

(No Model.)

A. D. B. DOUGLAS.

SAFE.

No. 316,250

Patented Apr. 21, 1885.

Fig. 1.

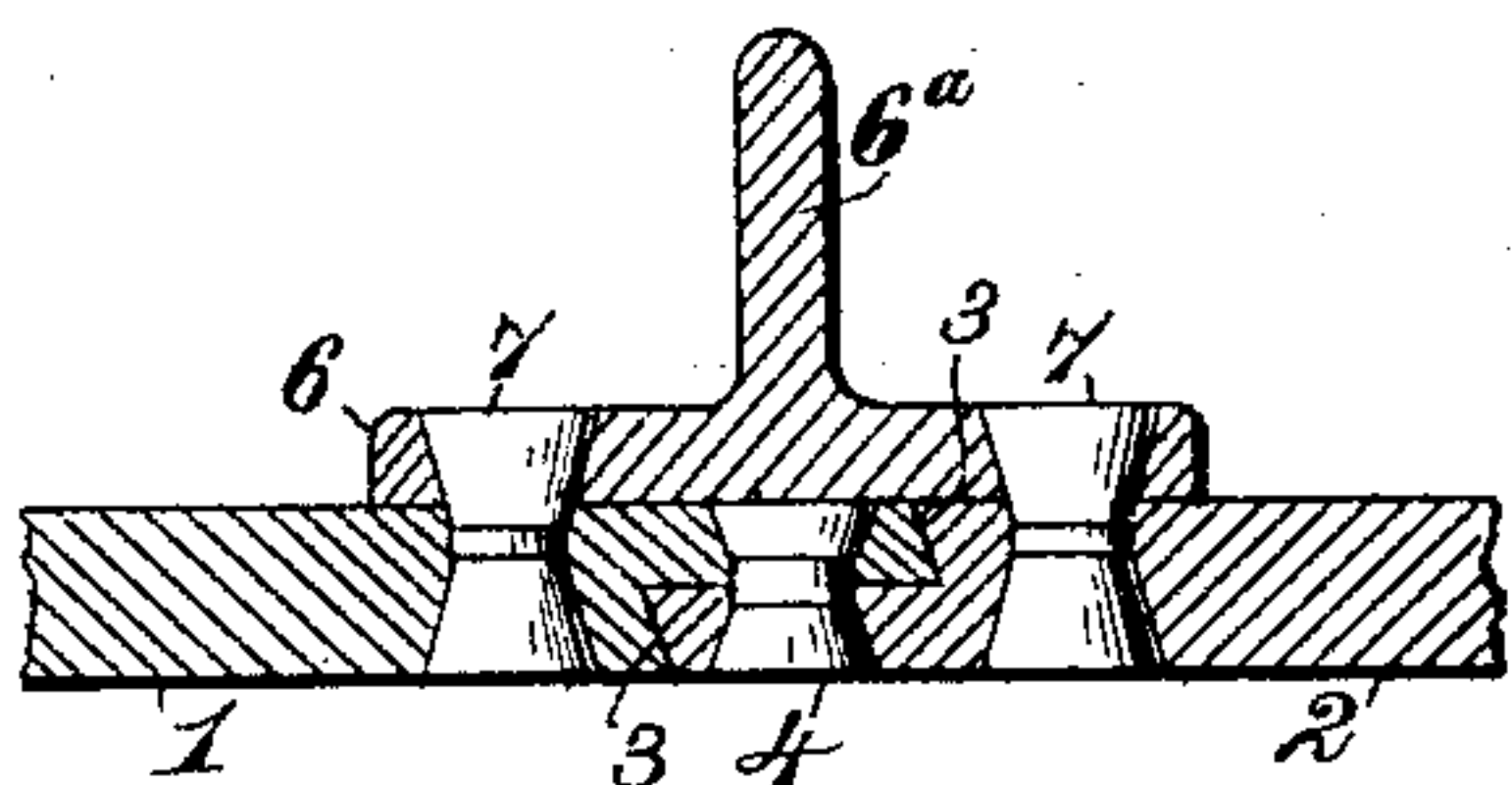


Fig. 1^a.

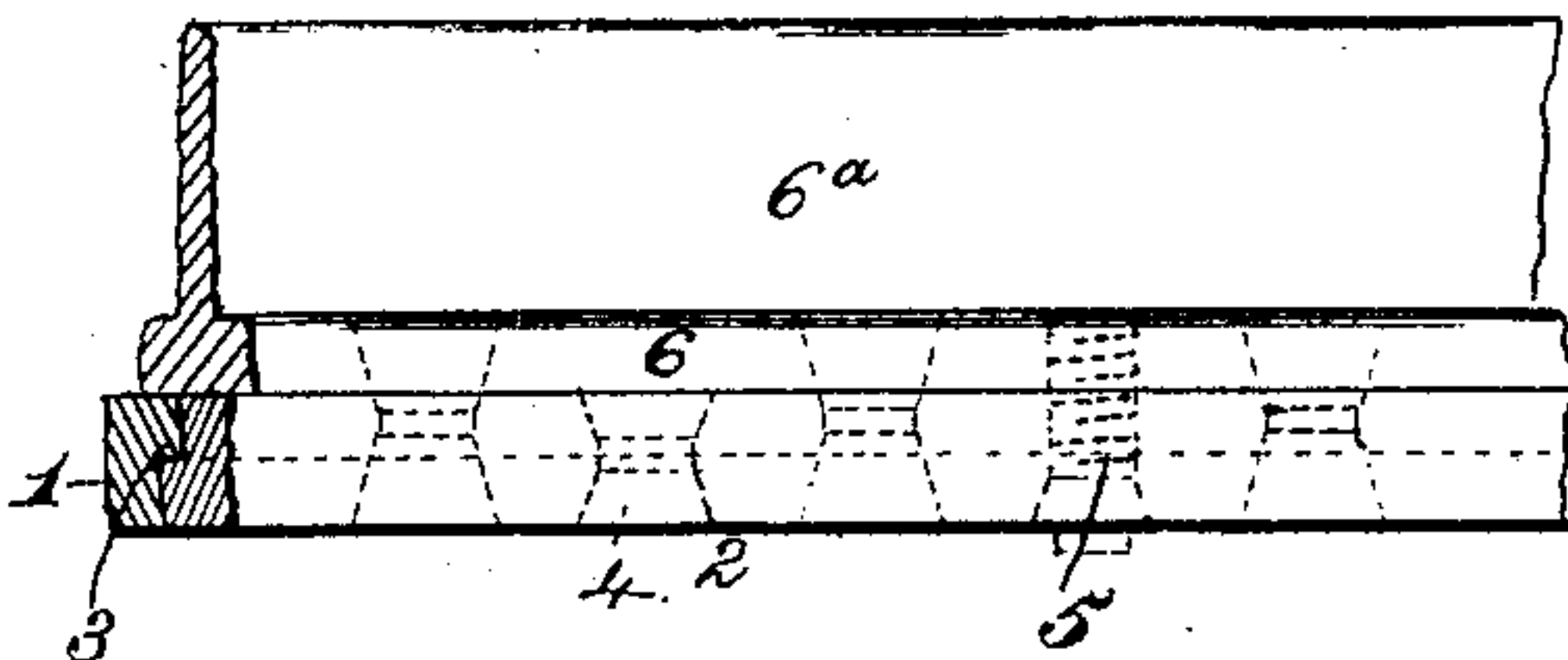


Fig. 2.

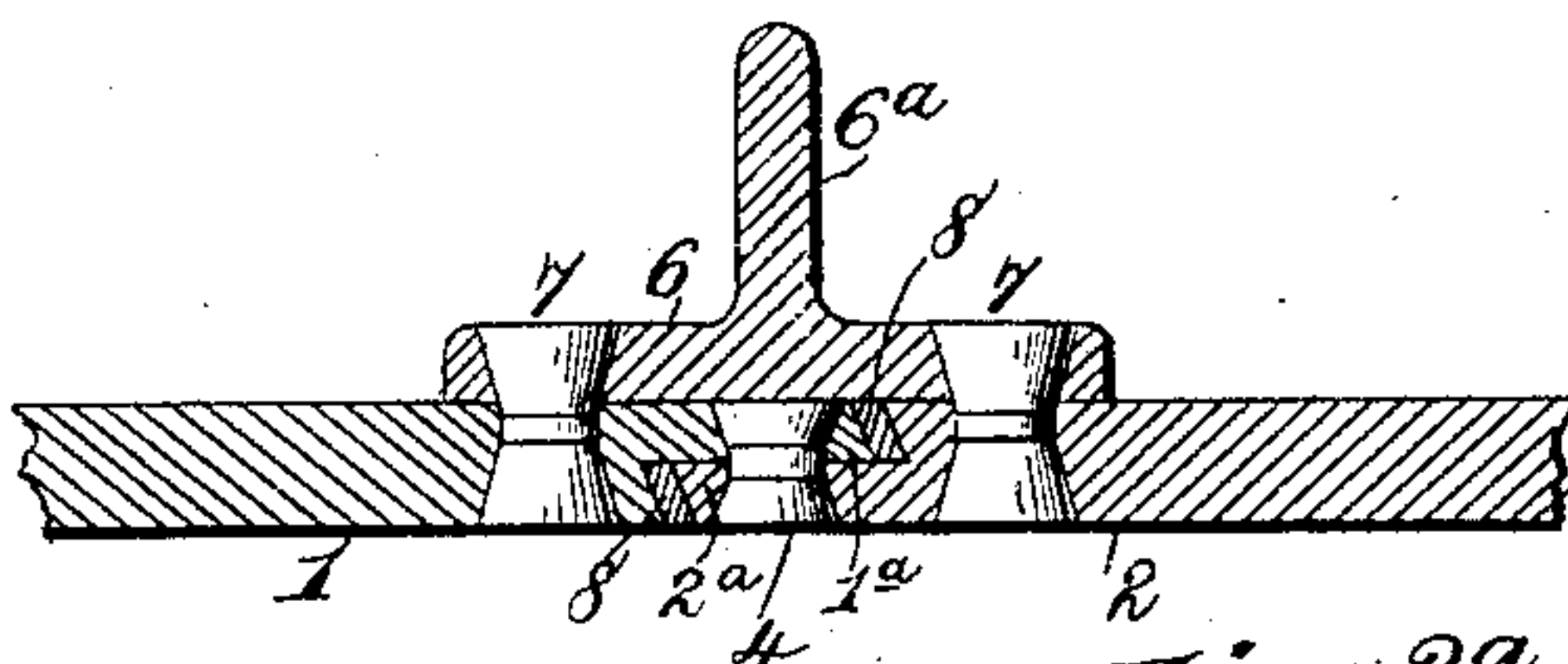


Fig. 3.

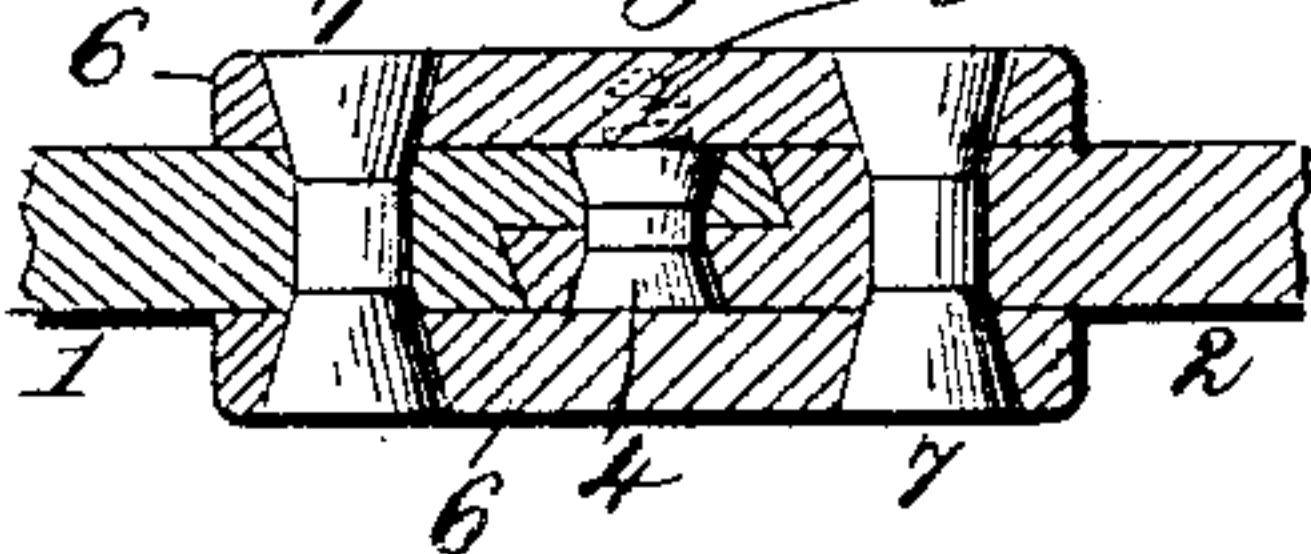


Fig. 3^a.

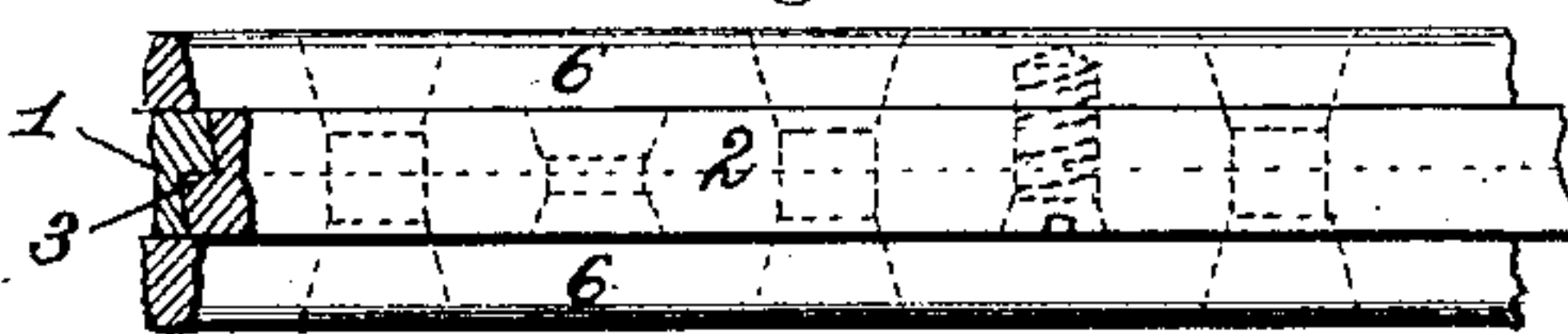


Fig. 4.

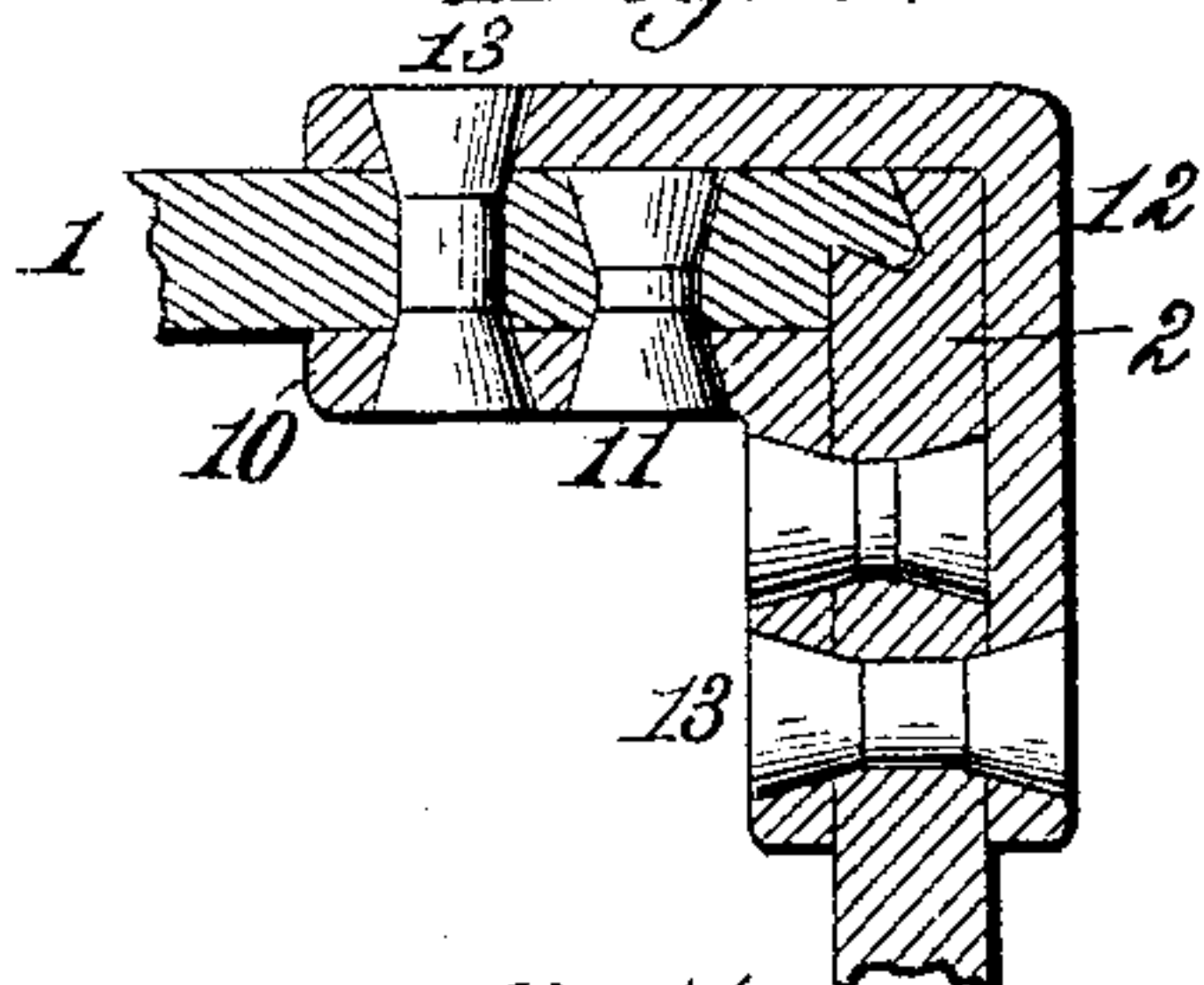


Fig. 5.

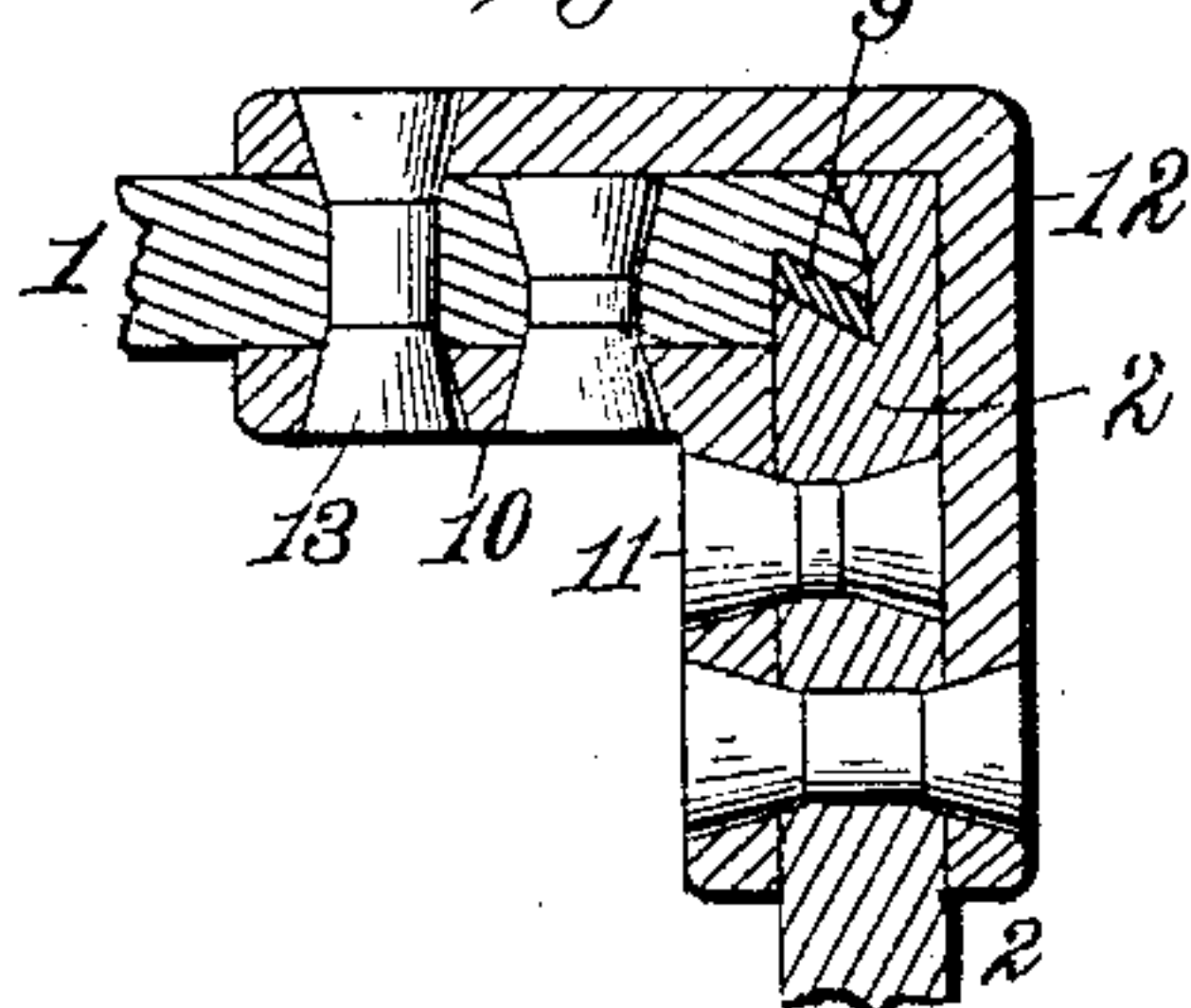


Fig. 6.

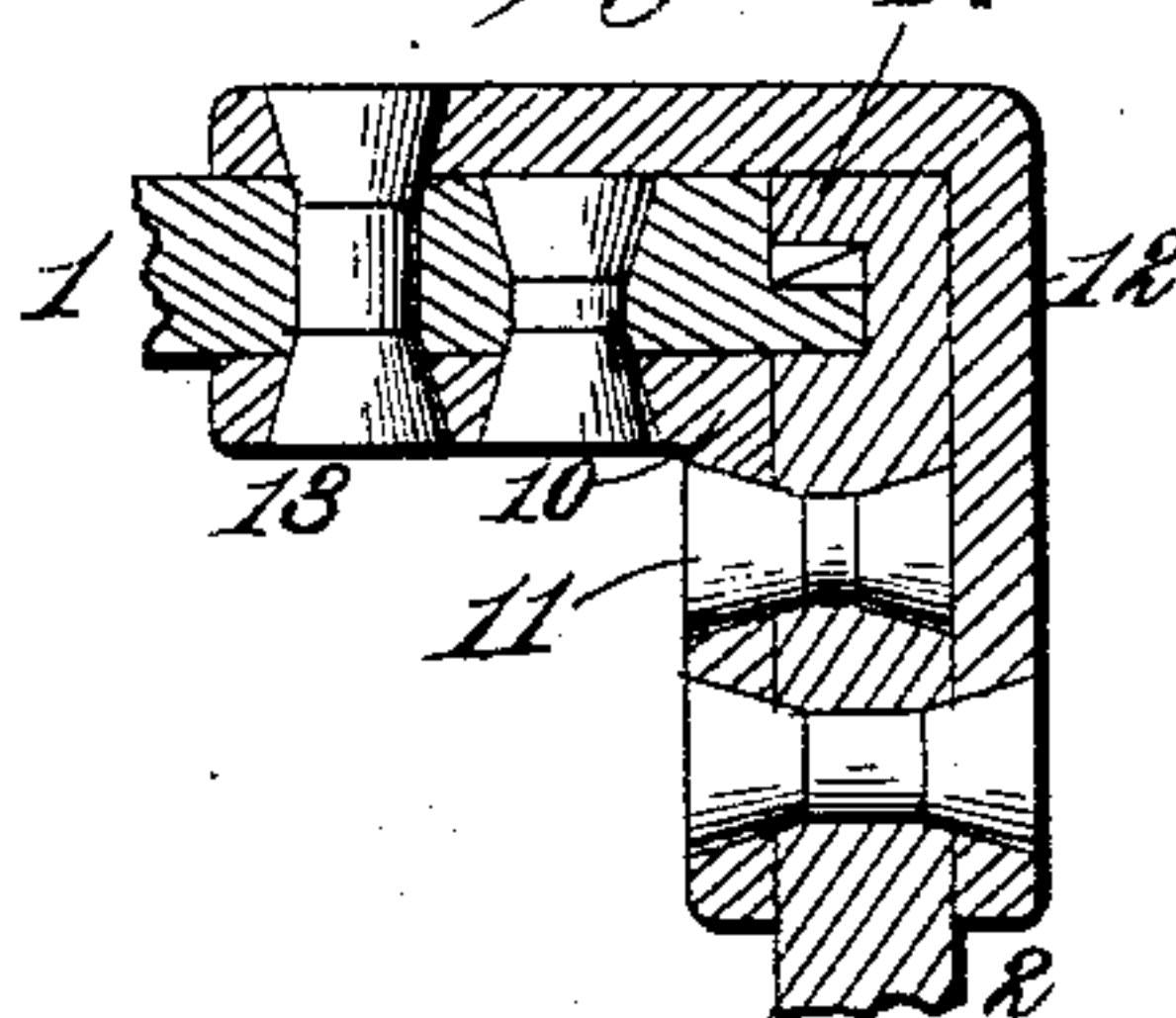


Fig. 7.

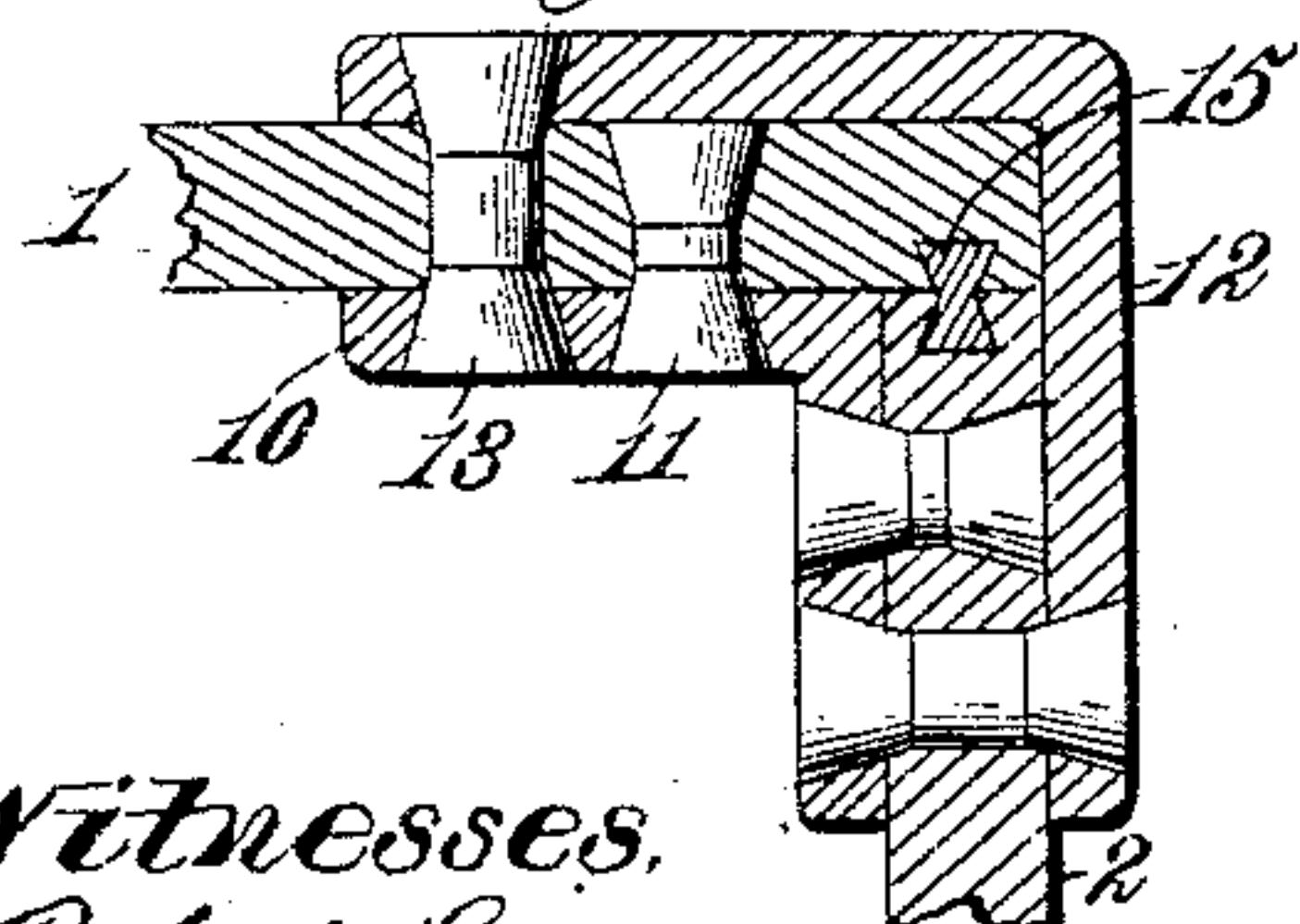
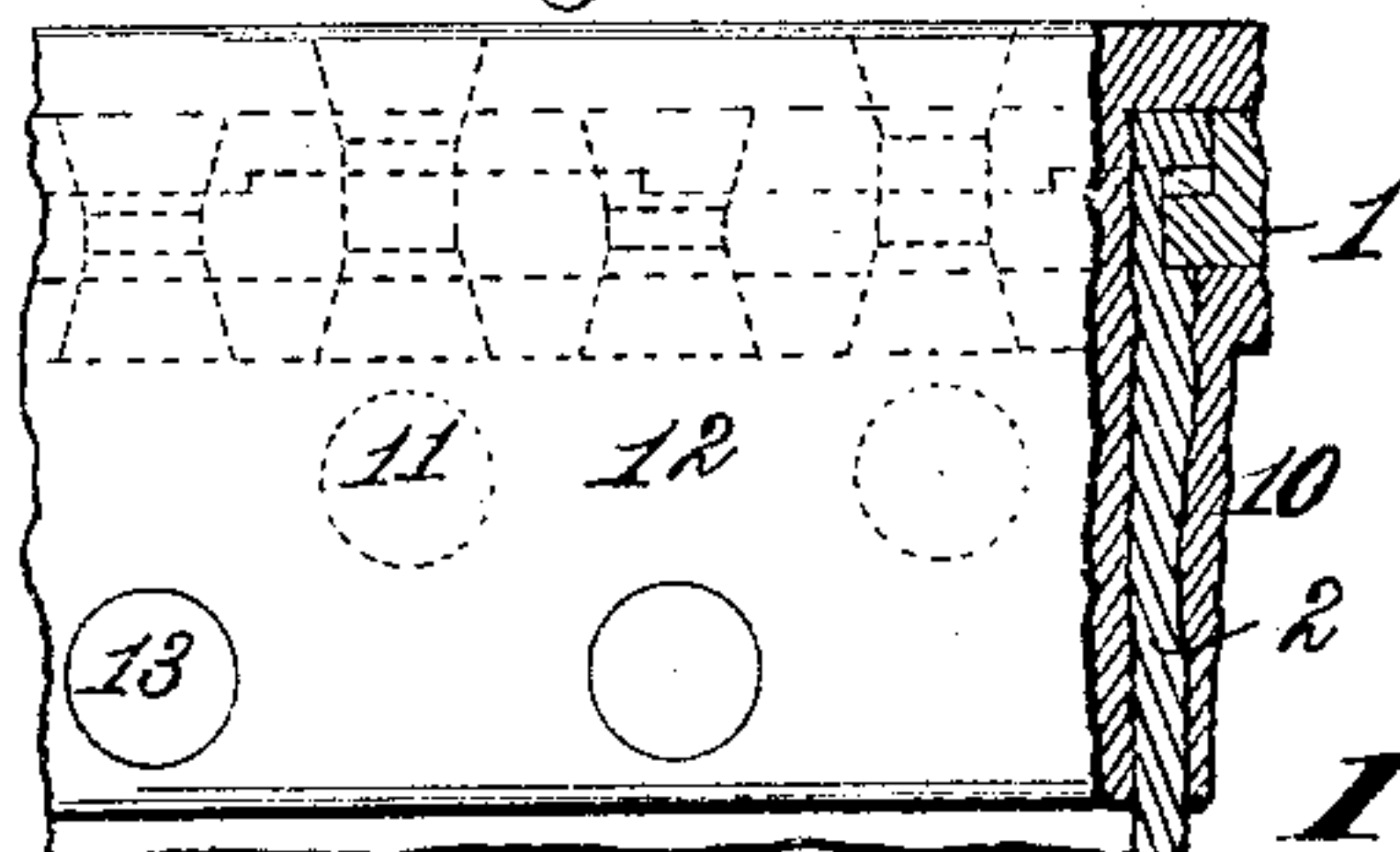


Fig. 8.



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UNITED STATES PATENT OFFICE.

ARCHIBALD DOUGLAS BRYCE DOUGLAS, OF SEAFIELD, ARDROSSAN, COUNTY OF AYR, SCOTLAND.

SAFE.

SPECIFICATION forming part of Letters Patent No. 316,250, dated April 21, 1885.

Application filed November 26, 1884. (No model.) Patented in England August 28, 1884, No. 11,745.

To all whom it may concern:

Be it known that I, ARCHIBALD DOUGLAS BRYCE DOUGLAS, a subject of the Queen of Great Britain, residing at Seafield, Ardrossan, in the county of Ayr, Scotland, have invented new and useful Improvements in Manufacture of Safes, (for which I have obtained Letters Patent in Great Britain, No. 11,745, August 28, 1884,) of which the following is a specification.

My invention relates to the construction of safes and strong rooms or vaults for the storage of money and articles of value, the purpose thereof being to provide a novel construction of the joints uniting the plates which compose the walls of such safes or vaults, whereby great strength, solidity, and security are attained.

My invention consists in the several novel features of construction and combinations of parts, hereinafter fully set forth, and then definitely pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a sectional view illustrating one of the forms in which my invention is embodied. Fig. 1^a is a side elevation of the parts shown in Fig. 1. Fig. 2 is a similar view to Fig. 1, showing a modified construction. Fig. 3 is a sectional view showing the manner of enveloping the joint. Fig. 3^a is a side elevation of the parts shown in Fig. 3. Fig. 4 is a sectional view illustrating one manner of forming the corner joint. Fig. 5 is a similar view showing a modified construction. Figs. 6 and 7 are sectional views showing further modifications in the construction of the dovetail. Fig. 8 is an elevation of the parts shown in Fig. 6.

In the said drawings, the reference-numerals 1 and 2 denote adjacent portions of plates composing the wall of the vault or safe. The meeting edges of these plates are rabbeted, the shoulders upon each being undercut, as shown at 3, and the edges of the plates beveled to fit therein. The overlapping portions of the plates are united by rivets 4, or by rivets in conjunction with screws 5. The joint is further secured by an outer and inner strap-plate, 6, fastened by rivets 7, which also pass through the intermediate overlapping portions of the plates 1 and 2. Where a single strap only is used, as in Fig. 2, it may have

an outwardly-projecting central web, 6^a, which imparts the necessary rigidity and strength to the joint.

In both forms of construction shown in Figs. 2 and 3, in order to enable the last or closing plate to be placed in position and still retain the safety-joint, the overlapping portions 1^a and 2^a may be made shorter by the depth of the undercut, so that they may be dropped into place, the spaces between the beveled and the undercut shoulders being afterward filled by slips of hardened steel 8.

When the joint is made at the corners or at an angle, I may form the plates 1 and 2 as shown in Fig. 5, wherein the edges of the corner plates are rabbeted and undercut, the space between the undercut shoulder upon the plate 2 and the similarly-formed rabbet upon the plates 1 being filled by slip of hardened steel 9, in the manner already described. An inner angle-plate, 10, is then placed over the joint and riveted to the wall-plates by rivets 11, an outer angle-plate, 12, being then placed over the joint and fastened by rivets 13, passing through both the angle-plates and the intervening wall-plates.

Instead of the rabbet-joints shown in Fig. 5, I may use the dovetail shown in Figs. 6 and 7. In the former the dovetail forms an integral portion of the plates, and in order to permit the latter being placed without sliding the one or the other the entire length equal portions of the wing 14 are cut away alternately upon each plate, as indicated in Fig. 8. By this construction the plates may be readily attached, and by a limited movement the dovetails will engage and fasten the plates together. The dovetail may, however, be constructed in the manner illustrated in Fig. 7 by cutting a dovetailed channel in the adjacent edge and surface of the plates, and inserting a key, 15, of hardened steel.

In each form of joint shown the inner and outer angle-plates already described are employed, the fastening-rivets 11 and 13 being alternated, as indicated by dotted lines in Fig. 8.

By this invention I effect the jointing of the plates in such manner that they make flush surfaces, and are securely keyed to each other, giving great strength and rigidity to the structure.

What I claim is—

1. In a safe, vault, or other similar structure, the combination, with the rabbeted edges having undercut shoulders, of a strip of hardened steel filling the space between said shoulders and the beveled ends of the overlapping portions, and rivets uniting the latter, substantially as described.

2. In a safe, vault, or similar structure, the combination, with the wall-plates having rabbeted edges and undercut shoulders, of hardened strips filling the space between said shoulders and the beveled edges of the overlapping portions, an enveloping plate or plate covering the joint, and rivets connecting said plates

to the wall-plates and to each other, substantially as described.

3. In a safe, vault, or similar structure, metallic wall-plates having their edges united by dovetails, equal portions of the wings being cut away upon each plate alternately, the parts being fastened by suitable rivets, substantially as described.

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

ARCHIBALD DOUGLAS BRYCE DOUGLAS.

Witnesses:

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W. B. CARRINGTON.