

F. H. DAVOL, JR.

BOLSTER.

APPLICATION FILED MAY 25, 1907.

930,051.

Patented Aug. 3, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

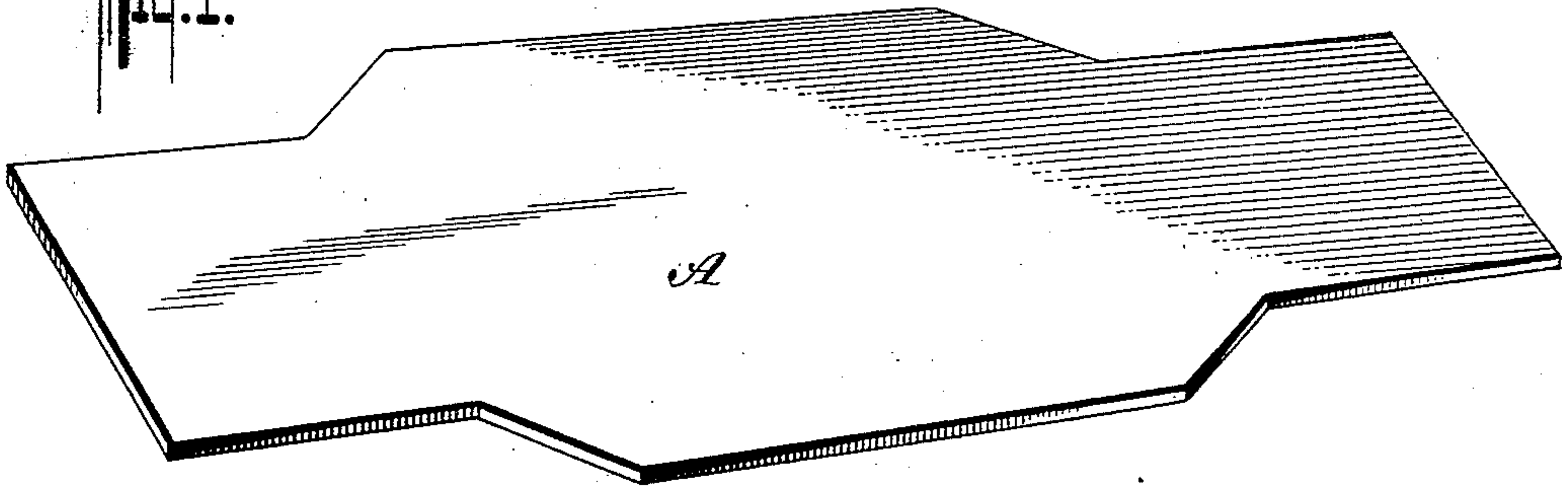


Fig. 2.

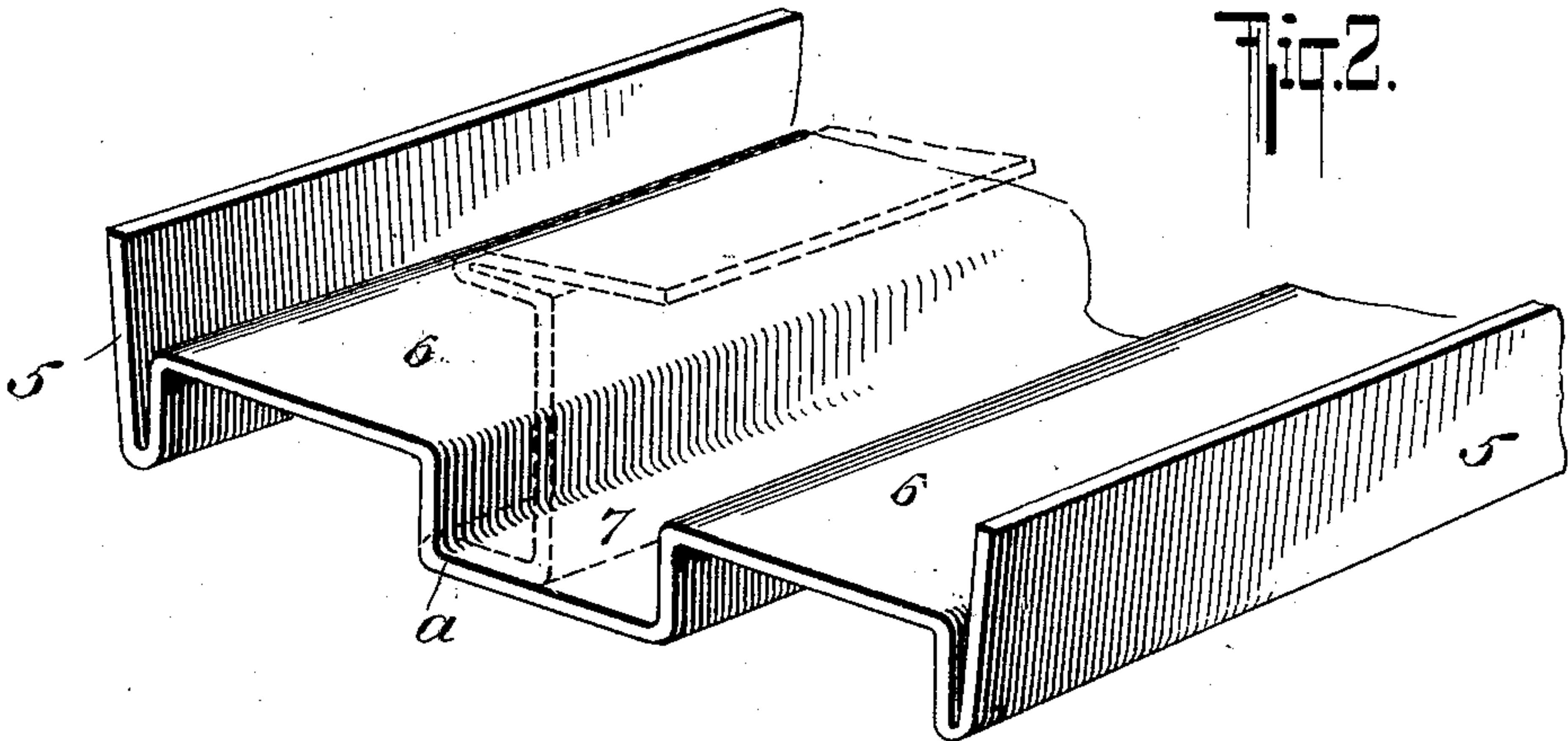
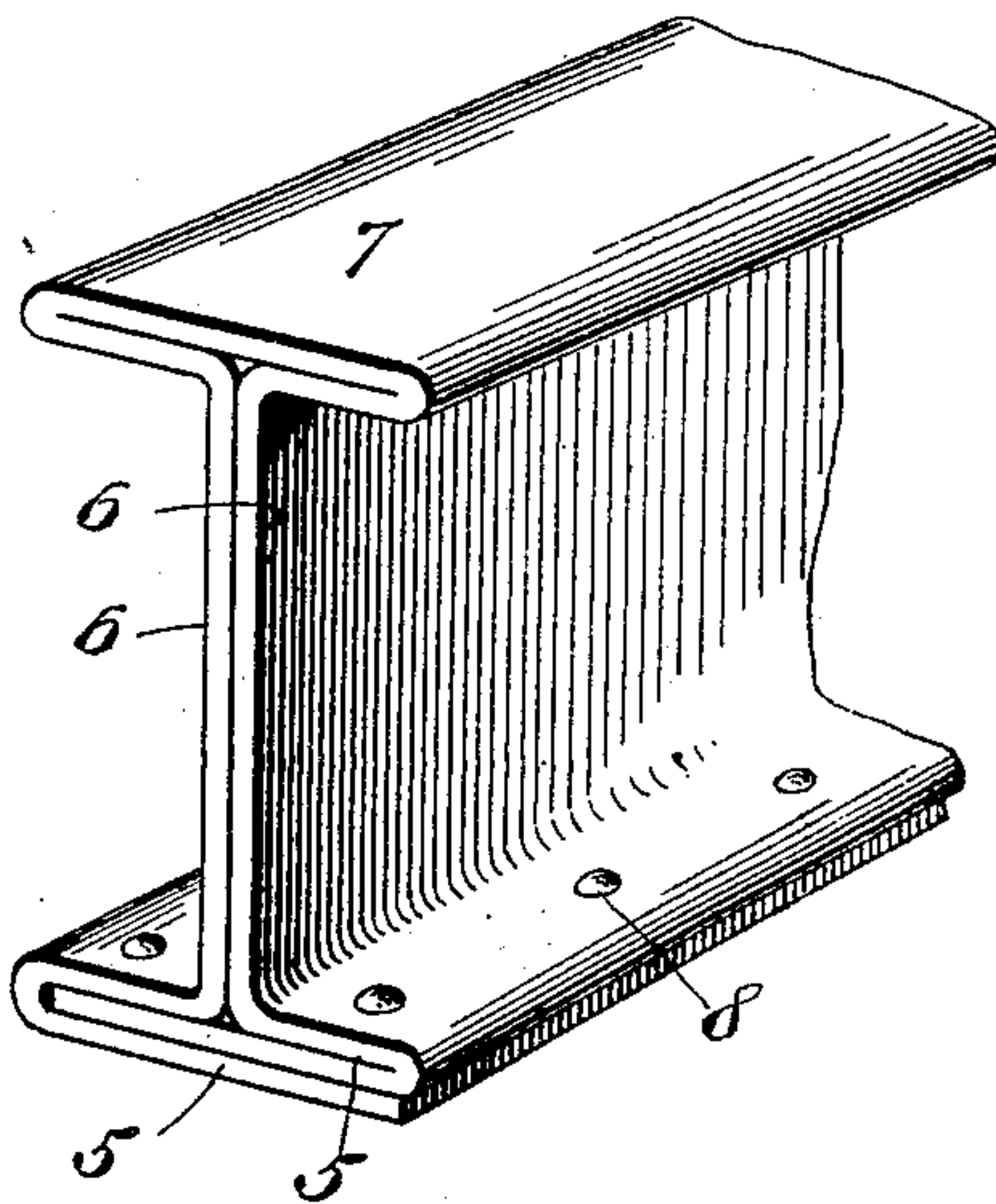


Fig. 3.



Witnesses:
Julius H. Hutz
R. B. Caranagh

Inventor
Frank H. Davol, Jr.
By his Attorneys *4ifford & Pule*

F. H. DAVOL, JR.

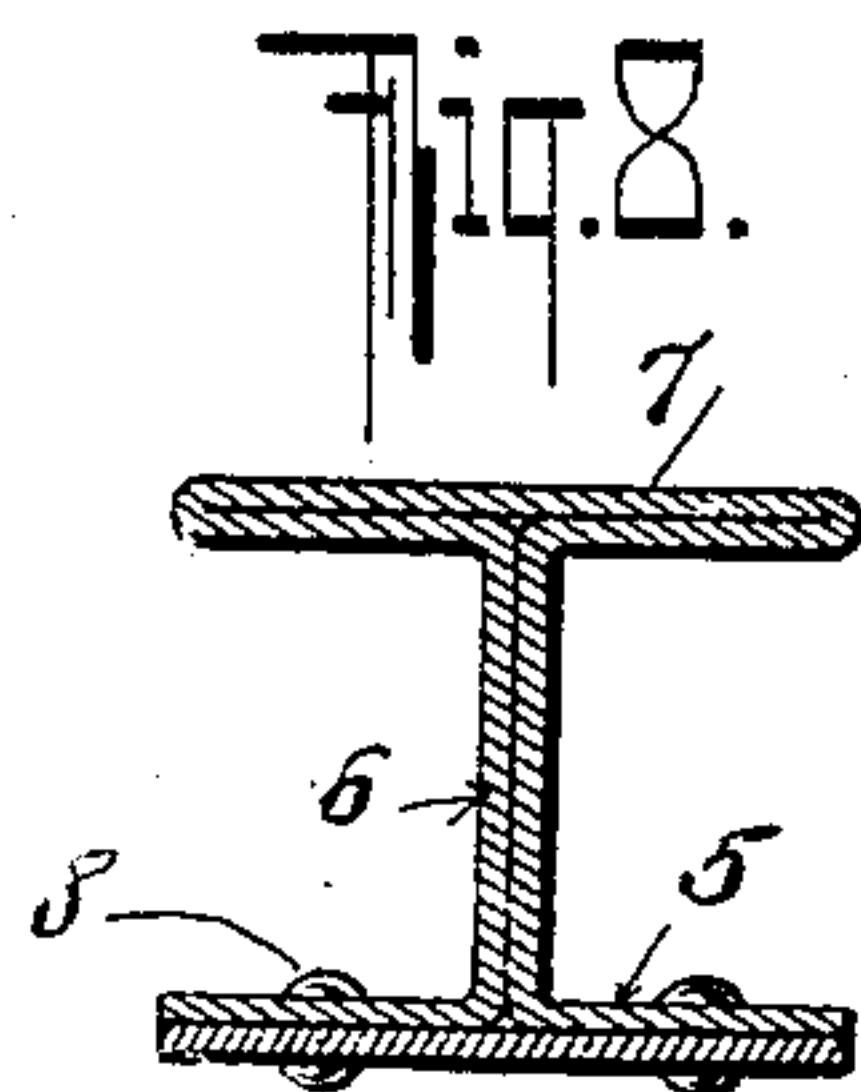
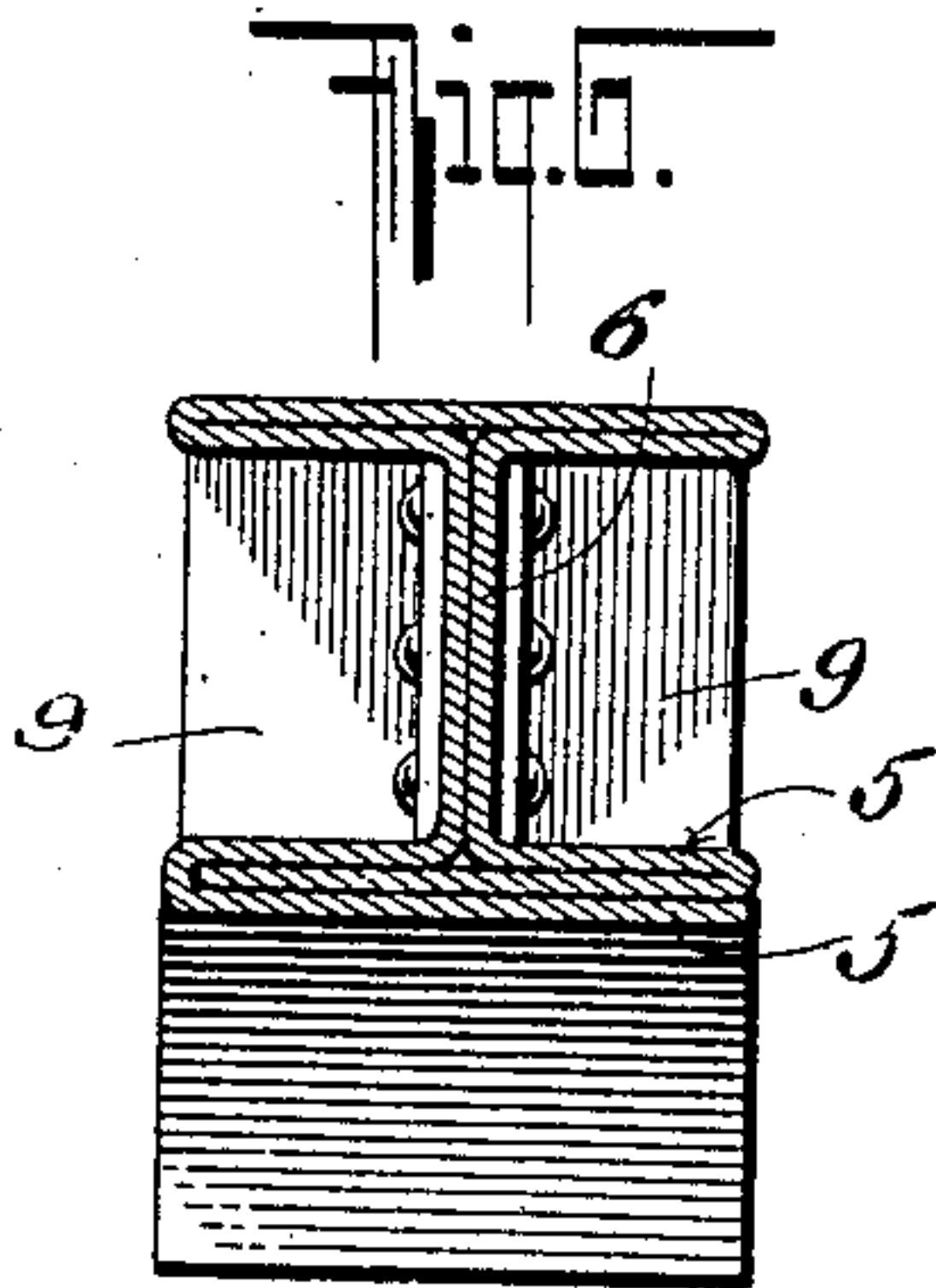
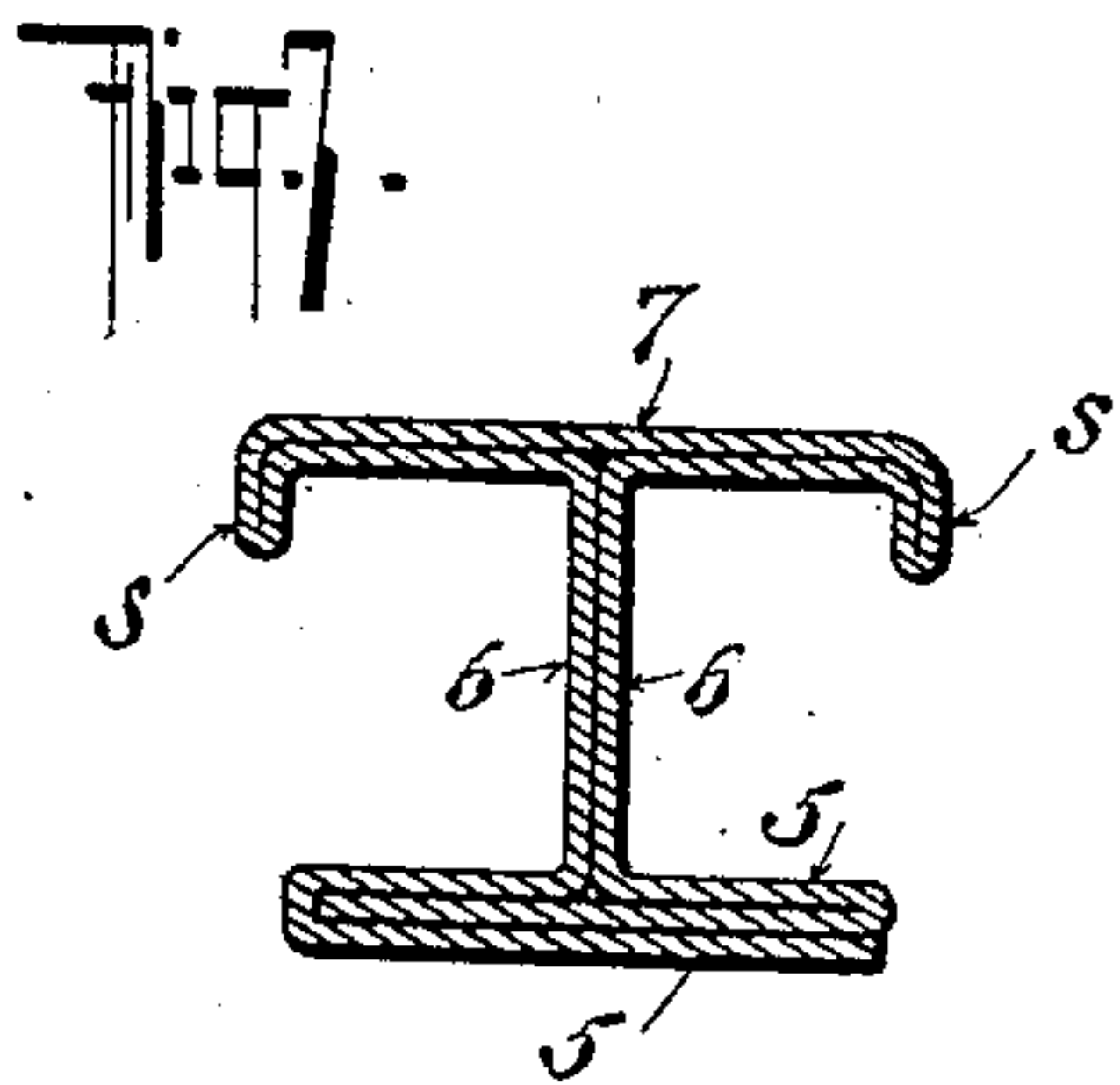
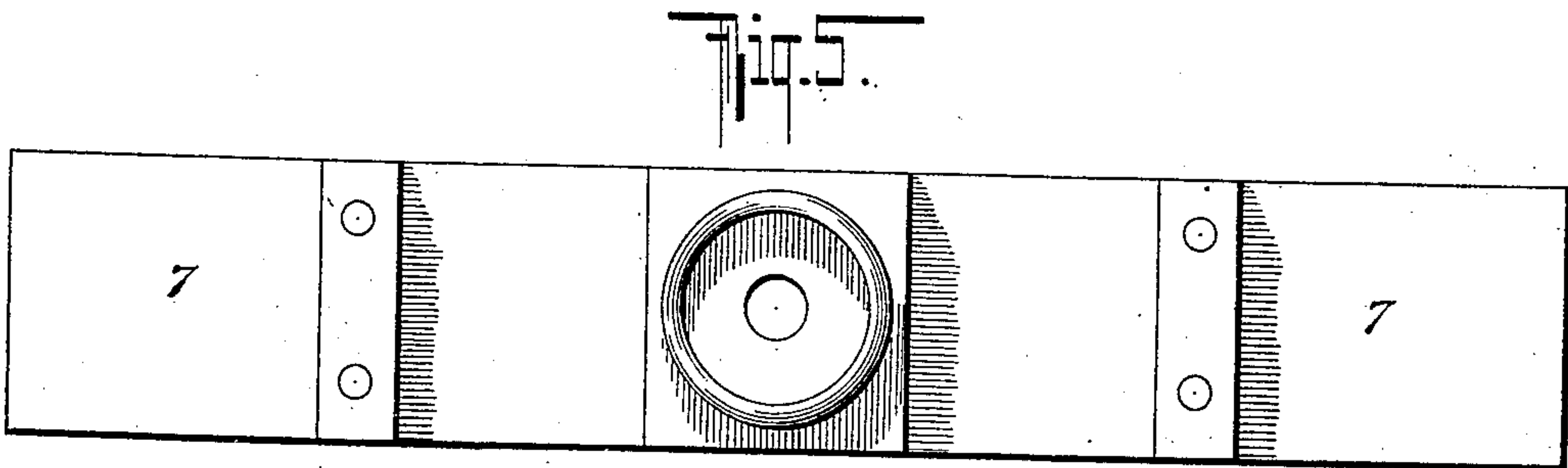
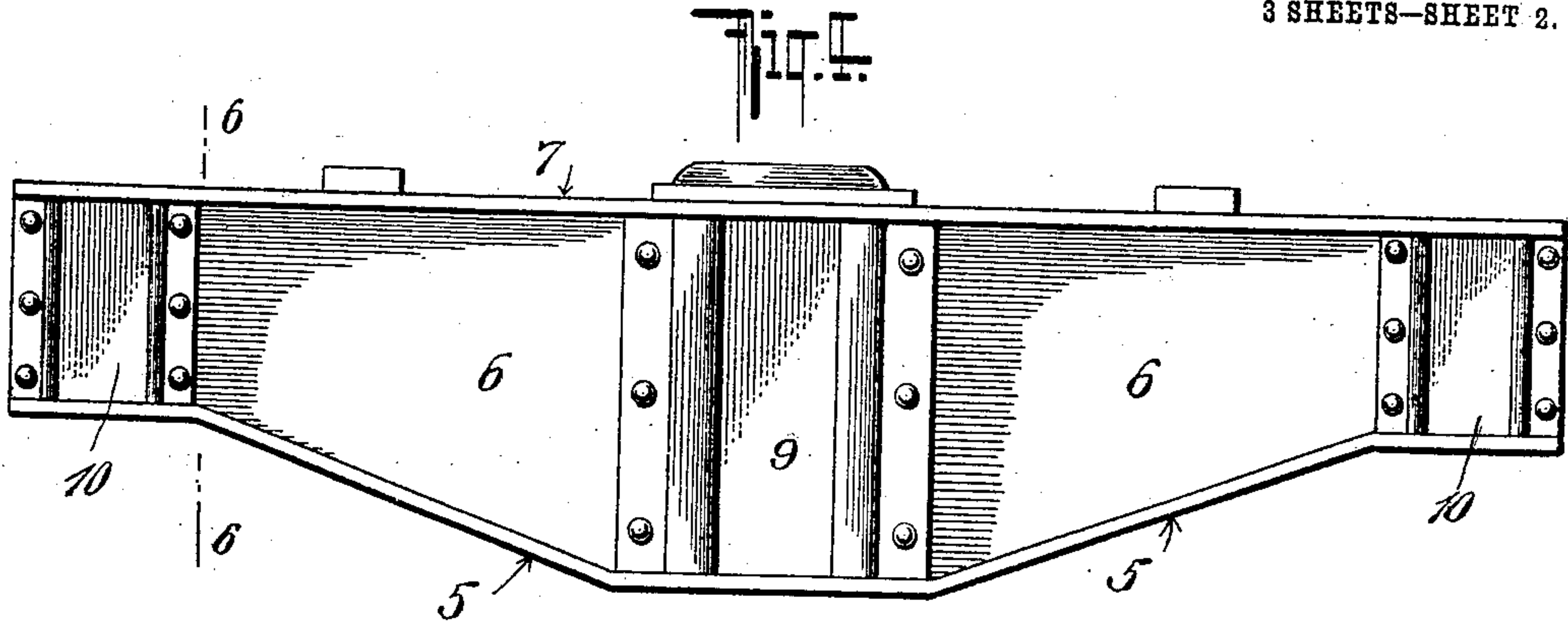
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3 SHEETS—SHEET 2.



Witnesses:
Julius H. Smith
R. B. Caruagh

Inventor
Frank H. Davol, Jr.
By his Attorneys *Gifford & Reed*

F. H. DAVOL, JR.

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3 SHEETS—SHEET 3.

Fig. 9.

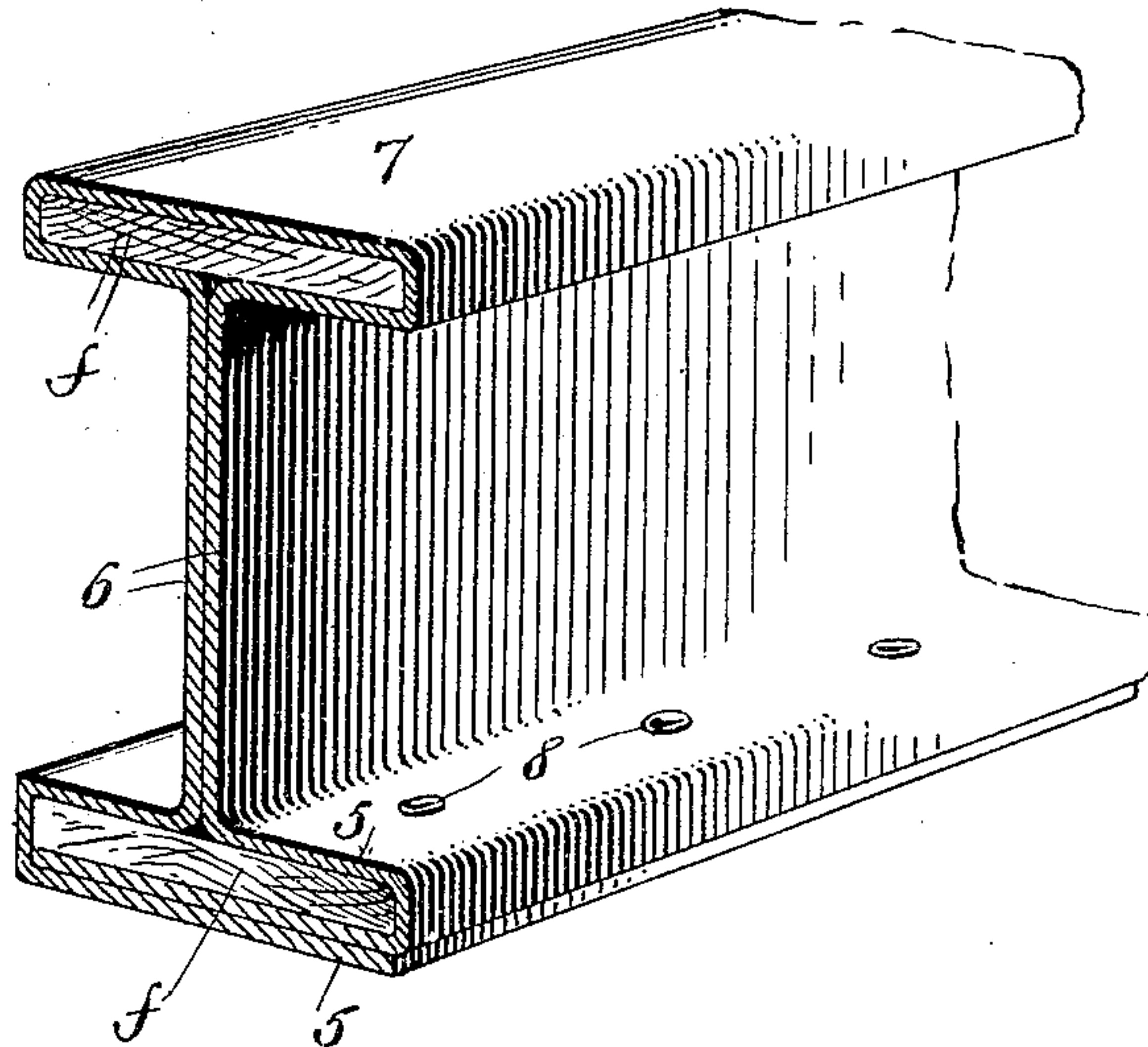
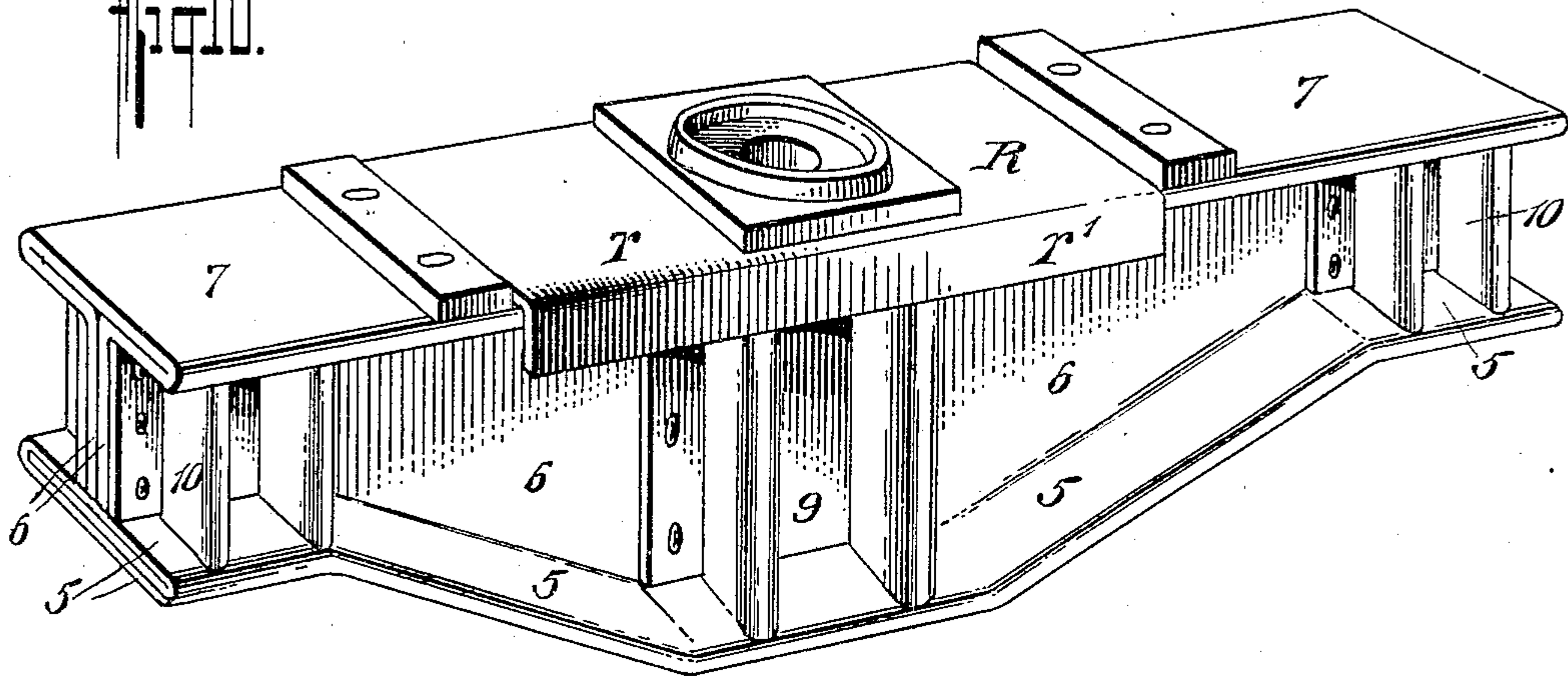


Fig. 10.



WITNESSES
Julius H. Hutz
R. B. Caranagh

INVENTOR
Frank H. Davol Jr.
BY *Jefferson R. Ruse*
his ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK H. DAVOL, JR., OF BROOKLYN, NEW YORK.

BOLSTER.

No. 930,051.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed May 25, 1907. Serial No. 375,598.

To all whom it may concern:

Be it known that I, FRANK H. DAVOL, JR., a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Bolsters, of which the following is a specification.

This invention relates to certain improvements in car or truck bolsters.

In carrying out my invention I have in view forming or making the main portion of the bolster of a single piece of metal, such as pressed steel. Further, it is my intention to construct this main portion of a single piece of metal in such a manner that it will embody the desired features of simplicity, durability and strength.

To the accomplishment of the above recited ends and others of a similar nature this invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings wherein, by way of illustration, I have delineated a preferred embodiment of my invention, Figure 1 shows a blank of metal such as a sheet of steel, from which the main portion of the bolster may be pressed; Fig. 2 is a perspective view showing a manner of pressing the sheet in the process of forming the bolster; Fig. 3 is a perspective view of a portion of the main body part of the bolster after the sheet has been pressed into form and the loose ends thereof riveted together; Fig. 4 is a side view of a complete bolster; that is, the main body being formed of one piece and the usual center plates and side bearings applied thereto; Fig. 5 is a top plan view of the same; Fig. 6 is a cross sectional view taken on the line 6—6 of Fig. 4; Fig. 7 is a cross sectional view of a modified form of bolster, that is to say, such figure showing the central portion of the pressed metal sheet, turned down to form strengthening flanges; Fig. 8 shows still another modification in which the loose ends of the bolster instead of being inturned and riveted together are turned outward and connected by riveting with a bottom plate. Fig. 9 shows a modification wherein a filler is employed for the upper and lower faces of the bolster. Fig. 10 is a modified form of bolster wherein I employ a reinforcing or strengthening plate R in conjunction with the bolster.

As is well known, car and truck bolsters

are subjected to considerable stress and strain and it has been found by experience that a bolster formed of pressed steel has many advantages over the ordinary article. But in pressed steel bolsters with which I am acquainted it has heretofore been the practice to make up such bolsters of several parts, which were riveted or otherwise jointed together. The result was that when the bolsters had been for some time subjected to the ordinary stress, jars and strains incident to their use, the rivets were liable to give way and the bolster would either have to be repaired or discarded, but by constructing the bolster in accordance with my invention; that is to say, rolling or pressing the main body portion of a single piece of metal I obviate the use of a large number of rivets and at the same time obtain a stronger and more durable article.

Referring now to the accompanying drawings in detail, A indicates the sheet from which the main portion of the bolster is formed and in the primary stages of the manufacture of my invention the sheet in blank is approximately as in Fig. 1; that is to say, with the central portion thereof relatively wider than the end portions. This blank is then bent or pressed as is shown in Fig. 2, that is to say, with the end flanges 5, 5, the raised portions 6, 6 and the depressed central portion 7. As the manufacture proceeds the bolster is pressed into form shown in Fig. 3; that is to say, the corrugated or bent blank of Fig. 2 is folded at approximately the point *a* and the blank bent up or folded so that a top flange is formed by the portion 7, the parallel sides of the bolster by the sides 6, 6 and the base flange of the bolster by the overlapping ends 5, 5 and such ends are connected or riveted together by bolts or rivets 8. If desired, the bolster may further be strengthened by a suitable filler placed in position at the upper flanges before the final operation. Such a construction is shown in the modified view in Fig. 9, the filler being indicated by the letter *f*. After the bolster has been pressed into form as before described, the center plate 9 and the end or column guides 10 are riveted on as shown in Fig. 4. However, if desired, the supporting plates 9 at the center may be pressed from the sheet metal so that such plates are formed integral with the bolster.

In Fig. 7, I have shown a bolster formed

with the longitudinal down-turned side flanges $s-s$, which further increases the durability and resisting power of the bolster.

In some instances it may be desired to further reinforce the bolster to stand horizontal stresses in particular. In such instance I provide a strengthening plate R placed upon the top of the bolster in the manner shown in Fig. 10, such plate being of any desired construction, but in the present instance comprises a flat, horizontal portion r and the down-turned flange r' .

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A truck bolster formed from a single sheet of metal bent lengthwise to provide a top flange of two thicknesses of metal, and the opposite side portions of the blank being brought into surface contact to provide a web, and the edge portions being bent outwardly and reversely to provide a bottom flange, each extreme edge portion extending beyond the web and engaging the opposite extreme edge portion, whereby a bottom flange of a plurality of thicknesses of metal is provided, and rivets arranged at intervals longitudinally of the bottom flange portion on both sides of the web and uniting the

thicknesses of metal composing the bottom flange.

2. A truck bolster formed from a single sheet of metal bent lengthwise to provide a top flange of two thicknesses of metal, and the opposite side portions of the blank being brought into surface contact to provide a web, and the edge portions being bent outwardly and reversely to provide a bottom flange, each extreme edge portion extending beyond the web and engaging the opposite extreme end portion, whereby a bottom flange of a plurality of thicknesses of metal is provided, a reinforcing member incased within the bottom flange and extending on opposite sides of the web, and rivets arranged at intervals longitudinally of the bottom flange on both sides of the web and extending through and uniting the thicknesses of the bottom flange with the reinforcing member.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

FRANK H. DAVOL, JR.

Witnesses:

R. B. CAVANAGH,
OSCAR ASCHER.