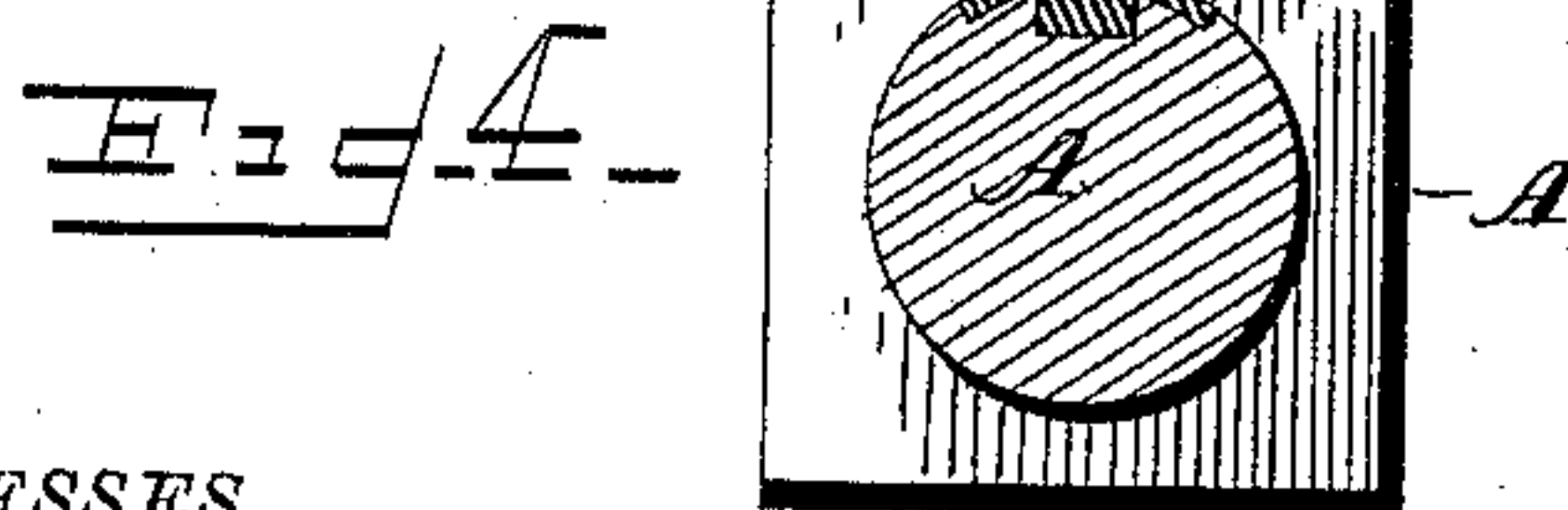
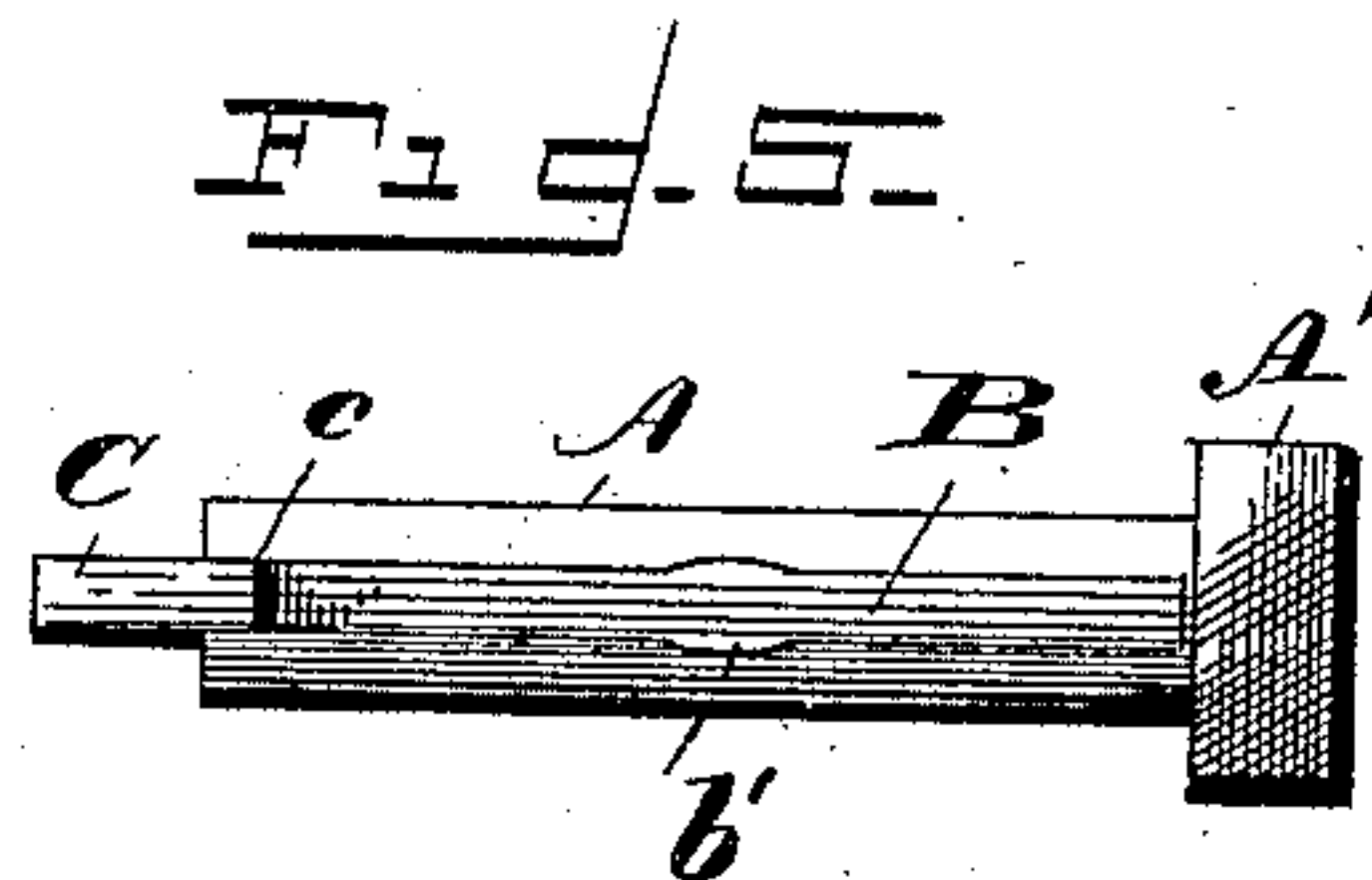
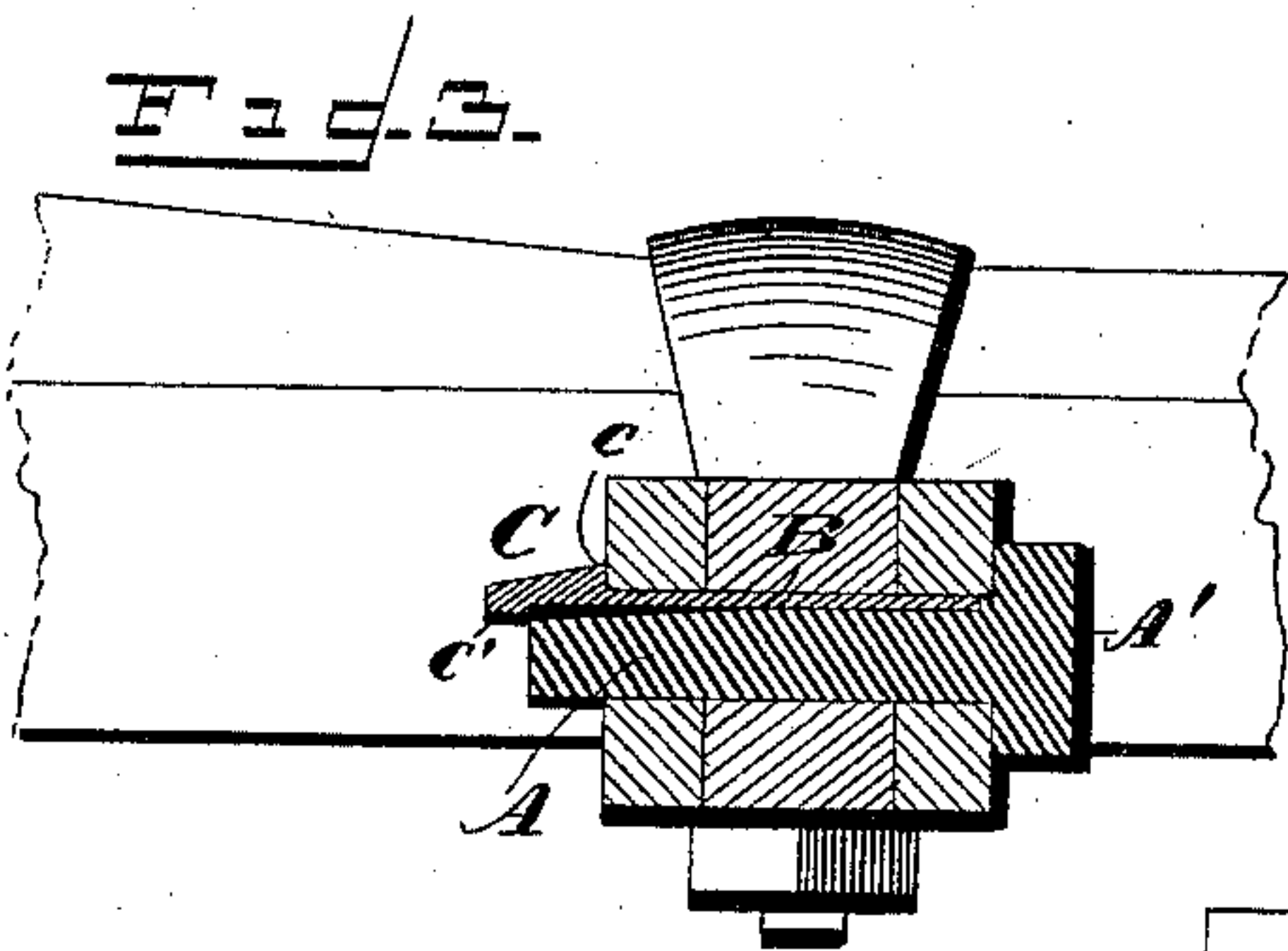
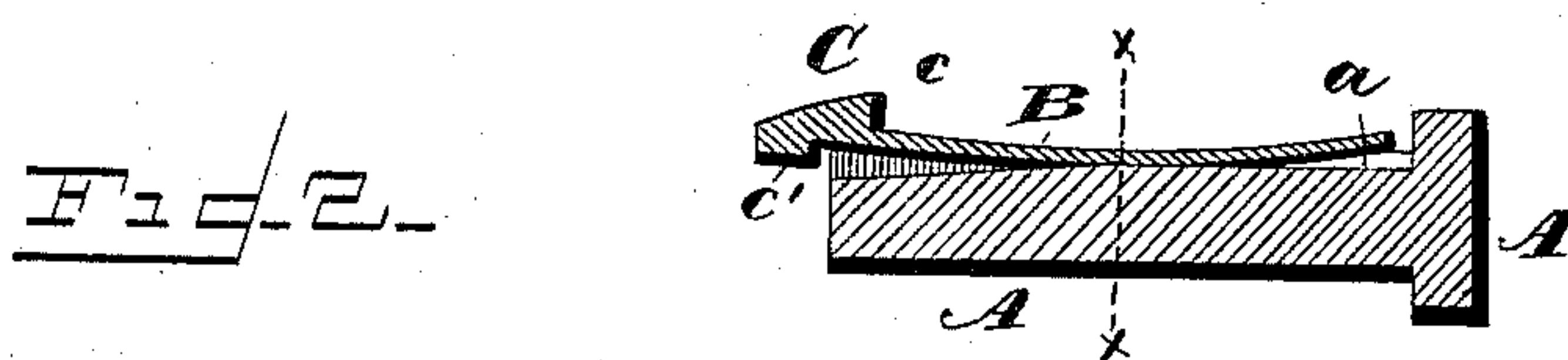
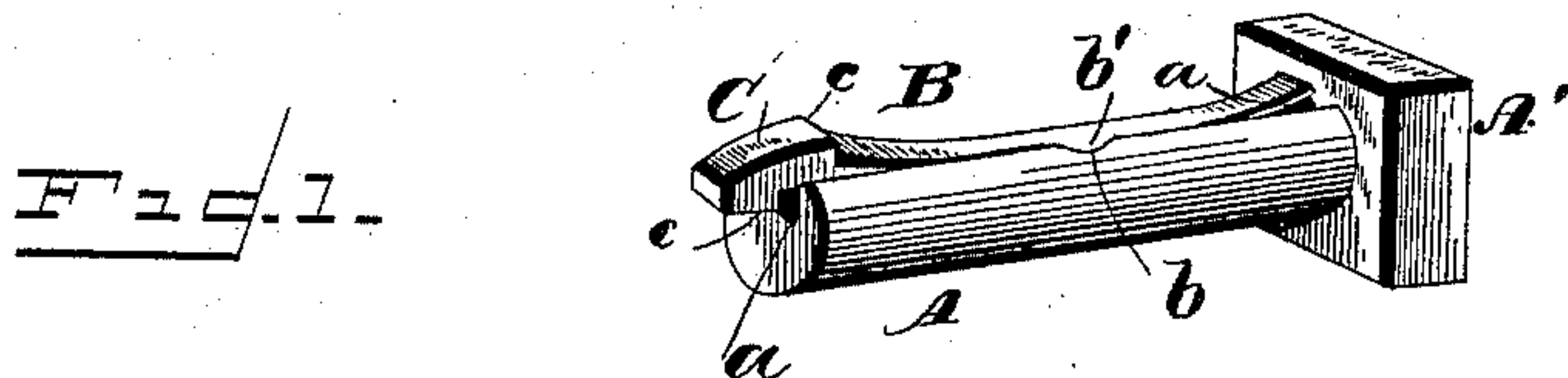


(No Model.)

O. M. STROUP.
THILL COUPLING BOLT.

No. 365,761.

Patented June 28, 1887.



WITNESSES
G. S. Elliott.
E. Johnson

Oliver M. Stroup.
INVENTOR
Attorney

UNITED STATES PATENT OFFICE.

OLIVER M. STROUP, OF WELLINGTON, OHIO.

THILL-COUPLING BOLT.

SPECIFICATION forming part of Letters Patent No. 365,761, dated June 28, 1887.

Application filed September 2, 1886. Renewed May 26, 1887. Serial No. 239,489. (No model.)

To all whom it may concern:

Be it known that I, OLIVER M. STROUP, a citizen of the United States of America, residing at Wellington, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Bolts for Thill-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in bolt-fasteners, the object of my invention being to provide a bolt with means which is carried by the body of the bolt, so as to secure the bolt in place, said means also preventing the bolt rattling or moving; and to this end my invention consists in providing a bolt with a longitudinal recess, within which is secured a spring with upwardly-curved ends, said spring having a notched head which will prevent the same being displaced.

My invention also consists in providing the bolt with a longitudinal recess which tapers toward the front end of the bolt, within which recess is secured a spring-bar, the outer end of which is provided with a head.

My invention also consists in the construction and combination of the parts, as will be hereinafter set forth.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a bolt and bolt-fastener constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a view showing my improvement applied to a thill-coupling. Fig. 4 is a sectional view taken through the line *xx* of Fig. 2, and Fig. 5 is a plan or side view.

A refers to the body portion of the bolt, which has formed integral therewith a head, A'. The body portion or shank of the bolt has formed therein a longitudinal recess, *a*, which is preferably straight upon its side and bottom and at that portion between the center of the bolt and the head thereof, the front portion of the recess *a* being tapered or cut deeper, so that the base of said recess will incline from

the front end of said bolt to the center portion thereof. The center portion of the bolt adjacent to the sides of the recesses are provided with semicircular recesses *b*, within which sidewise projecting portions of the spring B will lie when the aforesaid spring is placed within the recess. The spring B is of such construction that it will normally have upwardly-curved ends, and the outer end is provided with an enlarged head, C, with a projecting portion, *c*, which is adapted to abut against the side wall of the perforation through which the bolt is inserted, so as to prevent the bolt having a longitudinal movement within said perforation. The lower edge of the head is also provided with a downwardly-projecting portion, *c'*, which will abut against the end of the bolt beneath the side walls of the recess, so as to prevent the spring B being moved rearwardly within the recess when the bolt is being inserted or driven home. The upper edge of the head C is curved, as shown in the accompanying drawings. The center portion of the spring B is provided with semicircular projecting portions *b'*, which will lie within the recess *b* in the body portion of the bolt, and adjacent to these projecting portions the edge of the recess *a* is upset or bent over the body portion of the spring, so as to hold said spring securely in place, so that it cannot be removed from the recess.

The device hereinbefore described is particularly adapted to be used as a bolt for thill-couplings, and when so used the ends of the springs will bear upon the eyes of the thill-iron, and will depress the center portion upon the eye in the shackle-iron, so as to prevent the parts rattling. In a bolt constructed substantially as described the same may be easily inserted, and the use of nuts and screw-threads is entirely avoided, and as the parts wear from use the wear will be entirely taken up by the spring.

I do not wish to confine myself to the particular use of the bolt shown in the accompanying drawings, as it is obvious that it is capable of numerous applications; nor do I wish to limit myself to the exact manner of attaching the spring within the recess, as the sides of the recess may be upset over the semicircular projecting portions *b'* of the spring-bar, instead of adjacent thereto, and said pro-

jecting portions may be provided with beveled edges, over which the metal of the bolt may be upset, so as to securely hold the spring in position against displacement.

5 I am aware that prior to my invention it has been proposed to recess a bolt and provide the same with a headed spring-bar for holding the bolt in place without the use of nuts, as shown in Patent No. 50,189, dated September 10 26, 1865, and I do not claim such construction as my invention; but

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

1. In combination with a bolt having a longitudinal recess, a spring-bar secured within 15 said recess at its central portion, and provided with an enlarged head which is adapted to hold the bolt in place, the ends of said spring-bar being free from the bolt and upturned, substantially as shown, and for the purpose set 20 forth.

2. In combination with a bolt having a longitudinal recess, *a*, a recess, *b*, near the center

portion thereof, and a spring-bar, *B*, which is curved longitudinally, so as to provide spring 25 ends which will project above the recess, said spring-bolt having central laterally-projecting portions, *b'*, which are adapted to lie within the recess *b*, substantially as shown, and for the purpose set forth. 30

3. In combination with a headed bolt having a longitudinal recess, *a*, which tapers at its front portion, said recess being provided centrally with concave recesses *b*, a spring-bar, *B*, provided with a head with projecting 35 portions *c* and *c'*, and centrally-projecting portions *b'*, adjacent to which the edges of the recess *a* are upset, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in 40 presence of two witnesses.

OLIVER M. STROUP.

Witnesses:

W. F. MORROW,
GEO. A. VAN CLUF.