

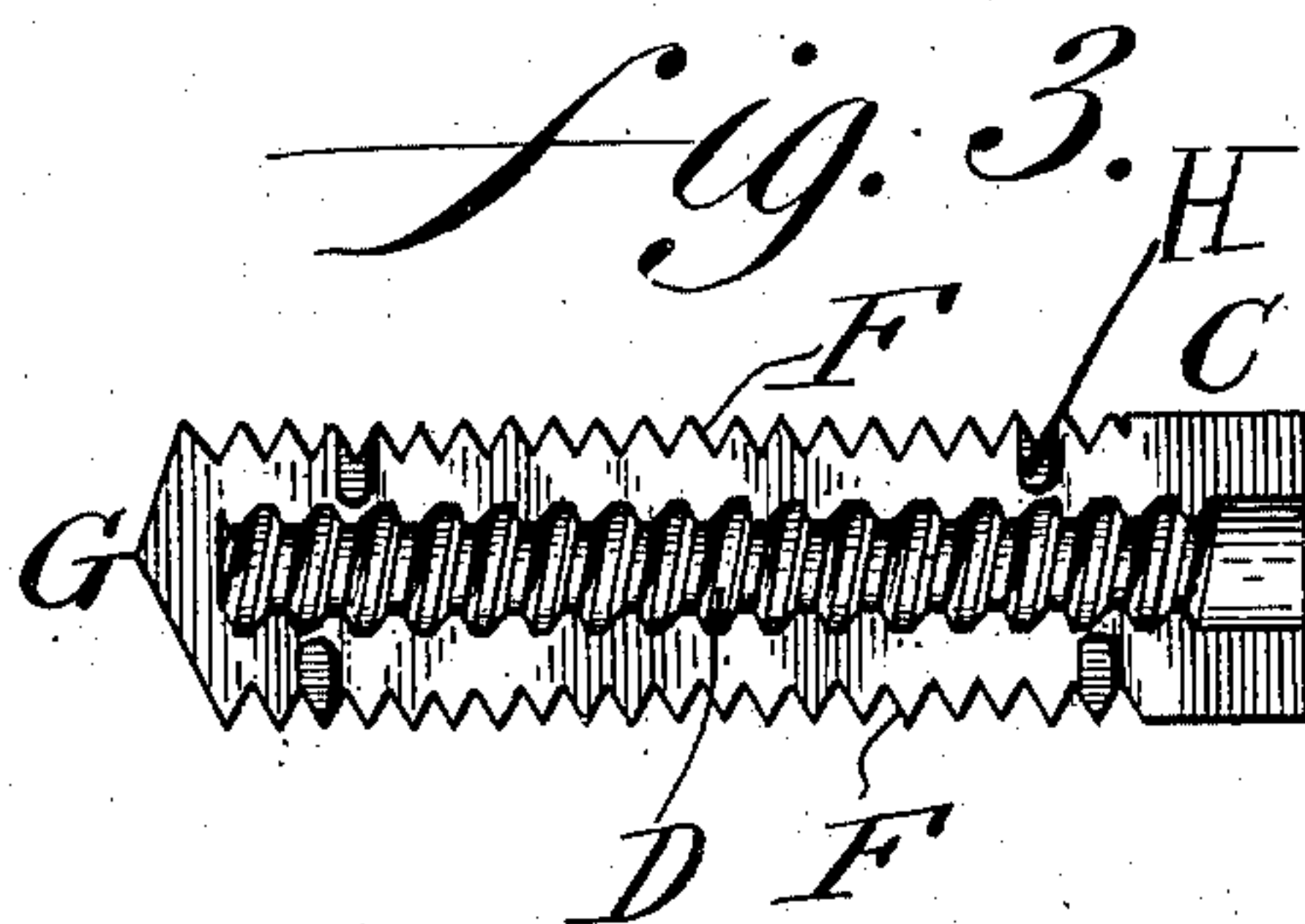
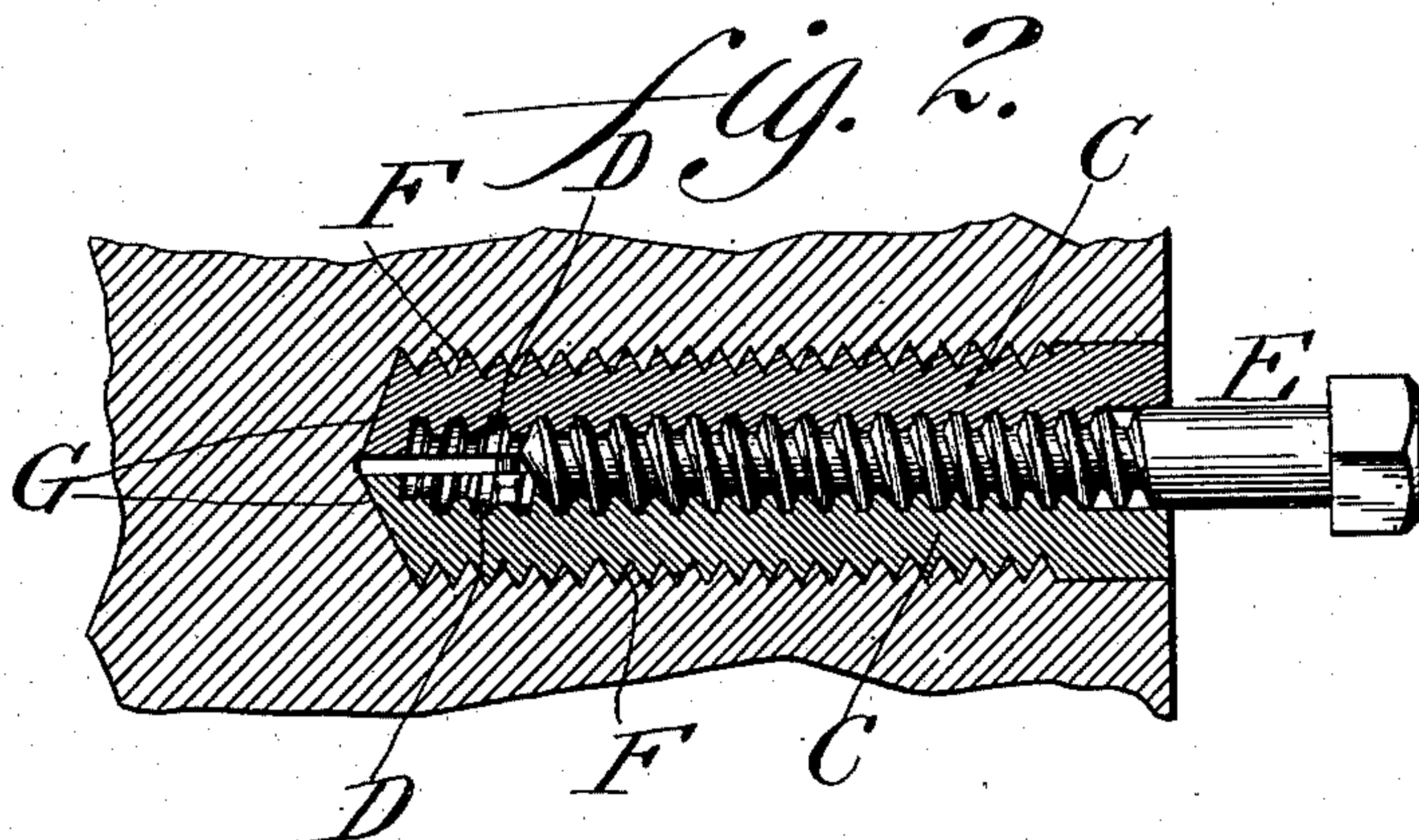
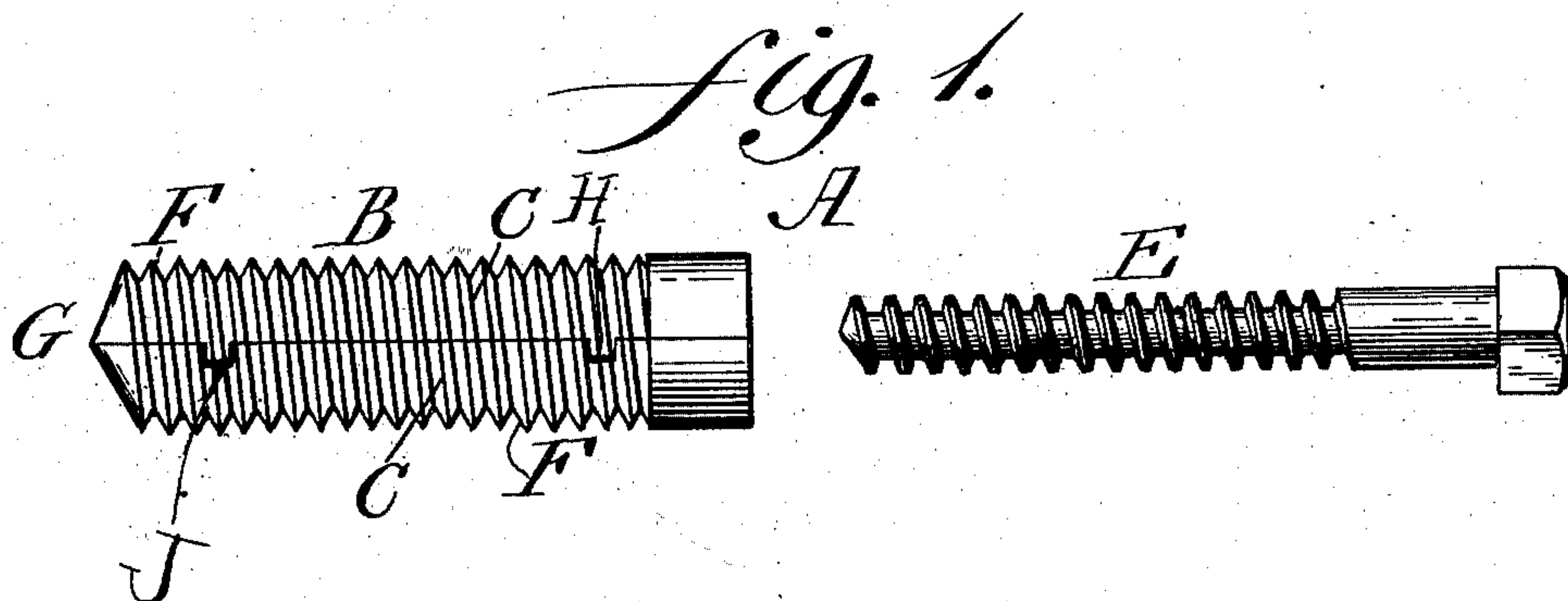
No. 741,983.

PATENTED OCT. 20, 1903.

N. H. STEWARD.
EXPANSION BOLT.

APPLICATION FILED MAY 2, 1903.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

NATHAN HARPER STEWARD, OF PHILADELPHIA, PENNSYLVANIA.

EXPANSION-BOLT.

SPECIFICATION forming part of Letters Patent No. 741,983, dated October 20, 1903.

Application filed May 2, 1903. Serial No. 155,272. (No model.)

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 new and useful Improvements in Expansion-Bolts, of which the following is a specification.

My invention consists of an expansion-bolt formed of a sectional sleeve the interior of which is screw-threaded for the engagement of a lag screw or bolt, which is adapted to expand the sleeve, and the exterior being provided with a thread, which admits of the sleeve being screwed into a bore, said sleeve being also pointed, so as to assist its convenient entrance into said bore and advance therein.

Figure 1 represents a side elevation of the parts of an expansion-bolt embodying my invention. Fig. 2 represents a partial longitudinal section and a partial side elevation thereof. Fig. 3 represents a view of the interior of one of the sections of the bolt.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates an expansion-bolt, the same consisting of the sleeve B, which is longitudinally divided, forming separate members or sections C C, which in the present case are two in number, the interior of said sections being screw-threaded, as at D. E designates a lag screw or bolt, which is adapted to enter the sleeve and engage with the threads D thereof, by which means said sections may be spread apart or expanded. On the exterior of the sleeve are sections of a perfect screw-thread F, and the forward portion of the sleeve has

a solid conical point G, it being seen that when the sleeve is longitudinally presented to a bore said point G enters the same, whereby the sleeve may be started true and continue so as it is rotated and so screws or drives itself into said bore, said point also presenting the least obstruction, say, when the sleeve forms its own bore in soft material, such as wood. On the side of one of the sections C are tongues H, which freely enter recesses J in the other section, by which provision the sections may be locked and so prevented from moving longitudinally of each other while the sleeve is being screwed into the bore. The screw E is then entered into the sleeve and rotated, whereby as it advances it forces the sections apart and so expands the sleeve, the latter thus taking firm hold of the wall of the bore which it occupies. Should it be desired to remove the device, the screw is properly rotated so as to be withdrawn from the sleeve, after which the latter may be properly rotated so as to be unscrewed from the bore, the effect of which is evident.

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

An expansion-bolt sleeve threaded exteriorly and interiorly and divided into a plurality of sections having cooperating tongues and recesses adapted by their engagement to prevent longitudinal movement of said sections on each other when said sleeve is being inserted into a bore.

NATHAN HARPER STEWARD.

Witnesses:

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