

(No Model.)

F. CASPAR.

SPRING GUN.

No. 255,141.

Patented Mar. 21, 1882.

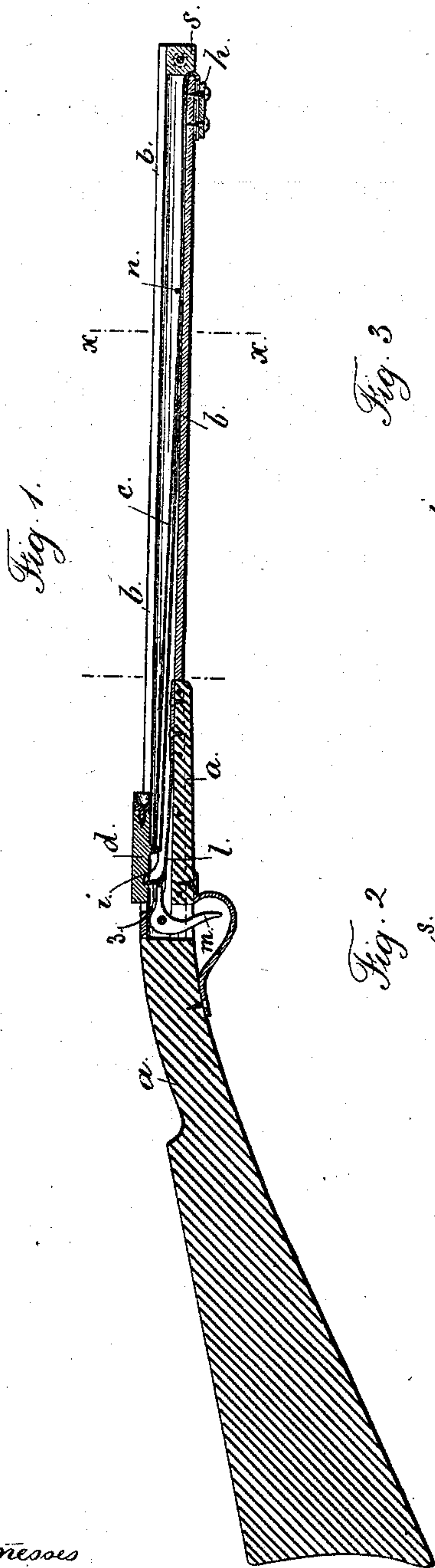


Fig. 3.

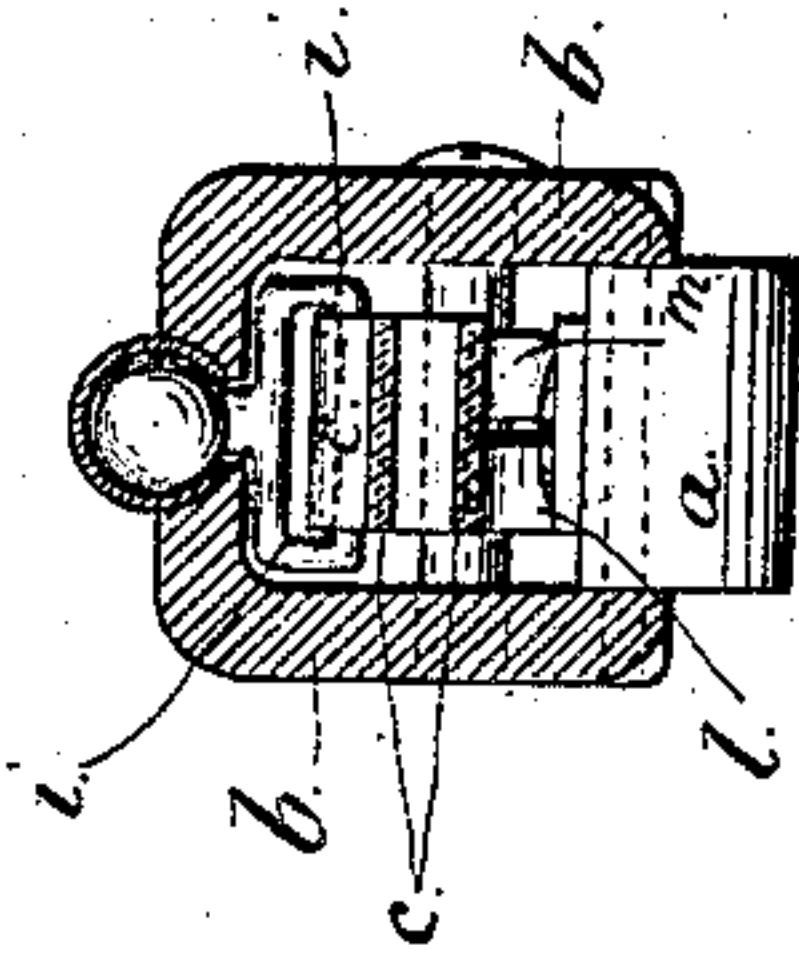


Fig. 2.

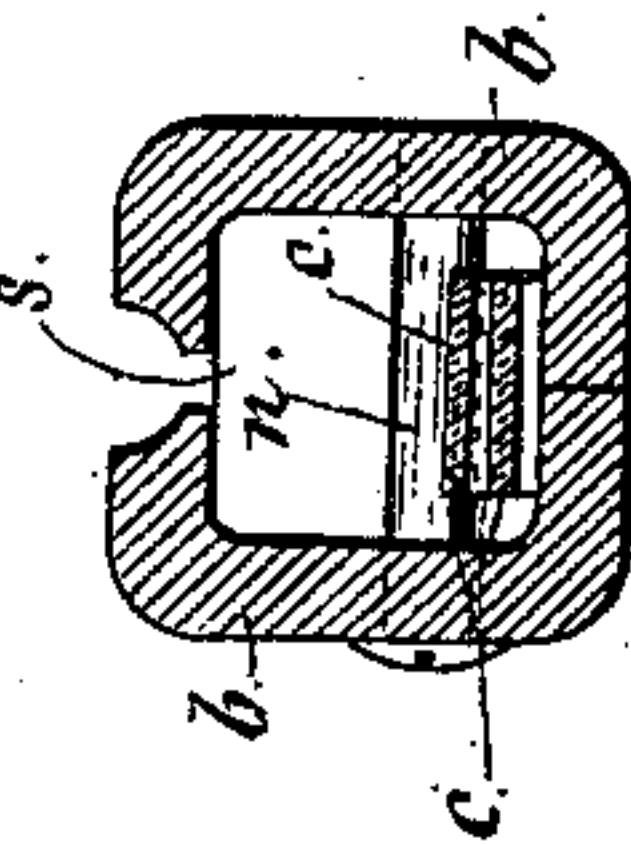


Fig. 5.

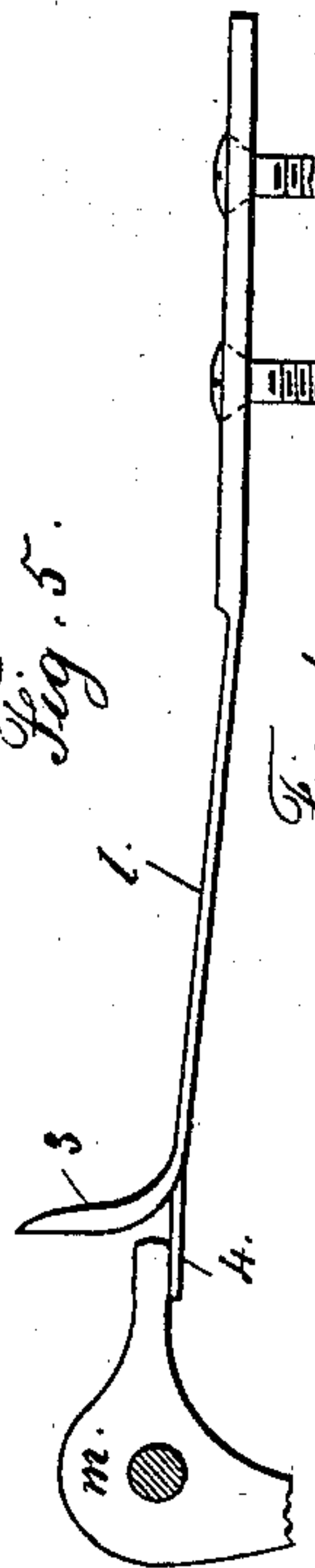
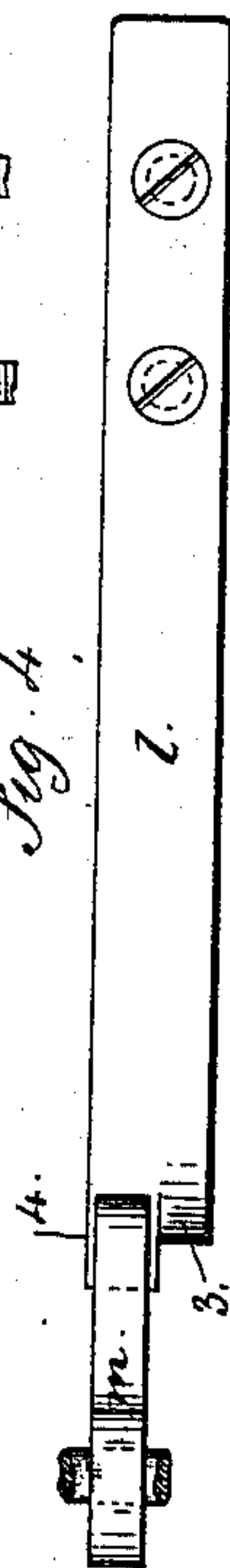


Fig. 4.



Witnesses

Chas. H. Smith
J. Hall

Inventor
Frederick Caspar
per Lemuel W. Serrell
attys

UNITED STATES PATENT OFFICE.

FREDERICK CASPAR, OF PLAINFIELD, NEW JERSEY.

SPRING-GUN.

SPECIFICATION forming part of Letters Patent No. 255,141, dated March 21, 1882.

Application filed January 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK CASPAR, of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Spring-Guns, of which the following is a specification.

Spring-guns have been made with a strip of india-rubber that is distended in drawing back the projector or fly; but the spring did not draw straight, and some of the momentum or power was lost by the spring passing around two or more pins. Besides this, the fly was liable to injure the other parts of the gun by the concussion in stopping.

My invention relates to the combination, with the rubber spring and fly, of a stop located between the barrel or groove of the body and the spring, in such a position that the rubber spring will wrap around such stop and gradually arrest the momentum of the fly. When the spring is distended it occupies a straight, or nearly straight, position, so as to exert its greatest power upon the fly and arrow or other projectile, and communicate to the same the highest velocity that the spring is capable of imparting when the fly is disengaged from the sear.

In the drawings, Figure 1 is a longitudinal section of gun in position for firing. Fig. 2 is a cross section at the line *xx*, but in larger size. Fig. 3 is a similar cross-section of the body with a barrel thereon. Fig. 4 is a plan of the spring-sear and trigger detached, and Fig. 5 is an elevation of the same.

The stock *a* is of suitable size, either to be placed against the shoulder or held in the hand. The body *b* of the gun is made hollow for the reception of the rubber spring *c*, and it is slotted lengthwise for the shank *i* of the projector or fly *d* to pass through and be connected with the spring *c*. The upper surface of the body *b* is recessed to form a trough in which to lay the arrow or other missile that is to be projected, or a sheet-metal barrel may be secured to the body *b*, as seen in Fig. 3. The shank *i* of the fly *d* is adapted to the reception of the rubber spring.

Round rubber cords may be employed for the spring; but I prefer to use a spring in the

form of a flat strip of rubber passed through the shank *i* of the fly, and the two thicknesses of spring-rubber brought forward in the hollow body *b*, and out at an opening in the lower part of the front end of the body and turned back and secured by a clamp, *h*. The spring passes beneath the stop-pin or roller *n*, that is across the body *b*, and below the path of the fly and its shank, so that when the projector or fly is liberated from the sear it moves unobstructedly forward and passes above this stop-pin or roller *n*, and carries the spring along with it, and in so doing wraps the rubber spring around such stop-pin, and the position of the same is such that the projector or fly is arrested in its forward movement before it reaches the end of the body *b*, the rubber spring alone stopping the momentum, and hence there is no noise or concussion.

The sear *l* is formed as a steel spring, the forward end of which is screwed to the wood of the stock at the bottom part of the hollow body *b*, and at its rear end is the finger 3, that springs up into a notch in the projector or fly and holds the same, and there is a trigger, *m*, that acts upon the second finger, 4, of the spring, so that when the trigger is pulled the finger is drawn down out of the notch in the projector, and the latter is liberated, and the contractile rubber spring causes said projector to fly forward with the utmost rapidity and project the arrow or dart with force and precision.

The arrow or dart is to be laid in the groove on the top of the body, or it may be inserted into the barrel.

If a lead ball is used, it may either be placed in the barrel or introduced into a cavity at the front end of the projector or fly *d*. This projector or fly can be pushed back by a ram-rod in preparing the gun to be discharged.

I remark that the body of the gun can be made of two trough-shaped pieces of wood screwed together at their lower edges and lapping at each side upon the forward part of the stock, so as to be fastened thereto.

At the front end of the body *b* is a removable plug, *s*. This can be taken out and the fly removed for the insertion of a new rubber spring *c*. This is easily accomplished, as it is

only necessary to remove the said plug and the clamp and unscrew the pin *n*, after which the new spring can be threaded through the shank of the projector, and this is then slipped
5 back to place, the end of the spring clamped, and the stop-pin *n* replaced above the spring.

I claim as my invention—

1. In a spring-gun, the hollow body having a groove and slot in its upper surface, in combination with a projector traveling in such
10 groove and having a shank in the hollow body, and a contractile rubber spring attached at the forward end of the body, and a stop-pin across the hollow body and above the spring, for the
15 purposes and substantially as set forth.

2. In a spring-gun, the hollow body formed of two grooved pieces of wood connected together at their lower edges and at the back end to the stock, in combination with the spring within such body, and the projector traveling
20 in a groove in the top edge of such body, substantially as set forth.

Signed by me this 31st day of December, A. D. 1881.

FREDERICK CASPAR.

Witnesses:

OLIVER B. LEONARD,
CRAIG A. MARSH.