

*Haviland & Gunn,*

*Air Pistol.*

*No. 113766.*

*Patented Apr. 18. 1871.*

Fig. 1.

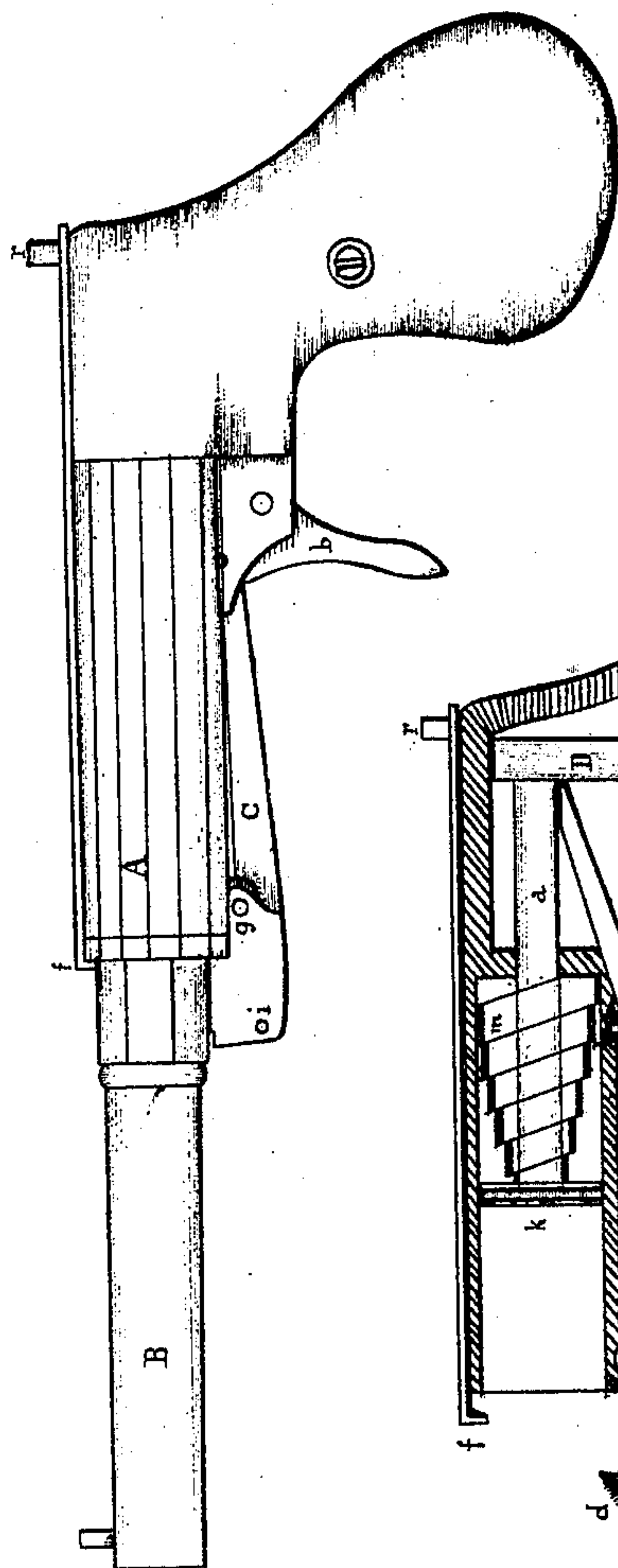
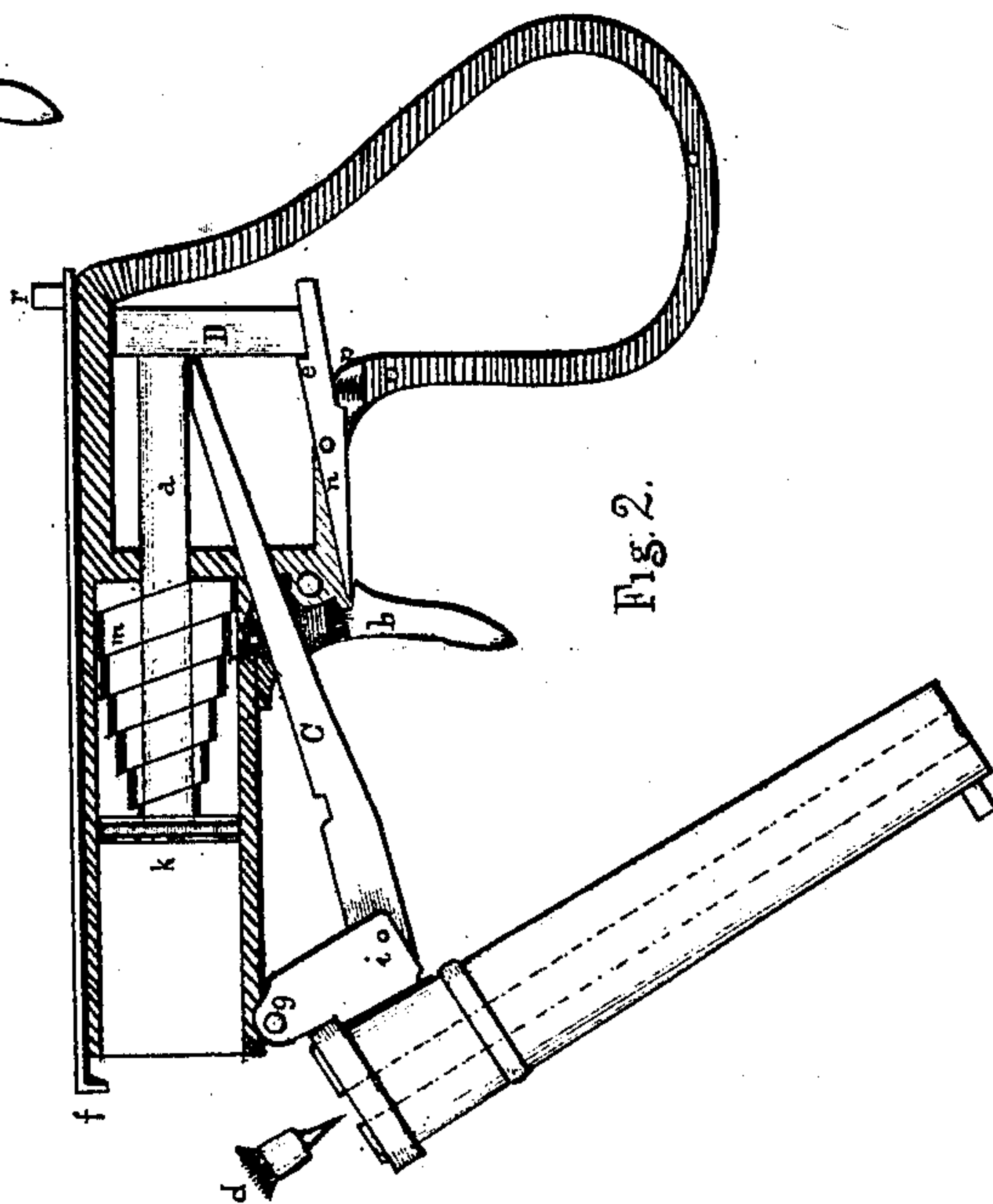


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PARLOR AIR-PISTOLS.

Specification forming part of Letters Patent No. **113,766**, dated April 18, 1871.

We, BENJAMIN HAVILAND, of the city of Hudson, in the county of Columbia and State of New York, and GEORGE P. GUNN, of Ilion, in the county of Herkimer and State aforesaid, have invented certain Improvements in Parlor Air-Pistols, of which the following is a specification:

### *Nature and Object of the Invention.*

Our invention consists, first, in the employment of the barrel of the pistol as a lever and transferring the point of application of its power to the rear end of the piston-rod, and thus to compress the spring which actuates the piston; secondly, in combining the head-block at the rear end of the piston-rod with the trigger in such manner as to hold or release the spring and piston at will.

### *Description of the Accompanying Drawing.*

Figure 1 is a longitudinal side view of our pistol. Fig. 2 is a longitudinal, sectional, or skeleton view of the same when opened.

### *General Description.*

A is the air-chamber containing the piston *k*. B is the barrel hinged at *g*. C is a pitman or arm hinged at *i*, and extending to cross-head D at the rear end of piston-rod *a*.

Trigger *b* vibrates on pin *h*, and is mortised or slotted at its upper end, so as to allow the arm C to pass through it. The end of this arm bears against the cross head or block D as soon as the barrel is begun to be opened or separated from the air-chamber A, and is of such length as to force the head D, and consequently the piston *k*, far enough back to obtain the required propulsion through spring *m* to project the dart a greater or lesser distance, according to the power of this spring.

The butt or rear end of the barrel B, when closed up in place, forms the head of the otherwise open chamber A, and then, too, the arm C will lie close along the under side of the air-chamber, and be so far withdrawn from

head D that when the latter is released from the catch or detent *e* on lever *n* it cannot strike it. The head D also forms a check or hold to the spring and piston, and prevents the latter from striking against the rear end of the barrel.

Hinging the barrel on the lower edge of the air-chamber renders it more easily accessible for inserting the dart *d*, more effectual in closing up the air-chamber A, and above all enables it to be employed as a lever of sufficient power to compress spring *m* by and through the intervention of arm C.

A shoulder or shelf on trigger *b* supports one end of lever *n*, while its opposite end passes under head D, and is borne up slightly by the little spiral spring *p*, so that the catch *e* will hold head D until it is desired to release it.

The piston *k*, by the use of proper packing, is made to closely fit the air-chamber A.

In order to describe the operation of the several parts of our pistol we will suppose it first in the condition represented by Fig. 1 of the annexed drawing, and that it is desired to load or charge it with the dart *d*. The slide-hook *f* is pressed off one side far enough to release the barrel. The barrel is then bent downward until the arm C has forced the cross-head D far enough back to be engaged by the catch *e* on upper side of lever *n*, the spring *p* pressing it upward and keeping it close to D. The dart *d* is now inserted into the barrel B as and at the point represented in Fig. 2, until the feather end is flush with the aperture, when the barrel is restored to its place and locked by the hook *f*. This return or restoring of the barrel to its place withdraws the arm C, so that the head-block D cannot strike it. The sights *r* and *s* are now in their proper places and the pistol ready to discharge. By applying the finger to the trigger *b* that end of lever *n* is elevated, the head D disengaged from catch *e*, and by the sudden expansion of spring *m*, piston *k* is thrown as suddenly for-



ward, and the air in chamber A forcibly compressed, and, having, no place of escape except through the barrel, the dart *d* is projected with sufficient force to fix it firmly in a target at the distance of from twenty to thirty yards.

We claim as our invention—

1. The combination and arrangement of barrel B, arm C, and cross-head D, substantially in the manner and for the purposes herein set forth.

2. The combination and arrangement of piston *k*, spring *m*, and rod *a*, with the elements

of claim 1, substantially as and for the purposes set forth.

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