is now placed in the extreme crotch or point of the notch F of the sling, and of course between the sides of the sling. The friction of the latter will usually hold the projectile in place; but the seat J is preferably present, as it is a safeguard in preventing the projectile from falling down out of the sling. The gun, ready loaded, may now be carried anywhere with perfect safety. The carriage is now drawn back, stretching the sling until the rear end, 4, of the spring enters the notch *e* of the rod A or the notch *a* thereof. The carriage is thereby held in a stationary position, the sling being strained. The bullet or the like could now be inserted; but for purposes of safety it should be introduced into the notch of the sling, as heretofore mentioned. The marksman now brings the gun to shoulder in position for firing, and by means of the sights S and C obtains an exceedingly accurate aim. He then, by means of the trigger, as aforementioned, releases the detent N, and the elastic sling impels the projectile with remarkable exactness to the point aimed at. If it is desired to use a small force, the carriage is set at notch *e*; but if it is desired to utilize the full power of the gun the carriage is set at notch *a*. The finger portion of the trigger K being pushed forward, its arm 3 of the lever R raises the spring portion 5 out of the notch *a* or *e*, as the case may be. The carriage H is now again slid forward for the detent N to be connected with catch I, and the already-described operations of straining the elastic sling, inserting the projectile, and discharging the latter are repeated.

For the more easy handling of the carriage it is provided with the ring Q, through which one or more fingers may be passed for running the carriage forward, and particularly in

drawing it back against the opposition of the sling. Instead of two rods A, one only may be used for the carriage or the frame B to slide upon, as the case may be. Either the upper or the lower rod may be dispensed with.

In Fig. 7 the upper rod A is shown, the carriage sliding thereon, the lower rod A being omitted. This upper rod A is made square in cross-section, to prevent the carriage from swinging laterally.

The connecting-bar C may, when desired, be dispensed with or merged with the trigger-supporting devices.

The trigger-locking devices may be fixed at the rear; but this is not desirable, as it is inconvenient to draw the sling back directly by hand. This last objection may be obviated by allowing the frame B to move back on the guide-rods A till the detent N of the sling is engaged with the catch, and then pushing the frame forward to the front ends of the guide-rods, and there fastening it; but this is obviously not as advantageous as the mode heretofore described and illustrated.

A preferred manner of constructing the seat of the sling is as follows: The seat has a piece of leather or equivalent non-elastic material, *g*, and this is connected to the elastic piece or pieces E of the sling. The detent N is riveted or otherwise secured to this seat. A preferred means of my invention of connecting these elastic pieces to the frame B is shown, and consists as follows: The frame B is provided with lugs *n n*. The end of the piece E is passed between the frame B and the lug, and the lug is then bent toward the frame against the piece E, thereby pinching this piece E and holding it firmly and securely to the frame B. This device also enables a new piece E to be substituted for the old one when the latter is worn out or injured.

While the various features of my invention are preferably employed together, one or more of said features may be used without the remainder, and in so far as applicable one or more of said features may be employed in connection with target-guns other than the one herein particularly specified.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In a target-gun, the combination of the guide rod or rods, elastic sling, and separate sliding carriage carrying the trigger and the catch for holding the elastic sling, and provided with means for retaining the said carriage in position, substantially as and for the purposes specified.

2. In a target-gun, the combination of the guide rod or rods, elastic sling fixed at the front portion of the gun, and the separate sliding carriage carrying the trigger-catch and trigger, and provided with a catch for holding it at a fixed point on the guide-rods, substantially as and for the purposes set forth.

3. In a target-gun, the combination of the elastic sling, guiding rod or rods, sliding car-

riage provided with devices for engaging and disengaging the sling, and one of the guide-rods having notches placed at various points along the said rod, substantially as and for the purposes specified.

4. In a target-gun, the combination of the guide rod or rods, one of the said rods being notched, frame B, attached to the guide-rods, elastic sling having detent N and attached to the frame B, carriage H, sliding on the guide-rods and carrying catch I, and trigger K, the latter bearing against pin M and held down by spring L, substantially as and for the purposes specified.

5. In a target-gun, the combination of the guide rod or rods, one of the said rods being notched, frame B, attached to the guide-rods, elastic sling having detent N and attached to the frame B, carriage H, sliding on the guide-rods and carrying catch I, and trigger K, the latter provided with an arm bearing against pin M and held down by spring L, and also provided with the lever R, to elevate the front

end of spring L, substantially as and for the purposes set forth.

6. In a target-gun, the combination of the elastic sling attached anteriorly to a transverse rigid frame and provided at its center with non-elastic material, and a detent attached to the non-elastic material, and a separate lock or catch for engaging the detent, substantially as and for the purposes specified.

7. In a target-gun not having a groove, barrel, or other guiding-support for the projectile, the combination of the front and rear sights, the guide rod or rods, elastic sling, and separate sliding carriage carrying the trigger and the catch for holding the elastic sling, and provided with means for retaining the said carriage in position, substantially as and for the purposes specified.

CASSIUS ALLEY.

Witnesses:

ALF. BLACKLEDGE,
GEO. W. KIMBLE.