

No. 835,478.

PATENTED NOV. 6, 1906.

N. P. SJOBRING.  
SHEET METAL SEAM.  
APPLICATION FILED DEC. 4, 1905.

Fig. 1.

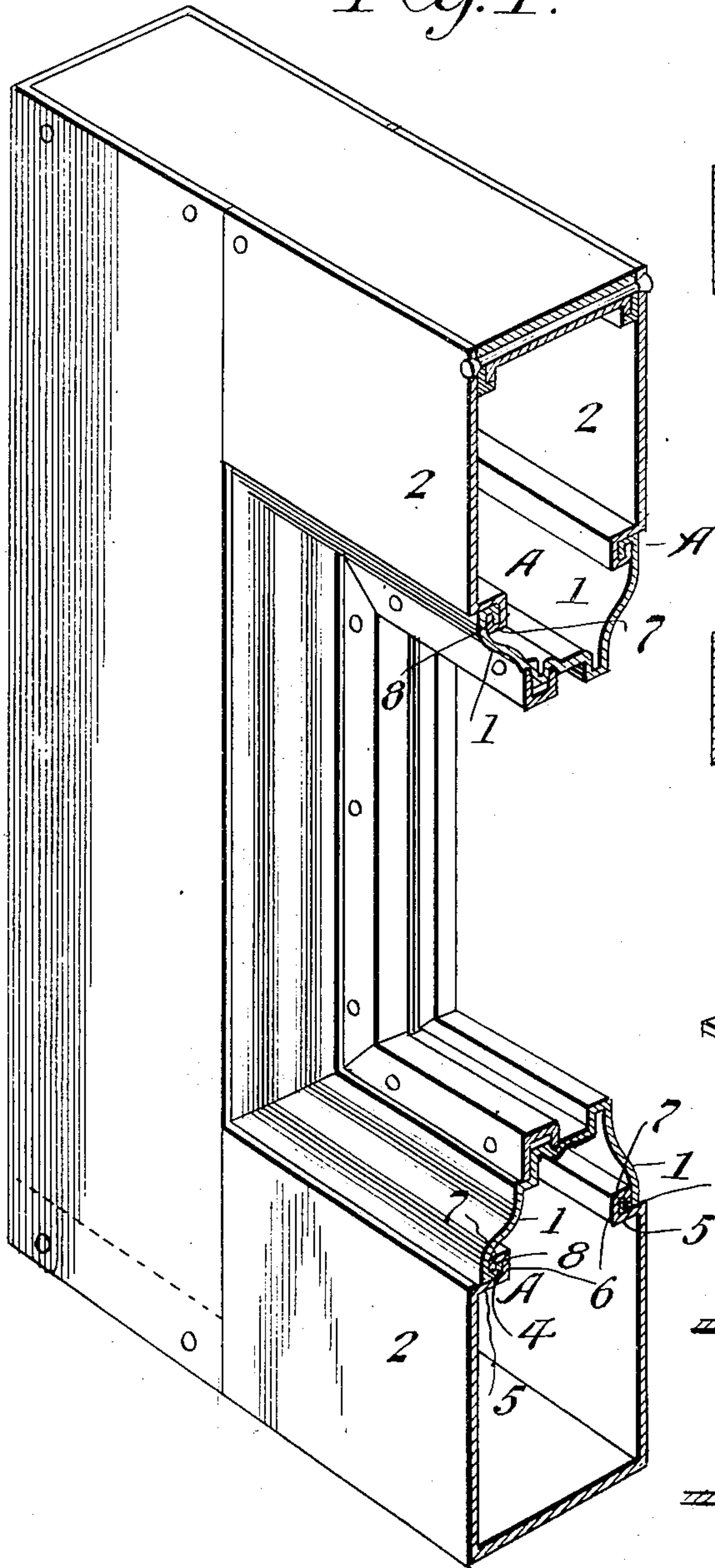


Fig. 2.

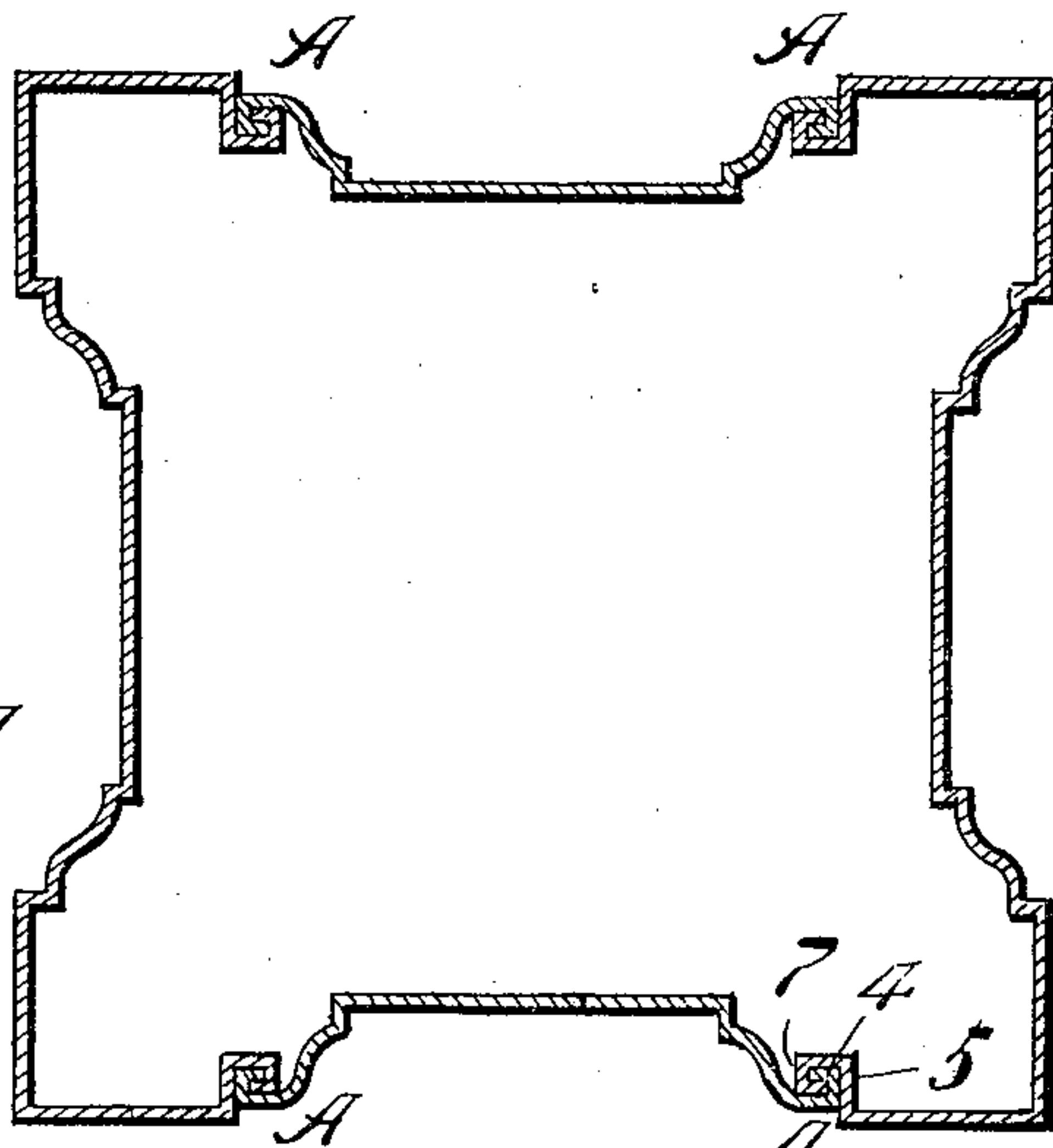


Fig. 3.

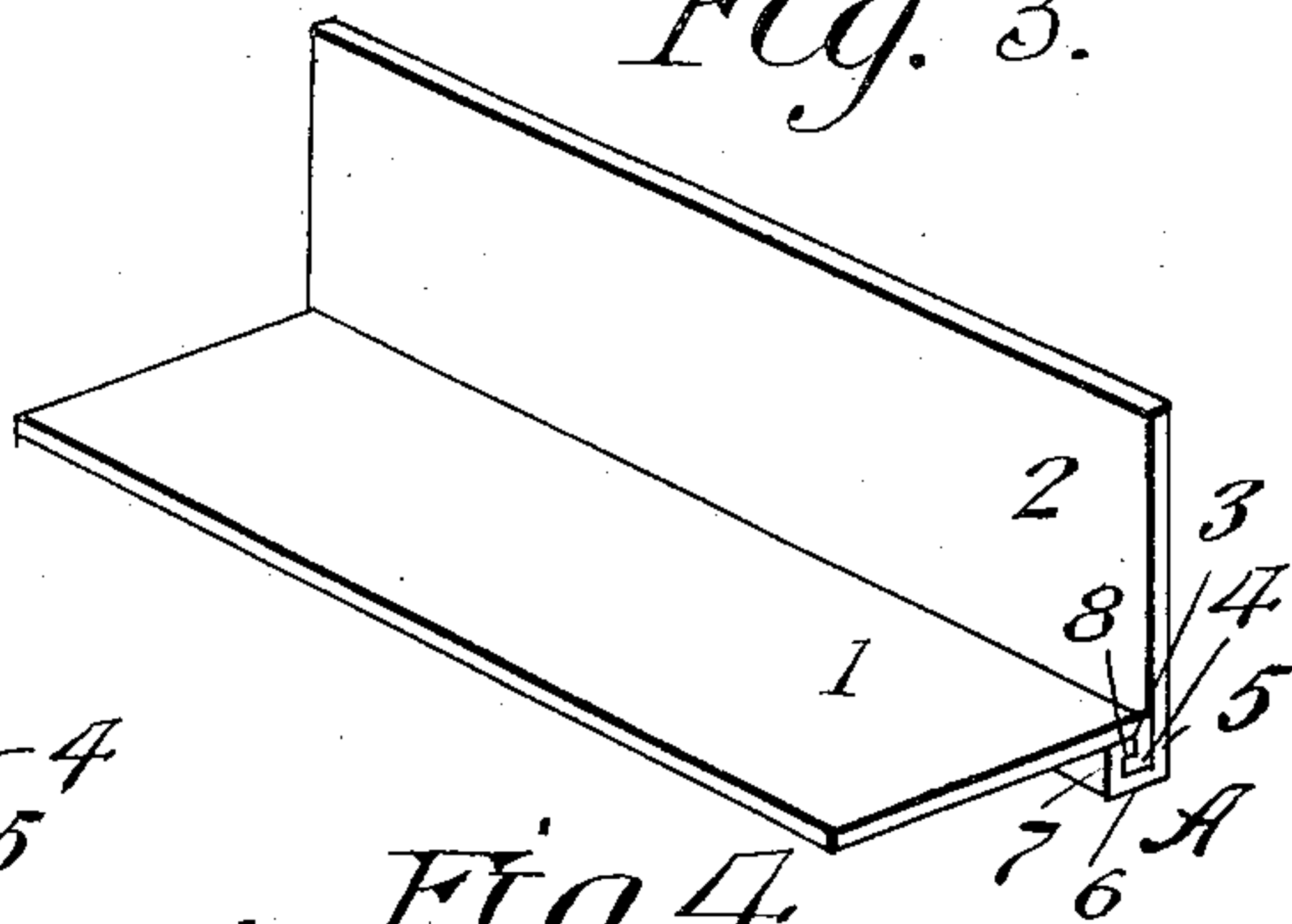
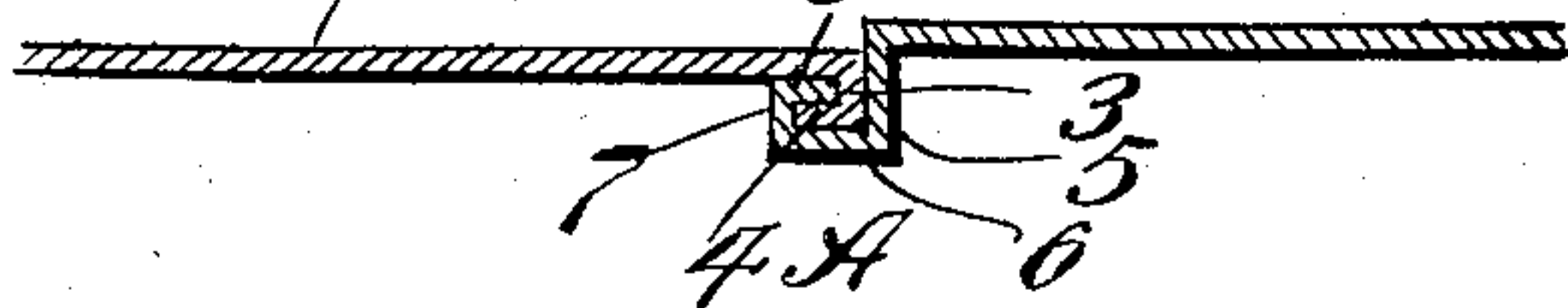


Fig. 4.



Fig. 5.



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# UNITED STATES PATENT OFFICE.

NILS P. SJOBRING, OF JAMESTOWN, NEW YORK.

## SHEET-METAL SEAM.

No. 835,478.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed December 4, 1905. Serial No. 290,302.

*To all whom it may concern:*

Be it known that I, NILS P. SJOBRING, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented new and useful Improvements in Sheet-Metal Seams, of which the following is a specification.

The invention relates to an improvement in sheet-metal construction, and particularly to a seam whereby the meeting edges of the plates are secured together.

The main object of the present invention is the production of interlocking means or seams for securing the meeting edges of sheet-metal plates constructed and arranged to provide a positive lock and prevent independent lateral movement of the plates.

The invention is designed, primarily, for uniting sheet-metal edges in practically any metallic construction, as the seam described provides for joining of sheets of metal so that they will lie in the same plane or at practically any desired angle to each other.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which—

Figure 1 is a perspective view, partly sectioned, illustrating the use of my improved seam in forming a window-casing. Fig. 2 is a transverse section through a column, the metallic sheets of which are united by my improved seam. Fig. 3 is a perspective view illustrating the seam used for joining sheet-metal plates designed to lie at right angles to each other. Fig. 4 is a transverse section through sheet-metal plates united by my improved seam and lying in the same plane. Fig. 5 is a similar view with the sheets lying in offset planes.

Referring to the drawings, the seam A, forming the main feature of the invention, is designed to connect any two sheet-metal plates 1 and 2. The interlocking member of each plate is different, the locking member of plate 1 being hereinafter referred to as the "male" member of the joint, while the locking member of plate 2 will be hereinafter referred to as the "female" member of the joint.

With particular reference to plate 1 it will be noted that the locking member comprises a wall 3, extending at right angles to the plane of the plate for the desired distance, and a plate 4, extending at right angles from

the wall 3 and in a plane parallel with and underlying the plate 1. The locking member of plate 1 therefore comprises a right angle wall and a parallel plate relative to the main plate, providing practically a hook-shaped member.

The female member of the joint, which is provided on the meeting edge of plate 2, is formed by bending the edge of said plate at a right angle thereto to provide a wall 5, then projecting said extension at a right-angle to said wall to provide an upper plate 6, the latter extending from the wall 5 in a direction opposite to the plane of projection of the plate 2. From the plate 6 the material is bent at a right angle to provide an outer wall 7, extending parallel with wall 5 and in the same direction from plate 6 as said wall. From the upper or free end of the wall 7 the material is bent inwardly to provide an upper plate 8, parallel with and extending in the same direction from wall 7 as plate 6. The wall 7, however, is of less length than wall 5, so that the lower surface of the plate 8 is on a plane above the lower surface of the plate 4. The distance between the plates 6 and 8 of the female member of the joint is approximately of a size equal to the thickness of the plate 4 of the male member, while the distance between the free end of plate 8 and the proximate surface of the wall 5 is equal to the thickness of the wall 3.

The female member of the locking-joint, it will be noted, comprises parallel side walls of unequal lengths and upper and lower plates included between said walls and of unequal lengths, the entire member being formed in a plane beyond the edge of the main plate 2.

In assembling the parts of the joint to secure the plates together the locking members are engaged by longitudinal sliding movement, the plate 4 of the male member fitting between the plates 6 and 8 of the female member, while the wall 3 of the male member rests snugly against the wall 5 of the female member and between said wall 5 and the free end of the plate 8, the body of the main plate 1 adjacent its locking member resting against the plate 8.

In Figs. 1 and 2 the joint is shown as connecting the plates 1 and 2, designed to form a window-casing or other structure, while in Fig. 2 the joint is shown as connecting panel-strips for a column or similar structure. In both these instances the construction preferably necessitates that the plane of plate 2 be



offset from plate 1, the latter being preferably shaped to provide desired ornamentation. The joint in this instance is identical in all features with that described above in  
5 detail except that the wall 5 of the female member is longer than the wall 3 of the male member, whereby the plate 2 is positioned in a plane offset from the plane of plate 1.

10 In Fig. 3 the seam is shown as uniting plates 1 and 2 to project them at a right angle to each other, in which instance the wall 5 of the female member of the seam is a continuation of and in the plane of the plate 2.

15 In Fig. 4 the seam is shown as connecting the plates 1 and 2 so as to arrange them in the same plane, in which event of course the wall 5 is of a length to aline the plates when the parts are assembled.

20 In Fig. 5 the seam is shown as used in connecting the plates so as to arrange them in offset but parallel planes, the wall 5 in this instance being extended to give the desired projection beyond the plane of plate 1.

25 As the wall 5 of the female member may be arranged at any angle relative to the plane of plate 2, it is obvious that the joint is designed for connecting sheet-metal plates at any angle relative to each other, and this without change in the slightest degree of the  
30 construction of the seam *per se*.

In the construction described it will be noted that the locking members of each plate are formed on the same side of the re-

spective plates and that when connected the wall 5 of the female member serves as a bearing and abutment for the wall 3 of the male member, so that any possibility of lateral movement of the parts or disconnection of the plates is prevented. 35

The seam described is primarily designed 40 for connecting metal plates in the construction of doors, windows, cabinets, bookcases, or similar articles; but its use in a variety of other articles and situations is obvious and is contemplated herein. 45

Having thus described the invention, what is claimed as new is—

The combination in a metallic structure of two plates having plane surfaces arranged in different parallel planes, each of said plates 50 being formed with interlocking hook-shaped edges arranged to be engaged by the endwise movement of one member relative to the other, one of the plates being provided with an intermediate portion between its plane 55 surface and the interlocking member, said intermediate portion being substantially diagonal to the parallel planes of the respective plates.

In testimony whereof I affix my signature 60 in presence of two witnesses.

NILS P. SJOBRING.

Witnesses:

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