

July 3, 1928.

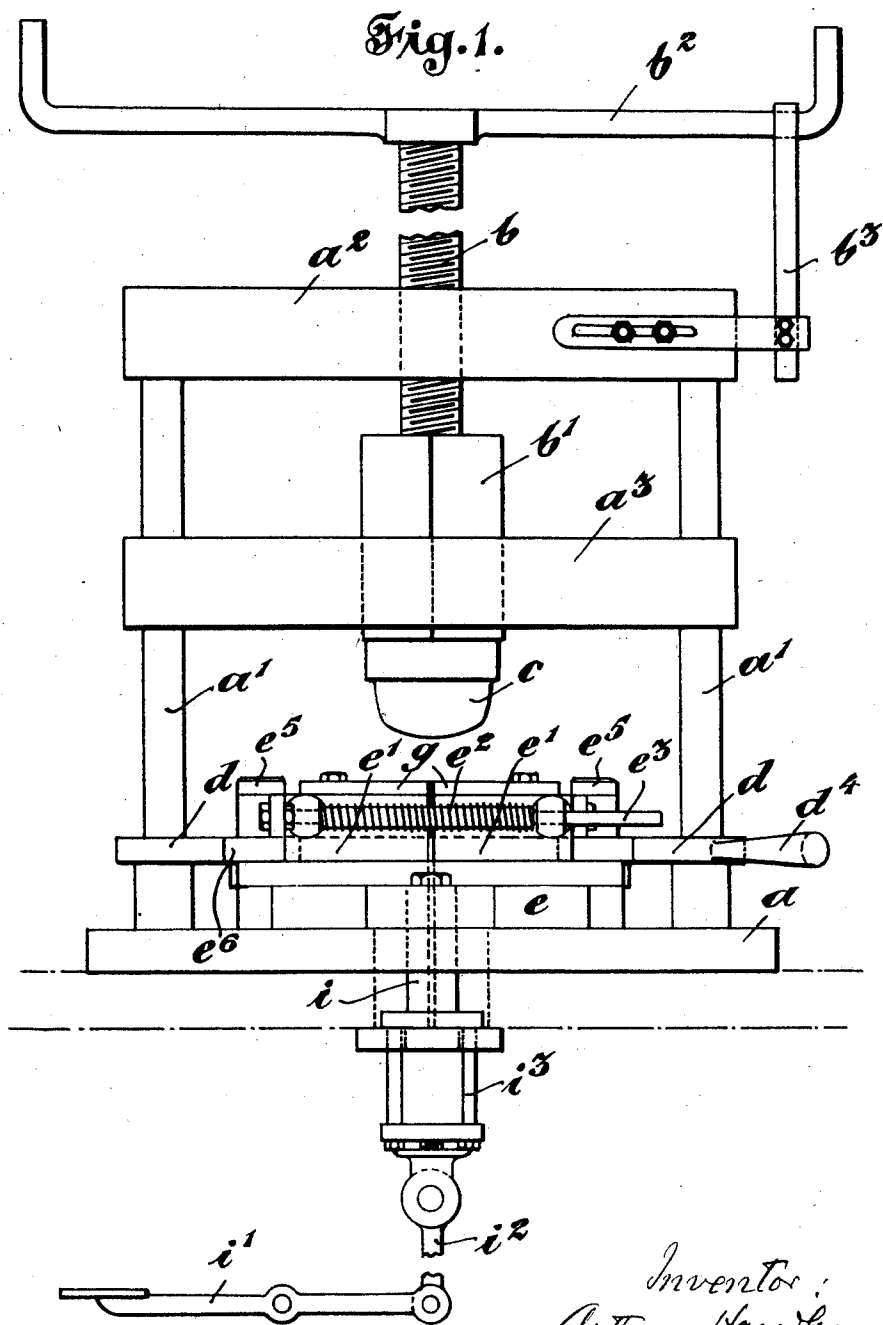
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A. HANDLEY

PRESS FOR SHAPING COVERS OF TEAPOTS AND THE LIKE

Filed Dec. 29, 1927

3 Sheets-Sheet 1



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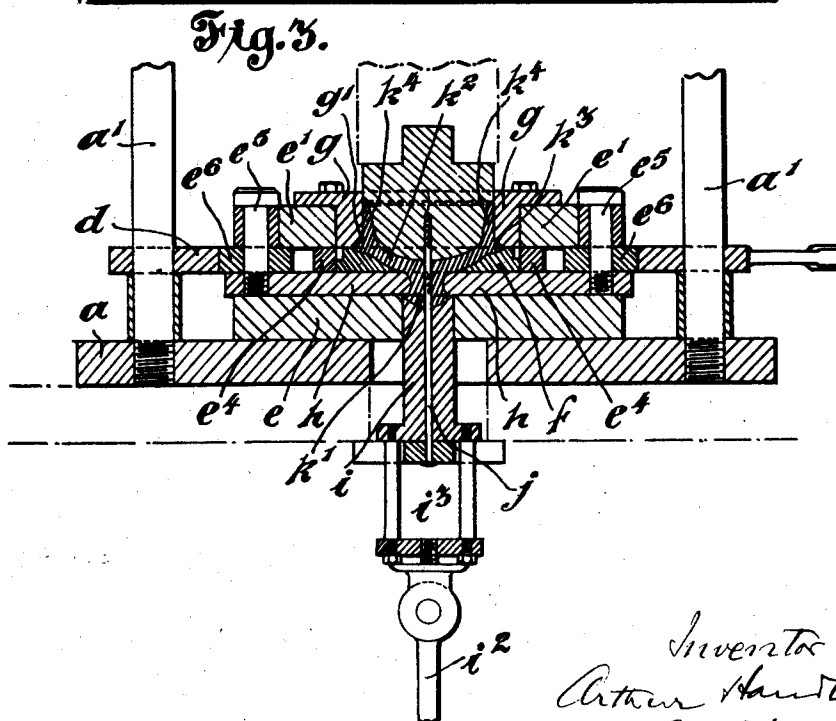
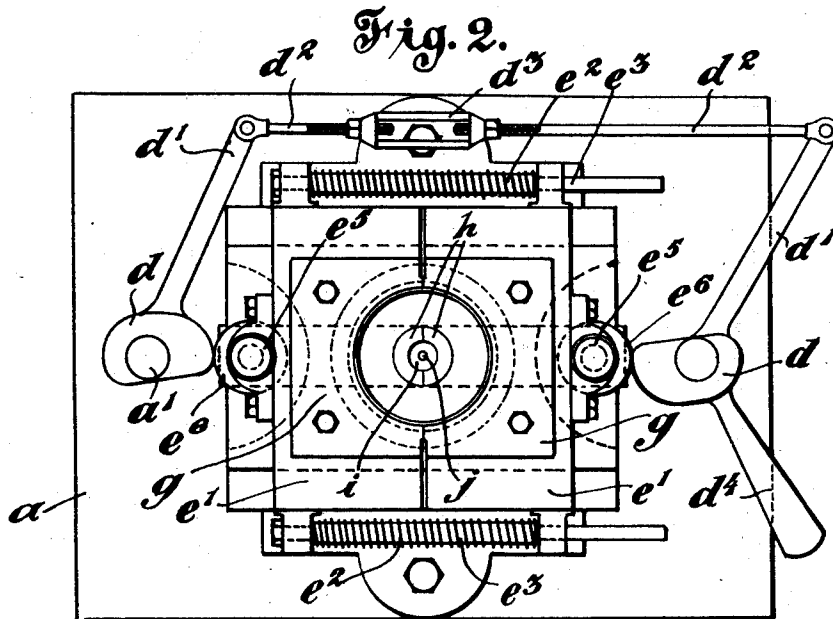
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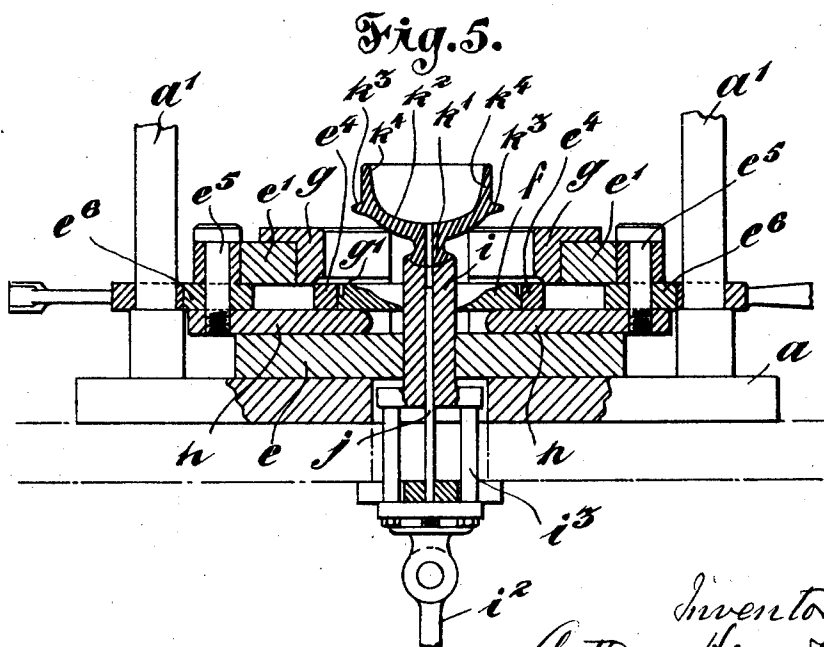
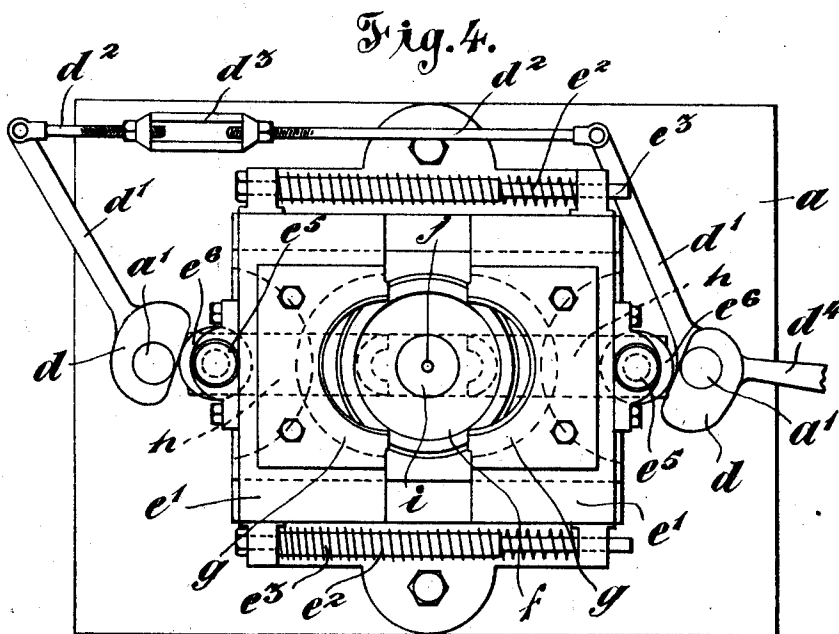
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PRESS FOR SHAPING COVERS OF TEAPOTS AND THE LIKE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

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PRESS FOR SHAPING COVERS OF TEAPOTS AND THE LIKE.

Application filed December 29, 1927, Serial No. 243,289, and in Great Britain December 8, 1926.

The present invention has relation to a press for manufacturing earthenware covers for teapots and the like, and has for its object primarily to provide for the more economical and expeditious manufacture of the article from clay dust or plastic clay by the present pressing operation than was heretofore the case.

In order that this invention may be clearly understood and readily carried into practice, reference may be had to the appended explanatory sheet of drawings, upon which:—

Figure 1 is an elevational view of a pressing machine for manufacturing an earthenware cover for a teapot or the like, constructed according to the present invention.

Figure 2 is a sectional plan view of the pressing machine shown in Figure 1.

Figure 3 is a sectional elevation illustrating the dies in engagement, having completed the manufacture of the cover in one stroke.

Figure 4 is a plan view of the female die in the open position, to permit of the removal of the cover.

Figure 5 is a sectional elevation of the female die in the open position, the cover being elevated ready for removal.

Referring to the drawings, the machine comprises a bed *a* whereon two uprights or vertical columns *a*¹ are mounted, terminating at their upper extremity in a stationary cross head *a*². A cross beam *a*³ is fixed across the uprights or columns, and a main vertical screw *b* is adapted to operate in a tapped bush or aperture in the cross head *a*², and is provided at its lower part with a member *b*¹ adapted to slidably operate but not rotate in the cross beam *a*³, which member at its lower part carries the male die *c* hereinafter more particularly referred to. The vertical screw *b* has a rotary or swivel connection with the slidable member *b*¹, and at its upper part carries a handle *b*², in well known manner, which may be provided with any suitable retentive means *b*³. Mounted upon each of the uprights or columns *a*¹ is a cam device *d*, having in each instance an arm *d*¹ (see particularly Figures 2 and 4), the two arms being united by a connecting rod *d*² incorporating a turnbuckle *d*³ or like adjusting device. One of the cam devices *d* carries an operating handle *d*⁴. The female die comprises a base *e* whereon two carrier members *e*¹ are slidably mounted.

These carrier members are normally urged apart by means of compression springs *e*² mounted on spindles *e*³. Each spindle *e*³ is attached to one carrier member adapted to slide in relation to the complementary carrier member. A one-piece annular female die element *f* (see particularly Figures 3, 4 and 5) is let into a cavity in a stationary part *e*⁴ of the base *e*, so as to be readily detachable therefrom and interchangeable. Associated with each carrier member *e*¹ are upper and lower die sections *g* and *h* respectively, adapted to operate above and below the one-piece annular female die element *f*. The upper die sections *g* are of semi-annular formation, and are located by means of flanges bolted to the carrier members *e*¹ (as illustrated). On their underside, they are recessed to constitute an annular channel *g*¹ (see particularly Figure 5), with the upper part of the female die element *f*. The lower die sections *h* have their extremities recessed and rounded (see particularly Figures 2 and 4) and are secured to the carrier members *e*¹ by vertical pins *e*⁵ whereon rollers *e*⁶ may be incorporated. Centrally within the base *e* an aperture is provided, wherein a central concavitous die *i* is adapted to slide upon or in relation to a fixed rod *j* normally protruding above the said die *i*. This central die *i* is adapted to be elevated by suitable foot mechanism *i*¹ *i*² *i*³ (Figure 1), when the lower die sections *h* (together with the upper ones *g*) have been displaced respectively away from one another (Figures 4 and 5). It will be appreciated from the foregoing that the carrier members *e*¹ are capable of being slid upon the base *e* and carrying the upper and lower die sections *g* and *h* therewith in reference to the stationary element *f*. The inward sliding displacement is effected by means of the two cams *d* co-operating with the rollers *e*⁶ against the action of the compression springs *e*².

The male die *c* is of boss-like formation (as illustrated), and is centrally apertured to receive the rod *j*.

In operation, two carrier members *e*¹ supporting upper and lower die sections *g* and *h* are urged together to complete the entire female die (see Figure 3), and clay dust or plastic clay is placed therein. The male die *c* is then caused to descend by operating the handle *b*², thereby causing the clay to occupy

the space between male and female dies (see again Figure 3), that is to say, pass beneath the lower sections *h* on to the central die *i* to constitute the knob *k*¹ (Figures 3 and 5), extend over the face of the female die *f* to constitute the dome or top *k*² of the cover, pass into the undercut part *g*¹ of the upper die sections *g* and adjacent part of the female die *f*, to constitute the locating flange *k*³, and extend around the upper part of the male die to form the annular wall *k*⁴. During this operation the knob is centrally perforated by means of the pin *j*. In order to remove the completed cover, the handle *d*⁴ is manipulated, the springs *e*² forcing the carrier members *e*¹ with their respective die sections *g* and *h* apart, the foot member *i*¹ then manipulated, causing the central die *i* to elevate the finished cover (Figure 5) whence it can be easily removed off the die by hand without fracture.

It will be appreciated that by simply changing the one-piece annular female die *f* and male die element *c* and upper and lower die sections *g* and *h*, the shape and dimension of the lid can be altered to suit different requirements.

In a modification of the present invention, instead of employing a detachable one-piece female die element *f*, same may be incorporated permanently in the base *e*, and instead of having detachable upper die section *g*, the carrier members *e*¹ themselves may constitute these features by being undercut to form the locating flange *k*³. The lower die sections *h* and central die section *i* are provided as in the previous instance. In this modification it will be appreciated that only the one shape and size of cover can be manufactured. In each instance, it will be understood that by employing a one-piece female die element *f*, the article when pressed has for its main part a plain outer and inner configuration. That is to say, there is no diametrical line giving the appearance that the cover has been made in two halves.

What I claim as my invention and desire to secure by Letters Patent is:—

1. Apparatus for the manufacture of an earthenware cover for a teapot or container comprising in combination a male die, a female die consisting of a one-piece concavitous body part, opposed pairs of relatively slidable upper and lower die sections associated with said female die, the lower sections being adapted to assist in constituting the cover handle, and the upper sections assist in constituting the annular wall and lateral locating flange of the said cover, and means for slidably displacing the opposed pairs of die sections for the removal of the cover.

2. Apparatus for the manufacture of an earthenware cover for a teapot or container

comprising in combination a male die, a female die consisting of a base, a detachable concavitous one-piece body part interchangeably supported thereby, opposed carrier members relatively slidable on the base, upper and lower die sections associated with each carrier member, the upper and/or lower sections being readily interchangeable, a central die section on the said body part, upper and lower and central die sections being adapted to constitute the external configuration of the cover including the knob-like handle, body part, locating flange and annular wall, and to permit of its withdrawal.

3. Apparatus for the manufacture of an earthenware cover for a teapot or container comprising in combination a male die, a female die consisting of a one-piece concavitous body part, opposed pairs of relatively slidable upper and lower die sections associated with said female die, the lower sections being adapted to assist in constituting the cover handle, and the upper sections assist in constituting the annular wall, and being undercut to further assist, in combination with the female die, in constituting the lateral locating flange of said cover, and means for slidably displacing the opposed pairs of die sections for the removal of the cover.

4. Apparatus for the manufacture of an earthenware cover for a teapot or container comprising in combination a male die, a female die consisting of a base, a detachable concavitous one-piece body part interchangeably supported thereby, opposed carrier members relatively slidable on the base, upper and lower die sections associated with each carrier member, the upper and/or lower sections being readily interchangeable, a central die section on the said body part adapted to slide vertically for ejection purposes, upper and lower and central die sections being adapted to constitute the external configuration of the cover, including the knob-like handle, body part, locating flange, and annular wall, and to permit of its withdrawal.

5. Apparatus for the manufacture of an earthenware cover for a teapot or container comprising in combination a male die, a female die consisting of a base, a detachable concavitous one-piece body part interchangeably supported thereby, opposed carrier members relatively slidable on the base, upper and lower die sections associated with each carrier member, the upper and/or lower sections being readily interchangeable, a central die section on the said body part adapted to slide vertically for ejection purposes, a stationary rod associated with the said central die section, upper and lower and central die sections being adapted to constitute the external configuration of the cover

including the knob-like handle, body part, locating flange, and annular wall, and to permit of its withdrawal.

6. Apparatus for the manufacture of an earthenware cover for a teapot or container comprising in combination a male die, a female die consisting of a one-piece concavitous body part, opposed pairs of relatively slidable upper and lower die sections associated with said female die, the lower sections being adapted to assist in constituting the cover

handle, and the upper sections assist in constituting the annular wall and lateral locating flange of the said cover, compression spring means tending to displace apart the opposed pairs of die sections for the removal of the cover, and hand operable cam mechanism adapted to operate against said spring mechanism for closing the die sections. 15

In witness whereof I have hereunto set my hand. 20

ARTHUR HANDLEY.