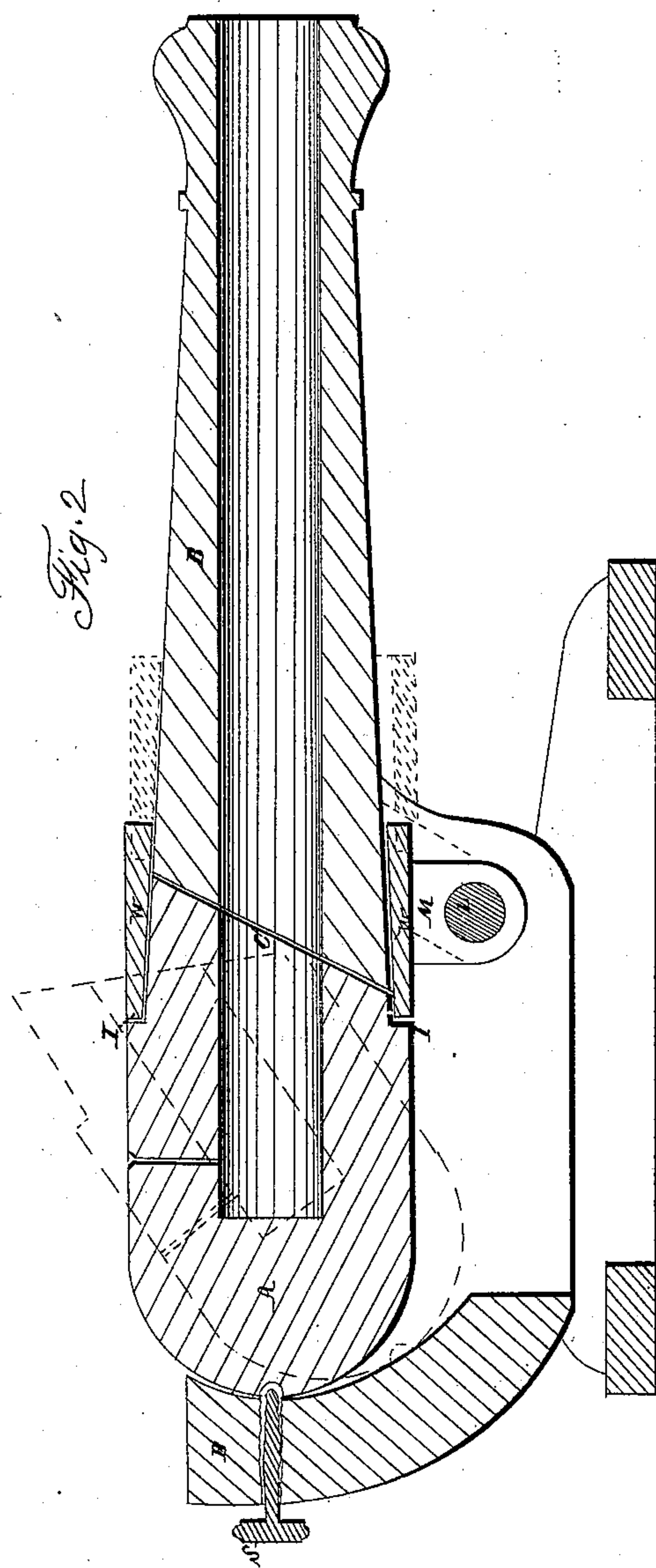
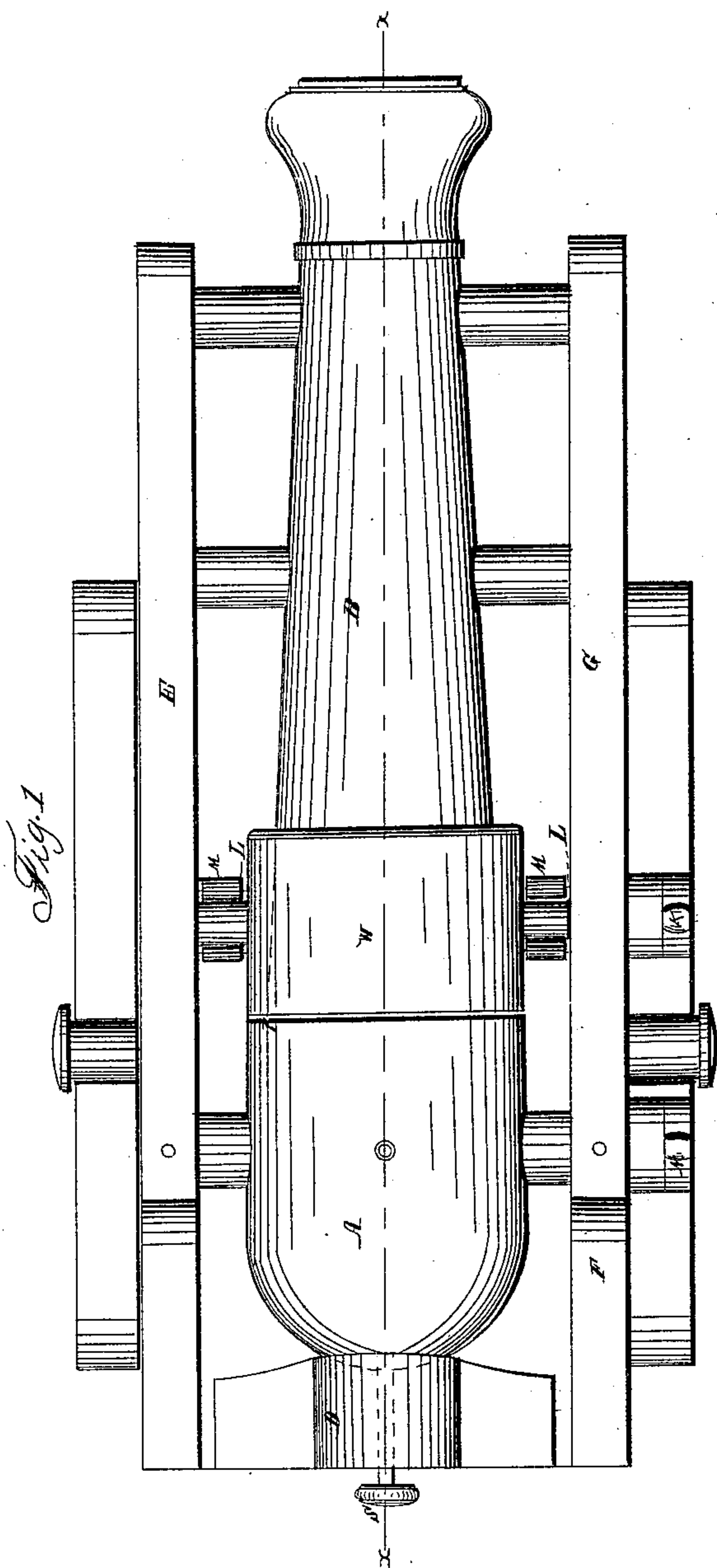


J. W. HOLLENSBURY.
Breech-Loading Ordnance.

No. 22,427.

Patented Dec. 28, 1858.



WITNESSES.
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JOHN W. HOLLENSBURY, OF ALEXANDRIA, VIRGINIA.

IMPROVEMENT IN BREECH-LOADING CANNON.

Specification forming part of Letters Patent No. 22,427, dated December 28, 1858.

To all whom it may concern:

Be it known that I, JOHN W. HOLLENSBURY, of the city of Alexandria, in the State of Virginia, have invented a new and Improved Mode of Making Breech-Loading Cannon, which also may be applied to breech-loading fire-arms; and I do declare the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

I construct a cannon in two parts, each end at the point of junction being sloped diagonally, so that when the two parts are brought together they present the appearance of the cannon A B, Figure 1, the diagonal line C representing the line of division. This line, which indicates the form in which the ends are sloped, shows that the breech portion of the cannon (marked A) rests on or caps on the part B. An ordinary cannon sawed in two obliquely, as at C, would represent the two parts of my cannon. The end of each division must be made perfectly smooth, and the bore in each of the same size, so that when the parts are brought together they fit perfectly. I also provide both portions of the gun with trunnions, part B with two sets, the number of which may be increased, if desired, because by these the gun is to be secured to a frame, which as a means of securing the two portions together constitutes a principal feature of my invention. The breech portion A has but one set, in order that while it is secured in the frame it may at the same time partially revolve, so as to be turned up to be loaded and readily thrown back in place. The breech A is a perfect gun of itself, or rather it may be called a "mortar," and may be used as such even when forming a part of a cannon. This constitutes one of its advantages, that the breech proper is not weakened—that point where the whole force of the powder is first expended. What shall be the length of the breech portion, or what length will prove most advantageous, experimental alone can tell, and whether the breech shall only contain a full charge of powder, or room for the powder and ball also, it readily occurs either may be provided for. The trunnions on the breech A should be placed low down, as the lower they are placed the less the obliquity or slope it is necessary to give to the two divisions of the gun in order that the

breech may readily free itself from the other portion on being turned up. As to the trunnions on part B, they should be so placed as to admit of the firmest attachment to the frame D E F G, and it readily occurs that in place of the trunnion being cast to either portion of the gun, with a view to securing it to the frame, wrought-iron rings with arms for trunnions may be used, and these rings may be shrunk on the barrel of the cannon, and thus hoop the gun from one end to the other, and add greatly to its strength. The gun gradually tapered toward its mouth would render this an easy matter, for the point of division of the two parts is already covered by a ring, as will be explained.

D E F G is a wrought-iron rectangular frame of the required strength to hold securely together the two parts of the gun. The portion D is made very heavy and thick, and scooped out to receive the end of the breech A, which terminates in a circle and fits closely against the end of the frame D. The portion of the gun B is secured immovably to the frame, while the part A is also secured to the frame by means of its trunnions, (or the wrought-iron ring with arms, before suggested,) on which it partially revolves, a partial revolution being all that is necessary in order to turn it up to be loaded. The parts A and B, where they unite, should be turned off smooth on the outside for some twelve inches or more, with a slight taper toward the mouth of the cannon, and on part B is placed a circular iron band or wedge, W, fitting closely, yet capable of being moved up on the part A, so that this ring, which may be a foot or more wide and three inches or more thick, shall cover the division-line of the two parts. No specified direction for the thickness or width of the band or wedge are here intended to be given. It must be of the required strength, and should fill up the recess around the part A, (shown at I.) This band or ring is thrown in or out of place by the lever K, which moves the rock-shaft L, to which are attached the arms M M, slotted at their ends. The breech of the cannon is turned up to be loaded and thrown back in place by means of the lever N, the breech part A being nearly balanced. This is easily done, and the ring being readily thrown on or off enables this gun to be worked with great rapidity. The two portions of the gun at the

point of union being slightly conical, and the band or ring made to fit them when it is pressed up on them, it will act as a wedge, bringing them closer together. If the ring when forced in place should prove insufficient to prevent the escape of the gas on the discharge of the gun, the ring may be packed on its inner side with vulcanized india-rubber or some other compact yet slightly yielding substance which would cover the line of division of the two parts. It would be so thick in practice as readily to admit of it, and so, also, may one of the oblique ends of the gun be packed by cutting a groove around it, and filling it with some substance, whether metal different from that of the gun, or any elastic substance; or there may be a tongue on one part and a groove on the other. The breech part of the gun may be made of wrought-iron, or steel, or gun-metal, or cast-iron, as experiment shall prove best. The barrel of the cannon should be cast. It is claimed as an advantage in this arrangement that by so arranging the frame as that it may be taken apart, each portion of the gun may be moved separately, which in transporting them from one place to another may prove very desirable. It will also be perceived that while the ordinary cannon is elevated or depressed generally by a screw, in this case the frame which holds the two parts

of the cannon together must be elevated or depressed, and may be done in like manner, and the frame may be supported on wheels like the ordinary cannon, or on a gun-carriage adapted to the service required. The screw S through the block or end of the frame D is intended to give additional support to the breech, and also to remedy any wear there may be on the trunnions of the breech or other journals.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A breech-loading cannon formed in two parts and secured together by means of a frame, substantially as described.

2. In combination with the two divisions of the cannon, as described, the frame D E F G, fitting closely up against the breech A, and capable of being elevated or depressed, the whole constructed and operated substantially as and for the purpose set forth.

3. In combination with the two divisions of the gun, the band or circular wedge W, constructed and operated substantially as described.

JOHN W. HOLLENSBURY.

In presence of—

JOSEPH T. SHERWOOD,
H. CARTER DORSEY.