

No. 796,262.

PATENTED AUG. 1, 1905.

N. H. STEWARD.
EXPANSION BOLT.
APPLICATION FILED DEC. 30, 1904.

Fig. 4.

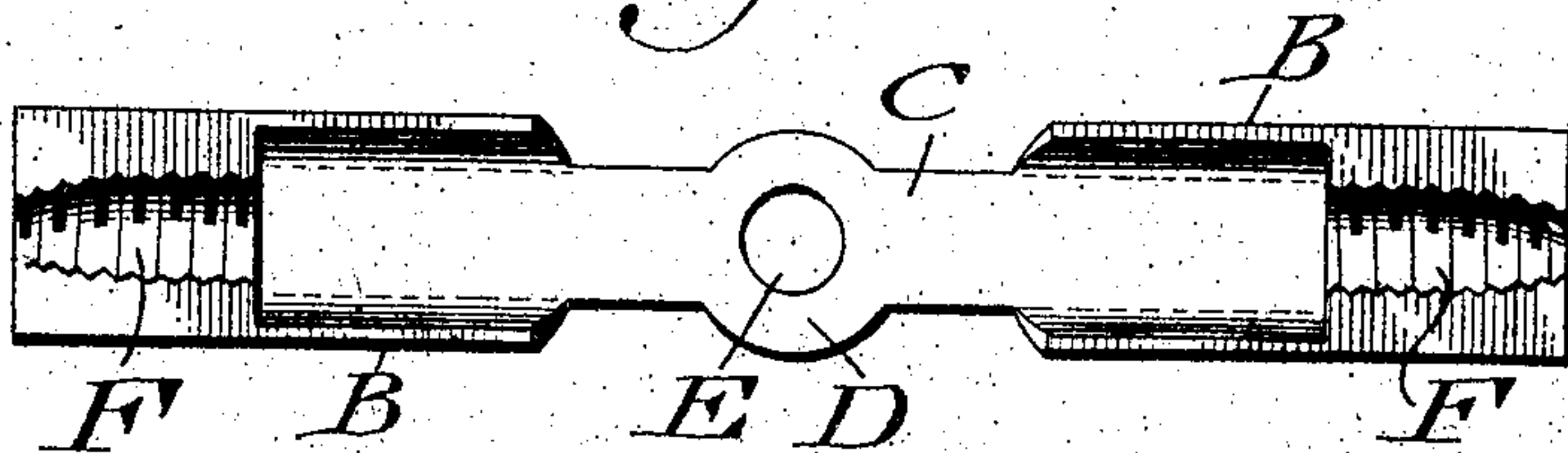


Fig. 1.

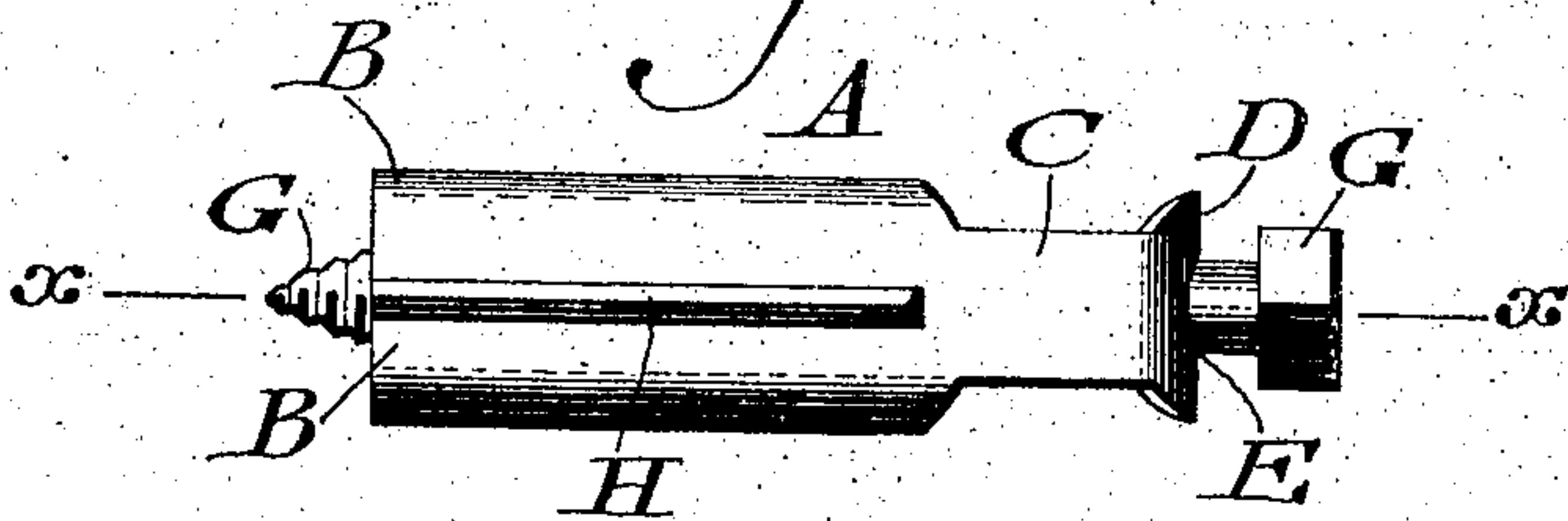


Fig. 2.

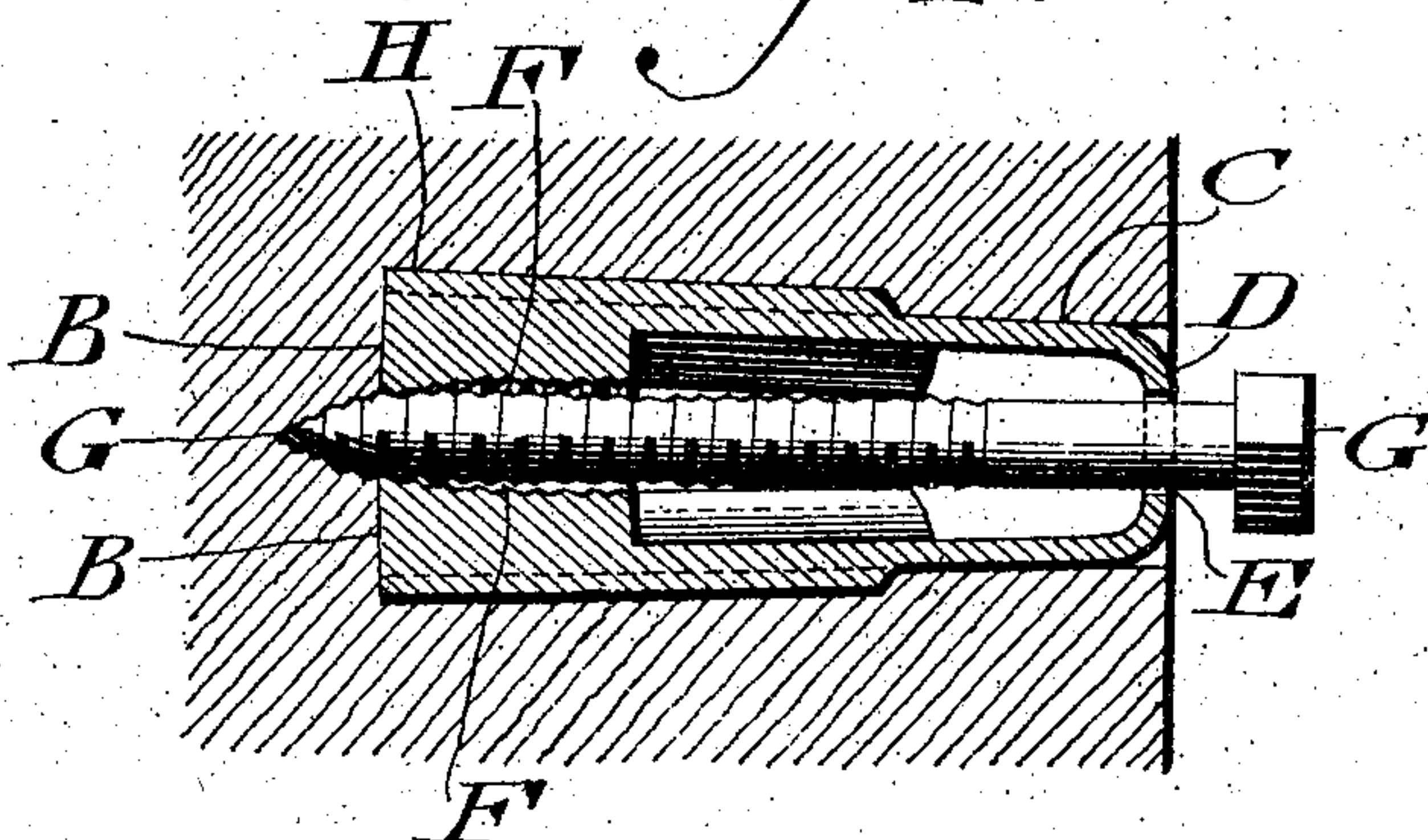
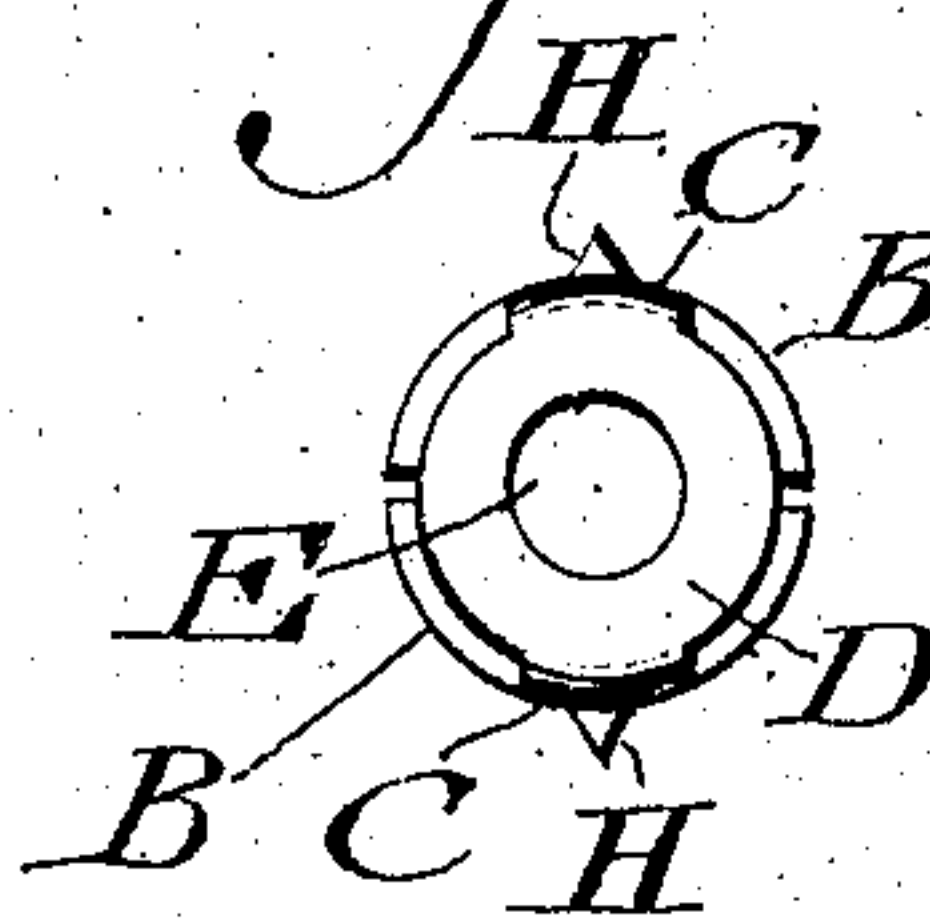


Fig. 3.



Witnesses

P. F. Nagle.
L. Douville.

Inventor

Nathan H. Steward.
By Wendell Fairbank
Attorneys

UNITED STATES PATENT OFFICE.

NATHAN HARPER STEWARD, OF PHILADELPHIA, PENNSYLVANIA.

EXPANSION-BOLT.

No. 796,262.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed December 30, 1904. Serial No. 238,882.

To all whom it may concern:

Be it known that I, NATHAN HARPER STEWARD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Expansion-Bolt, of which the following is a specification.

My invention consists of an expansion-bolt composed of a sectional body, an arched-shaped neck joining the same and having a screw passing through the crown thereof and engaging the inner faces of said body, so as to separate the sections of the body opposite to said head, whereby the body is forcibly pressed against the wall of the bore or opening in which it is placed and thus reliably held therein.

Figure 1 represents a side elevation of an expansion-bolt embodying my invention. Fig. 2 represents a longitudinal section on line *x x*, Fig. 1. Fig. 3 represents an end view thereof, the screw having been removed. Fig. 4 represents a face view of the shell in condition before being shaped for operation.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the body of the shell or nut, the same consisting of tubular semicylindrical sections or segments B B, which are joined at one end by the pliable neck C of arch form, in the crown D of which is the opening E. On the portions of the inner wall of the sections opposite to the neck C are the screw-threaded channels F, said portions being thicker than the adjoining portion for purposes of strength and providing sufficient depth for the screw-threads.

G designates a tapering screw, which is passed through the opening E in the neck C, and has its threads adapted to engage with the threads of the channels F.

Primarily the shell or nut is formed of a continuous length, as in Fig. 4, when it is bent, say, in half, on the crown portion D of the neck C, so that the sections B are opposite to each other, thus forming the body A, which is of tubular form, as has been stated, and integral. The screw may then be inserted through the opening E into said body and the latter introduced into the bore in the

article adapted to receive it. The screw is then rotated, whereby it engages with the threads of the channels F, and as it advances, owing to its tapering shape, it separates the sections B and expands the body and forces it into firm and locking contact with the wall of said bore, thus reliably retaining it in position, it being seen that the expansion of the body is permitted, owing to the pliable or yielding nature of the neck or arch C, and it exerts its pressure in said bore where it is most needed—viz., at its free inner end. In order to prevent rotation of the body, there are formed on the exterior thereof the outwardly-projecting ribs H, which engage with the wall of the bore or opening which the body occupies, the effect of which is evident. When the screw is properly rotated, the sections B may contract and the body be withdrawn, both sections being removable as one, owing to the integral nature of the sections and neck.

Various changes may be made in the details of construction shown without departing from the general spirit of my invention, and I do not, therefore, desire to be limited in each case to the same.

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

1. In an expansible bolt, a body formed of longitudinal sections, having the inner end portions thickened, a neck joining the outer end of said sections and threads on the interior walls of said sections at the inner end of said body, said neck being adapted to have an expanding-screw passed through the same, said neck being yielding.

2. In an expansion-bolt, a body formed of longitudinal sections having the inner end portions thickened, an arched neck, joining the same with an opening in the crown thereof, threads on the interior of the thickened portions of said sections, said neck being yielding, and a screw passing freely through the opening in said crown and engaging said threads.

NATHAN HARPER STEWARD.

Witnesses:

JOHN A. WIEDERSHEIM,
S. R. CARR.