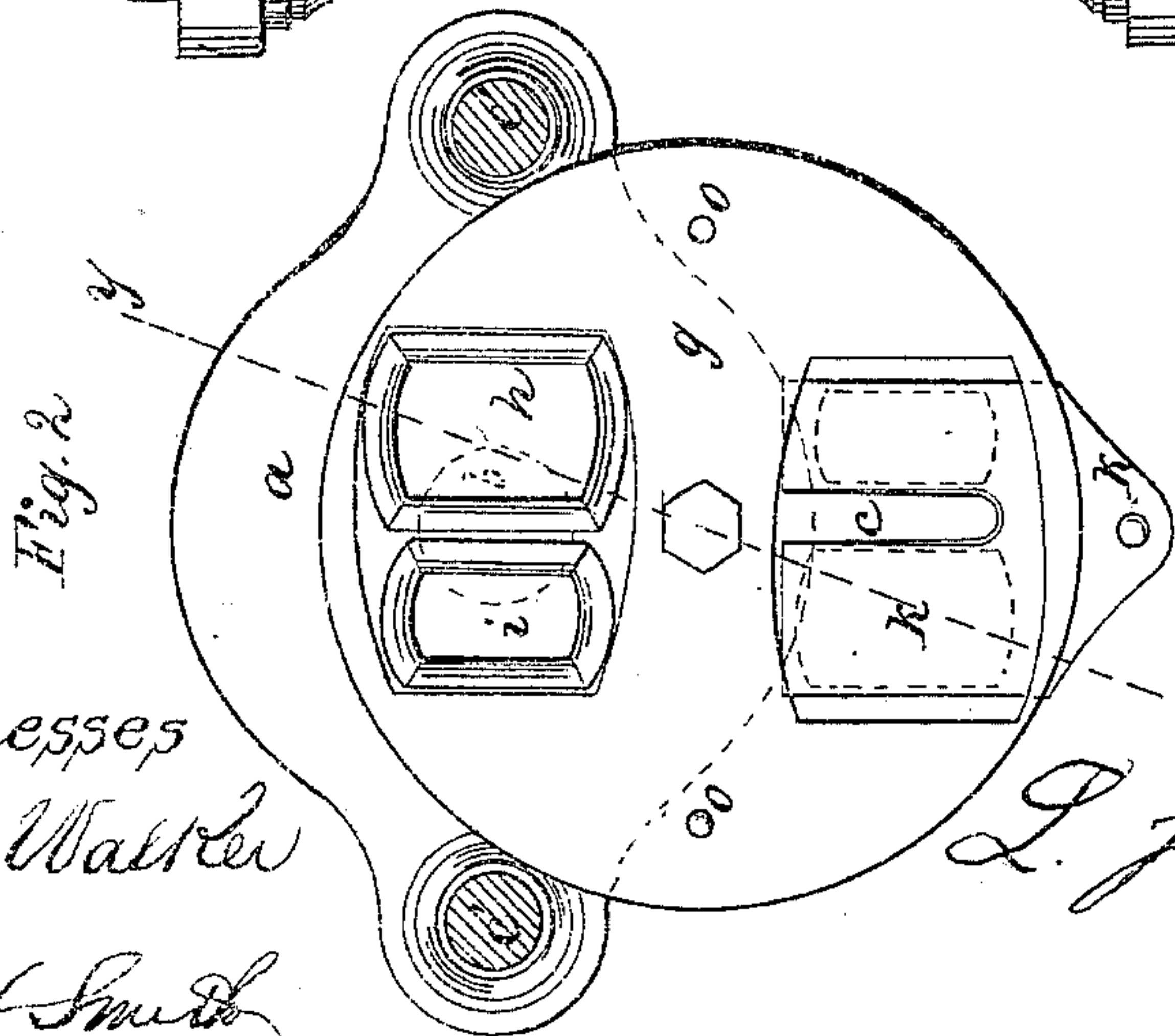
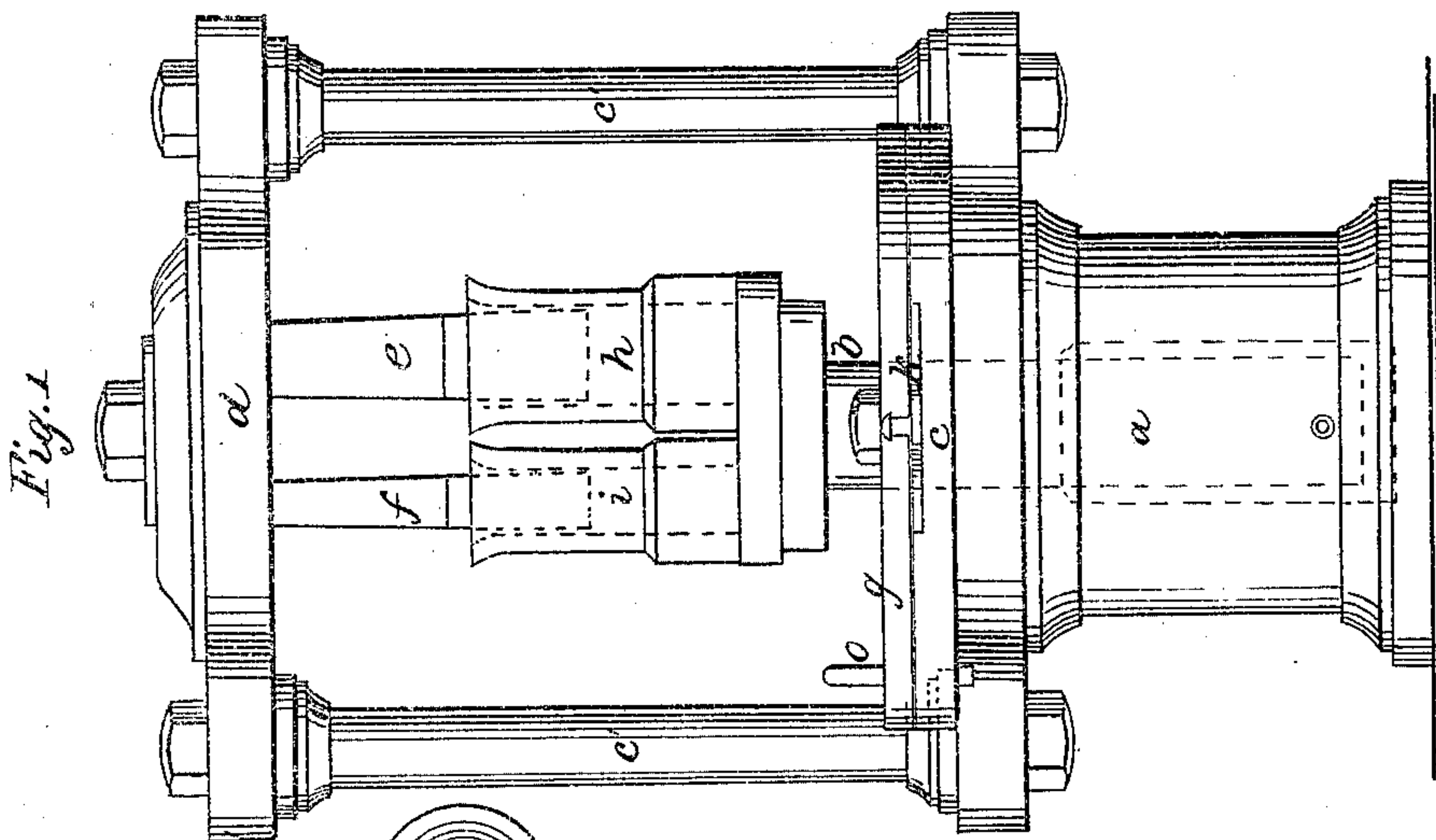
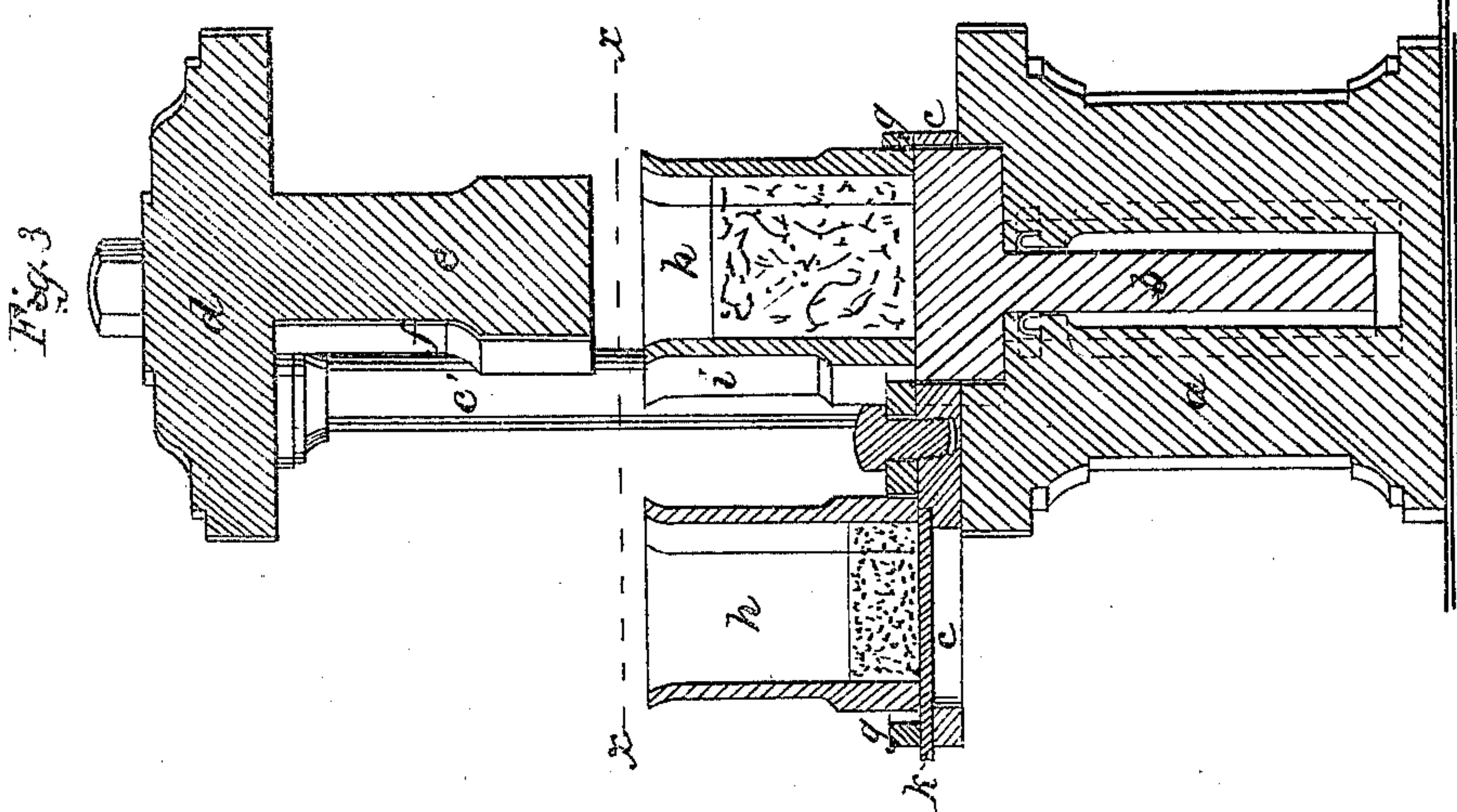


*L.J. Atwood,*  
*Bundling Scrap Metal,*  
*No 61,136,* *Patented Jan. 15, 1867.*



Witnesses  
*Geo. D. Walker*  
*Chas. H. Smith*

Inventor  
*L. J. Atwood*  
*per L. W. Sewell*  
*att'y*



# United States Patent Office.

LEWIS J. ATWOOD, OF WATERBURY, CONNECTICUT.

*Letters Patent No. 61,136, dated January 15, 1867.*

## IMPROVEMENT IN APPARATUS FOR BUNDLING SCRAP METAL.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, LEWIS J. ATWOOD, of Waterbury, in the county of New Haven, and State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Means for Bundling Scrap Metal previous to remelting; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is an elevation of the apparatus employed by me.

Figure 2 is a sectional plan at the line *x x*; and

Figure 3 is a vertical section at the line *y y*.

Similar marks of reference denote the same parts.

Large quantities of scrap metal, of almost every conceivable variety and form, particularly copper and brass, are remelted; but previously thereto, said scraps are "cabbaged," that is, packed tightly into the form of a ball or bundle. To effect this operation, an iron basin or mortar is used in the following manner: Strips of metal are first placed over the mortar, and with the hand pressed down and made to conform to its shape. The upper ends of said strips are left hanging over the sides of the mortar. Scraps of metal are then placed upon its top and pounded down into it with an iron bar or sledge-hammer. When the mortar is filled, the upper end of the strips of metal are bent over inward and hammered down upon the scraps; this serves to hold them together after being removed from the mortar while being transferred to the melting-pots or crucibles. This operation is slow, tedious, and expensive; besides this, the workmen are very likely to be cut by the sharp angles of the metal whilst it is being handled for cabbaging. In order to facilitate this process the scrap that is any way hard is annealed to make it as soft as possible.

The object of my invention is the cabbaging of scrap metal with very little handling and with great rapidity. With my method the annealing may be dispensed with. This I accomplish by means of a scrap-box or receiver, into which the scrap is placed and compressed into a compact mass by a plunger that fills the receiver and is acted upon by a hydraulic press, or other competent power, so as to form the scraps into a bundle or cabbage for their introduction into crucibles for remelting.

In the drawing, *a* represents a hydraulic cylinder, with a ram, *b*. *c' c'* are tie rods extending from the flanged head *c*, of the cylinder *a*, to the head-block *d*, that carries the plungers *e f*. Upon the head *c* is a carrier-plate, *g*, with two openings, each of which is of a size and shape to receive the scrap-boxes *h* and *i*. *k* is a slide, introduced to cover openings in *c* at a point where the bundles of scrap are delivered from the boxes or receivers *h* and *i*. When the scrap is of a loose and bulky nature, I use the large and small boxes or receptacles *h* and *i* in the following manner: When the empty box *h* is over the slide *k*, (that being closed,) I rake or otherwise draw the scrap metal, or deliver it loosely, into the box *h*, which box is of large capacity, care only being required to prevent any of the pieces or scraps hanging over the edge. I then give the plate *g* a half rotation, and steady it by the introduction of a pin, *o*, or similar device. This movement brings the scrap-box *h* under the plunger *e*, and over the upper end of the ram *b*; the power is then brought into operation, which lifts the scrap-boxes *h i*, and the ram *b* filling the box *h*, the contents are compressed into a flattened mass; the ram *b* is lowered, and the plate *g* is again moved half a turn, bringing the box *h* back to the place of beginning; the slide *k* is withdrawn, the mass of scrap is knocked through, the slide *k* is again pushed in, and the said flattened mass is introduced edgewise into the box or mould *i*, and a fresh supply of scraps introduced into the mould or scrap-box *h*, and the two moulds are turned around under the plungers *e f*, and their contents pressed, the one assuming the form of a flattened mass, as aforesaid, the other, by the second compression, being consolidated either into a globular form or an elongated bundle, according to the shape of the end of the plunger *f*; and a movable block may be placed in the bottom of the mould *i* to properly shape the lower side of the bundle or cabbage. If it is desired to compress the scrap laterally as well as by the direct action of the plunger, the scrap-boxes or receptacles may be made of a tapering form, and the plunger made so that it can slide together (like a hat-block) as it is forced into the smaller portion of the receptacle; in this case, a plate of steel will have to be fitted at the lower end of the plunger to cover the openings between the parts of the plunger that move towards each other in going down into the box. By my improvement the scrap can be cabbaged or bundled with great rapidity, and the mass is very compact in consequence of the great pressure to which it is subjected, and that pressure

acting first one way and then the other. When the scrap is of a more compact nature, four or more boxes or receptacles may be employed of the same size, two or more being pressed while the others are being filled. The great pressure renders it unnecessary to anneal the metal previous to cabbaging.

What I claim, and desire to secure by Letters Patent, is—

The bundling or consolidation of scraps of sheet metal by the means and substantially as set forth.

In witness whereof I have hereunto set my signature this 26th day of June, A. D. 1866.

L. J. ATWOOD.

Witnesses:

JOSEPH A. BUNNELL,  
SCOVILL N. PRITCHARD.