

(Model.)

2 Sheets—Sheet 1.

S. J. WILLIAMS & H. RICHEY.

MANUFACTURE OF BAKING PANS.

No. 271,388.

Patented Jan. 30, 1883.

Fig. 1.

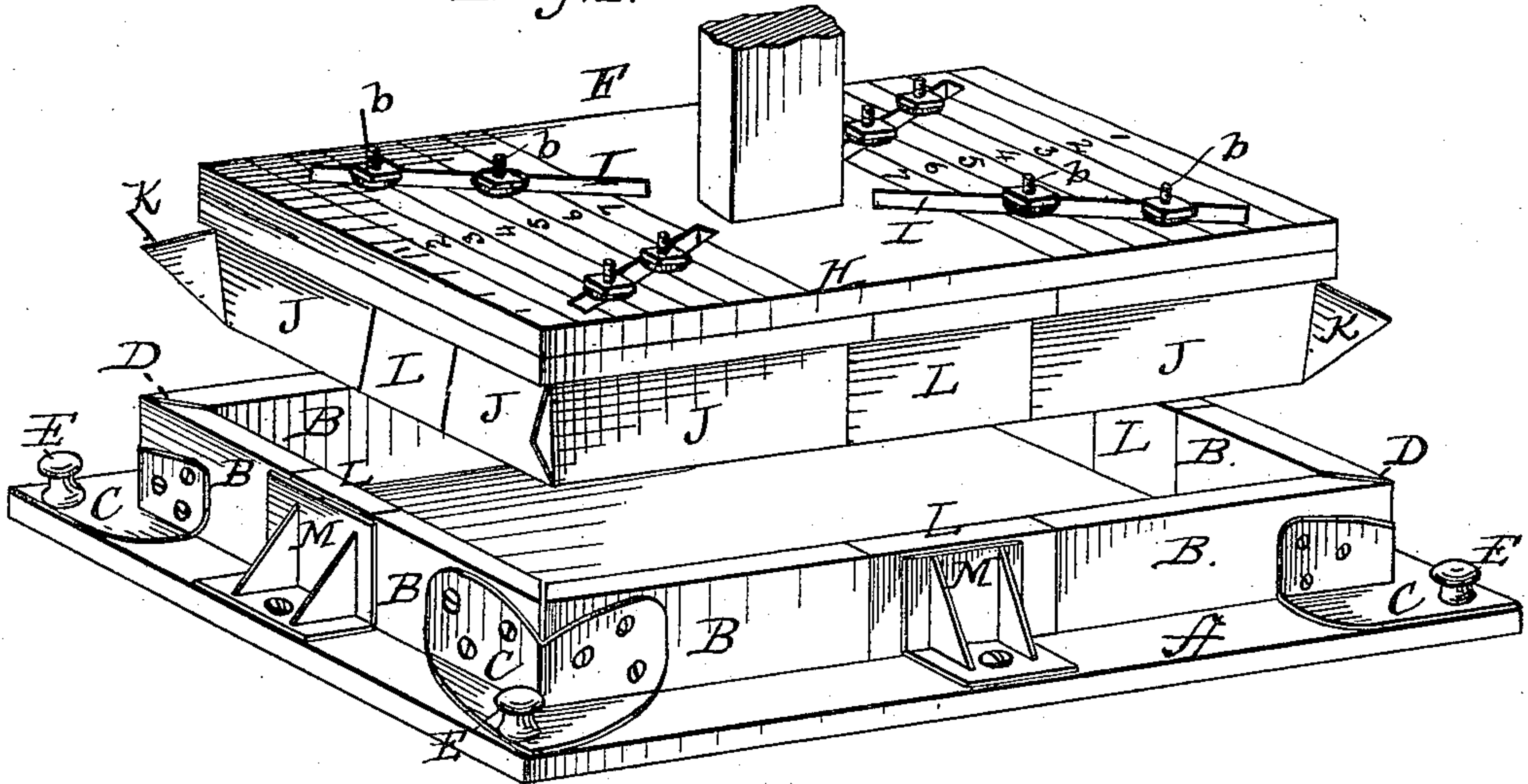


Fig. 2.

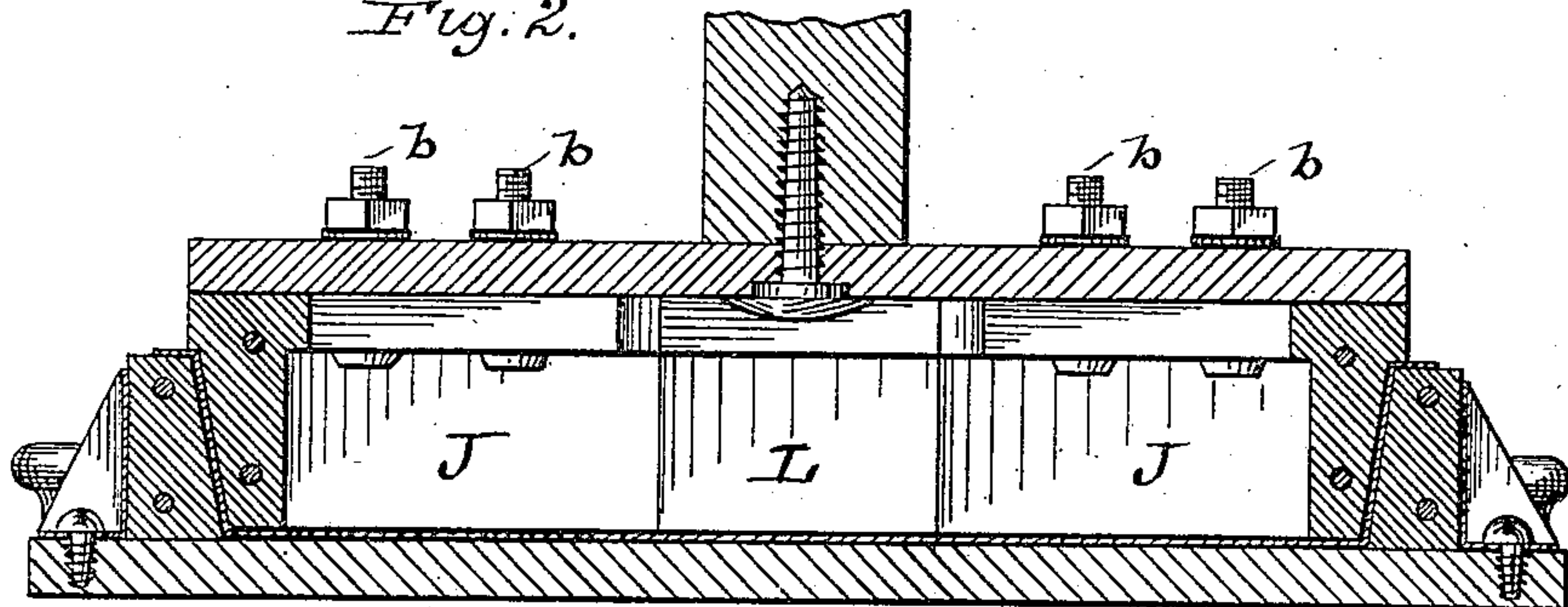
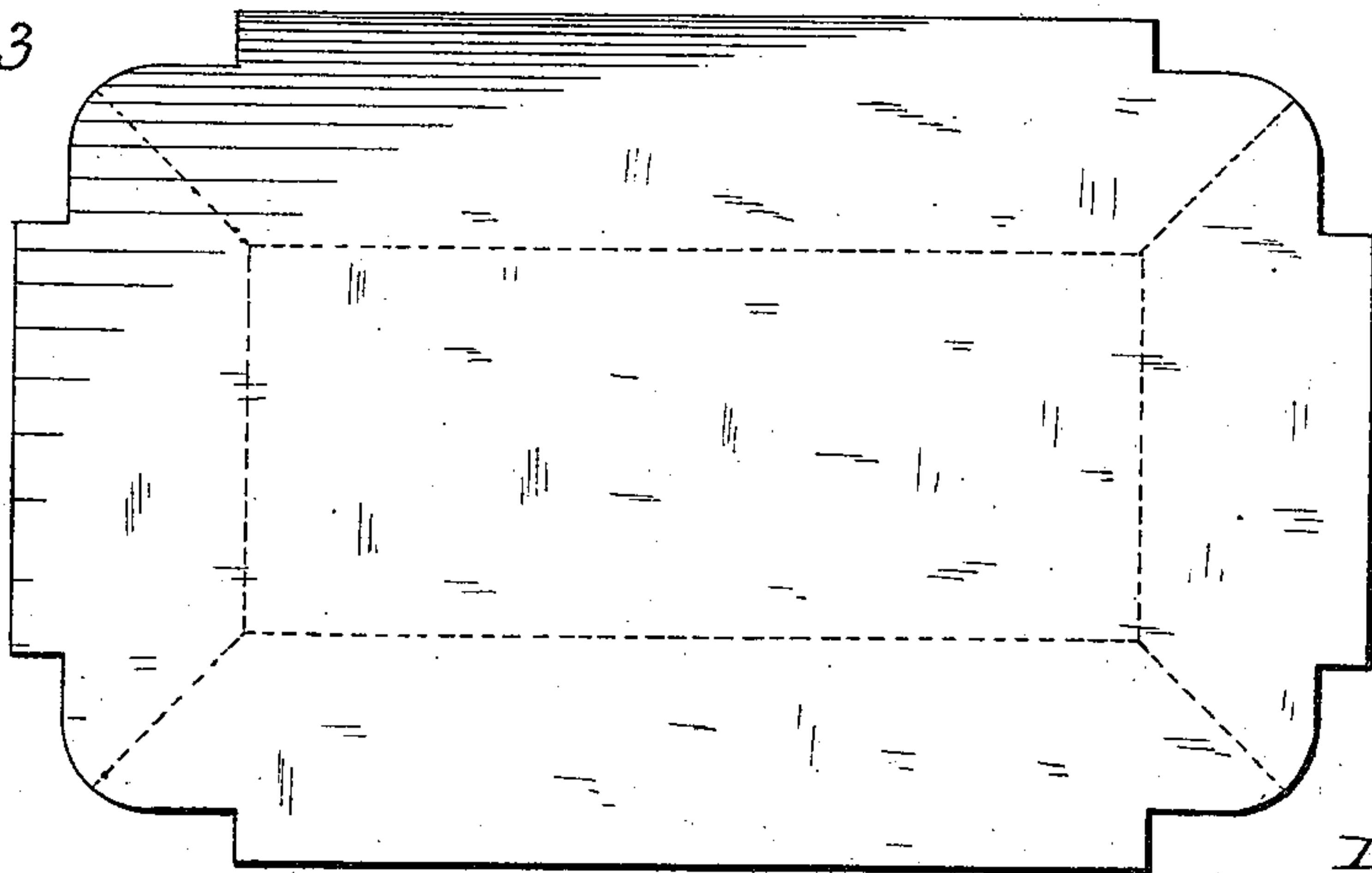


Fig. 3.



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(Model.)

2 Sheets—Sheet 2.

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Fig. 4.

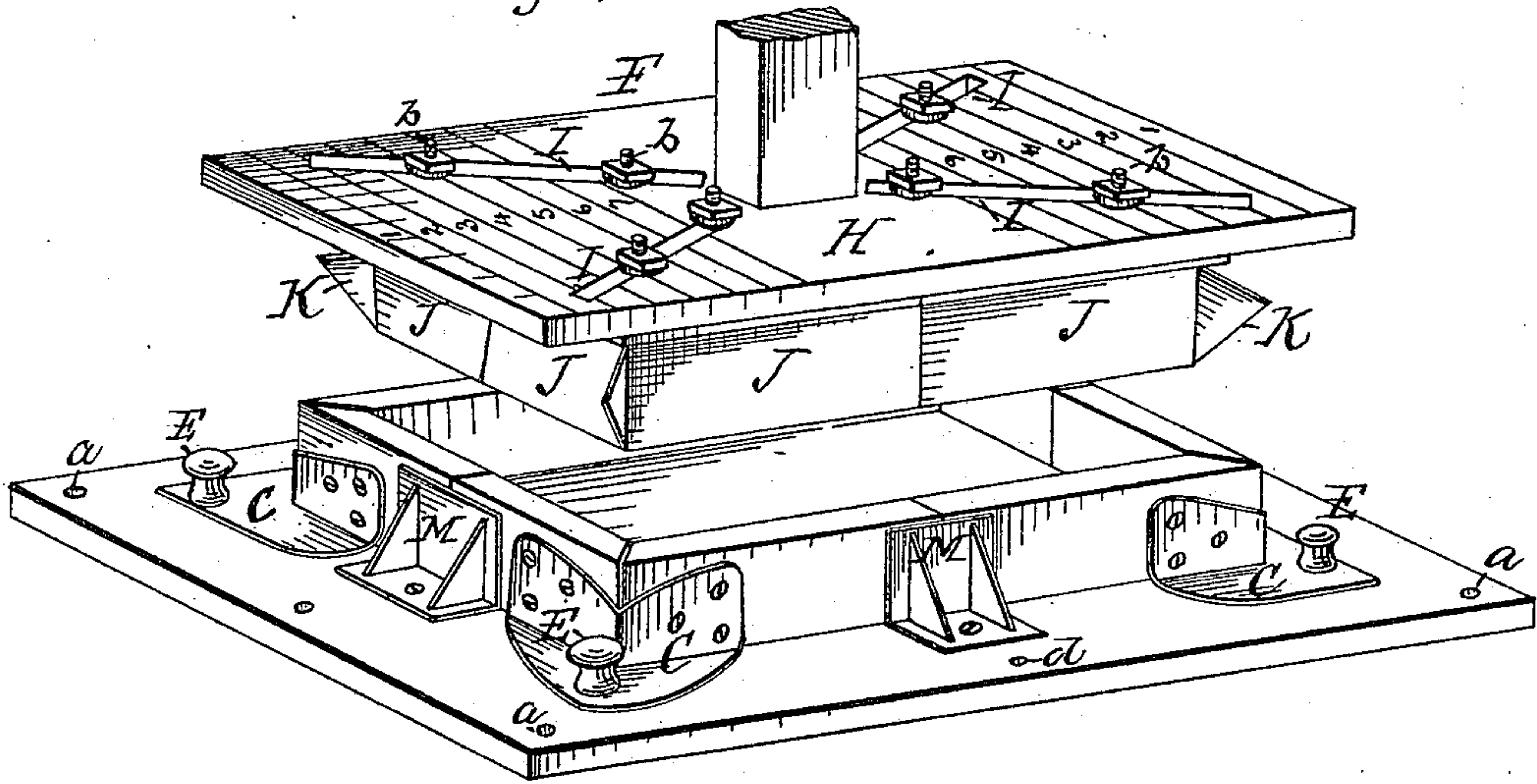


Fig. 5.

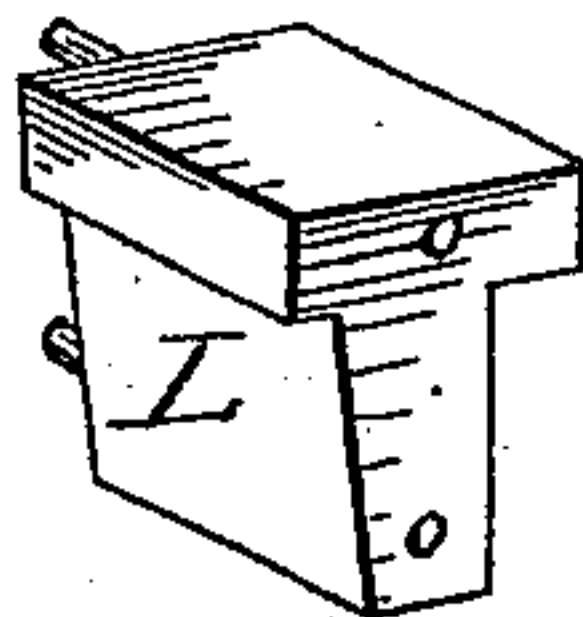
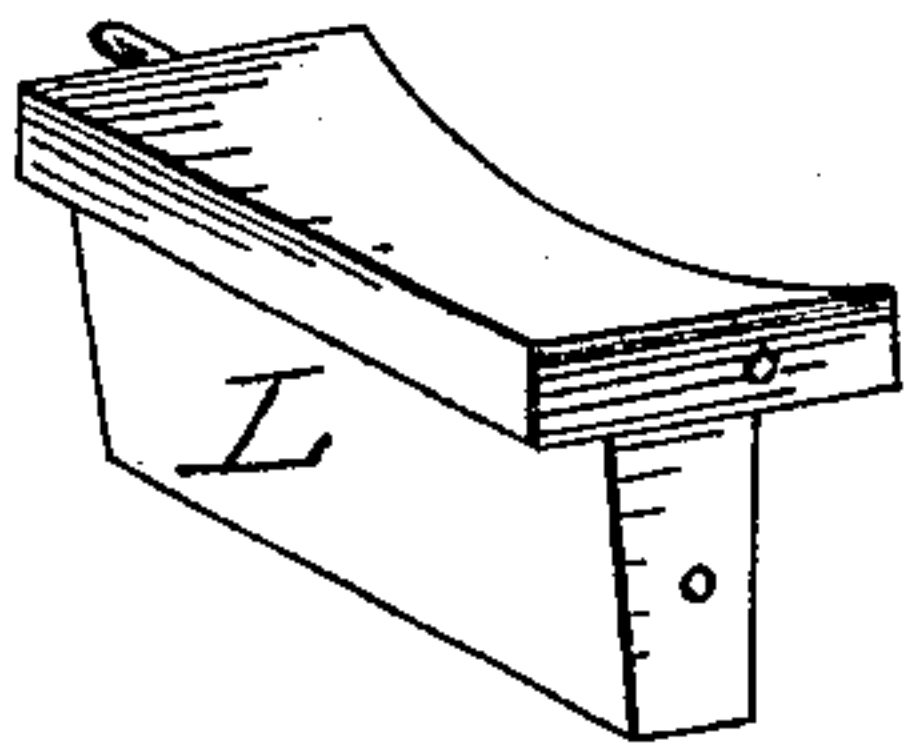


Fig. 6.

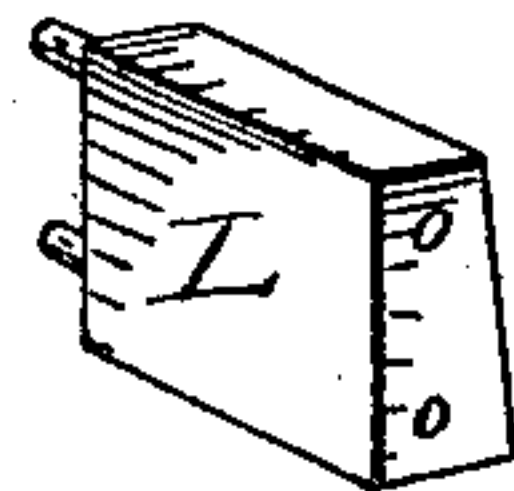
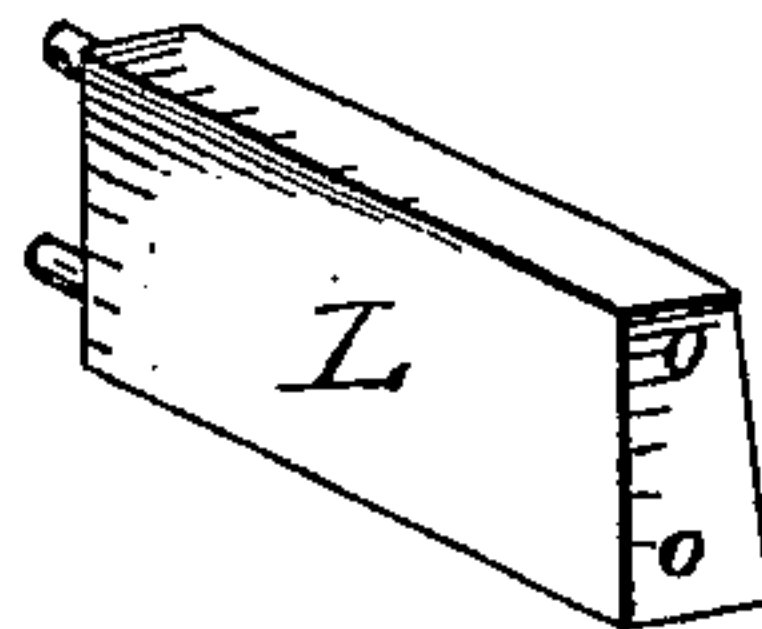
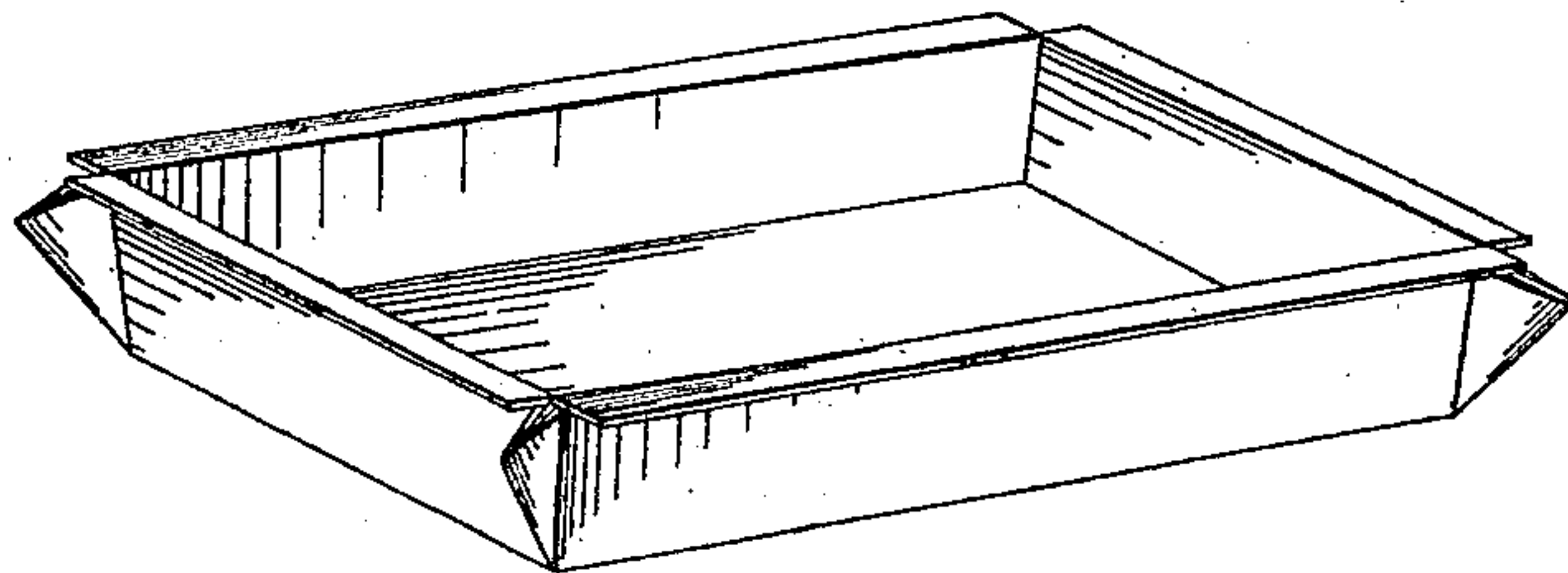


Fig. 7.



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UNITED STATES PATENT OFFICE.

SETH J. WILLIAMS AND HIRAM RICHEY, OF SING SING, NEW YORK.

MANUFACTURE OF BAKING-PANS.

SPECIFICATION forming part of Letters Patent No. 271,388, dated January 30, 1883.

Application filed July 27, 1882. (Model.)

To all whom it may concern:

Be it known that we, SETH J. WILLIAMS and HIRAM RICHEY, citizens of the United States, residing at Sing Sing, in the county of Westchester and State of New York, have invented certain new and useful Improvements in the Manufacture of Baking-Pans, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain improvements in dies for the manufacture of square or rectangular pans from tin, sheet metal, or other suitable material; and they consist in the novel construction and arrangement of parts, as will be hereinafter more fully described, and pointed out in the claims.

In the annexed drawings, Figure 1 is a perspective view of the upper and lower dies, showing the intermediate die-sections in place. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a plan view of a blank for forming a pan. Fig. 4 is a perspective view of the upper and lower dies with the intermediate die-sections removed. Figs. 5 and 6 are views of the intermediate die-sections for enlarging the dies to make larger size pans, and Fig. 7 is a perspective view of a struck-up pan ready for the wiring and finishing machine.

The letter A represents the bed-plate of the female or lower die, which is preferably rectangular in form. Upon the upper surface of this bed-plate (see Fig. 4) are removably attached the corner die-sections B, connected at their corners by the angle-plates C in such a manner as to leave miter-spaces D between them, as shown. The angle-plates are attached to the bed-plate through the media of the perforations *a* and the thumb-screws E. The perforations in the bed-plate are arranged in miter-lines from the corners toward the center of the same for the inward and outward adjustment of the corner die-sections. The corner die-sections are firmly connected with the angle-plates.

The letter F (see Fig. 4) represents the upper or male die, composed of the cap-plate H, provided with the transverse gage-marks representing inches and the diagonal slots I. The office of the gage-marks is for readily adjusting the dies to the size of the pan to be made. To the under surface of the cap-plate H are secured the angular corner die-sections

J, with the angular-shaped corner-formers K, by means of the bolts *b*, passed upwardly through the diagonal slots I of the cap-plate H and adjustably secured by the washers and nuts, as shown. The formers K, for shaping the corners of the pan in the process of formation, are secured between the miter ends of the corner side and end die-sections by suitable fastening means.

By reference to Figs. 2, 5, and 6 of the drawings it will be observed that the square meeting ends of the die-sections are provided with dowel-pins or recesses for the reception and retention of dowel-pins on intermediate die-sections.

When it is desired to enlarge the size of the upper and lower dies to manufacture larger sized pans, the adjustable and removable die-sections L are interposed or inserted in the sides or ends (or both) of the die, as seen in Fig. 1, the dowel-pins thereof entering the dowel-recesses in the square ends of the corner die-sections. The dowel-pins and dowel-recesses of course may be divided between the intermediate and corner die-sections. The intermediate die-sections (see Fig. 1) are also sustained in position by the metal braces M, of sizes corresponding, or nearly so, to the die-sections, and have the desired object of strengthening the dies at the points of intersection. These braces are adjustable inward and outward by means of the perforations *d* and the fastening-screws of the braces.

To form a pan, a blank of sheet tin or iron of the required size, substantially as shown in Fig. 3, is placed on the female die, and the male die pressed down upon the sheet, forcing it into the female die and forming the corners and flange at the same time. The male die is raised and the formed pan removed for the finishing and wiring machine, or completed in the usual manner.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a machine for manufacturing rectangular pans, an upper or male die having a cap provided with transverse gage-marks and diagonal slots and die-sections with connecting means whereby the die-sections may be expanded and contracted, substantially as described.

2. In a machine for manufacturing rectan-

gular pans, the upper or male die consisting of the cap provided with the diagonal slots and the corner die-sections connected by means of bolts passed upwardly through the slots of the cap and nuts, substantially as described.

3. In a machine for manufacturing rectangular pans, the combination, with the lower or female die having the corner die-sections provided with the miter-spaces, of the angle-plates attached to the outer walls of the corner die-sections and fastened to the bed-piece by thumb-screws, substantially as described.

4. In a machine for the manufacture of rect-

angular pans, the combination, with the bed-plate A, perforated on miter-lines from its corners to the center, of the corner die-sections joined by the angle-plates C, and provided with set-screws for adjustment, substantially as described.

In testimony whereof we have affixed our signatures in presence of two witnesses.

SETH J. WILLIAMS.
HIRAM RICHEY.

Witnesses:

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