

(No Model.)

O. EDWARDS.

BARREL SUPPORT FOR BATTERY GUNS.

No. 310,036.

Patented Dec. 30, 1884.

Fig. 1.

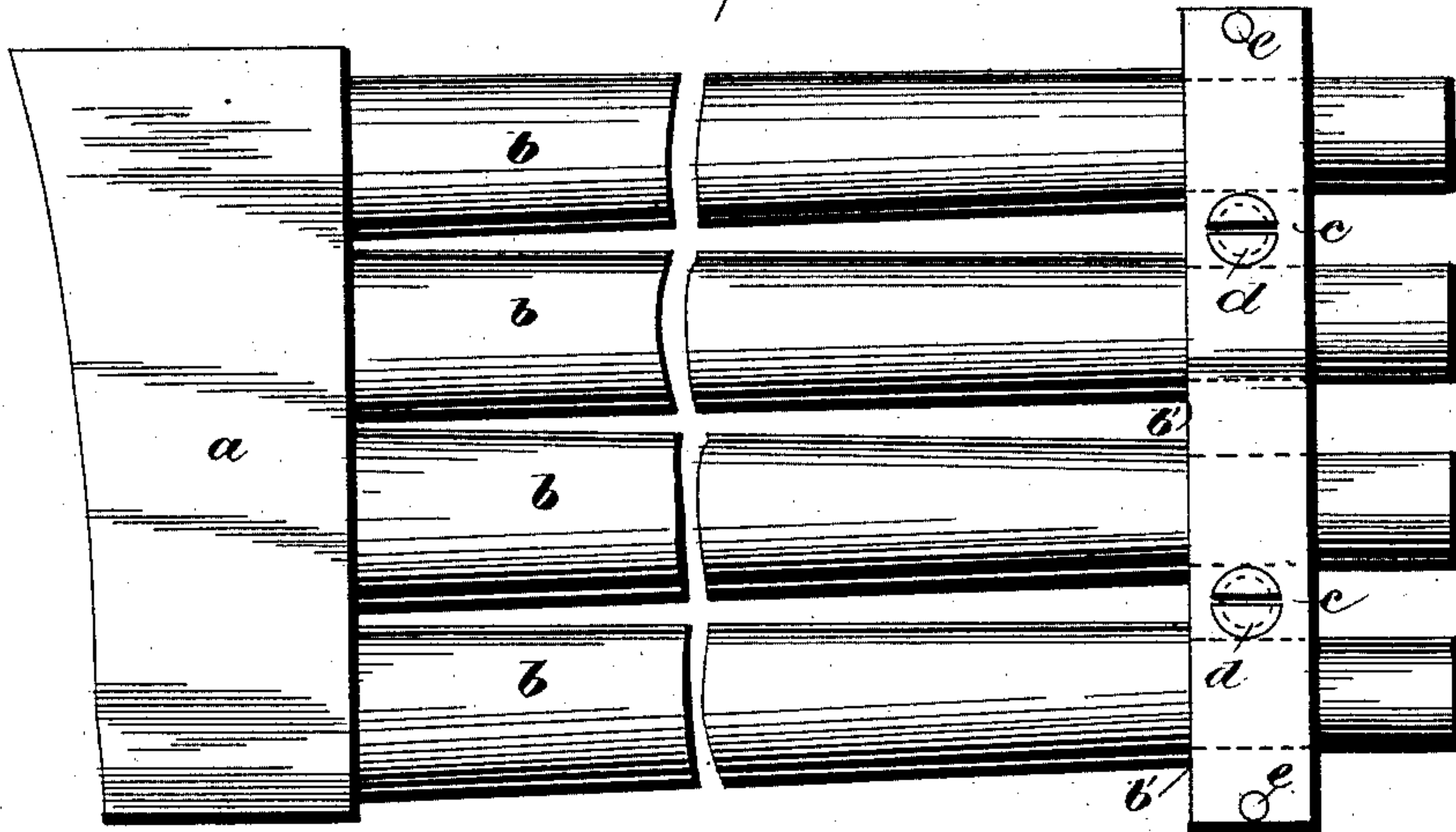


Fig. 2.

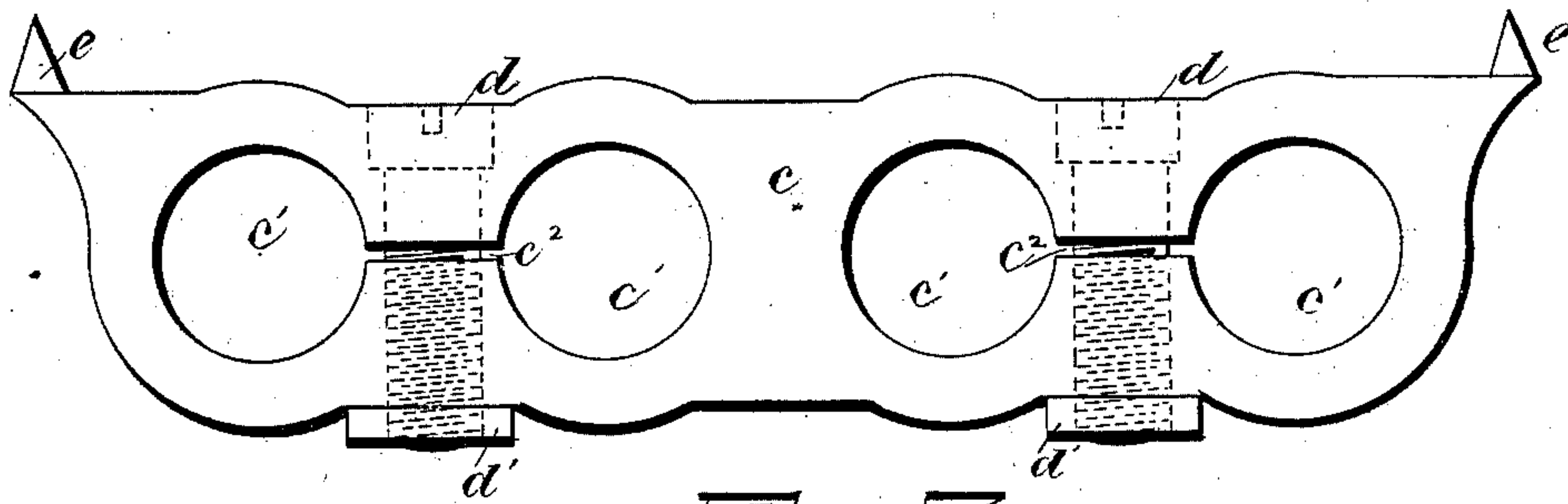
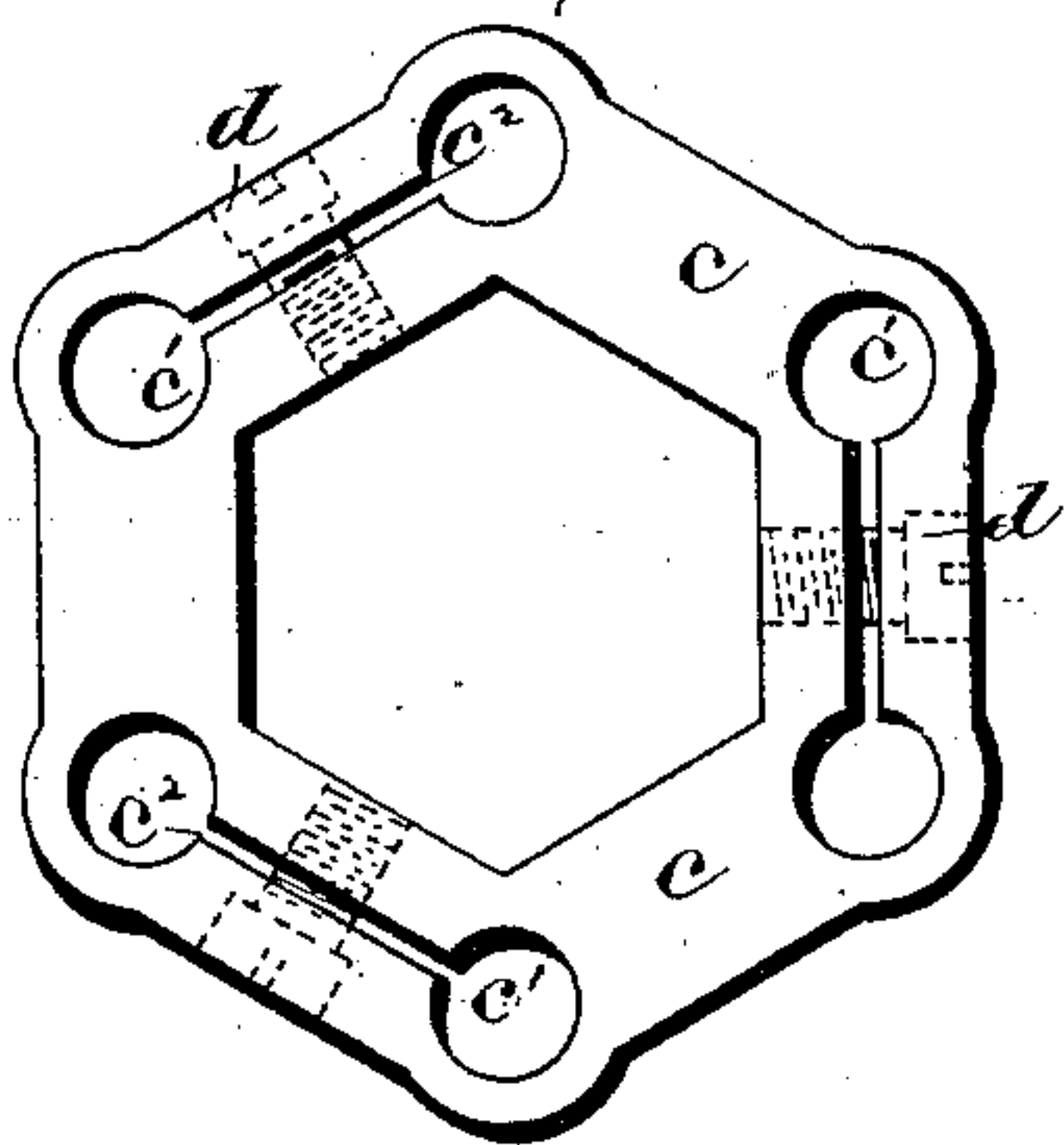


Fig. 3.



WITNESSES

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OLIVER EDWARDS, OF LONDON, ENGLAND, ASSIGNOR TO THE GARDNER
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BARREL-SUPPORT FOR BATTERY-GUNS.

SPECIFICATION forming part of Letters Patent No. 310,036, dated December 30, 1884.

Application filed September 18, 1884. (No model.) Patented in England March 11, 1884, No. 4,734.

To all whom it may concern:

Be it known that I, OLIVER EDWARDS, of London, England, have invented certain new and useful Improvements in Battery or Machine Guns, (for which I have obtained a patent in Great Britain, numbered 4,734, and dated March 11, 1884;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in battery and machine guns, the object being to provide a cross-head or equivalent device attached to and connecting the different barrels, preferably near the muzzle, by means of which the barrels mutually support each other in such a manner that the ordinary side frames for supporting the barrels are not required, thereby lessening the weight and initial cost of such machine or battery guns.

With this object in view my invention consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

According to the usual method of constructing guns of this class the barrels are mounted and secured in frames which extend at the sides of the barrels from the breech or rear end to or nearly to the muzzles of the said barrels. These frames add considerably to the weight of the gun and increase the cost of its manufacture; but by my invention I provide for securing and keeping the barrels in place by the simple expedient of securing the barrels so that they support each other by means of a cross head, bar, or plate at any point forward of the barrel-chambers, but preferably at or near the muzzle ends of the said barrels.

In carrying my said invention into practice the breech ends of the barrels are firmly fixed in the ordinary manner in the forward end of a gun box or case containing the breech mechanism. The said cross head, bar, or plate is so constructed that it can be placed upon the barrels, and after the latter have been adjusted so that the centers of their muzzles are in the same horizontal plane the said cross head, bar, or plate can be rigidly clamped or

otherwise secured to one or more of the barrels, and with them will form a strong and rigid frame. The barrels will therefore not require the support of the side frames heretofore employed, the cross-head or its equivalent permitting and maintaining the proper adjustment of the barrels, not only as regards the arrangement of their centers in the same horizontal line, but in respect of the distance between their centers. The said cross-head may be made to fit one or more tiers of barrels, if desired, or the barrels may be arranged in a circle or in any desired position, and the cross-head or its equivalent be made to fit the same.

I do not limit myself to any particular construction of this cross-head or its equivalent, or to any method of attaching the same, as it is a simple matter for any mechanic to vary such construction or mode of attachment.

In the accompanying drawings I have shown how my said invention may be conveniently and advantageously carried into practice.

Figure 1 is a plan of part of a gun having a horizontal row of four barrels, and Fig. 2 is a front elevation, drawn to an enlarged scale, of the cross-head of the said gun. Fig. 3 is a front elevation drawn to a reduced scale, showing a cross-head for a gun having six barrels arranged in a circle.

a is the gun box or case, in which the breech ends of the barrels *b* are secured in any suitable manner. *c* is the cross head, bar, or plate, made with apertures *c'* to fit the muzzle ends of the barrels *b*, which are preferably reduced in diameter to form shoulders *b'* for the said cross-head to bear against.

In the gun shown in Figs. 1 and 2 two slots, *c''*, are formed in the cross-head *c*, each of which slots connects two of the apertures *c'*. A screw-bolt, *d*, is inserted in the cross-head *c*, and provided with a nut, *d'*, for the purpose of drawing the top and bottom parts of the said cross-head toward each other, so as to firmly secure the same to the barrels.

In constructing the gun illustrated in these figures, after the barrels *b* have been secured in the gun-box *a* the cross-head *c* is placed in position upon their muzzle ends. One or both

of the outer barrels are then adjusted so as to bring the centers of the muzzles of all the barrels in the same horizontal line. The cross-head is then rigidly clamped to the barrels by means of the bolts d and nuts d' .

The front sights of the gun may form part of the cross-head c , as shown at e , or they may be attached thereto and made adjustable.

In the gun shown in Fig. 3 the cross head or plate c is made hexagonal, as shown, and three slots, c^2 , are formed therein, each of which connects two of the apertures c' . Screws d are provided for firmly securing the said cross head or plate to the barrels after the latter have been properly adjusted.

In a gun with a large number of barrels, slots may, if desired, be made so as to connect all the apertures in the cross-head, and a corresponding number of screws or bolts is then employed; or the cross-head may be made in two parts, which are firmly clamped upon the barrels by means of bolts or otherwise; or the said cross-head may be made in one piece and fixed to the barrels by keys, pins, or set-screws, instead of being slotted and secured by the screw bolts and nuts, as above described; or the barrels and the apertures for their re-

ception may be made with one or more flat portions or sides.

What I claim is—

1. The combination, with a battery or machine gun having a series of barrels connected at their rear ends to a gun box or case, of a cross-head or other device independent of the barrel-supports or machine-frame, and devices passing through the cross-head between the barrels, for clamping the cross-head to all of said barrels.

2. The combination, with a gun box or case and the barrels connected thereto, of a cross-head disconnected from the barrels' support and provided with apertures, slots communicating with said apertures, and screws secured in the cross-head and passing through the slots for the purpose of compressing the sides of the cross-head firmly against the barrels, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 18th day of June, 1884.

OLIVER EDWARDS.

Witnesses:

JNO. CROWELL,
CHAS. H. DORER.