

No. 724,273.

PATENTED MAR. 31, 1903.

O. F. ERMEL.  
CUSHIONED GUN STOCK.  
APPLICATION FILED SEPT. 11, 1902.

NO MODEL.

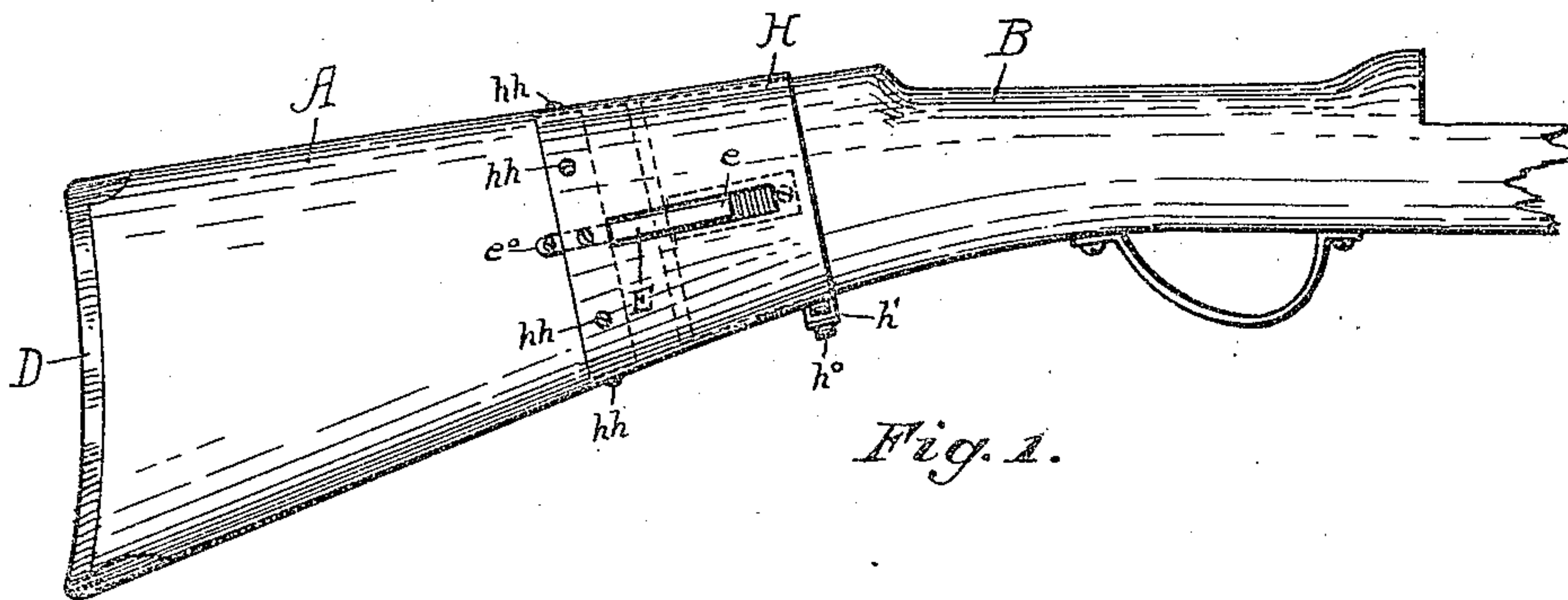


Fig. 1.

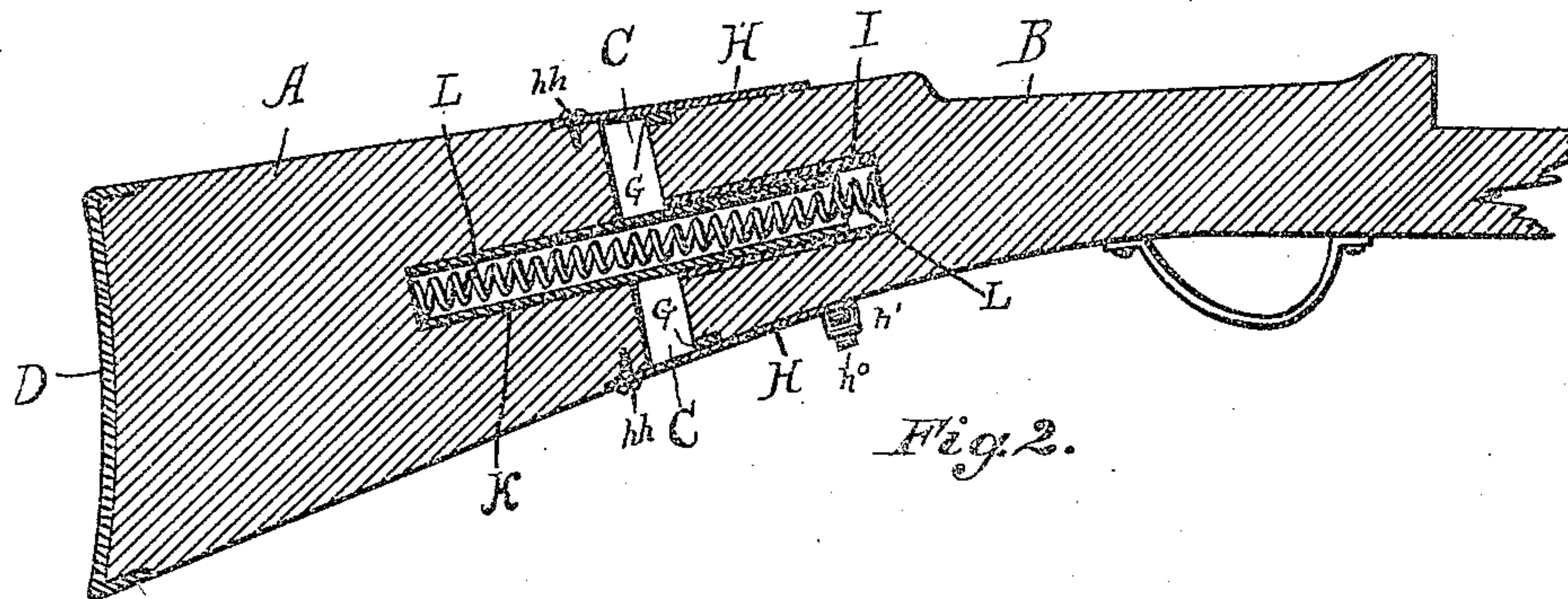


Fig. 2.

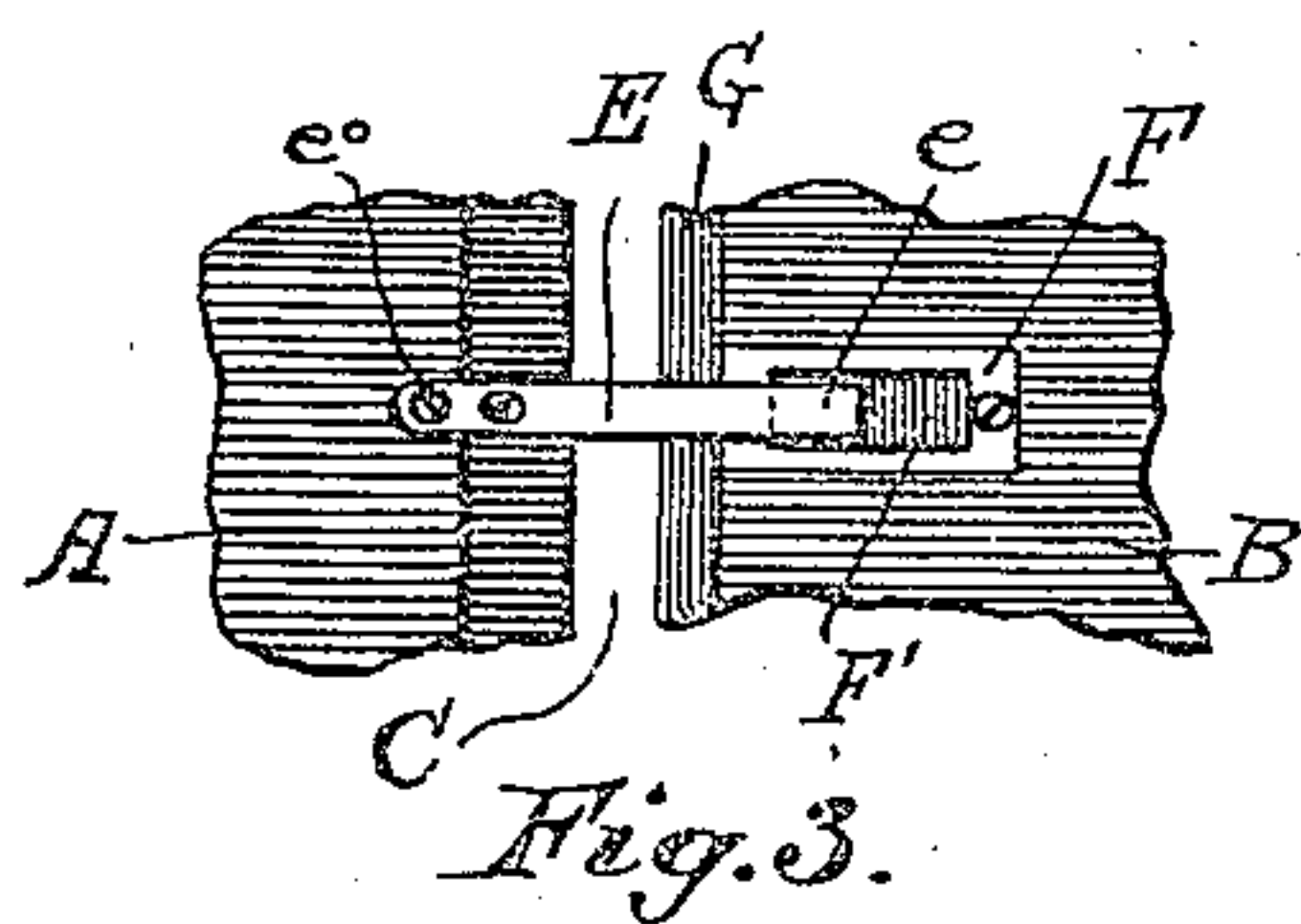


Fig. 3.

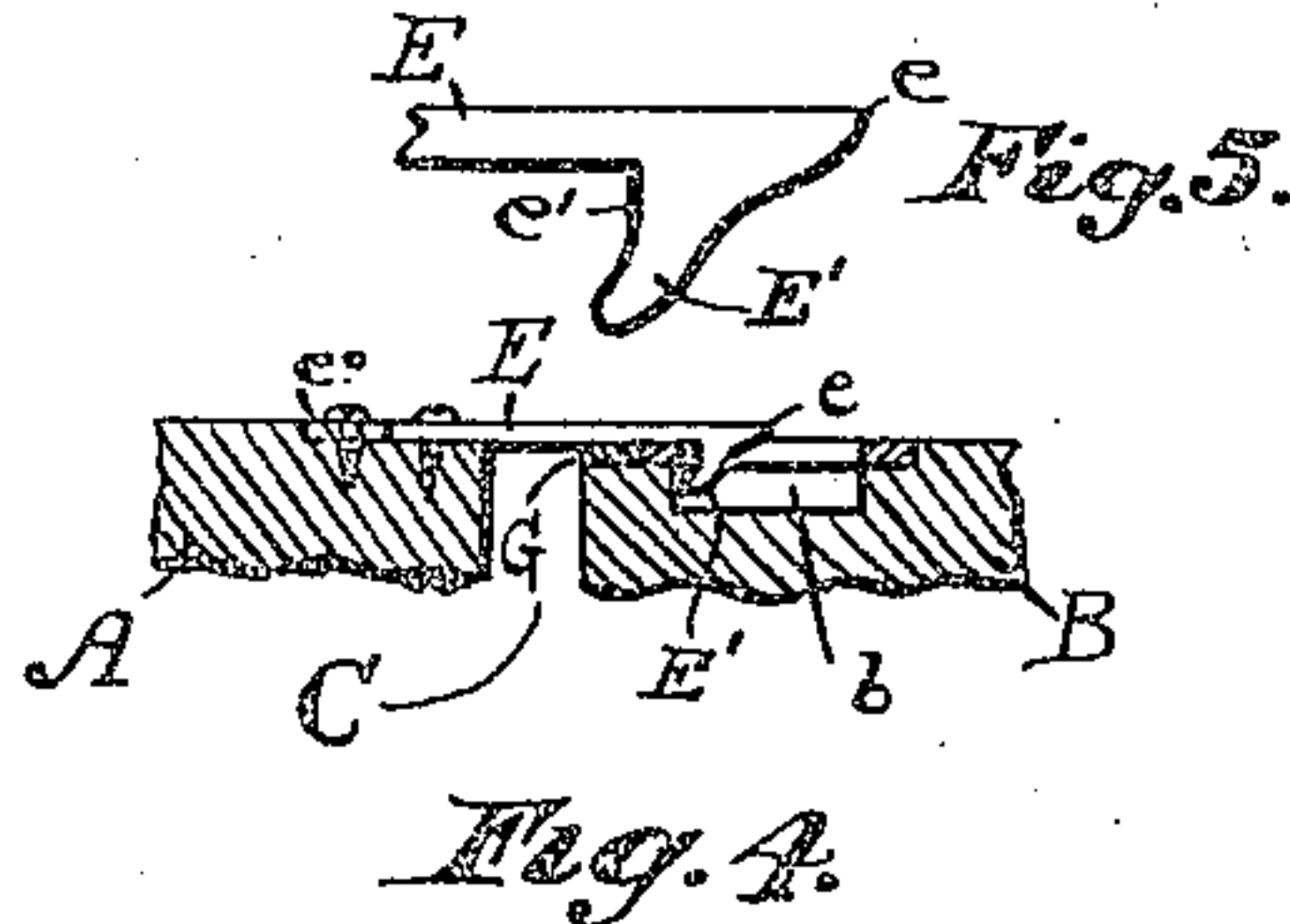


Fig. 4.

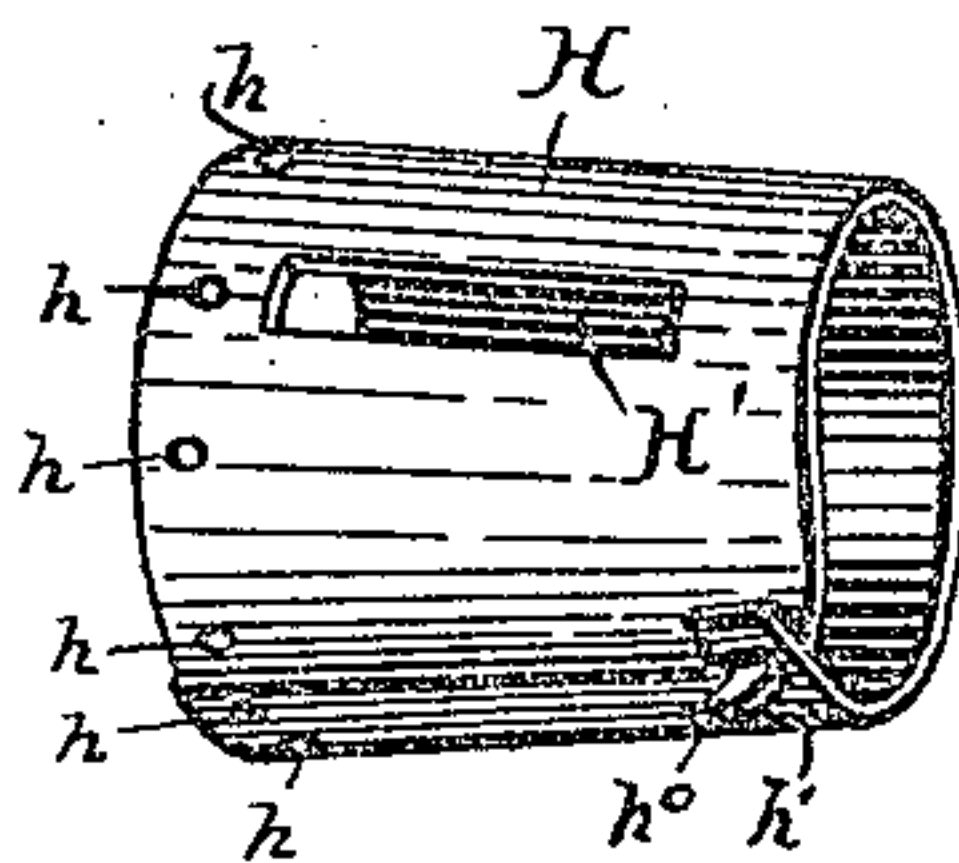


Fig. 6.

Witnesses:

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Inventor:  
O. F. ERMEL;  
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# UNITED STATES PATENT OFFICE.

OSCAR F. ERMEL, OF NEW LEBANON, OHIO.

## CUSHIONED GUN-STOCK

SPECIFICATION forming part of Letters Patent No. 724,273, dated March 31, 1903.

Application filed September 11, 1902. Serial No. 122,909. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR F. ERMEL, residing at New Lebanon, in the county of Montgomery, and in the State of Ohio, have invented new and useful Improvements in Cushioned Gun-Stocks, of which the following is a specification.

My invention relates to gun-stocks adapted to absorb and annul the effect of the recoil when the gun is discharged.

The object of my invention is to provide a two-part gun-stock with an intermediate mechanism adapted to absorb and annul the recoil when the gun is discharged.

Another object is to provide a cushioned gun-stock in which a resilient spring mechanism is provided to receive the recoil of the gun in order that the effect of the recoil may not be transmitted to the person holding the gun.

Another object is to provide a two-part gun-stock provided with telescoping resilient intermediate mechanism, a guard for covering the intermediate mechanism, and means for attaching and detaching the two parts of the gun-stock easily and quickly.

Another object is to provide a cushioned gun-stock which will be strong and durable in construction, positive in action, in which the various parts of its structure can be readily assembled and at the same time will be difficult of inadvertent displacement, will be neat and attractive in appearance, which can be manufactured and sold at a comparatively low price, and will be capable of a wide scope of usefulness and efficiency.

Other objects and advantages will appear from the following specification and from the drawings forming a part thereof.

With the above-enumerated objects in view my invention consists in a cushioned gun-stock embodying the improved construction, arrangement, and combination of the several parts hereinafter fully described and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe and illustrate its construction and operation in connection with the ac-

companying drawings, forming a part of this specification, in which—

Figure 1 is a side view of a gun-stock embodying my invention. Fig. 2 is a vertical central section through the gun-stock and my improved mechanism. Fig. 3 is a detail side view of the securing mechanism, and Fig. 4 is a detail in horizontal longitudinal section of the same. Fig. 5 is a detail of the securing-hook, and Fig. 6 is a detail perspective view of the circular guard.

Similar indices refer to and denote similar parts throughout the several views.

In the drawings, A represents the rear part of the gun-stock; B, the front part of the gun-stock:

C represents the interstice between the two parts of the stock, and D represents the back plate or butt of the gun-stock.

Into the centers of the opposite facing ends of the two parts of the stock I provide longitudinal oppositely-disposed holes on a line with each other, of different diameters, and of substantially the same depth. In this instance I have placed the larger hole in the forward part of the stock and the smaller hole in the rear part of the stock. The hole in the part B is of a size to snugly receive therein the tube I, said tube I being of a length that its inner end may rest on the bottom of the opening, while its outer end is flush with the rear end of the forward part of the stock, as shown. The hole in the part A is of a size to snugly receive therein the tube K, said tube being of a length that its inner end may rest on the bottom of the opening, while its outer end extends beyond the part A for substantially the same distance that it is entered in the opening in the part A. The inner diameter of the tube I is only slightly larger than the outer diameter of the tube K in order that the tube K may freely slide within the tube I, as shown in Fig. 2.

L represents a resilient helical spring whose diameter is slightly smaller than the diameter of the tube K, in which it is adapted to operate, and is of a length, normally, substantially the same as the sum of the lengths of the tubes I and K and is adapted to be compressed longitudinally. One end of the spring L is adapted to rest on the bottom of the opening



in the forward part of the stock and the other end of the spring is adapted to rest on the bottom of the opening in the rear part of the stock, substantially as shown in Fig. 2.

5 Around the rear end of the part B is a band or ferrule G, as shown, to protect the edge of said parts.

E represents a spring-tongue whose rear end  $e^0$  is secured by screws to the forward part of the part A, beyond which it extends for some distance and terminating in a point  $e$ . Extending in from the under side of the spring E immediately back of the point  $e$  is a hook member E' with a rear facing-shoulder  $e'$  substantially of the form shown in Fig. 5. Secured near the rear end of the part B opposite to the spring E is the plate F, secured by screws and with a longitudinal slot F' therethrough, as shown. The surface of the plate E and the surface of the rear portion  $e^0$  of the spring E are flush with the surface of the respective portions B and A, as shown in Fig. 4. Below the slot F' in the portion B is formed a cavity  $b$  to receive the hook E', as shown in Fig. 4. When the parts A and B are brought toward each other, the forward beveled edge of the hook E' will engage the edge of the rear end of the part B, by which the hook E', together with the forward end of the spring E, will be lifted up and carried over the rear end of the plate F, and passing on the hook E' will drop into the slot F' and the shoulder  $e'$  will engage in the rear end of the slot F', as shown in Fig. 4. It will now be seen that the tubes I and K being placed in the holes in the parts B and A, as shown, the spring L being inserted in the tube K, and the tube K inserted in the tube I; that the parts A and B being then pressed toward each other against the resiliency of the spring L; that when the facing ends of the parts A and B have nearly contacted the hook E' will engage in the slot F' and hold the parts A and B from separating farther apart than the width of the predetermined interstice C.

Around the forward end of the periphery of the part A is a channel to receive the rear end of the guard H, which encircles said end of the part A. Said channel is of a depth 50 the same as the thickness of the material of which said guard is composed. The periphery of the rear end of the part B is of same circumference and contour as the bottom of the channel in the part A, and the rear portion of the part B is at no point greater in circumference than is the circumference of the channel in the part A. The guard H (shown in Fig. 6) consists of a band of sheet metal or the like with a longitudinal slot H' 60 through one side, as shown, and with screw-holes  $h$  formed around the rear end of the guard. The circumference of the guard H is substantially the same as the circumference of the inner ends of the parts A and B, and said guard H is adapted to be placed around the inner ends of the parts A and B and secured to the part A by the screws  $h$ , 65

inserted through the holes  $h$  into the bottom of said channel in the part A, substantially as shown. The forward meeting edges of the guard H are adapted to be locked together as follows: Extending from one of the forward corners of the guard H is a tongue  $h'$ , in which is provided a slot, and opposite thereto, extending from the opposite corner, is a similar but smaller tongue  $h^0$ , the latter being of a width to enter in the slot in the tongue  $h'$ . It will now be seen that the guard H is formed to surround the interstice C, to be secured at its rear end in the channel of the part A, extend forward over the rear end of the part B, and the forward corners secured together by inserting the tongue  $h^0$  in the slot of the tongue  $h'$ , and then turning the tongue  $h^0$  back upon itself, forming a lock. The slot H' is formed to come directly over the spring-tongue E in order that the tongue E may be lifted for the purpose of releasing the hook E' from the slot in the plate F without the necessity of removing the guard H. 70 75 80 85 90

My gun-stock when constructed as set forth will appear as shown in Fig. 1, and it will now be apparent that when so constructed and in connection with a complete gun if the back-plate D be placed against the shoulder of the operator and the gun discharged in the usual manner the recoil will be taken up by the coil-spring L and the part A and the guard H will not be affected thereby, and consequently the recoil will not be apparent to the operator. 95 100

In ordinary practice the guard H will be in contact with the face of the operator at the time the gun is discharged, and as the guard H will remain stationary and not be affected by the recoil when the gun is discharged it will be apparent that the recoil will have no effect on the face of the operator, and also, for the same reason, the butt of the gun will not affect the shoulder or any part of the operator when the gun is discharged. 105 110

My invention is perfectly adapted to accomplish the results for which it is intended, and it is evident that changes in and modifications of the specific construction herein shown and described may be made and that analogous parts may be used to accomplish the same results without departing from the spirit of my invention or sacrificing any of its many advantages. 115 120

The terms "forward," "backward," and other similar terms are used for convenience of description, and it is not intended by the use of such terms to limit the arrangement and operation of the several parts to the relative positions and operations indicated; but they may be variously changed and modified to suit the various requirements of different types of guns on which my invention may be used. 125 130

Having now fully shown and described my invention and the best mode for its construction to me known at this time, what I claim



as new, and desire to secure by Letters Patent of the United States, is—

1. In a device of the class described, the combination of a gun-stock divided into two parts, a forward and a rearward portion with an interstice between the two parts, a coil-spring extending across said interstice and extending into the forward and rearward portions of the stock, a pair of telescoping tubes surrounding said spring, one of said tubes extending into each of the forward and rearward portions of the stock, a spring-tongue and hook secured to one of the parts of the stock and a catch to receive the said hook in the other part of the stock, and a guard for covering said interstice with means for securing the guard to one of the parts of the stock, and an opening in the guard by which access is obtained to said spring-tongue, all substantially as shown and described and for the purposes set forth.

2. A cushioned gun-stock, the combination

of the two parts A and B held resiliently apart by a coil-spring L extending into said two parts, a catch consisting of the tongue E secured to the part A extending forward over the part B, and a hook E' extending in from the forward end of said tongue, a plate F secured to the part B opposite to the tongue E, a slot F' in the plate F to receive the hook E', whereby the two parts of the stock are adapted to be secured near together against the resiliency of the spring L, a guard H for protecting the space between the two parts of the stock, and a band or ferrule surrounding the end of the part B, all substantially as shown and described and for the purposes set forth.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

OSCAR F. ERMEL.

Witnesses:

R. W. RANDLE,

R. E. RANDLE.