No. 687,789. Patented Dec. 3, 1901.

G. H. RHYNEDANCE.

METALLIC FASTENER FOR JOINTS.

(Application filed Feb. 19, 1900.)

(No Model.)

Fig. 1.

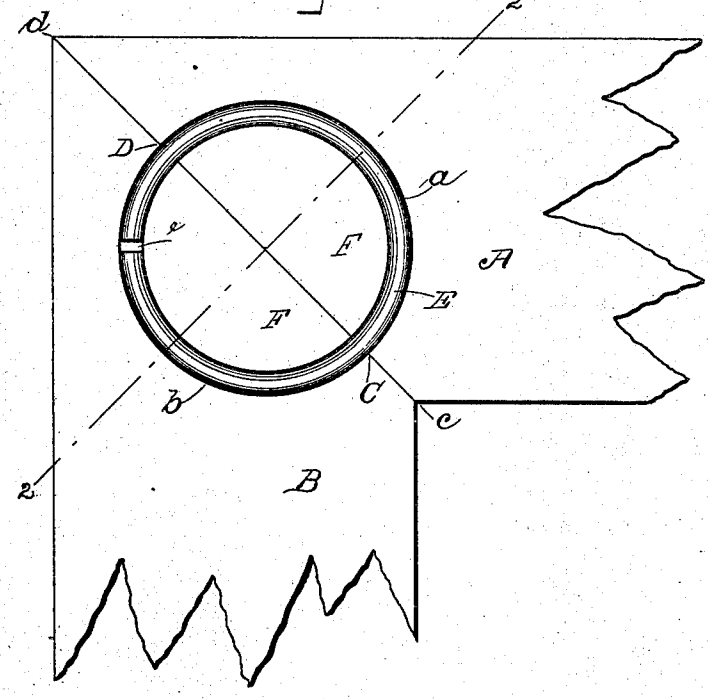


Fig. 2.

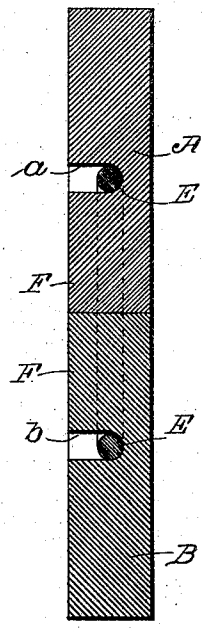


Fig. 3.

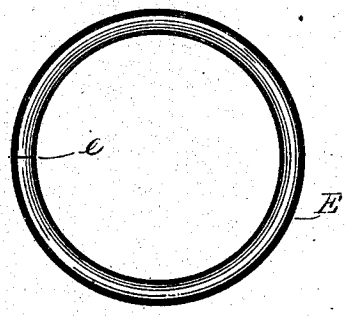


Fig. 4.

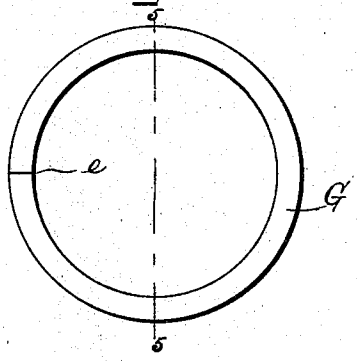
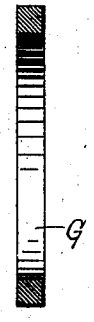


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE H. RHYNEDANCE, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE NEW HAVEN CLOCK COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

METALLIC FASTENER FOR JOINTS.

SPECIFICATION forming part of Letters Patent No. 687,789, dated December 3, 1901.

Application filed February 19, 1900. Serial No. 5,819. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. RHYNEDANCE, of the city and county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Metallic Fasteners for Joints, of which the following is a full, clear, and exact description when taken in connection with the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a front elevation of a joint with a metallic fastener embodying my invention; Fig. 2, a transverse section on lines 2 2 of Fig. 1; Fig. 3, an elevation of the fastener by itself; Figs. 4 and 5, an elevation and vertical section on lines 5 5, respectively, of a modified form of the fastener.

In all figures similar letters of reference represent like parts.

This invention relates to metallic devices for fastening the joints of articles of wood or other material; and it consists in the improvements and combinations of parts pointed out and claimed hereinafter.

Metallic fasteners have been used for joints heretofore, but, as far as I am aware, were formed of corrugated or straight-sided strips of sheet metal driven into the wood or other material. In fasteners of the corrugated character the total strength of the device is the strength of a single corrugation next the line of juncture where it is capable of being straightened out without necessarily affecting the remainder of the fastener. In other fasteners where abrupt or right-angled turns are present the danger of straightening is at the angle where the strain is greatest on the wood included in the angle. This difficulty is increased by weakening the fiber of the wood when the fastener is driven in.

The object of my invention is to overcome this difficulty by producing a fastener of circular configuration that will cross the line of juncture at two points and embrace a portion of both parts of the joint and at the same time have no reëntrant angle or angular portion which may be straightened out, so that the separating of the parts of the joint may take place only by overcoming the resistance of the entire portion of the article embraced by the fastener. By having the slots in the two parts cut or formed in the joint the wood is not weakened by driving the metal into it, and the ring may be seated in the wood below the surface, so that it may be held or covered by placing plaster-of-paris or other suitable material in the slots above it.

Referring to the drawings, the parts designated by the letters A and B are the two parts of the article to be held together by the fastening device. In the parts A and B are slots *a* and *b*, herein shown circular in outline, with their ends meeting or corresponding to each other at C and D on the line of juncture *c* and *d* when the parts A and B are united.

E represents the fastener, which in the preferred form shown and described consists of a circular piece or ring of metal without any reëntrant angle or curve, also circular in cross-section and adapted to fit snugly in the slots or grooves *a* and *b*.

When the parts A and B are united, the fastener E is fitted into the slots or grooves *a* and *b*, and, as shown in Fig. 1, crosses the line of juncture *c* and *d* at two points C and D, and when the fastener is so fitted in place, owing to its curved configuration, it engages both parts A and B and prevents the same from being drawn apart. The ring E is not continuous, but is separated at *e*, so that there is a slight flexibility of the fastener to allow for the contraction and expansion of the parts of the joint, especially if of wood. In this particular form the metallic ring embraces a segment of a circle F on both parts A and B of the joint.

I have also shown in Figs. 4 and 5 a modification of my metallic fastener, which consists of a circular piece of metal or ring G, which differs from that already described in that it is rectangular in cross-section, as more particularly shown in Fig. 5. The operation of this modified form of fastener does not differ from that set forth in connection with the preferred form.

What I claim, and desire to secure by Letters Patent, (without limiting myself to the

exact details of construction shown and described,) is—

The combination with the parts A and B of a joint of wood or other material having the corresponding parti-circular slots *a* and *b* in the sides thereof, forming together a continuous circular groove; of a circular ring E of metal adapted to fit in said groove when the parts are assembled and engage the portion of each part of said joint included within said groove, substantially as described.

In witness whereof I have hereunto set my hand this 7th day of February, 1900.

GEORGE H. RHYNEDANCE.

Witnesses:
SAMUEL H. FISHER,
ELIZABETH K. PENDLETON.