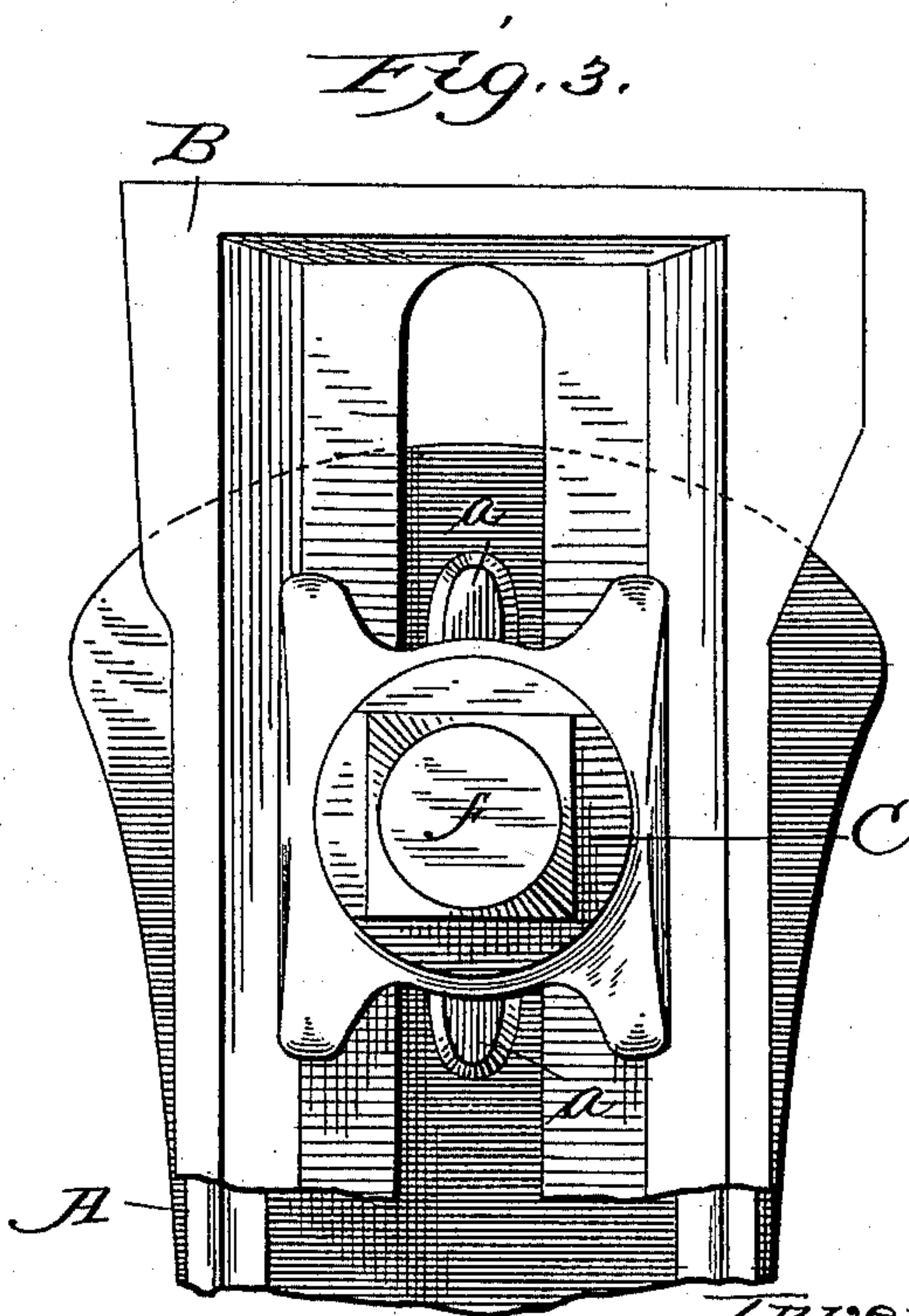
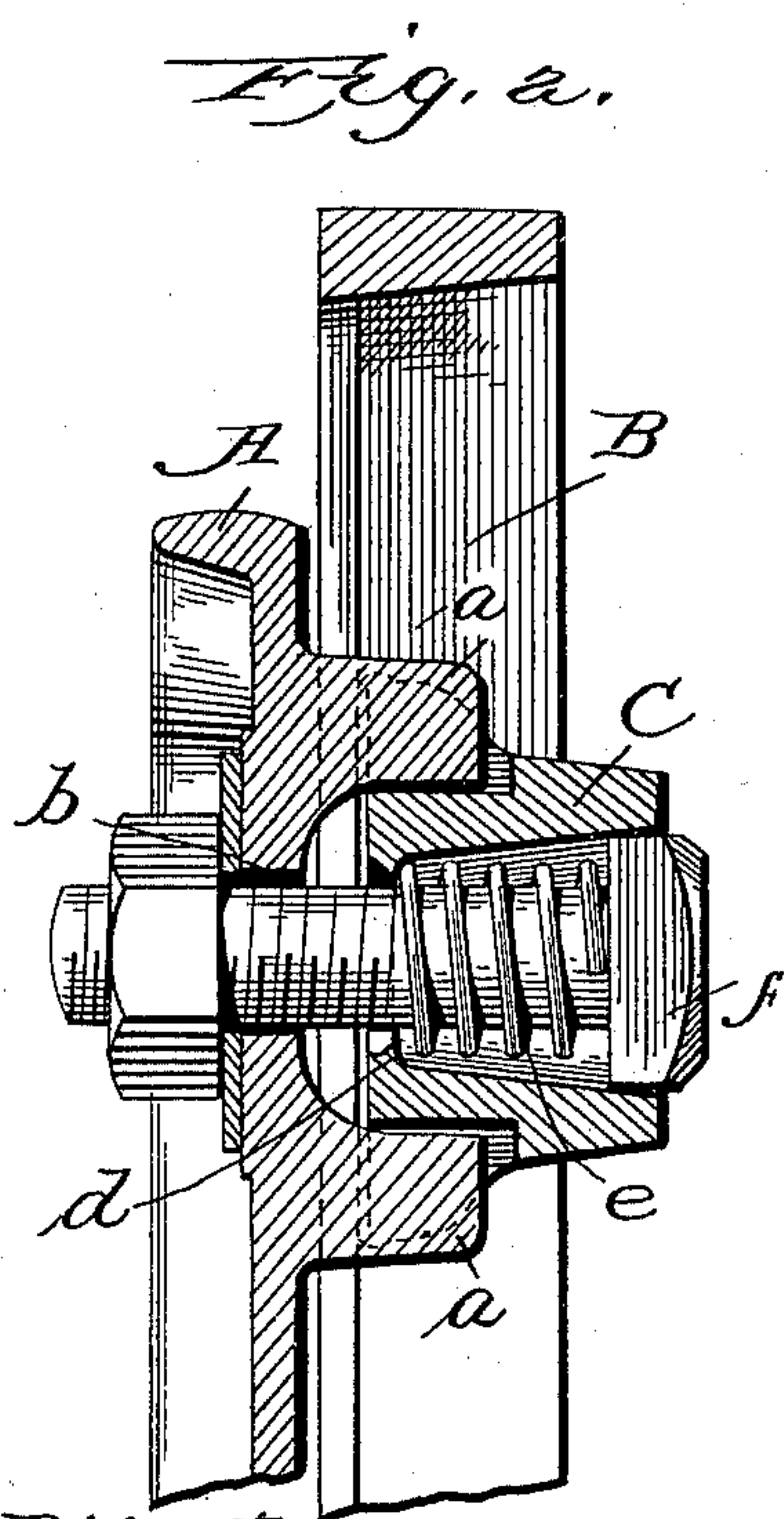
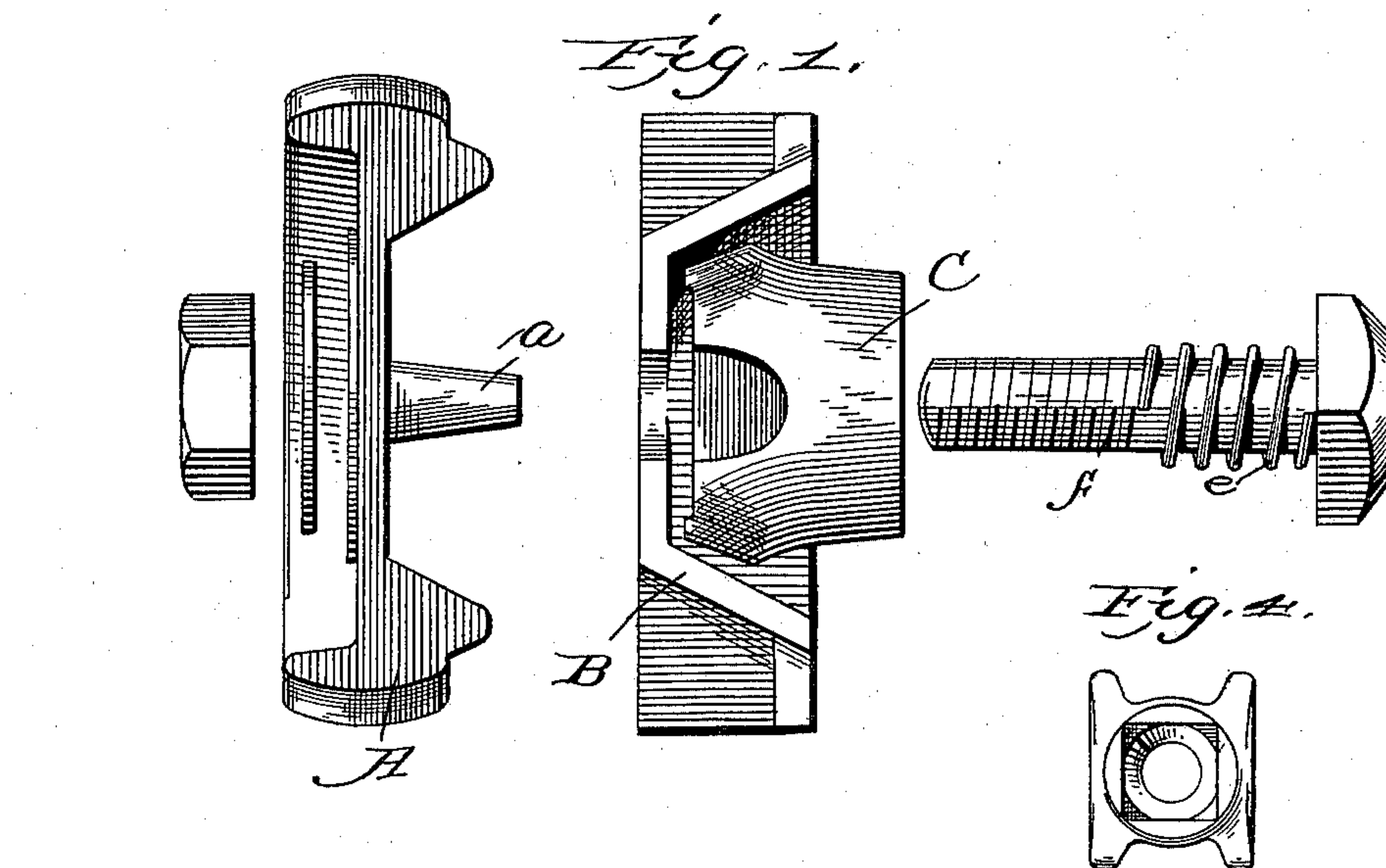


(No Model.)

A. D. LINN.  
CLAMP FOR SCHOOL DESKS.

No. 598,674.

Patented Feb. 8. 1898.



Attest,  
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Inventor  
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by Eli Spru  
Atty



# UNITED STATES PATENT OFFICE.

ALLEN D. LINN, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE GRAND RAPIDS SCHOOL FURNITURE COMPANY, OF SAME PLACE.

## CLAMP FOR SCHOOL-DESKS.

SPECIFICATION forming part of Letters Patent No. 598,674, dated February 8, 1898.

Application filed July 29, 1897. Serial No. 646,388. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN D. LINN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Clamps for School-Desks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to adjustable desks, and aims to provide a connection between the adjustable parts thereof which while securely holding the parts together will under certain conditions permit ready adjustment without binding and without requiring the complete detachment of the holding means. While it is my purpose to use this fastening device in connection with an adjustable top, I do not limit myself to this connection, as the fastening may be used in any situation where it may be found convenient or desirable.

In the accompanying drawings I have simply shown a portion of the standards, as I deem it unnecessary to show the parts in full.

In the drawings, Figure 1 represents a detached view of the parts comprising the fastening. Fig. 2 is a vertical section centrally of the standards, and Fig. 3 is a side view of the bracket and standard. Fig. 4 is a face view of the block.

The standard which supports the desk is shown at A, and this is channeled on its inner face, so as to receive the corresponding portion of the bracket-support on or forming part of the desk. The walls of the channeled portion are inclined, and the walls of the desk bracket or standard are likewise inclined, so as to fit snugly the channels in the standards A. The relative position of the parts is shown in Fig. 1 ready for assembling, which would be done by moving the parts together laterally. The desk-standards shown at B are provided with a vertically-extending slot, permitting the vertical adjustment of the standard on the standards A without requiring the removal of the fastening-bolt. The desk-standards are made hollow, their inner faces conforming to the outline of their outer faces. The standards A are each provided with a bolt-hole near the upper end, and on the inner face of the standards A above and below the bolt-

holes projections or bosses are provided for a purpose hereinafter more fully described. The standards B fit snugly within the channeled inner face of the standards A, passing over the bosses *a* above and below the bolt-holes *b*. The bosses *a* project through the slot in the standard B and are adapted to receive between them a block of the shape shown in Fig. 1 at C. This block is provided with a central opening adapted to register with the bolt-hole in the standards A and having recesses at top and bottom fitted to receive the projecting ends of the bosses *a*, while the base of the block has a firm bearing on the inner face of the desk-standard B. The block contains a circular cavity a little larger than the opening in its bottom, so as to leave a flange *d*, and this flange forms a bearing for the end of a spring *e*. A bolt *f* is adapted to pass through the block, the slot in the standard B, and the opening in the standard A, and to be engaged by a nut and washer upon the outer face of the standard A. This bolt also passes through the spring, and the head of the bolt, which is square, is adapted to enter a squared recess in the head of the block, which prevents it from turning when force is applied to turn up the nut on the other end. The spring within the cavity bears against the under face of the bolt-head and puts sufficient tension upon the part so as to permit of the adjustment of the desk without entirely removing the bolt, and at the same time the friction is sufficient to hold the parts in place during the temporary adjustment, and when the proper height is secured and the nut is tightened the inner face of the head of the bolt finds a rigid bearing in the recess in the end of the block and there is no strain upon the spring. It will be seen that the projection *a* engages the block at top and bottom, and thus carries the load and relieves the bolt of all strain, as in the common construction—that is, the weight of the load upon the bracket B is transmitted to the projection *a* through the block C, which for this purpose must of course maintain its frictional contact with the channeled face of the bracket. These projections also prevent the bracket from moving up or down as the desk is adjusted, which would cause a binding of the bolt and necessitate further loos-



ening thereof. This is all avoided by the construction described.

What I claim is—

1. In combination, the standard, the bracket  
5 having a vertical slot therein, the projections  
*a, a*, on the standard extending through the  
said slot, the block between the projections  
having the portions for engaging the bracket  
and the bolt for drawing the parts together,  
10 said bolt passing through the slot in the  
bracket and through an opening in the stand-  
ard, substantially as described.

2. In combination, the standard having a  
channeled face, the projections *a, a*, extend-  
15 ing from said channel, the bracket also of  
channel form fitted to the channel in the  
standard and slotted to receive the projections  
*a, a*, and the block fitted between the projec-

tions and bearing on the bracket with the bolt  
for drawing the parts together, substantially 20  
as described.

3. In combination, the channeled standard,  
the channeled and slotted bracket fitted there-  
to, the projections *a, a*, extending through the  
slot, the block having recesses to receive the 25  
projections and a recess to receive the head  
of the bolt, the bolt having its head engaging  
the recess in the block and the spring within  
the block, substantially as described.

In testimony whereof I affix my signature 30  
in presence of two witnesses.

ALLEN D. LINN.

Witnesses:

L. T. GIBSON,

L. M. OLMSTED.