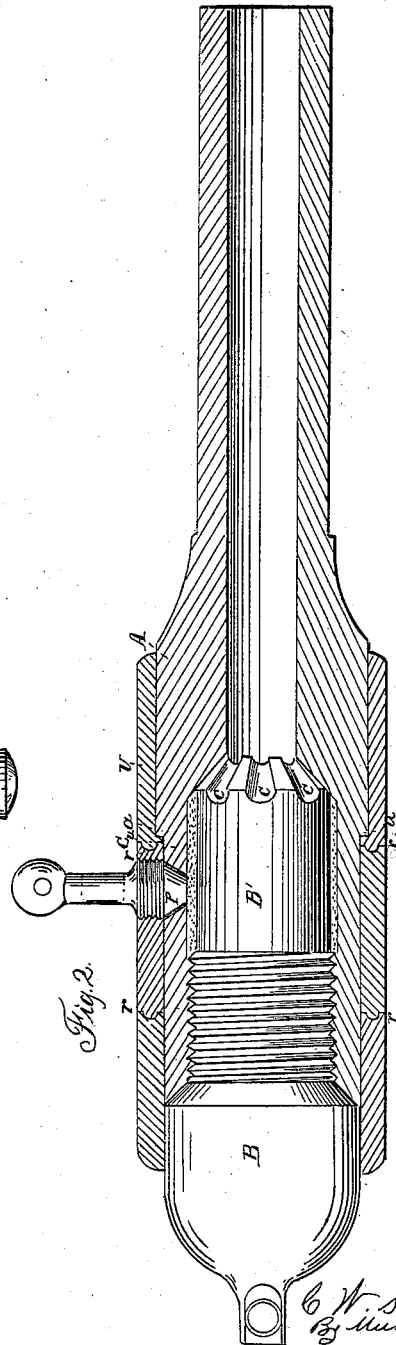
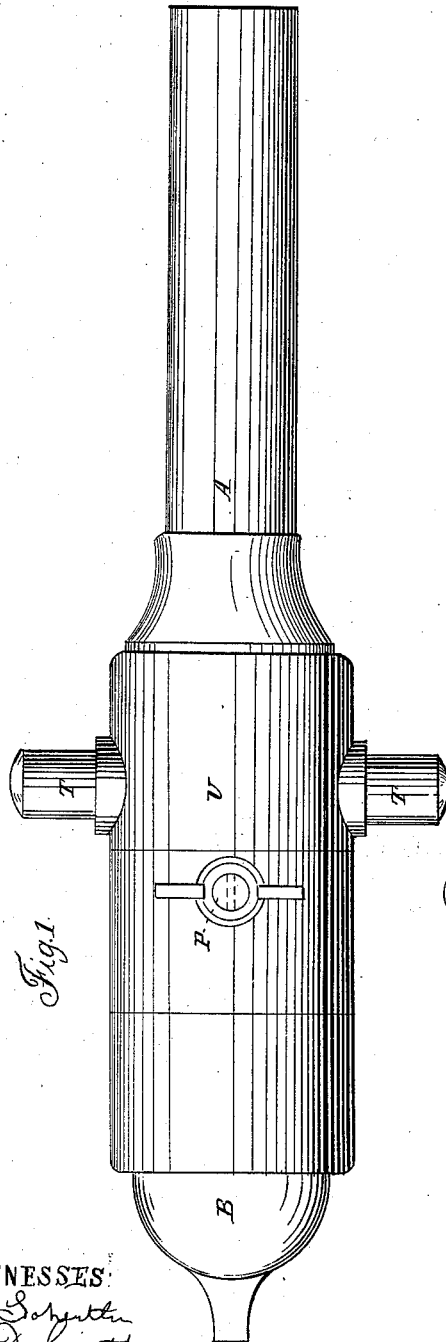


C. W. STAFFORD.

Ordinance.

No. 46,506.

Patented Feb. 21, 1865.



WITNESSES:

D. Schmitt
C. D. Smith

INVENTOR

C. W. Stafford
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UNITED STATES PATENT OFFICE.

CHARLES W. STAFFORD, OF OLD SAYBROOK, CONNECTICUT.

IMPROVEMENT IN THE CONSTRUCTION OF ORDNANCE.

Specification forming part of Letters Patent No. **46,506**, dated February 21, 1865.

To all whom it may concern:

Be it known that I, CHARLES W. STAFFORD, of Old Saybrook, Middlesex county, Connecticut, have invented a new and useful Improvement in Ordnance; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan or top view of a cannon illustrating my invention. Fig. 2 represents a vertical axial section of the main portion of the gun, and a side elevation of the breech-piece and plug, hereinafter described. Fig. 3 represents a vertical axial section of the entire gun.

Similar letters of reference indicate corresponding parts in the several views.

My invention relates to an improved manner of constructing a cannon with a trunnion-band and one or more re-enforce-bands, applied in the manner hereinafter described.

A represents the main body of the cannon, constructed with an enlarged open chamber for the reception of a chambered breech-piece, B, which may be of the form represented in the drawings, and may be secured within the gun by a screw-thread, *b*, upon its central part, fitting a corresponding thread in the gun.

T T represent the trunnions formed upon a band, U, adapted to encircle the gun, and formed at back with an inwardly-projecting flange, *u*, which fits against a shoulder, *a*, on the gun, so as to prevent the displacement of the trunnion-band in a forward direction.

One, two, or more re-enforce bands, R R', of wrought-iron, are shrunk onto the breech in customary manner to strengthen the gun, and serve also to secure the trunnion-band in place. The edges of the said trunnion-band and re-enforce bands are tongued and grooved, as shown at *r*, to afford mutual strength and support to each other.

P represents a screw-plug occupying an aperture in the upper side of the breech, and affording communication with an annular chamber, C, around the smaller front part, B', of the breech-piece B.

c c represent channels communicating between the chamber C and the bore of the gun.

In constructing a gun according to my invention, the main part is first formed solid of either cast or wrought iron or steel, with the enlarged chamber at back, and the latter threaded to receive and hold the breech-piece. The said breech-piece, also cast solid, and formed on its exterior, as shown, is then screwed in and the various bands applied, the trunnion-band being driven on and the re-enforce bands heated and shrunk on. The piece is then bored from the muzzle through the main body of the gun and into the breech-piece, the channels *c c* already formed upon the forward end of the breech-piece affording communication between the bore and chamber C. The vent may be formed and located in any suitable way.

This gun is intended to be loaded from the muzzle in customary manner; but the invention may also be applied to breech-loading guns, if desired. The chamber C is charged by removing the plug P and pouring powder through the aperture. An additional plugged opening may be made to communicate with the under side of the chamber C, so that the latter may be thoroughly cleansed by running through it any suitable wash.

While disclaiming the general principle of so constructing and applying re-enforce bands as to break the joints between the same, whether this be done by lapping, rabbeting, or dovetailing, I claim—

1. In combination with the cast main body A of a piece of ordnance, two or more bands, (trunnion and re-enforce,) when secured and strengthened with longitudinally-projecting tongues *r* and corresponding grooves, in the manner herein represented.

2. The combination of the trunnion-band U, adapted to slip on over the breech, the flange *u*, projecting inward from the said trunnion-band, the shoulder *a*, preventing forward displacement of the trunnion-band, and one or more re-enforce bands, R, securing it against backward displacement, substantially as herein described.

C. W. STAFFORD.

Witnesses:

OCTAVIUS KNIGHT,
EDWARD H. KNIGHT.