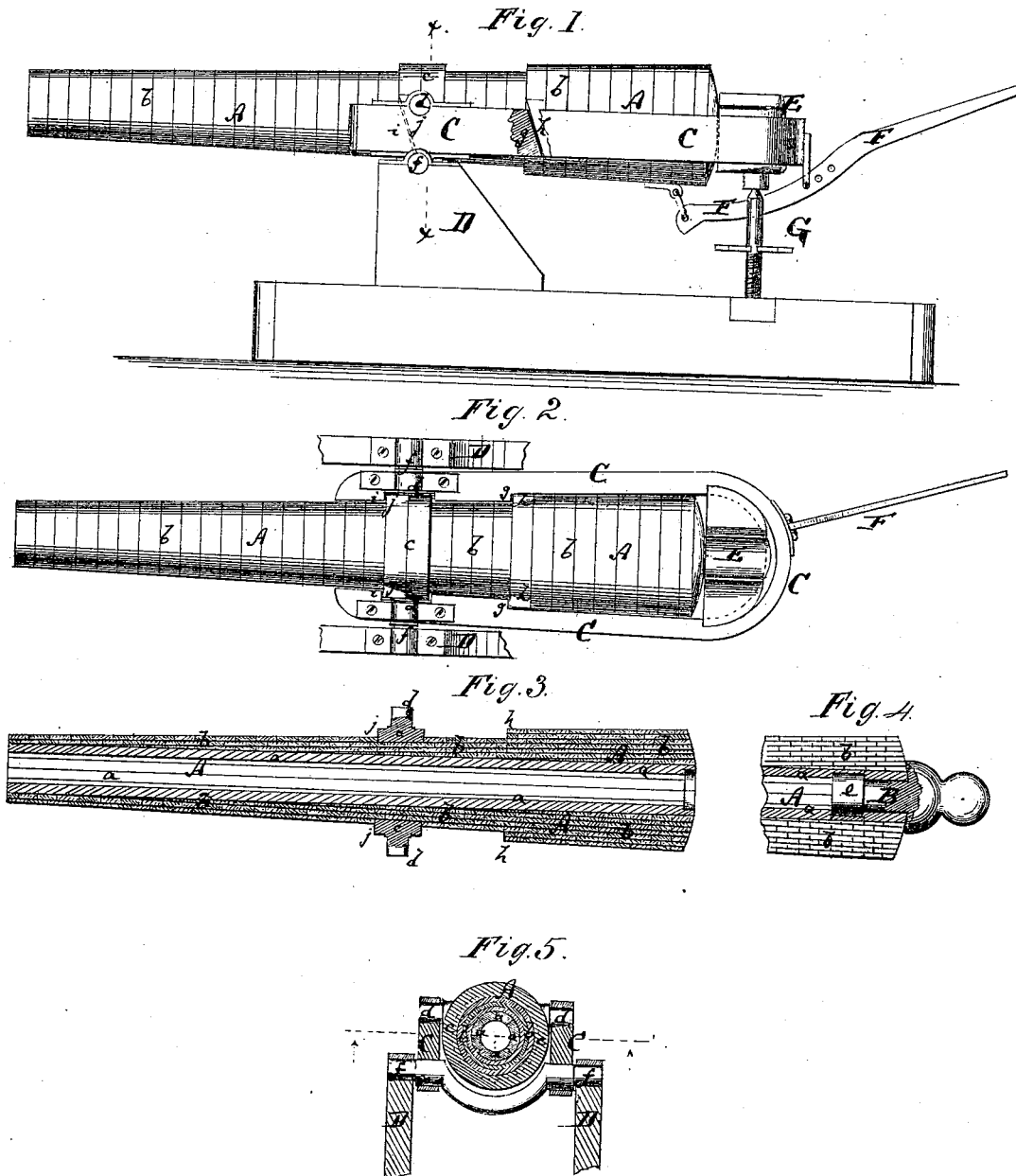


H. J. ALLEN.
BREECH LOADING CANNON.

No. 113,963.

Patented Apr. 25, 1871.



Witnesses:
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HIRAM J. ALLEN, OF ARKADELPHIA, ARKANSAS.

Letters Patent No. 113,963, dated April 25, 1871.

IMPROVEMENT IN BREECH-LOADING CANNON.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HIRAM J. ALLEN, of Arkadelphia, in the county of Clark and State of Arkansas, have invented a new and useful Improvement in Cannon; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a side view, partly in section, of my improved cannon.

Figure 2 is a plan or top view of the same.

Figure 3 is a horizontal longitudinal section of the same.

Figure 4 is a detail horizontal longitudinal section of a modification of the same.

Figure 5 is a vertical transverse section of the same, the plane of section being indicated by the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to cannon, and consists in a certain combination of parts, which will first be hereinafter described in connection with all that is necessary to a full understanding thereof, and then be clearly pointed out in the claim.

The barrel A is constructed as follows:

A suitable number of longitudinal bars, *a a*, is arranged to form the inner portion or bore of the gun.

Around them are laid series of bands, *b b*, which are arranged in layers in such manner that every outer layer covers the joints in the layer beneath.

When the outermost layer of bands is put on the collar *c*, carrying the trunnions *d*, is also applied.

The bands are put on warm enough to shrink tight around the bars *a*, not, however, so tight that they would tend to break or injure said bars.

Cannon constructed on this plan are considerably lighter and stronger than those cast solid. The bands are either made of steel or wrought-iron.

Cannon made on this plan are preferably to be constructed as breech-loaders, as in fig. 3; but they may,

by receiving a plug, B; at the breech end, be readily made muzzle-loaders.

The plug B should have a shoulder, *e*, fitting into a groove of the inner layers *a*, as is clearly shown in fig. 4.

The barrel A is, with its trunnions, hung in a U-shaped frame, C, which is pivoted by pins *f* to the gun-carriage D.

In the back end of the frame C is fastened the breech-block E, which closes the bore, as in fig. 2, and which has a longitudinal groove on its upper face, as shown.

A lever, F, is pivoted to the frame C, and has its front end connected with the barrel A.

When the lever is swung down the breech end of the barrel will be raised above the block E, so that the bore will come in line with the channel in such block. In this position the gun will be ready for loading, the charge being placed upon the block and slid into the barrel. The lever is then swung down to close the breech end, as in fig. 1.

The range of the gun is regulated by a screw, G, which supports the rear end of the frame C.

On the frame C are, in rear of the trunnions and on the inner side, formed inclined shoulders *g*, which serve to support inclined shoulders *h* formed on A when the gun is in the firing position.

In front of the trunnions are, in the frame C, similar shoulders *i*, to support shoulders *j* of the cannon when the same is in the loading position.

These shoulders, should the gun expand by incessant firing, will still support it, although the position will be slightly varied.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The grooved breech-block E and pivoted barrel A, combined as described with the lever F and frame C, as and for the purpose set forth.

H. J. ALLEN.

Witnesses:

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