

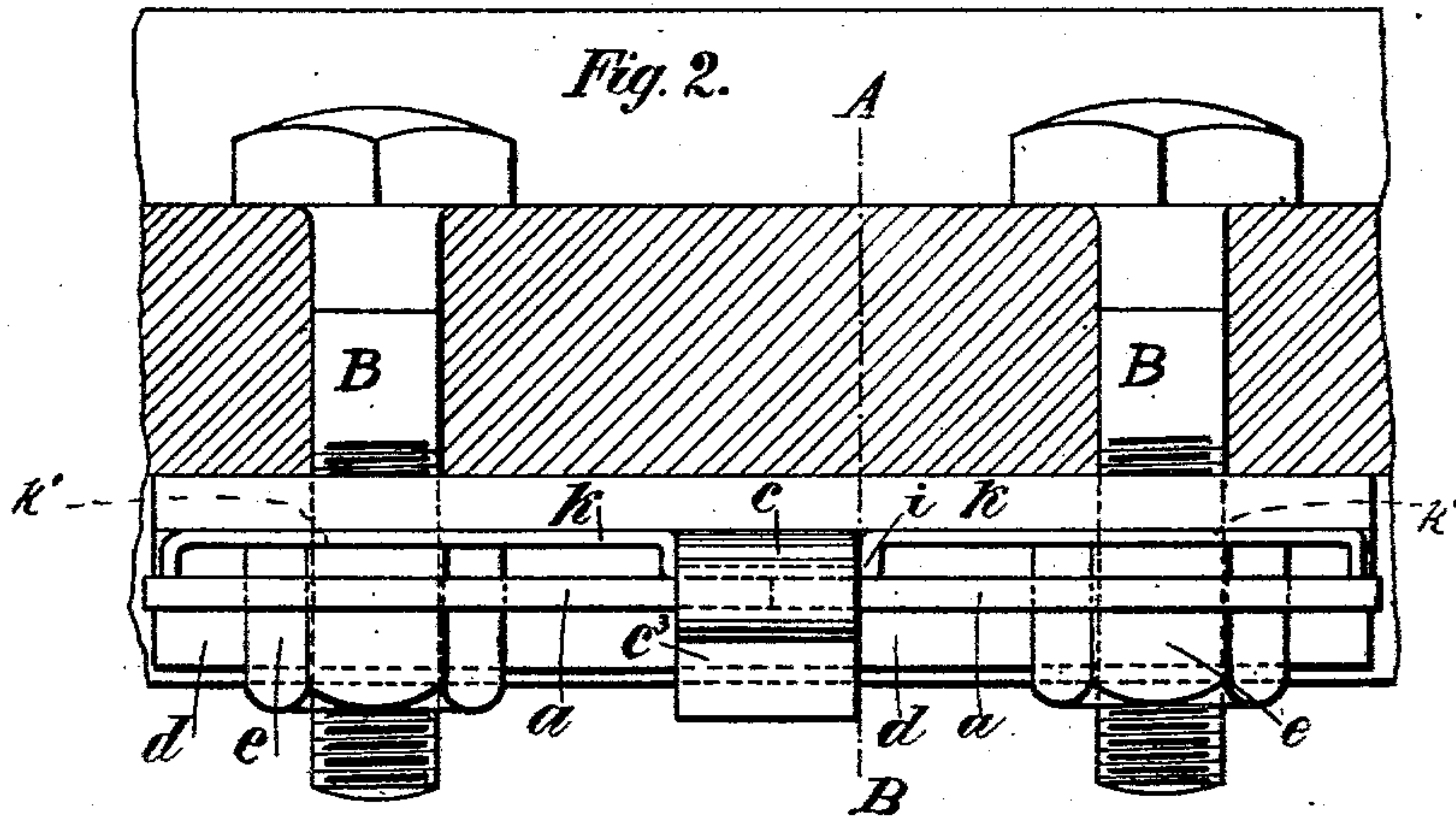
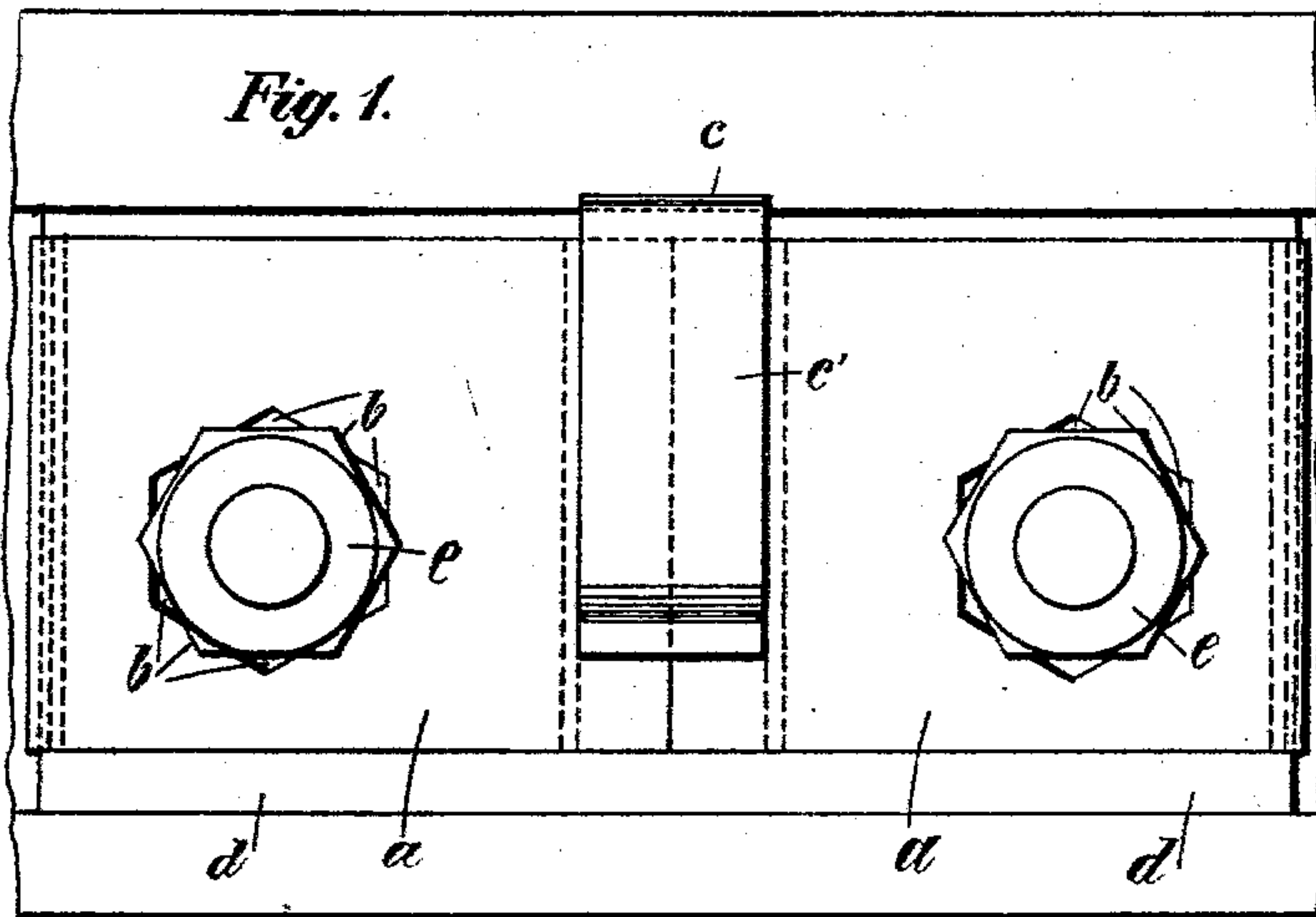
No. 716,860.

Patented Dec. 30, 1902.

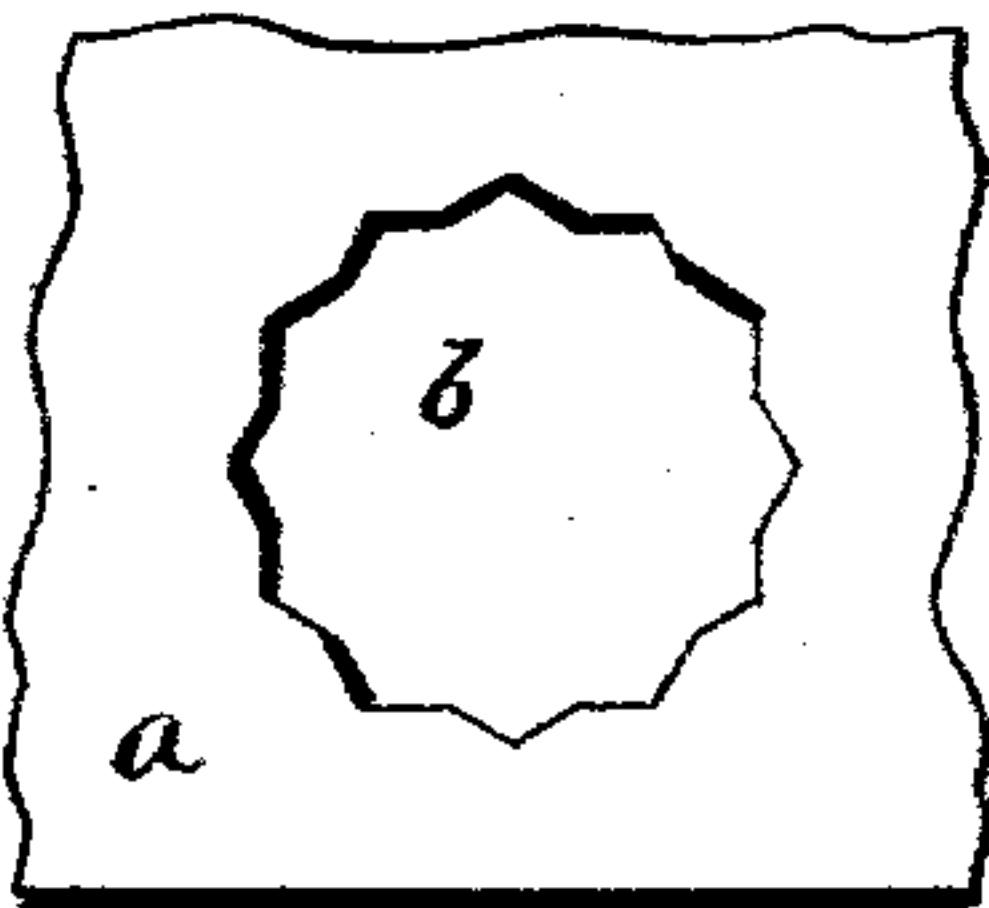
A. BUDDE.  
SCREW NUT LOCKING DEVICE.

(Application filed Sept. 9, 1902.)

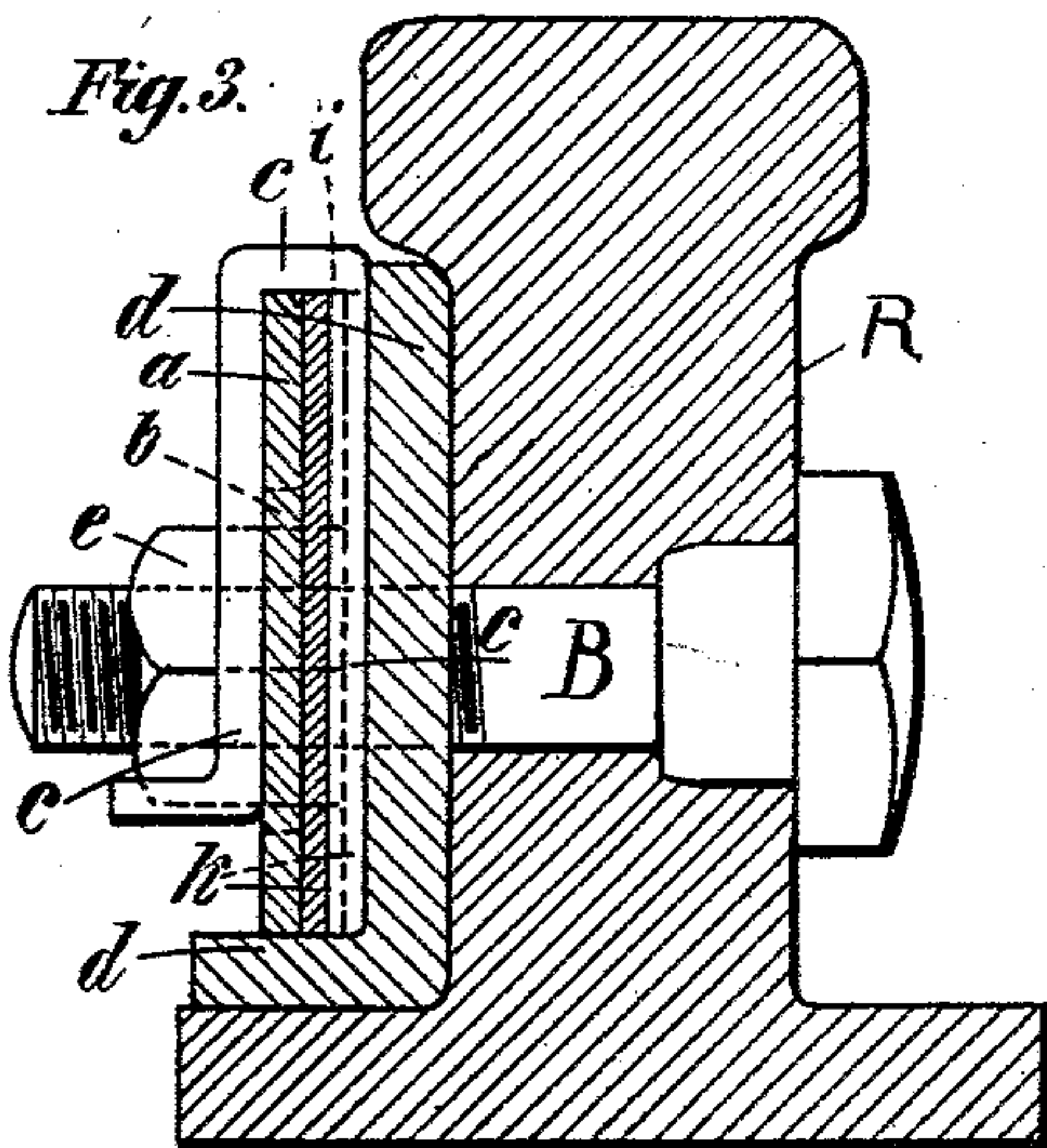
(No Model.)



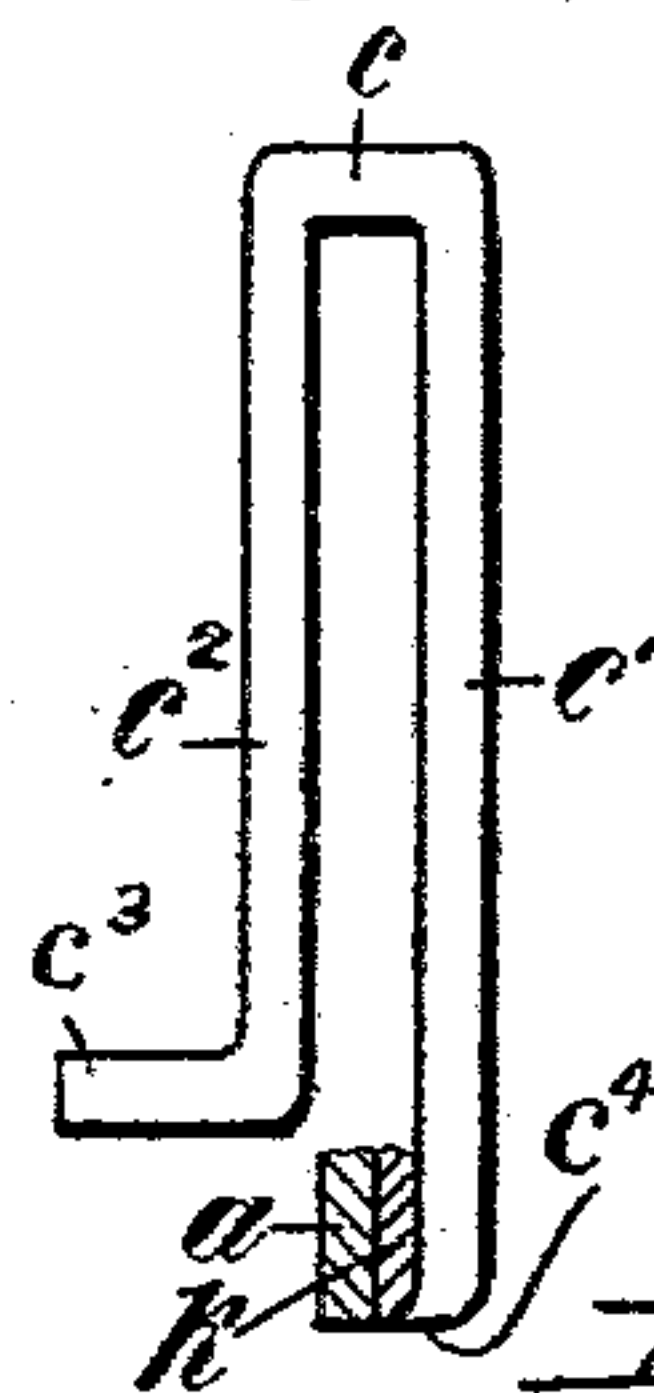
*Fig. 5.*



*Fig. 3.*



*Fig. 4.*



Witnesses:  
W. W. Deane.  
G. S. Roy.

Inventor:  
August Budde

By *J. H. Schaeffer*,  
Attorney.



# UNITED STATES PATENT OFFICE.

AUGUST BUDDE, OF RADEVORMWALD, GERMANY, ASSIGNOR TO THE FIRM  
OF PETER HOLZRICHTER, OF RADEVORMWALD, GERMANY.

## SCREW-NUT-LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 716,860, dated December 30, 1902.

Application filed September 9, 1902. Serial No. 122,707. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST BUDDE, a subject of the King of Prussia, German Emperor, residing at Radevormwald, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Screw-Nut-Locking Devices, of which the following is a full, clear, and exact description.

This invention relates to an improvement in nut-locks, and has for its object to provide novel and effective means for securely fastening nuts upon their bolts, while at the same time permitting of the ready removal of the nuts, if found desirable or necessary.

To this end the invention contemplates a form of nut-lock embodying a minimum number of parts and easily manipulated to provide for the locking or removal of the nuts.

A further object of the invention is to provide a nut-lock useful generally as a nut-locking device, but possessing special utility as a rail-joint fastening.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, which will be hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a front elevation of a rail-joint, illustrating a pair of bolts equipped with the improved nut-lock fastening contemplated by the present invention. Fig. 2 is a horizontal longitudinal sectional view of the rail-joint construction shown in Fig. 1, exposing the elements of the nut-locking device in plan. Fig. 3 is a vertical cross-sectional view on the line A B of Fig. 2. Fig. 4 is a detail view of the detachable fastening-key and also illustrating the retaining engagement between the said key and the fixed plate member with which it engages to prevent accidental displacement. Fig. 5 is a detail elevation of one of the locking-plates, showing the form of nut-engaging opening therein.

Like reference-letters designate corresponding parts throughout the several figures of the drawings.

In carrying out the invention the same is usually constructed for application to a pair

of bolts and the nuts thereof arranged in the relation such as found in connection with rail-joints and equivalent structures, so for illustrative purposes the invention is shown in the drawings as applied to a pair of bolts and nuts of an ordinary rail-joint.

Referring particularly to the drawings, the letter R designates the section of rail carrying the pair of spaced bolts B, on the threaded ends of which are removably mounted the polygonal nuts e, which cooperate with the fish-plate d of the joint, which plate is an element of the rail-joint structure and constitutes no part of the present invention.

While the invention, in fact, provides a construction embodying common means for locking the nuts on both bolts, it is preferable in the carrying out of the invention to associate with each nut an individual locking-plate a provided therein with a polygonal nut-engaging opening b, corresponding in shape to the external configuration of the nut, but having a greater number of angles than the latter. The angles or notches of the opening fit over and engage the angles or corners of the nut.

The separate locking-plates a after being slipped over the nuts e are arranged in precise alinement, and the same are designed to be held in a locking position through the medium of a common fastening means consisting, essentially, of a detachable fastening-key c and a base-plate k.

The base-plate k is designed to be arranged at the inner sides of the nuts e, so as to be interposed between the same and the plate d, against which the said base-plate rests. The base-plate k is provided in the opposite end portions thereof with the bolt-openings k', receiving the bolts b, and at an intermediate point between the bolts the said base-plate is formed with a forwardly-projected recessed offset i, which lies in rear of the adjacent ends of the plates a and constitutes a socket for receiving the inner vertical leg members c' of the inverted approximately U-shaped fastening-key c. The outer leg c<sup>2</sup> of this fastening-key is provided at its lower end with an offstanding lip c<sup>3</sup>, which is engaged by the hand or suitable tool for removing and replacing the key. The lower end of the inner leg c' of said key is preferably provided with



a retaining-deflection  $c^4$ , adapted to have a spring engagement with the bottom edge of the base-plate  $k$  to prevent accidental displacement of the key.

5 By removing the fastening-key both of the locking-plates  $a$  are freed, so that they may readily be slipped off of the nuts.

Changes in the form, proportion, and minor details of construction may be resorted  
10 to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

15 1. In a nut-locking device, the combination with the bolt and the nut thereof, of a stationary base-plate arranged on the bolt at the inner side of the nut and provided with a  
20 socket element, a locking-plate having a nut-engaging opening receiving the nut, and a detachable fastening-key removably placed

astride of both the locking-plate and the base-plate and having a member engaging the said socket element of the base-plate.

25 2. In a nut-lock, the combination with the spaced bolts and the nuts thereof, of a stationary base-plate mounted on the bolts at the inner side of the nut and provided at an intermediate point with a recessed offset  
30 forming a socket, separate locking-plates for the individual nuts having nut-engaging openings, and an inverted-U-shaped fastening-key detachably placed astride the base-plate and the locking-plates at the adjacent  
35 edges of the latter, said fastening-key having its inner leg removably engaging within the socket of the base-plate.

In witness whereof I have hereunto set my hand in presence of two witnesses.

AUGUST BUDDE.

Witnesses:

OTTO KÖNIG,  
J. A. RITTERSHAUS.