

(No Model.)

2 Sheets—Sheet 1.

A. KRAUSE.
STRUCTURAL METAL WORK.

No. 523,075.

Patented July 17, 1894.

Fig. 1,

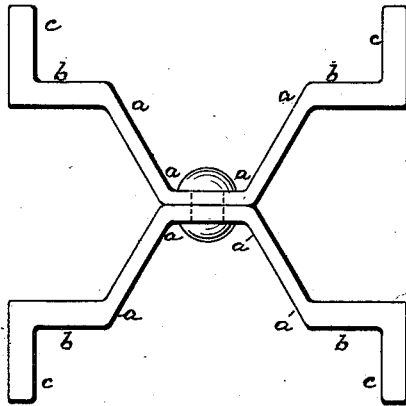


Fig. 3,

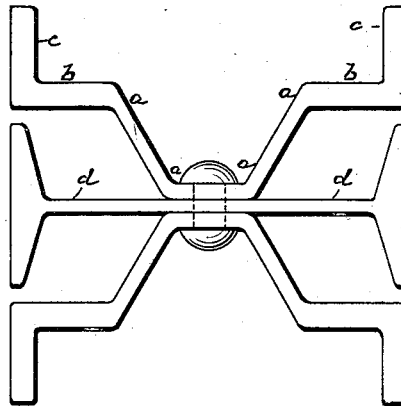


Fig. 2,

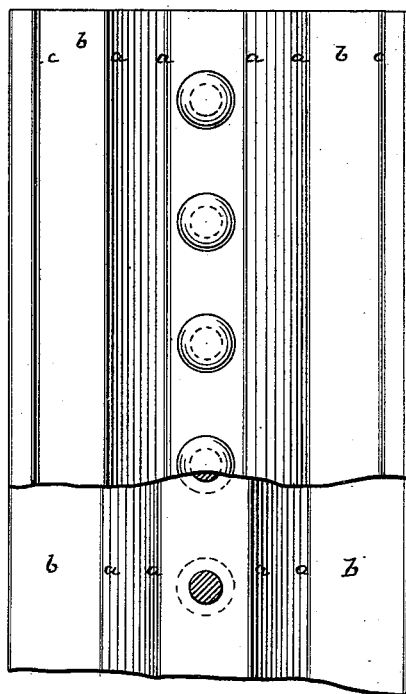
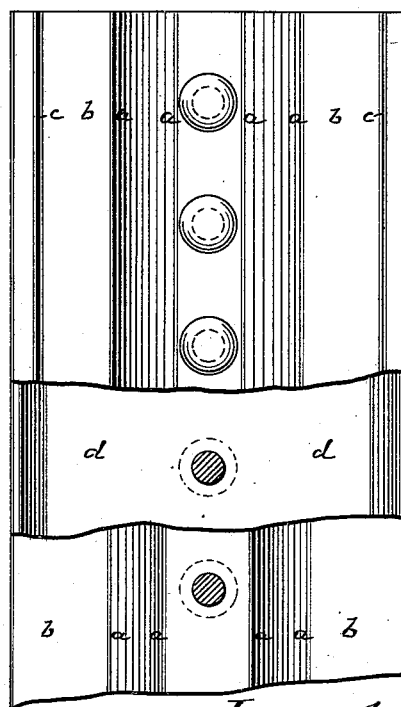


Fig. 4,



Witnesses:-

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Fig. 5.

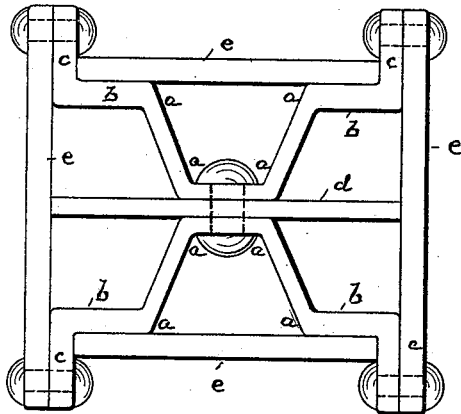


Fig. 7.

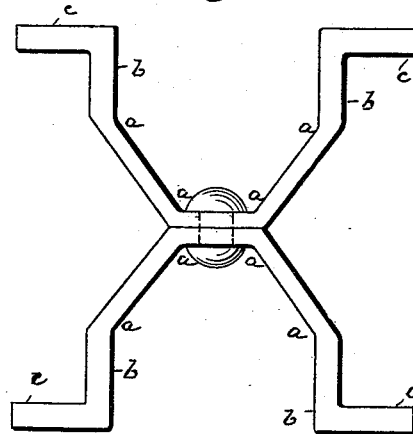


Fig. 6.

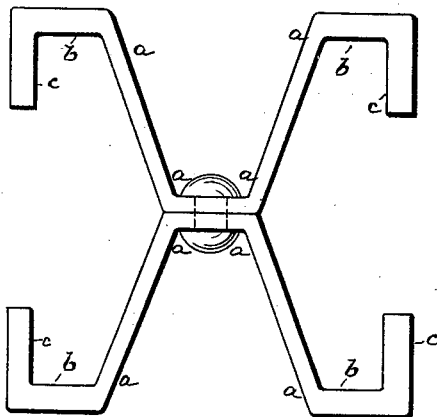
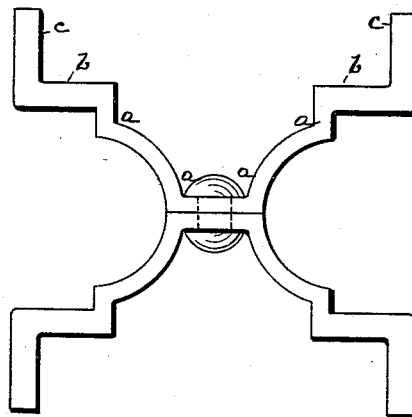


Fig. 8.



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UNITED STATES PATENT OFFICE.

ARTHUR KRAUSE, OF JERSEY CITY, NEW JERSEY.

STRUCTURAL METAL-WORK.

SPECIFICATION forming part of Letters Patent No. 523,075, dated July 17, 1894.

Application filed April 25, 1894. Serial No. 509,047. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR KRAUSE, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Structural Metal-Work, of which the following is a specification.

My improved construction is especially adapted for columns, but may be used for other structural shapes employed in building.

In the accompanying drawings, Figure 1 is an end view of a column constructed according to my improvement. Fig. 2 is a side elevation. Fig. 3 is a modified construction and Fig. 4 is a side elevation of the same and Figs. 5, 6, 7, and 8 are modified forms.

The object of my invention is to make a column of rolled metal sections so shaped and formed as to afford a ready means for connecting thereto beams, brackets and strengthening pieces. These strengthening pieces consist mainly of rolled plates or the various kinds of well known structural shapes, such as L-beams, channels or angle irons, &c.

The primary shape of my column is a double trough shaped section *a, a, a, a*, having on the ends rectangular flanges *b, c*, the flanges being integral with the trough shaped sections, and the latter riveted or otherwise secured together at the center to form the column. The rectangular flanges *b, c* at the end of the trough-shaped sections may be turned in various directions, as shown in Figs. 1, 6 and 7, so as to present the attaching surfaces for the beams or brackets at different sides of the column.

Figs. 3 and 5 show the primary shape with the addition of strengthening plates *d*, and *e*; in Fig. 3 an I-beam *d* being placed between the trough-shaped sections in order to strengthen the column and afford more attaching surface, and in Fig. 5 plate *e* being riveted to the rectangular flanges in such a way as to surround the primary shapes and form an inclosed rectangular column. It will be obvious that the strengthening plates may be attached to the primary shapes in various ways to form columns of different shapes.

Fig. 8 illustrates a modified form in which the sides *a a* of the trough-shaped section are curved instead of being straight.

The two rectangular flanges *b, c* in combination with the trough-shaped pieces *a, a, a, a*, form one of the essential features of my improved column, their flat surfaces affording the best means of making attachments and connections to the column; and moreover, these flanges and the trough-shaped sections may be readily rolled or otherwise formed in one piece, and the two pieces thus made connected together to form the column.

It will be thus understood that the flanges *b, c* may be made of any desired thickness or strength, while the trough-shaped sections *a, a, a, a*, may have less thickness and strength.

What I claim is—

1. The structural shape for columns consisting of the double trough-shaped sections *a, a, a, a*, having the rectangular flanges *b, c*, formed integral therewith, joined together at the center, substantially as described.

2. In a structural shape for columns, in combination the double trough-shaped sections *a, a, a, a*, having the rectangular flanges *b, c*, formed integral therewith and joined together in the center and strengthening members attached to the flanges, substantially as described.

3. A structural shape for column members consisting of a trough-shape section and the rectangular flanges *b c* formed integral therewith, substantially as described.

4. In a structural shape for columns in combination, the double trough-shape sections having the rectangular flanges *b c* formed integral therewith in combination with a strengthening member, substantially as described.

Signed at New York, in the county and State of New York, this 23d day of March, A. D. 1894.

ARTHUR KRAUSE.

Witnesses:

J. E. GREER,
FRED S. KEMPER.