

(No Model.)

J. B. FUNKHOUSER.
NUT LOCK.

No. 559,696.

Patented May 5, 1896.

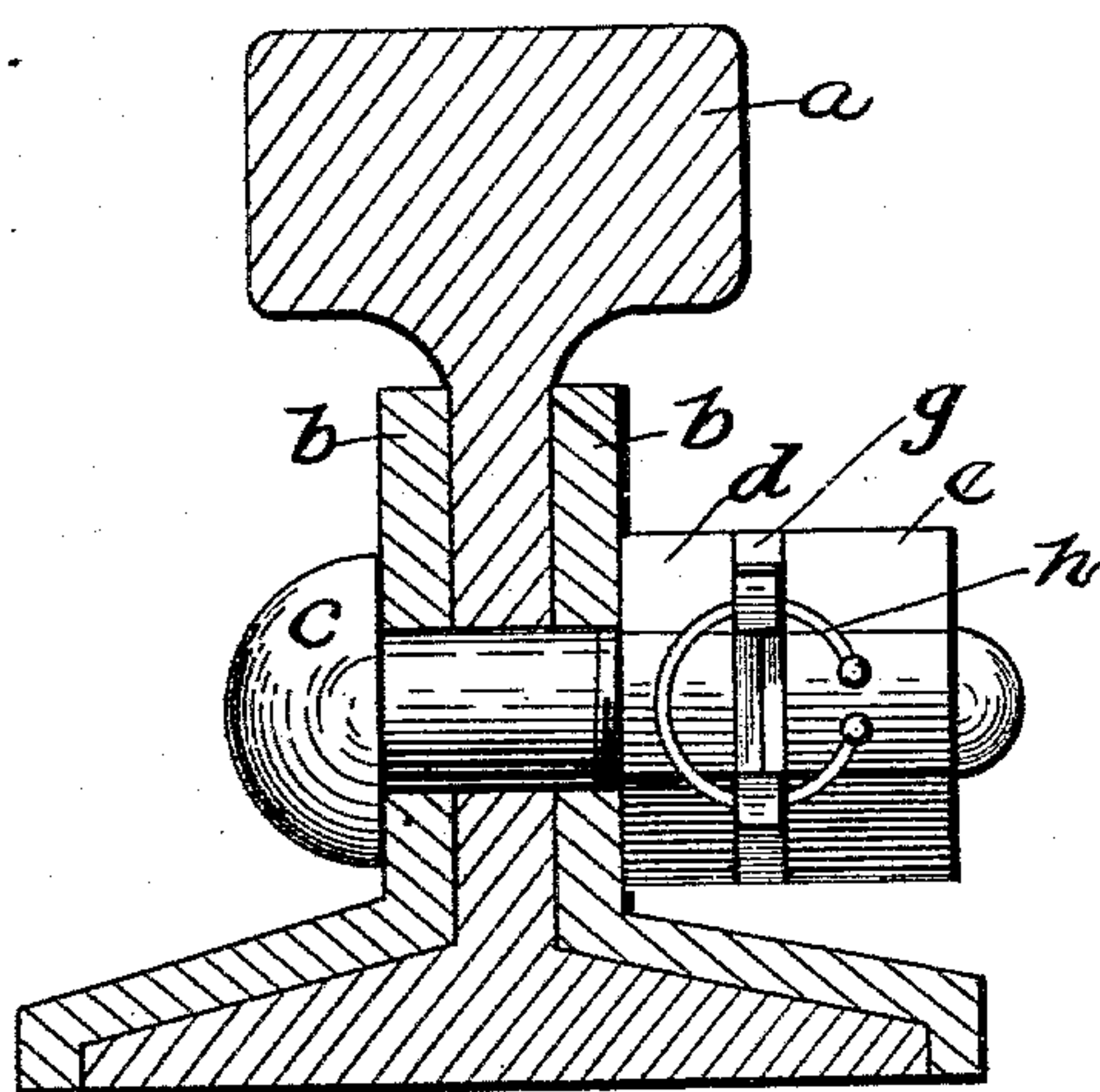


Fig. 1.

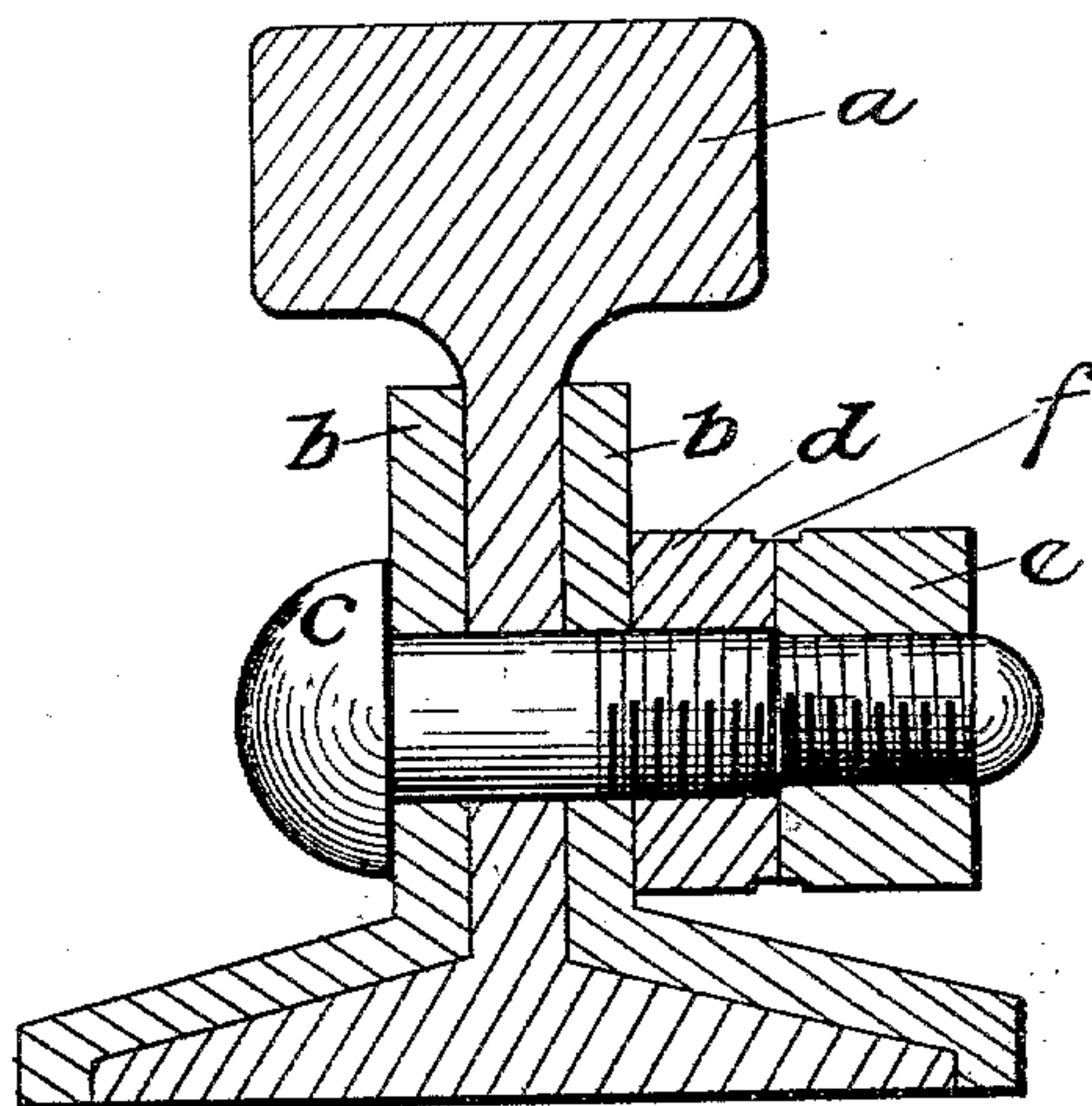


Fig. 2.

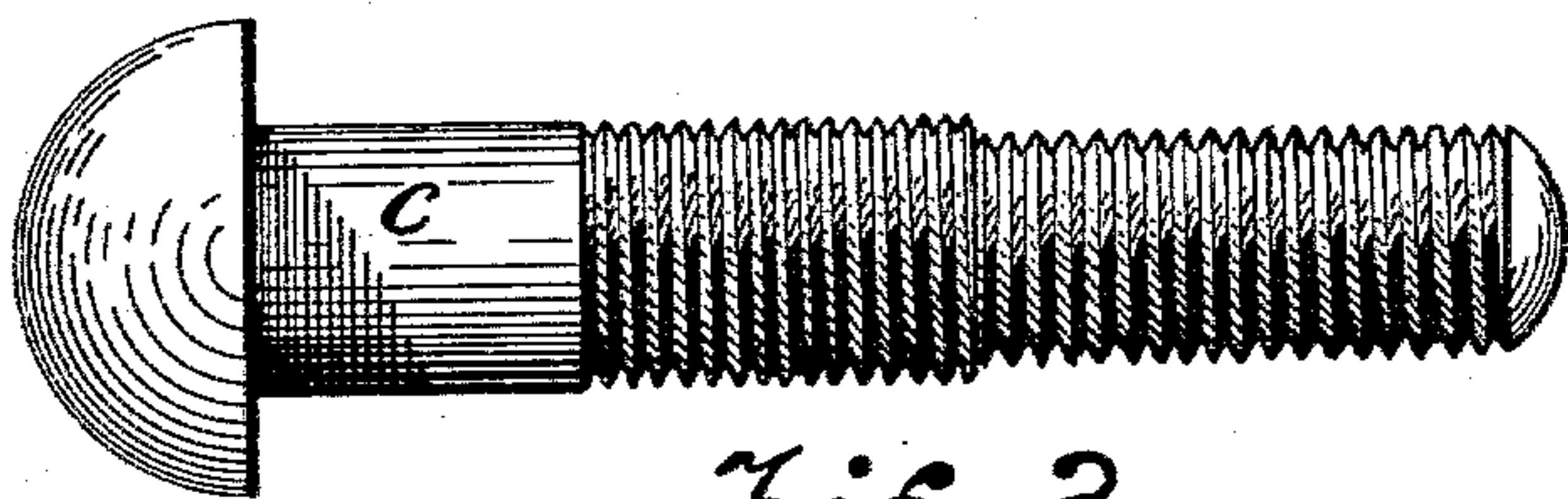


Fig. 3.

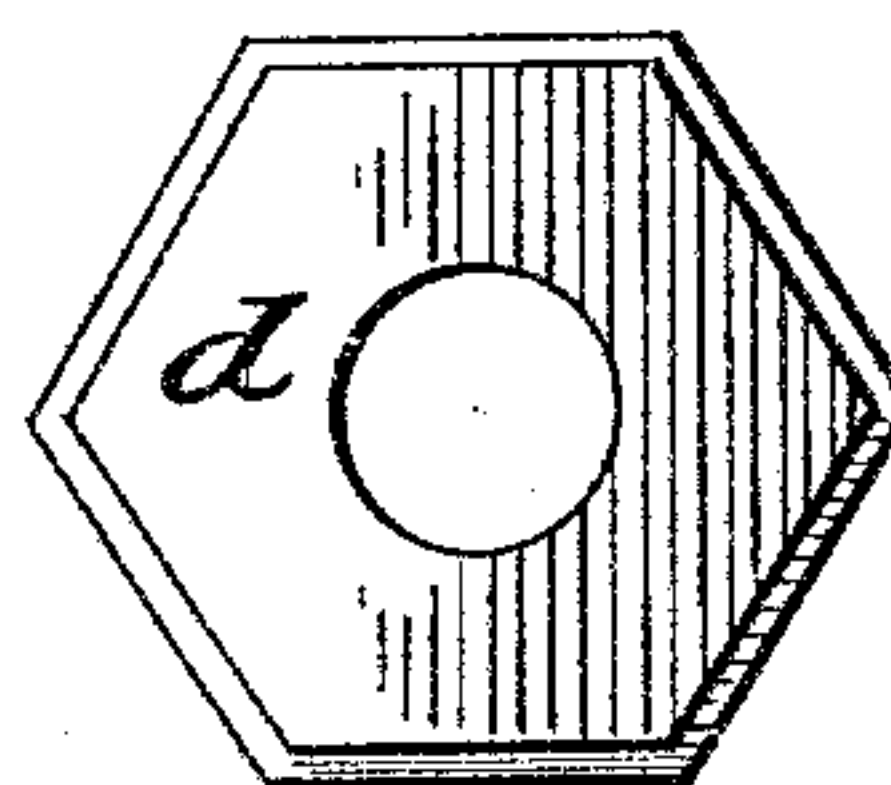


Fig. 4.

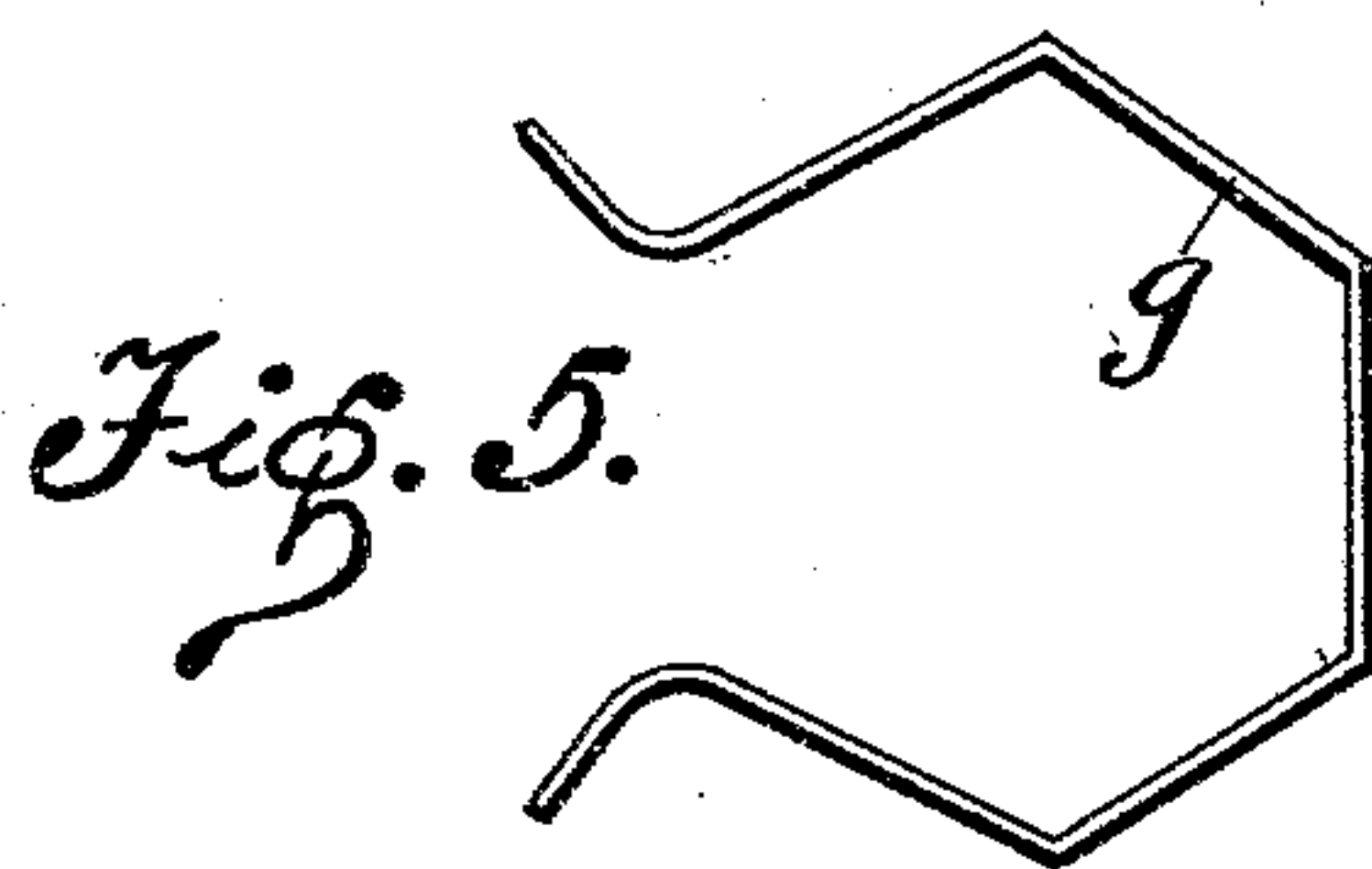


Fig. 5.

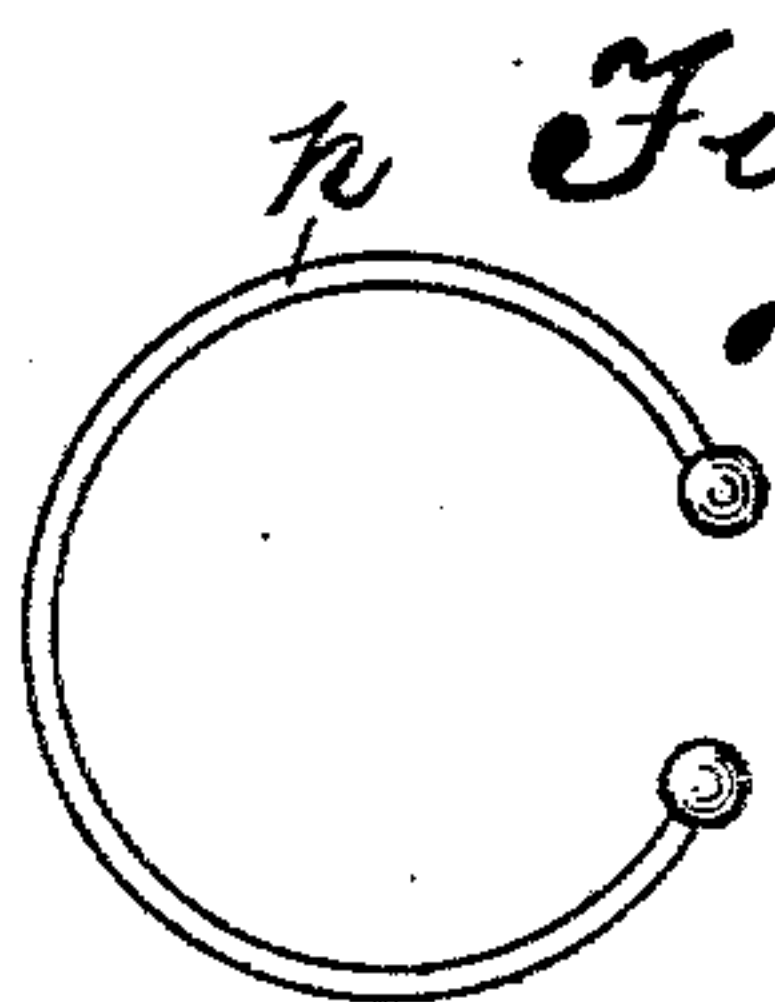


Fig. 6.

Witnesses:
A. R. Appleman, Jr.
Ameyson

Inventor:
John B. Funkhouser

By Henry C. Ewert

Atty.

UNITED STATES PATENT OFFICE.

JOHN B. FUNKHOUSER, OF NEW BRIGHTON, PENNSYLVANIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 559,696, dated May 5, 1896.

Application filed December 9, 1895. Serial No. 571,486. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. FUNKHOUSER, a citizen of the United States of America, residing at New Brighton, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to certain new and useful improvements in nut-locks in general, and more particularly to that class employed on railroad-rails and fish-plates.

15 The invention has for its object the provision of novel means whereby a nut is securely locked to a bolt and prevented from turning when locked in position; furthermore, to provide novel and effectual means whereby the nut will be prevented from becoming loose ordinarily caused by the constant jar of the trains, and the expansion and contraction caused by the atmospheric action.

20 The invention has for its further object to construct a lock of the above-referred-to class that will be extremely simple in its construction, strong, durable, and comparatively inexpensive to manufacture; furthermore, to construct a nut-lock that may be readily unlocked when desired, and again easily replaced in position.

25 With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts to be hereinafter more particularly described, and specifically pointed out in the claims.

30 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar parts throughout the several views, in which—

35 Figure 1 is a transverse vertical sectional view of a rail and fish-plates provided with my improved nut-lock. Fig. 2 is a similar view showing the rail, fish-plates, bolt, and nuts in proper position. Fig. 3 is a side view of the bolt, showing right and left hand threads. Fig. 4 is a front elevation of one of the nuts, showing cut-away portion on edge of face. Fig. 5 is a plan view of the spring-clamp. Fig. 6 is a side view of the bull-ring.

In the drawings, *a* represents the rail, *b b* the fish-plates, and *c* the bolt. The fish-plates and rail, as will be noted, are of the ordinary construction, and the bolt *c* is provided with a right and left hand thread. At the intersection of the two threads there is a slight offset, making the diameter of the bolt from this point to the end less than the balance of the body portion, as fully shown in Fig. 3 of the drawings. A nut *d* is adapted to fit on the larger portion of the bolt, and a nut *e* is adapted to fit on the portion of less diameter, and abuts against the nut *d*. The nuts *d* and *e* are provided on their engaging faces with a cut-away portion which when the nuts are in position on the bolt form a groove *f* for the reception of the clamping-spring *g*, which is securely locked in position by the bull-ring *h*. The clamping-spring *g* is constructed in the same shape as the nuts *d* and *e*, and the ends are turned outwardly, as shown in Fig. 5, to form a catch for the bull-ring *h*.

75 The operation of my improved nut-lock will be readily apparent from the views shown in the drawings.

80 The bolt is placed in the fish-plates and rail in the well-known manner and the nut *d* is screwed on the bolt on the thread provided therefor. The nut *e* is then placed on the bolt in the same manner and when the nuts are both in their respective positions the nut *d* will abut against the fish-plate on one side, and will engage the nut *e* with its other face. The groove *f* is thus formed, and the clamping-spring is forced into this groove, thus engaging both nuts. The ends of the clamping-spring are then forced inwardly and the bull-ring placed over the clamping-spring and securely locks the nuts in position. It will be observed that the nuts are thus prevented from turning by reason of the right and left hand threads of the bolt, and the clamping-spring engaging both nuts. It will also be noted that these nuts can be made in any desired shape, as the clamping-spring can be shaped accordingly, and readily forced into position. This spring when made of steel will be found a sufficient lock in itself, but where absolute security is required the bull-ring is provided. This construction of a nut-lock may be advantageously employed for

many other purposes than herein shown, but for the purpose of illustrating the invention clearly I have shown the same as applied to a rail.

5 It will be noted that many changes may be made in the details of construction of my improved nut-lock without departing from the general spirit of my invention.

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

15 1. In a nut-lock, a right and left hand thread bolt, nuts adapted to fit on said threads, said nuts being provided with a cut-away portion on one edge forming a groove when the nuts are in position, a spring-clamp formed in the shape of the nut and having outwardly-extending ends, said clamp being adapted to fit in the groove between the nuts,

and a bull-ring adapted to engage said clamp, 20 substantially as shown and described.

2. In a nut-lock, the combination of a bolt formed of less diameter on the outer end than the balance of the body portion, said body portion being provided with right and left 25 hand screw-threads, nuts adapted to engage the threads, said nuts having a cut-away portion forming a groove when the nuts are in position, a clamping-spring adapted to fit in said groove, and a bull-ring engaging the said 30 clamping-ring and retaining same in position, substantially as shown and described.

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

JOHN B. FUNKHOUSER.

Witnesses:

ALFRED M. WILSON,

H. C. EVERT.