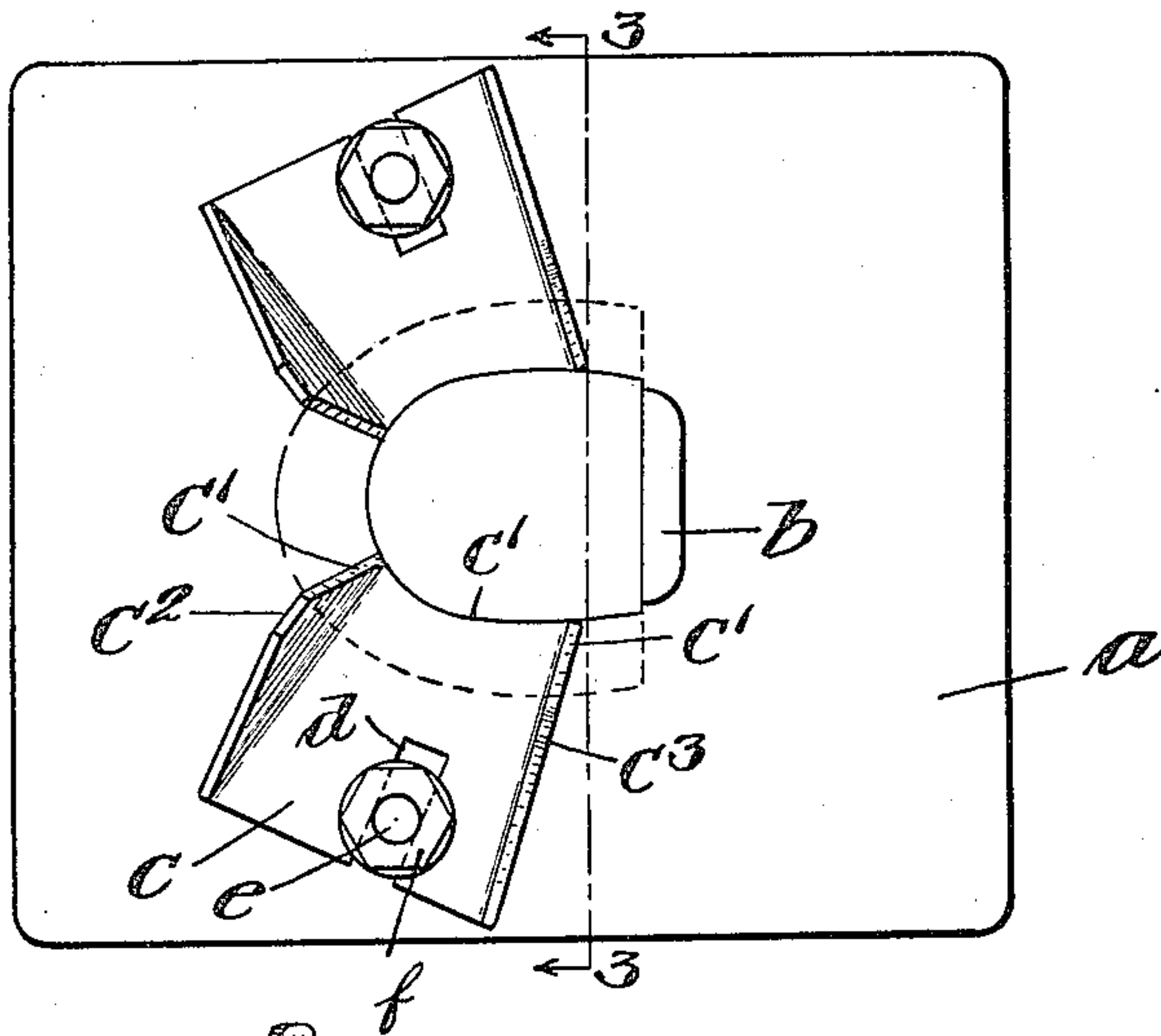


A. H. BRADSTREET.  
HEEL BUILDING FORM.  
APPLICATION FILED JAN. 15, 1915.

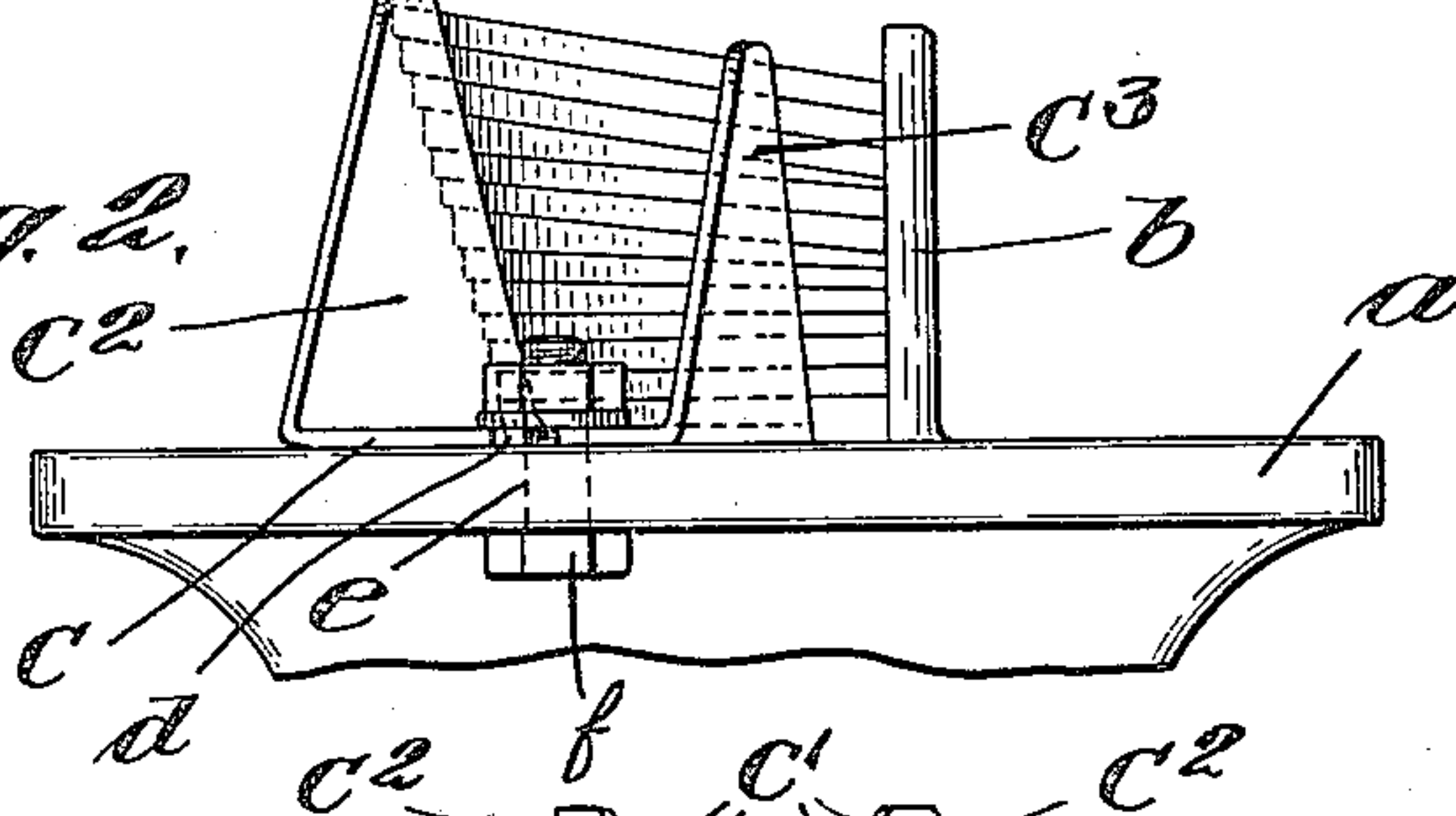
1,154,744.

Patented Sept. 28, 1915.

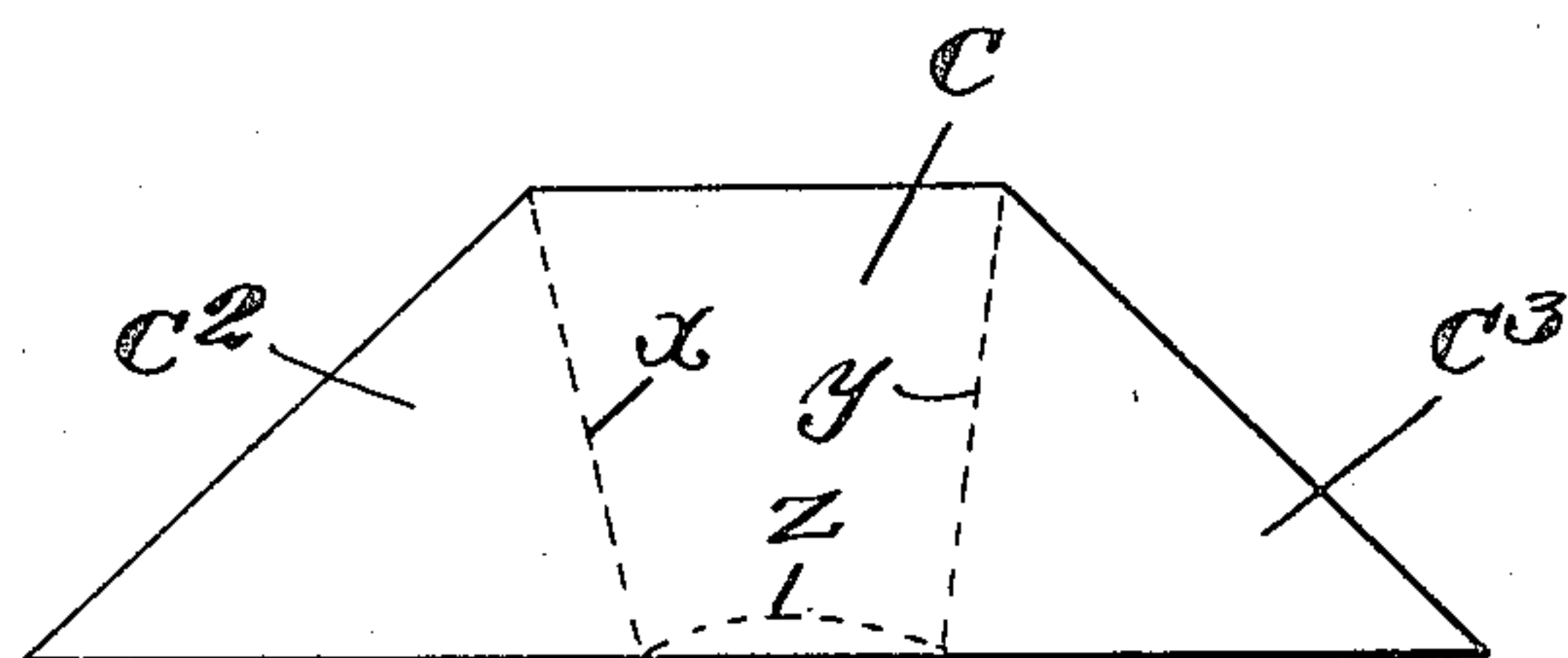
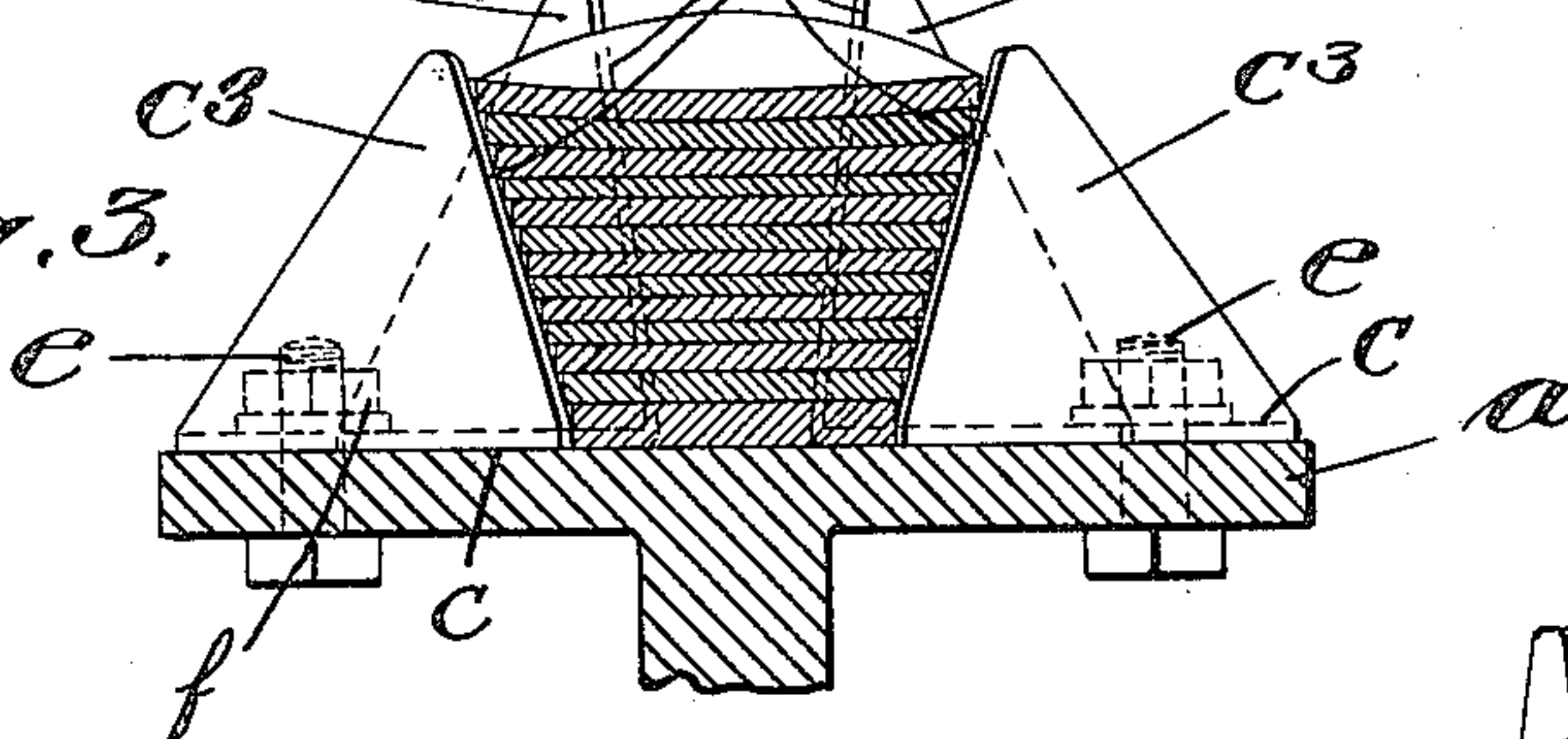
*Fig. 1.*



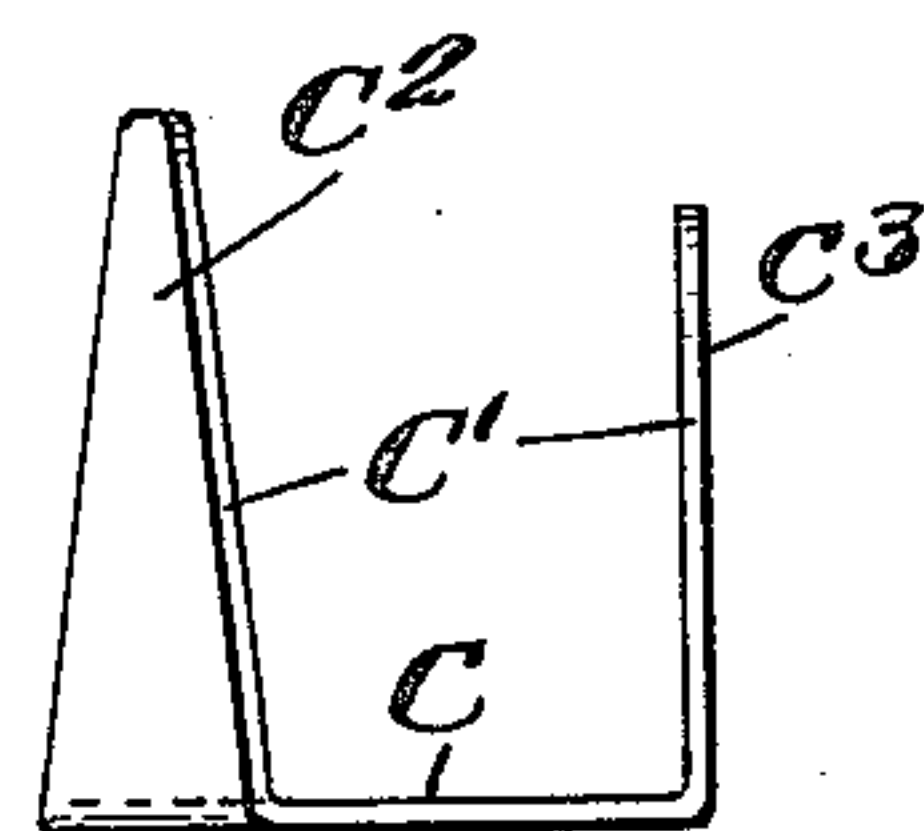
*Fig. 2.*



*Fig. 3.*



*Fig. 5.*



*Fig. 4.*

Witnesses:

H. B. Davis.  
R. Connell.

Inventor  
Arthur H. Bradstreet  
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Attorneys



# UNITED STATES PATENT OFFICE.

ARTHUR H. BRADSTREET, OF HAVERHILL, MASSACHUSETTS.

## HEEL-BUILDING FORM.

1,154,744.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed January 15, 1915. Serial No. 2,316.

*To all whom it may concern:*

Be it known that I, ARTHUR H. BRADSTREET, a citizen of the United States, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented an Improvement in Heel-Building Forms, of which the following is a specification.

In the manufacture of heels, it is customary to provide suitable forms in which the heel lifts are assembled, and which hold the lifts in their desired relative positions until they are secured either by a building-nail, or by a clamping-mechanism, by which they are held until the cement, with which they have been coated, causes them to adhere.

Inasmuch as heel manufactures are usually required to produce many different styles of heels, varying in height, pitch, and size, it becomes necessary to provide a large number of different forms for this purpose. Adjustable forms of various kinds have been produced, which are objectionable on account of the difficulty of adjustment of the parts to the exact position desired, and particularly on account of the time required to make such adjustment. Special forms, which are non-adjustable, are also quite generally employed for the different sizes and shapes, but, while they are usually more satisfactory than the adjustable forms, are objectionable on account of the expense of manufacture.

The object of my invention is to provide a heel-building form, and, more particularly, a construction of forming member, which is of permanent character, so that it may be repeatedly used, which may be manufactured, and accurately fitted to the heel, without difficulty and at small expense, and is adapted to be readily interchanged with similar forms, and with which the operator is enabled to build heels with the utmost facility.

I accomplish these objects by the means shown in the accompanying drawing, in which;—

Figure 1 is a plan view of a heel-building form embodying my invention. Fig. 2 is a side elevation thereof. Fig. 3 is a cross-sectional view on the line 3—3 of Fig. 1. Fig. 4 is an elevation of one of the lift-holding members, and, Fig. 5 is a detail view of the blank from which these members are formed.

In the drawing, *a* indicates a suitable support on which the heel is built and on which the form is mounted, said support being pro-

vided with a breast-gage *b*. According to my invention, I provide a pair of heel-forming members adapted to be mounted on said support, and, as these devices are identical in every particular, except that one is constructed to engage the right side of the heel, and the other the left side, a description of one of these members will suffice. Each member, therefore, consists of a sheet-metal plate *c*, which is formed from a sheet metal blank originally cut out in approximately the shape shown in Fig. 5, the longer edge *c'* being straight, or approximately so, and its ends being cut at an oblique angle so that the end edges converge from said edge *c'*. These obliquely cut end-portions are bent upwardly on the lines *x*, *y*, of Fig. 5, into positions approximately at right angles to the middle portion of the plate, forming fingers *c*<sup>2</sup>, *c*<sup>3</sup>, said lines *x*, *y*, extending divergently from the edge *c'* of the blank, at approximately equidistant points from the middle thereof, to the point of termination of the obliquely formed end edges in the opposite side edge. As a result, the side edge *c'* of the fingers *c*<sup>2</sup>, *c*<sup>3</sup>, when thus formed, will be inclined away from the edge of the middle portion, which is continuous therewith, the particular inclination being, in each instance, made to correspond to the particular inclination of the portion of the side of the heel, to be built, with relation to its tread face, at the point at which it is to be engaged by said edge *c'* of the fingers, and, as this varies in different parts of the heel, the angle at which the end portion is bent is correspondingly varied. The finger *c*<sup>2</sup>, which is adapted to engage the rear portion of the heel, is slightly inclined rearwardly from the vertical, the other finger *c*<sup>3</sup> being almost exactly vertical, these positions being varied somewhat according to conditions. The side edge *c'* of the intermediate portion of the blank is concaved or recessed sufficiently to receive the convexity of the top lift between the edges of the fingers, as indicated by the dotted line *z*, Fig. 5. The opposite edge portion from edge *c'* is provided with a notch *d*, to receive a clamping bolt *e*, onto which a nut *f* is threaded, to secure the form member in position on the support *a*.

In practice, the two members are secured to the support in oppositely disposed positions, so that the edge *c'* of the finger *c*<sup>3</sup>, of each member, engages the heel to be built



nearly midway of its length from breast to rear, and the finger  $c^2$  engages it at one side of its rear end, as best shown in Fig. 1.

In use, the heel lifts are placed in the form in the order of their size, the smallest being placed at the bottom, and they will be held by the fingers exactly in the desired form. In case the fingers, as first formed from the blank, do not fit the heel, they may be readily filed, or ground, so as to conform as accurately as desired. As the fingers  $c^2$ ,  $c^3$ , extend approximately perpendicularly with relation to the intermediate base portion which rests on the support, and are spaced apart sufficiently for the operator to pass his fingers therebetween, the lifts may be more easily placed in the form and pressed down or adjusted, so that they will lie flat, than if the form were solid. Also, this arrangement enables a lift to be easily removed when necessary.

The purpose of cutting the ends obliquely is principally to save stock, as, by this method, the blanks may be cut from a strip without waste, while the fingers are just as rigid as, and less cumbersome than if they were of full width throughout.

When heels of different shapes are to be made, the form members may be readily interchanged, and, on account of the small cost of manufacture of a pair of members, the expense of a set for each size and style of heel is small.

I claim:—

1. A heel-building form comprising a horizontally disposed support, a pair of form-members for engaging opposite sides of a heel, each member consisting of a sheet-

metal plate adapted to rest on, and to be removably connected to said support, and having end-portions bent into upright relation thereto, to provide fingers having engaging edges for the side and rear end-portions of the lifts, and means to secure said plates to said support.

2. A heel-building form comprising a horizontally disposed support and a pair of form-members for engaging opposite sides of a heel, each member consisting of a sheet-metal plate adapted to rest on, and to be removably connected to said support, and having end-portions bent into upright relation thereto, to provide fingers having engaging edges for the side and rear end-portions of the lifts, said end-portions being bent on lines which extend divergently from the lift-engaging edge of the plate, whereby the edges of said fingers incline outwardly as they extend upwardly.

3. A heel-building form-member comprising a sheet-metal plate having its end-portions bent into upright relation to the intermediate portion, on lines which extend divergently from one edge-portion, to provide lift-engaging edges which incline back from the edge of said intermediate portion, the latter being adapted and arranged to be secured onto a support.

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

ARTHUR H. BRADSTREET.

Witnesses:

L. H. HARRIMAN,  
HARRY J. COLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."