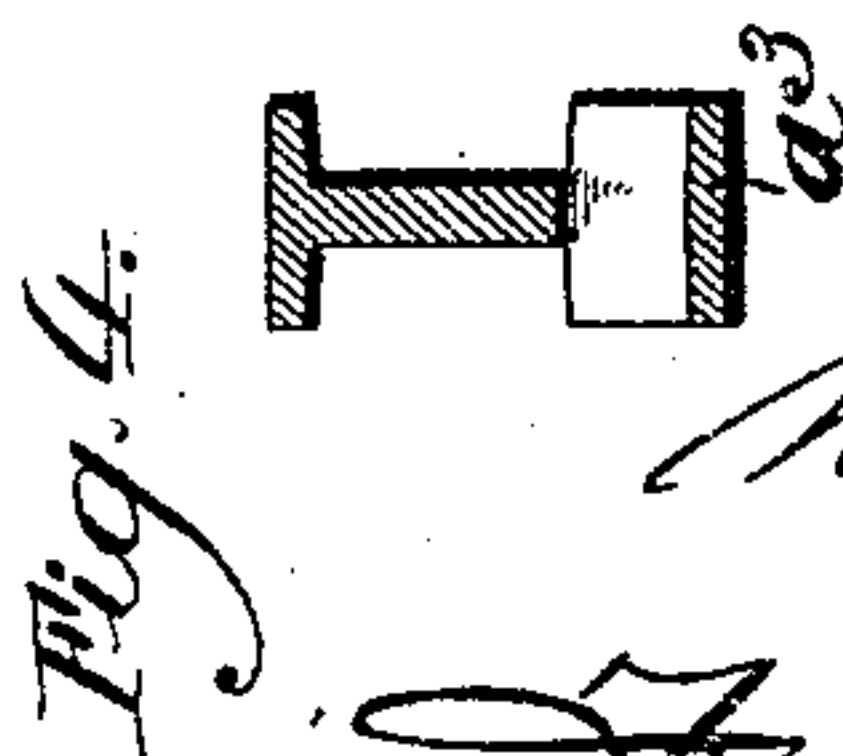
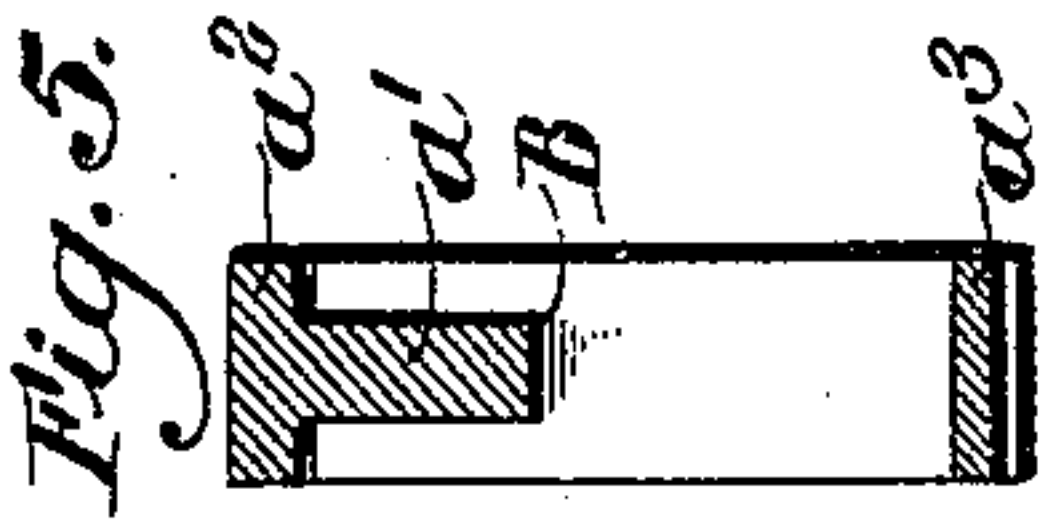
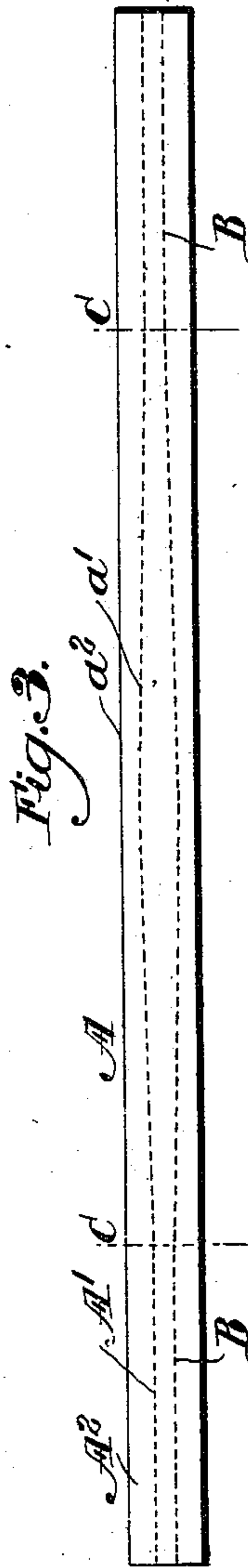
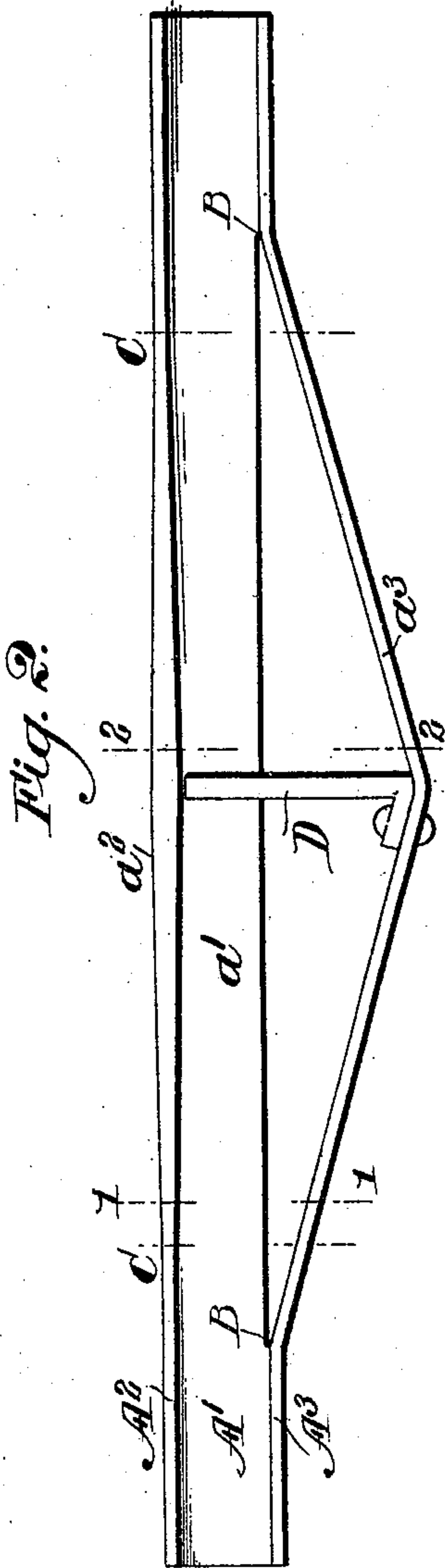
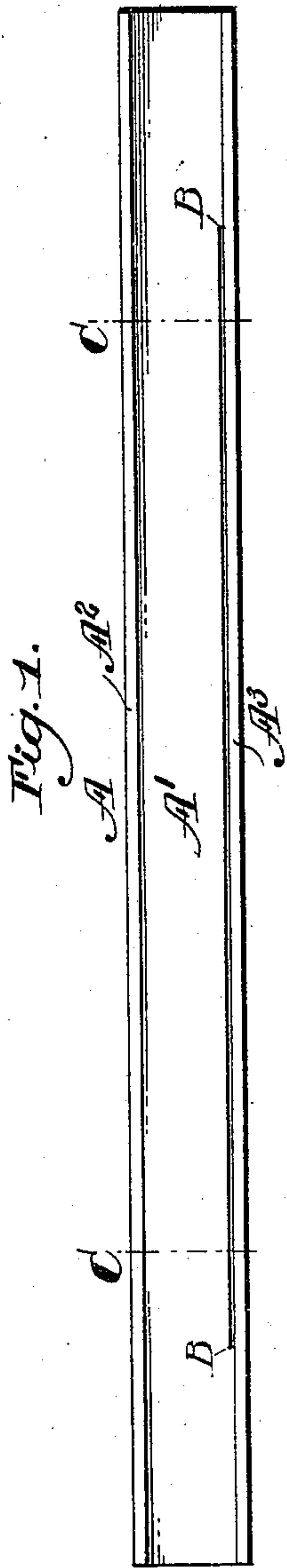


(No Model.)

N. H. DAVIS.
TRUSS.

No. 574,887.

Patented Jan. 12, 1897.



Witnesses.

Henry Denny
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UNITED STATES PATENT OFFICE.

NATHAN H. DAVIS, OF PHILADELPHIA, PENNSYLVANIA.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 574,887, dated January 12, 1897.

Application filed August 21, 1896. Serial No. 603,445. (No model.)

To all whom it may concern:

Be it known that I, NATHAN H. DAVIS, a citizen of the United States of America, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Trusses, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to the formation of a truss from a beam slit intermediate of its ends and distended to give it the proper outline. Such trusses have heretofore been made by distending the slit beam into an equilateral diamond form and also by severing and piecing out the beam-section lying on one side of the slit, so as to form a truss shorter on one side than the other.

The object of my invention, however, is to form a truss with sides of unequal length without severing or piecing out the metal of the beam and to form such a truss with the metal in the shorter side, which is naturally the compression side of the truss, thickened up so as to reinforce and strengthen this side. I accomplish this result by the method of slitting the beam longitudinally intermediate of its ends, then heating the side portion of the beam which is to be shorter than the other side to an upsetting temperature, and then upsetting this side and drawing the other and longer side away from it to give the desired truss form; and this method, together with apparatus especially adapted to carry it into effect, forms the subject-matter of my pending application for Letters Patent filed July 1, 1896, Serial No. 597,701, my present application being intended to cover the new truss as an article of manufacture.

Reference being now had to the drawings which illustrate my invention, Figure 1 is a side view of an I-beam slit longitudinally and ready to be converted into my truss. Fig. 2 is a side view of my truss. Fig. 3 is a top view thereof; and Figs. 4 and 5 are sectional views on the lines 1 1 and 2 2, respectively.

A represents the beam, preferably, as shown, an I-beam having a central web A' and top and bottom flanges A² and A³.

B B is the slit formed in the I-beam, preferably at the bottom of the web A', as shown. The portion of the beam above the slit B B is preferably heated from C to C to an upsetting temperature and then upset, as shown in Figs.

2 to 5, while the lower flange is drawn out, as indicated at a³ a², indicating the upset portion of the flange A², and a' the upset portion of the web A'.

The extent of the upsetting action will depend on the form of the truss desired, and the form of the upset can be controlled by suitable dies. Preferably the upsets a² a' should taper from the center outward, as shown, so that the compression member of the truss will be strongest at the center.

I have for the sake of clearness in illustration exaggerated the upset in the drawings, but all skilled in the art of working metals will recognize the extent of upset required in any designed form and can properly provide for it.

D, Fig. 2, indicates a strut arranged as usual to hold the sides of the truss apart. As shown, it is formed of a plate bolted to the flange a³.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture a truss formed of an integral metal beam longitudinally slit intermediate its ends having the metal on one side of the slit upset and thickened in cross-section and the metal on the other side of the slit drawn away from the upset portion to an extent regulated by the shortening of said portion by upsetting.

2. As a new article of manufacture a truss formed of an integral metal beam having flanges and a web A' said beam being longitudinally slit in its web intermediate its ends having the metal on one side of the slit upset and thickened in cross-section and the metal on the other side of the slit drawn away from the upset portion to an extent regulated by the shortening of said portion by upsetting.

3. As a new article of manufacture a truss formed of an integral metal beam longitudinally slit intermediate its ends having the metal on one side of the slit upset and thickened in cross-section with a gradual taper from the center of the truss, and the metal on the other side of the slit drawn away from the upset portion to an extent regulated by the shortening of said portion by upsetting.

NATHAN H. DAVIS.

Witnesses:

ROBERT W. LLOYD,
D. STEWART.