

(No Model.)

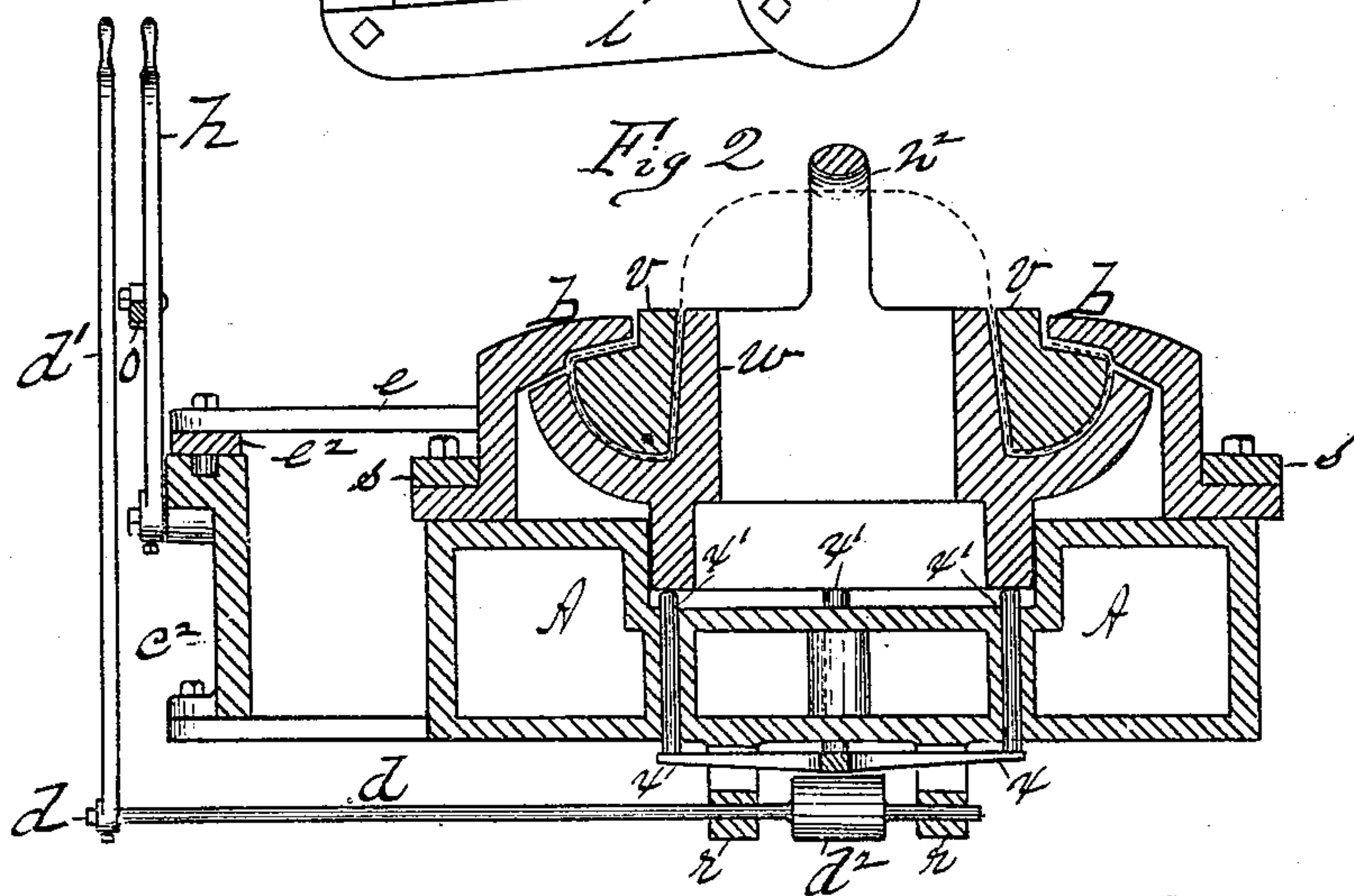
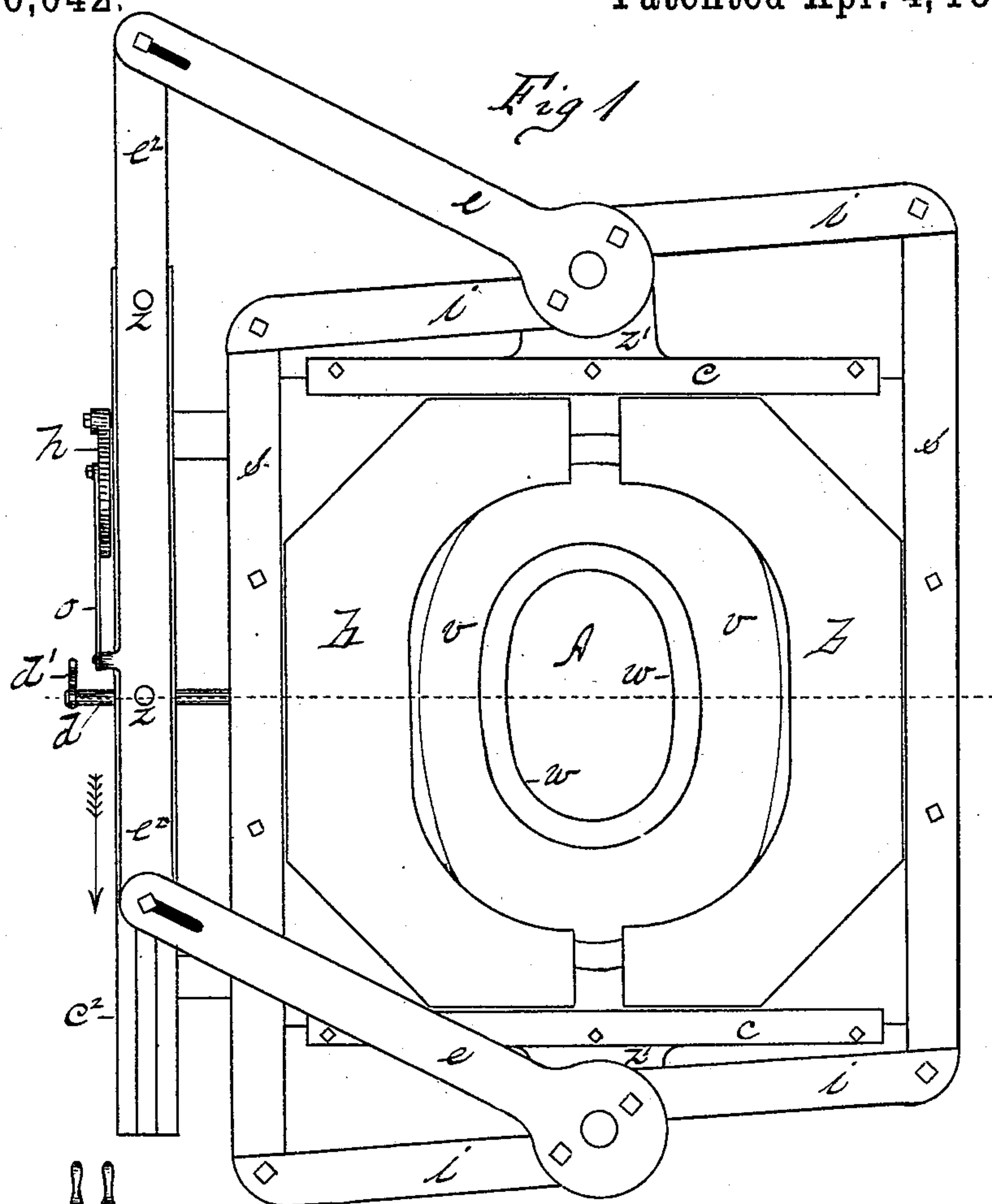
2 Sheets—Sheet 1.

L. S. PLUMB & G. W. MARCHANT.

HAT FLANGING MACHINE.

No. 256,042.

Patented Apr. 4, 1882.



Witnesses
J. D. Garfield
G. N. Bowers

Inventors
Lauren I Plumb
and George W Marchant
By Henry A Chapin Atty

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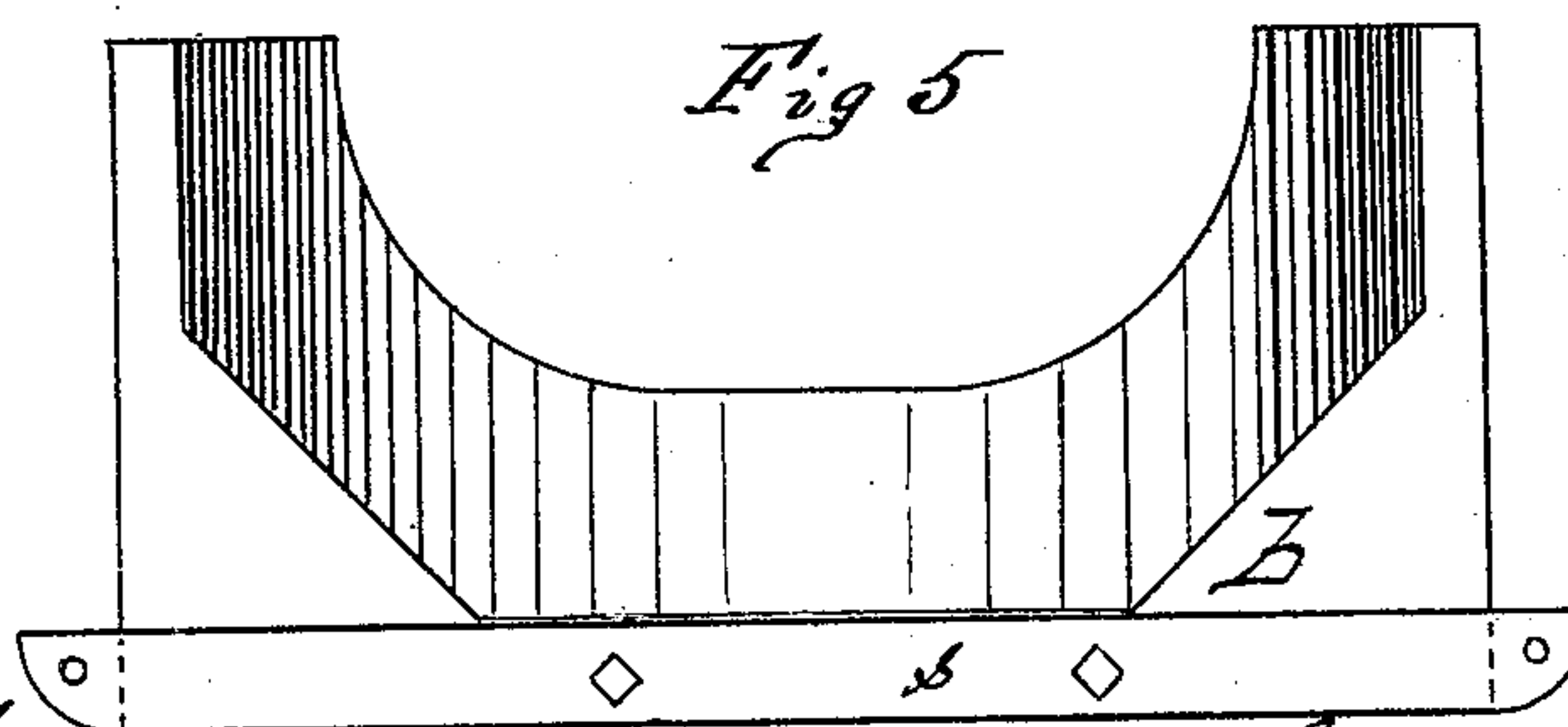
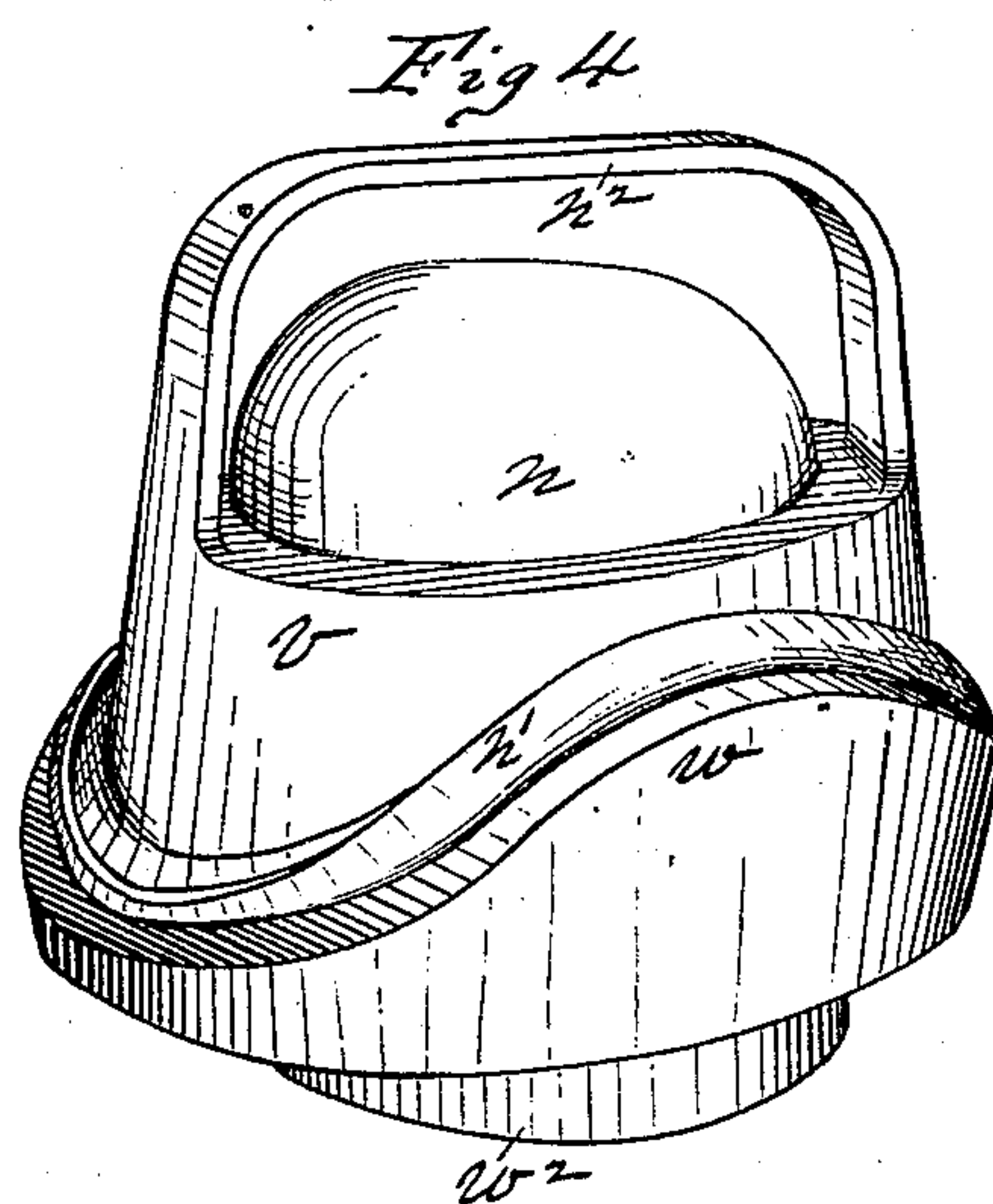
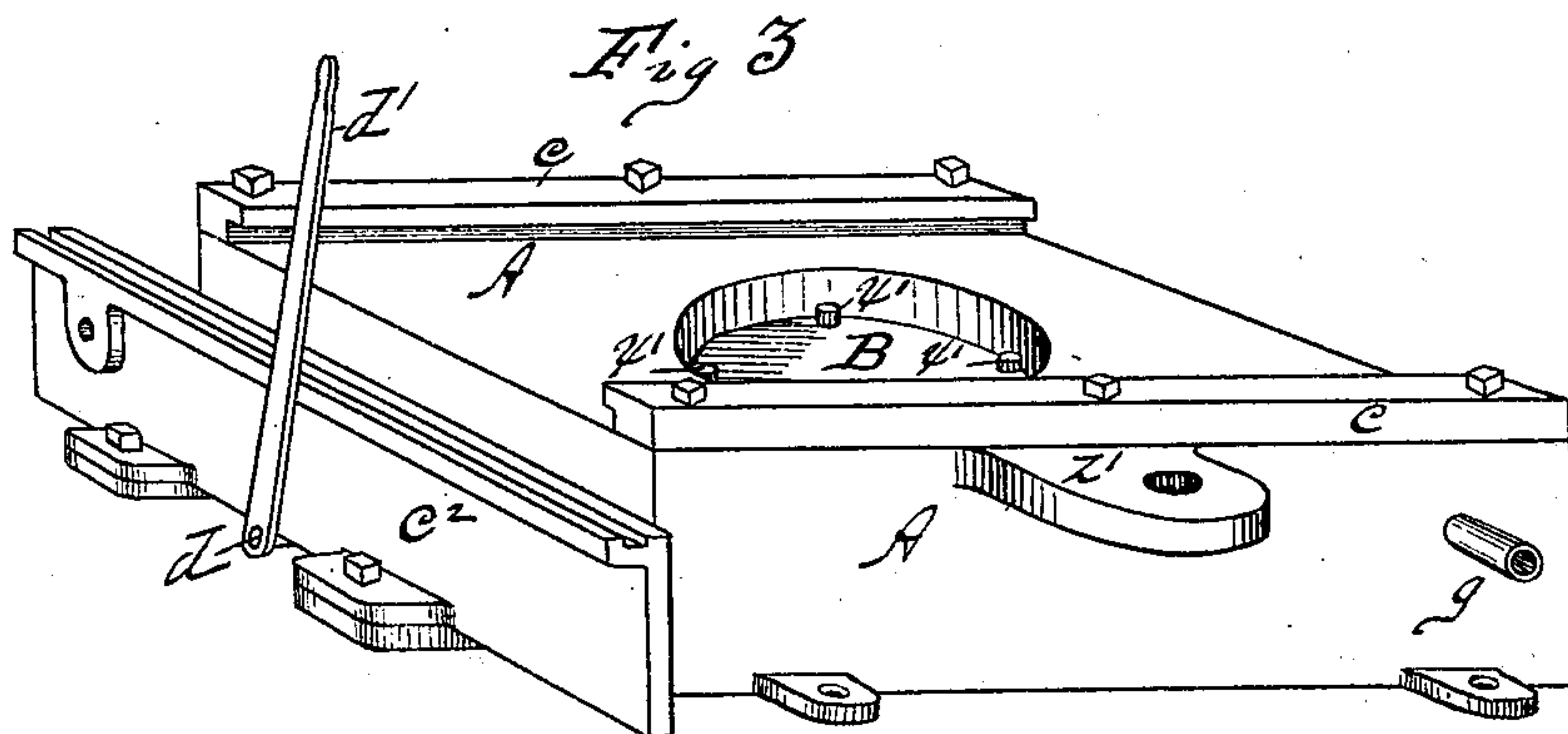
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UNITED STATES PATENT OFFICE.

LAUREN S. PLUMB AND GEORGE W. MARCHANT, OF PALMER, MASS.; SAID
MARCHANT ASSIGNOR TO ROBERT L. GODDARD, OF SAME PLACE.

HAT-FLANGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 256,042, dated April 4, 1882.

Application filed July 23, 1881. (No model.)

To all whom it may concern:

Be it known that we, LAUREN S. PLUMB and GEORGE W. MARCHANT, citizens of the United States, residing at Palmer, in the county of Hampden and State of Massachusetts, have jointly invented new and useful Improvements in Hat-Flanging Machines, of which the following is a specification.

This invention relates to the details of the construction of a machine for bending and setting the flanges on hat-brims, the object being to provide a machine which will rigidly grasp the brim of a hat, force the flanges to a proper angle relative to said brim and there hold them until they shall have assumed the requisite form and position, and at the same time mold the hat-brim to the desired form.

In the drawings forming part of this specification, Figure 1 is a plan view of a hat-flanging machine embodying our improvements. Fig. 2 is a sectional view about on the dotted line, Fig. 1. Fig. 3 is a perspective view of the steam-table and some of its immediately-connected parts. Fig. 4 is a view of the male and female hat-dies, showing a hat between them in the position in which it is operated upon by the machine. Fig. 5 is a plan view of one of the brim-clamps and its connecting-strap.

In the drawings, A is the hollow steam-table. *c* are guideways on said table. *c*² is a track-bar. *x'* are posts passing up through table A, within the recess in its top. *x* is a base upon which posts *x'* rest beneath said table. *r r* are supports on the under side of table A for a shaft, *d*. *d*² is a cam on shaft *d*, and *d'* is a lever on the same shaft. *e e* are two levers pivoted to ears projecting from the sides of table A. *e*² is a connecting-bar to which the ends of levers *e e* are pivoted. *z z* are pins set in bar *e*², whose ends enter the groove in the bar *c*² under bar *e*². *h* is a lever pivoted to the side of bar *c*², and connected to bar *e*² by a connecting-rod, *o*. *i i i i* are connecting-bars pivoted to levers *e*, and to the ends of the bars *s s*. *b b* are brim-clamps, two of whose edges lie under the guideways *c c* on table A, and to whose other edges are secured the bars *s s*. *g* is a steam-induction pipe on table A. *w* is the male hat-die, and *v* is the female die. *n* is the hat-body, and *w'* is the flange on the hat-brim.

Like letters refer to like parts in the several figures.

The steam-table A is made hollow and of suitable strength to allow of safely carrying a moderate pressure of steam therein. Steam is conveyed to the interior of said table by a pipe, *g*, and a suitable discharge-pipe is provided for it, whereby requisite and constant heat may be supplied to said table. A circular recess, B, is made in the upper face of said table, as in Fig. 3, and tubular-formed passages are formed from the base of said recess down through said table for the reception of the posts *x'*.

A track-bar, *c*², is bolted to ears projecting from one side of table A, and two ears, *z' z'*, project from opposite sides of said table, to which are pivoted the levers *e e*, and the free ends of said levers are pivoted to the bar *e*², which is adapted to have a reciprocating motion upon the edge of bar *c*², guided by pins *z z*, which project into the groove in the last-named bar. Said reciprocating motion of bar *e*² is produced by swinging the lever *h*, which is pivoted to the side of bar *c*², and connected to bar *e*² by the bar *o*. The two brim-clamps *b b*, each having a bar, *s*, secured to one edge, are placed upon table A, with their ends under the guideways *c c*, and the ends of the bars *s* on clamps *b* are connected with levers *e e* by the bars *i i i i*. The male hat-die *w* is placed on table A, with its downwardly-projecting ring *w*² setting into the recess B and resting upon the ends of posts *x'*, before said clamps are finally fastened in working position.

The base *x* is placed under posts *x'*, after placing the latter in position in table A, as in Fig. 2, and shaft *d*, having the cam *d*² thereon, is hung in the supports *r r*, so that said cam, by turning shaft *d*, can be worked against the base *x* to lift it and said posts. A lever, *d'*, is secured to one end of shaft *d*, by which said shaft is rotated for the above-named purpose.

The hat-dies *v* and *w* are made of such corresponding forms as to adapt them to hold the hat to be operated upon between them, as seen in Figs. 2 and 4, a portion of the male die *w* projecting upward, around which the sweat-leather of the hat lies when the hat is placed thereon. The female die *v* sets over the crown

of the hat *n*, and its lower edge is made to conform to the shape of the brim-flange on the male die, and that portion of the sides of said die *v* upon which the flange of the hat-brim is to be pressed and formed is made of the required pitch or angle, and the edges of the brim-clamps which approach and bear upon the flange-forming part of said die are made to conform to the shape thereof, and have a shallow groove, as shown in Fig. 2, just back from their edges, into which the bent corner of the brim and flat part of the flanges lie.

A handle or bail, *n*², is provided on die *v*, by which it may be easily manipulated.

The operation of our improvements in forming and finishing the brims and brim-flanges of hats is as follows: Steam is introduced into table *A* until it and the dies *v* and *w* shall have become properly heated. The position of the various parts of the machine before putting in the hat is that shown in Fig. 1. The female die *v* is removed from die *w*, and the hat *n* is placed upon the latter, and die *v* is placed over the hat, as shown in Fig. 4, and as represented in dotted lines in Fig. 2. Lever *h* is now operated, sliding bar *e*² in the direction of the arrow in Fig. 1, swinging the ends of levers *e*, and causing the brim-clamps *b b* to be simultaneously drawn forcibly against the edge of the hat-brim on die *v*. Lever *d*¹ is now swung over, turning shaft *d* and cam *d*² thereon, whereby said cam lifts with much force base *x* and posts *x*¹, thus pressing the border of die *v* powerfully upward against the under edge of the brim-clamps *b b*, and pressing and forming the brim-flanges therebetween, and at the same time pressing and forming the hat-brim. The hat is left in the above-described position in the machine for a few moments, when it may be removed therefrom, and it will be found that

its brim and its flanges have become properly and uniformly shaped, and permanently set to the form provided for by the said dies.

By the use of this machine as above described the heretofore slow and expensive method of ironing hat-brims into shape, and of bending and setting the flanges thereof by hand, is obviated, and brims and flanges of uniform and desirable shapes are rapidly and cheaply produced.

What we claim as our invention is—

1. The hollow steam-table *A*, the brim-clamps *b b*, having their under faces curved to conform to the brim-flange form on the sides of the die *v*, the levers *e e*, the connecting-bars *i*, bar *e*², lever *h*, and the dies *w* and *v*, all combined and operating substantially as set forth.

2. The combination, with the steam-table *A*, the brim-clamps *b b*, and the dies *v* and *w*, of the posts *x*¹, the base *x*, cam *d*², shaft *d*, and lever *d*¹, substantially as set forth.

3. The within-described improved process for shaping the flanges of hat-brims, which consists in placing the hat upon a die having a border conforming to the shape of the hat-brim, placing a second die upon the upper side of the hat-brim, having a border upon which to form the said brim-flanges extending partially under said flanges, then heating said dies and hat and moving the clamps *b b* under pressure over the surfaces of said flanges from the outer edges of the brim toward the hat-body, and by mechanism substantially as described lifting and forcing said flanges against the under side of said clamps, substantially as set forth.

LAUREN S. PLUMB.

GEORGE W. MARCHANT.

Witnesses:

J. W. BRIGHAM,

F. D. BEACH.