

(No Model.)

F. ROBBINS.
NUT LOCK.

No. 282,927.

Patented Aug. 7, 1883.

Fig. 1.

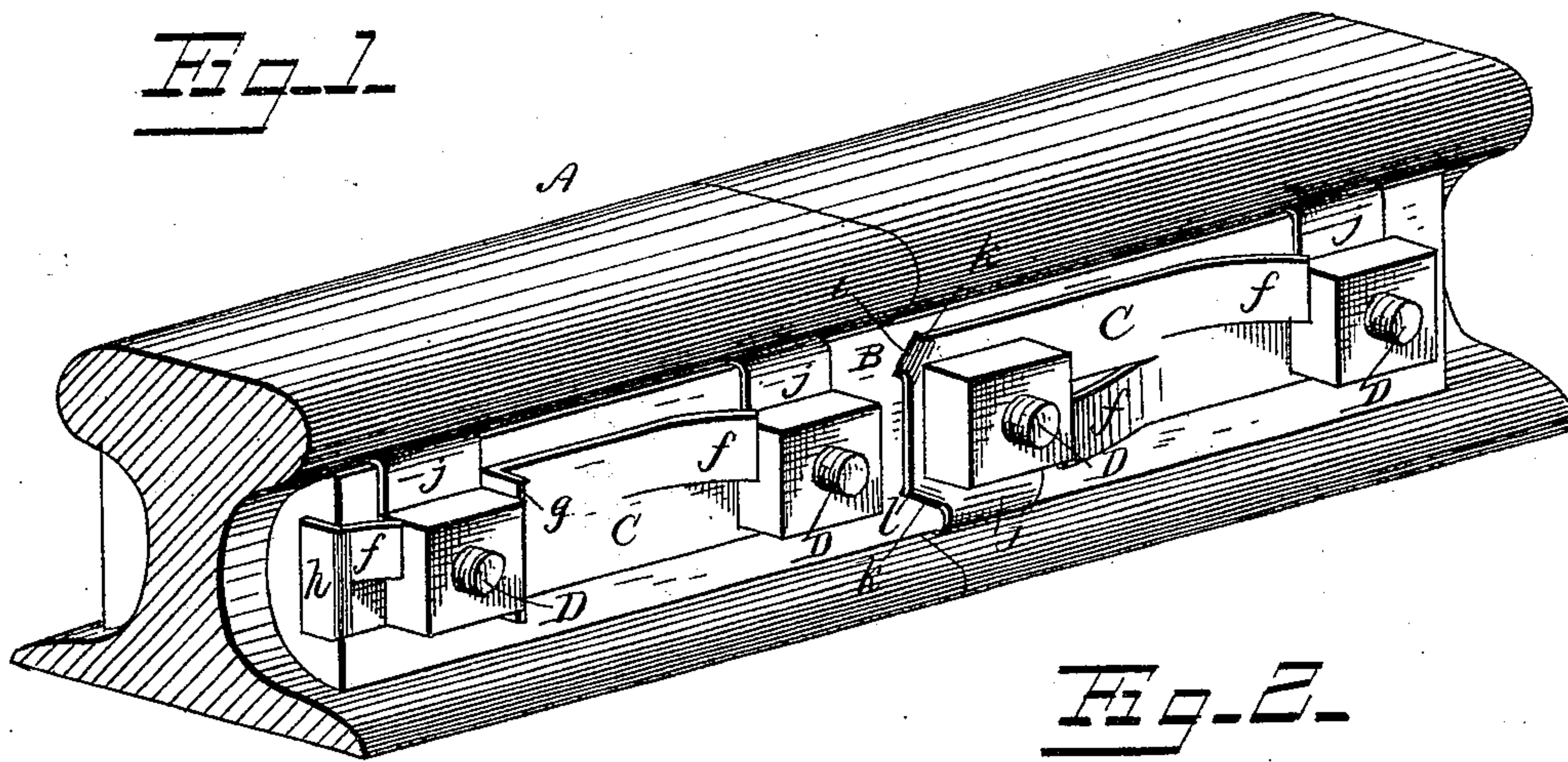


Fig. 2.

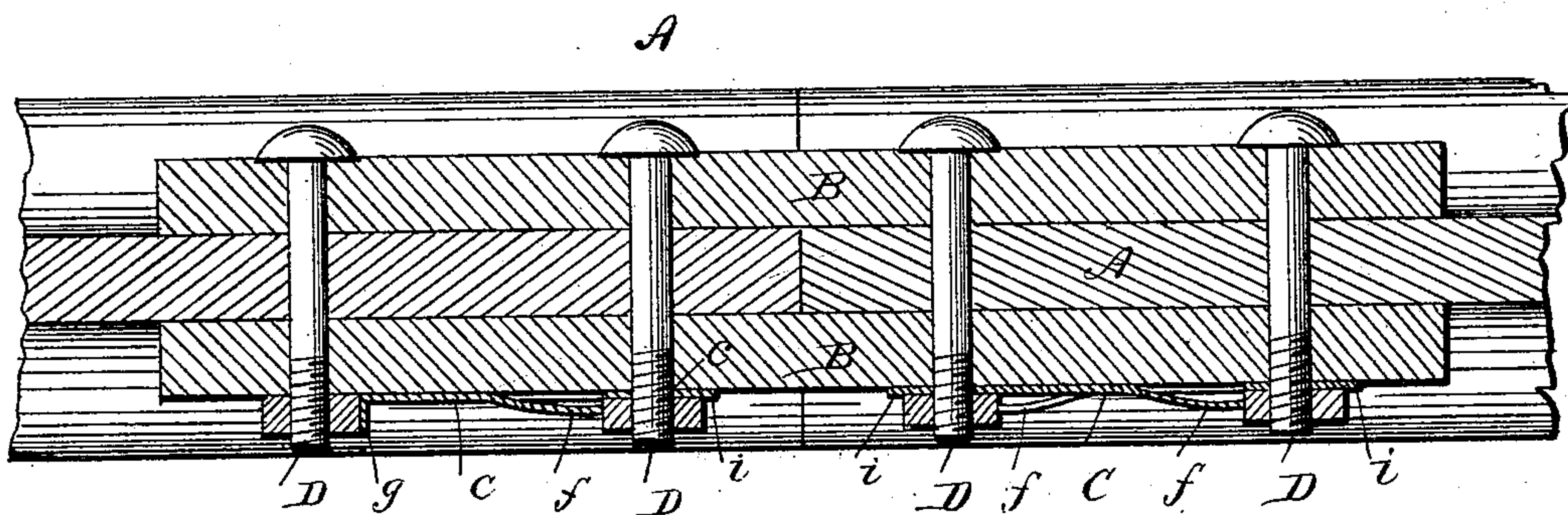


Fig. 3.

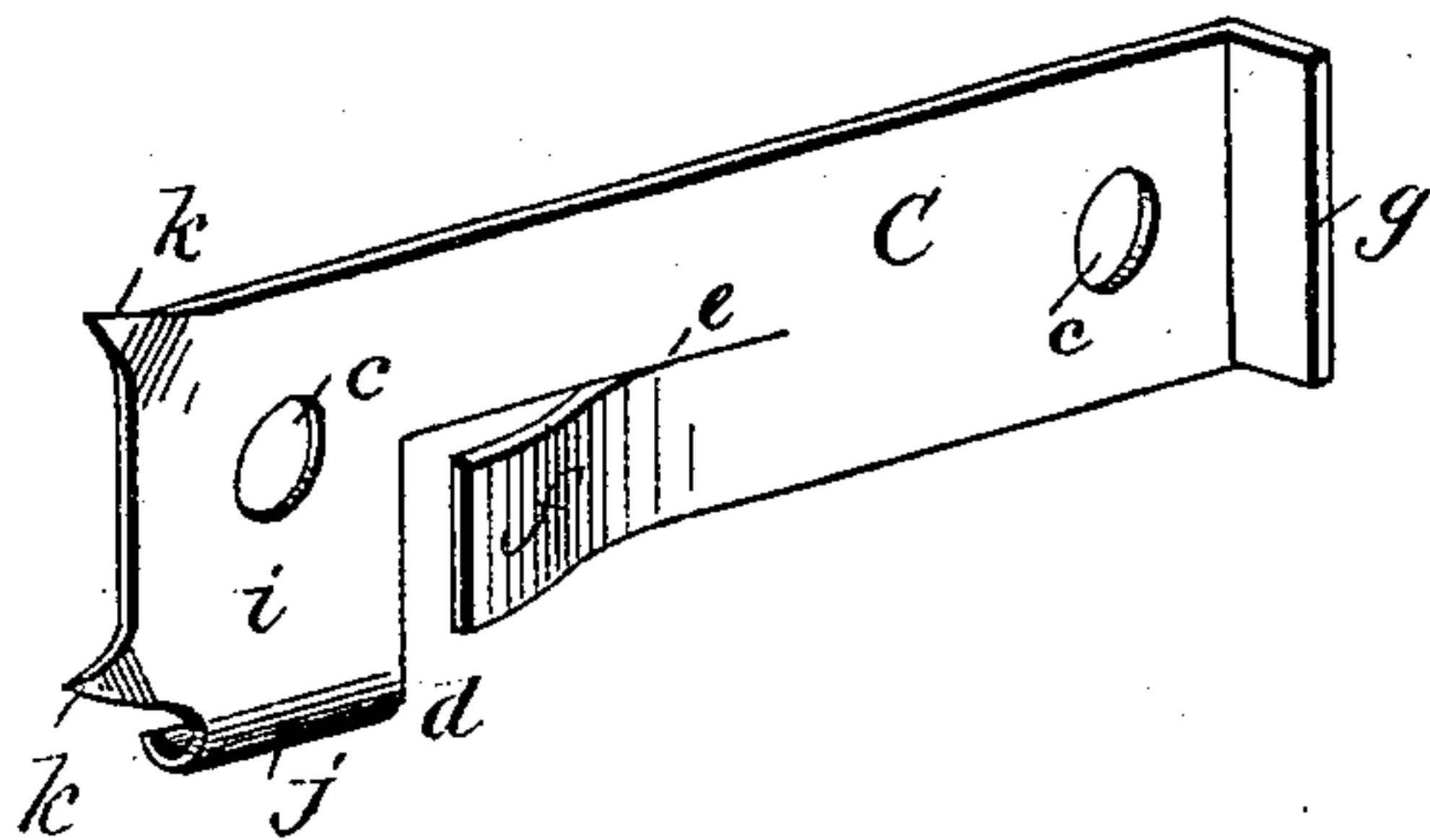
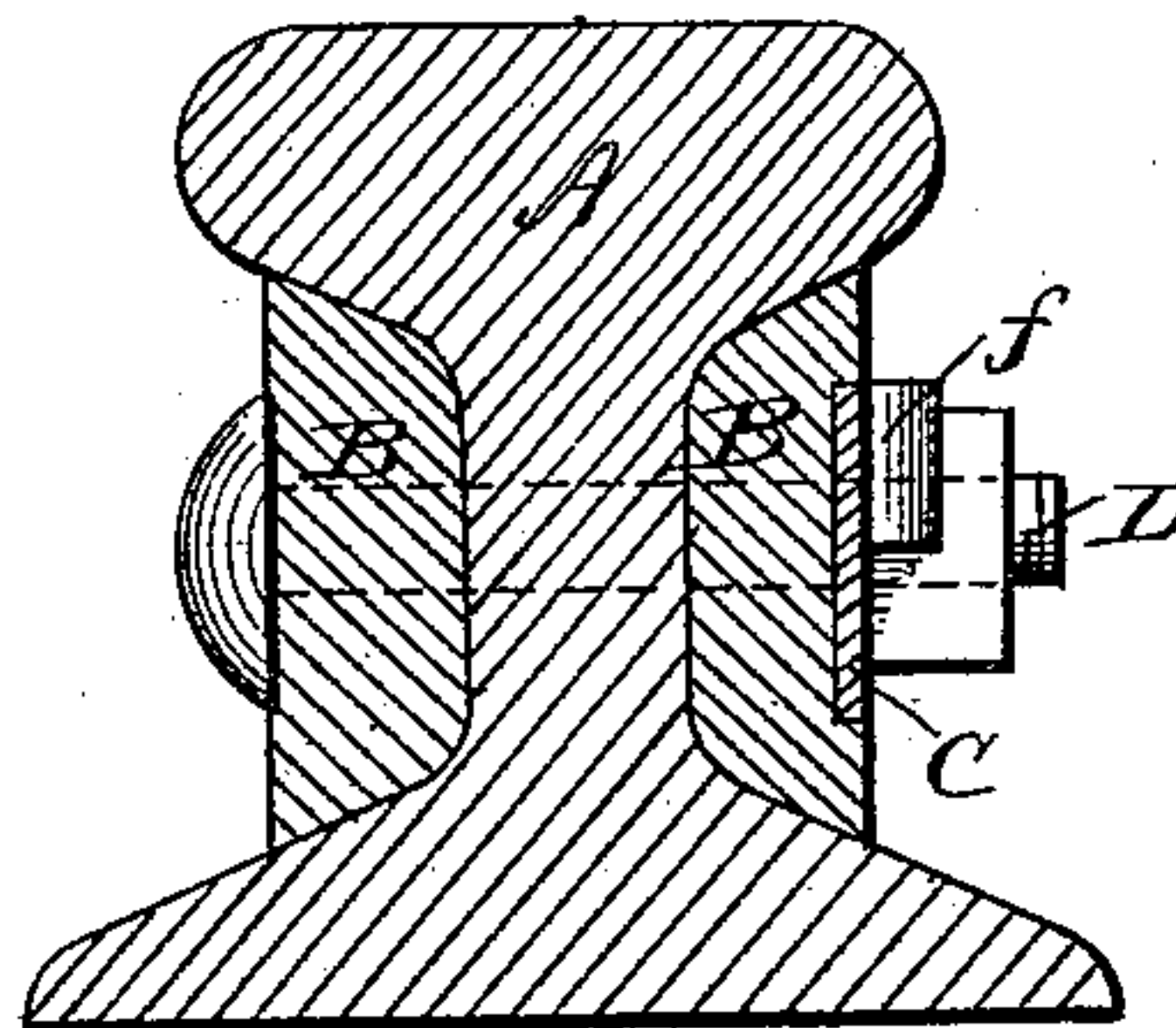


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

FABIUS ROBBINS, OF WALNUT, KANSAS, ASSIGNOR OF TWO-THIRDS TO
THOMAS F. JONES AND FRANK PLAYTER, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 282,927, dated August 7, 1883.

Application filed June 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, FABIUS ROBBINS, a citizen of the United States, residing at Walnut, in the county of Crawford and State of Kansas, have invented a new and useful Nut-Lock, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to nut-locks adapted to be applied on joints of railroads, or at any other place where bolts and nuts are used; and it consists in certain details of construction and combination of parts, as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved nut-lock applied to a rail-joint. Fig. 2 is a section through the bolts. Fig. 3 is a detail view of the combined washer and spring plate-lock. Fig. 4 is a modification.

Like letters refer to corresponding parts in all the figures.

Referring to the drawings, A designates the two rails, connected by the fish-plate B in the usual manner.

C designates my improved spring plate-lock and washer combined, formed from such material as will have the required spring force for the purposes, as stated. Said plate-lock and washer consists of a rectangular piece of sheet metal of any desired length, formed with an opening, *e*, at one end for the bolt D.

At a certain distance on one side the opening *e* I slit or cut the plate vertically, as shown at *d*, said slit terminating at or near the center of plate, a horizontal slit, *e*, beginning at the point where the vertical slit ends, and runs a short distance lengthwise of the plate. By means of the slits *d e* a portion, *f*, of the plate is partly cut out, and by bending up the front portion it forms a spring-lock, which bears with its vertical edge against the straight edge of the nut. This spring-lock *f* works up and down, as hereinafter stated, and can be placed any distance from the bolt-opening *e* to suit different sizes of nuts. The other end of the plate C may be formed with similar slits, *d e*, and spring-lock *f*, for the purpose of locking the nut at that end of plate; but I prefer the following construction: The other

end of plate C in this instance is formed with a turned-up edge, *g*, which bears against the straight side of the nut on the end of a bolt, and this holds the same from turning. It may be desirable to lock the last-named nut more securely, as the edge *g* of the plate may not be sufficient to lock it from turning. In that case I provide a plate similar to C, having an opening through which the bolt is passed, the front end of the spring-lock *f* bearing against the other side of the nut, so that the nut is locked on both sides. In place of being turned upward the end of the plate is turned downward, as at *h*, so as to fit around the end of the fish-plate. The edge *h* will prevent the plate from moving laterally or lengthwise, so that the lock *f* will be always against the nut, and not be shifting out of place.

The portions *i* of the plate C, forming the washers for the nuts, is formed at the upper and lower ends with downwardly-turned edges *j*, which fit over the upper and lower portions, respectively, of the fish-plate, and prevent the plate from slipping up or down. As shown, one of the washers at one end of the plate is provided at the upper end with the downwardly-turned edges, while the other washer at the opposite end is provided with the edges *j* at the lower end or edge. It will be seen that even if the nuts were broken the plate C would be retained in place by the edges *j*, fitting around the upper and lower edges of the fish-plate.

k designates projections formed in the corners of the washer *i*, and fitting within openings *l* in the fish-plate. When the bolt is applied to wood parts, these projections can be readily driven into the wood, and thus the washer will be held secure.

In case it is required to fasten a single nut, one end of the plate may be provided with an opening for attaching it to the machinery by a screw, the bolt and nut being secured on a washer, while the lock *f* will bear against the nut in the manner herein set forth. When there is not enough room for the screw attachment upon the machinery, I provide the projections *k* upon the washer of the nut, which may be pressed into the wood surfaces to which the nut-lock is applied; or in case when used

upon iron surfaces, indentations or openings may be formed for the reception of the said projections.

The operation of my invention can be readily understood from the foregoing description, taken in connection with the annexed drawings. While the nut is being worked on the bolt the spring-lock *f* is pressed down until the nut reaches its proper place. When the nut is screwed down far enough, the spring-lock assumes its original position, the square end of said lock fitting against the square side of nut, completely preventing the nut from moving in any way until the spring-lock is pressed down away from the nut. It will be seen that as soon as pressure is relieved from the spring-lock it assumes its position against the nut.

My invention is specially applicable as a double lock for nuts on the fish-plates of railroad and other joints, where two uniform bolts in similar positions are used, so that the same plate which forms the washers also forms the lock for the two bolts; but the invention can be applied wherever two bolts and nuts come on parallel planes and contiguous to each other.

In Fig. 4 I have illustrated a modification in which the fish-plate is formed with a groove of the same size, depth, and shape of the plate *C*, so that the top of the plate is flush with the fish-plate. The object of this groove is to prevent the plate *C* from turning. The spring-

lock *f* works in a similar manner in this modification.

My nut-lock is simple, durable, and efficient. The washer and spring-lock being formed from one piece and secured tightly from displacement at all sides, it is obvious that the nut-lock will stand more strain than most locks.

Having thus described my invention, I claim—

1. As an improvement in nut-locks, the plate *C*, having one or more openings, *c*, and a corresponding number of spring-locks, one end of said plate having a turned-up edge, *g*, adapted to bear against the straight side of a nut, for the purpose set forth.

2. In a nut-lock, the combined spring-plate and washer *C*, having one or more openings, *c*, and a corresponding number of spring-locks *f*, one end of said plate having a turned-up edge, *g*, adapted to bear against the straight side of a nut, a portion of said plate being extended and turned inward, as at *j*, and a series of projections, *k*, all arranged and operating for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FABIUS ROBBINS.

Witnesses:

FRANK PLAYTER,
THOS. F. JONES.