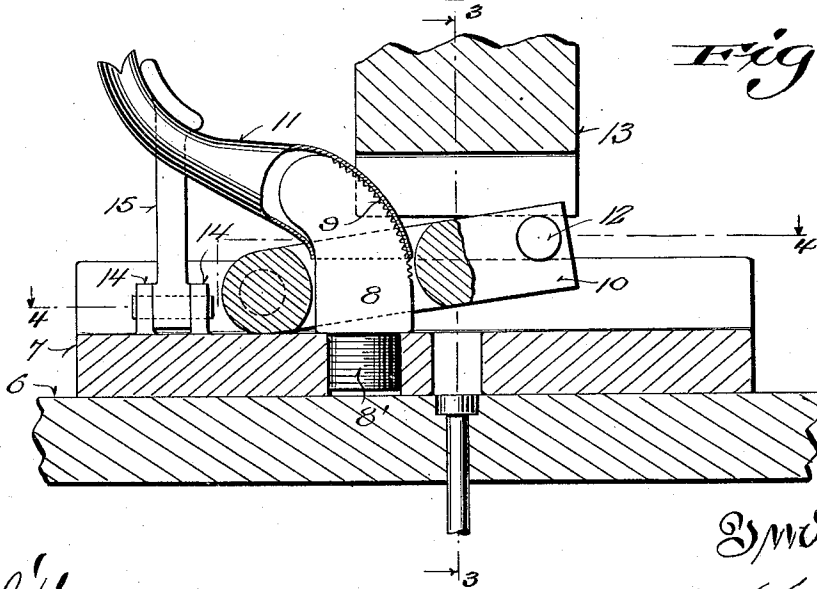
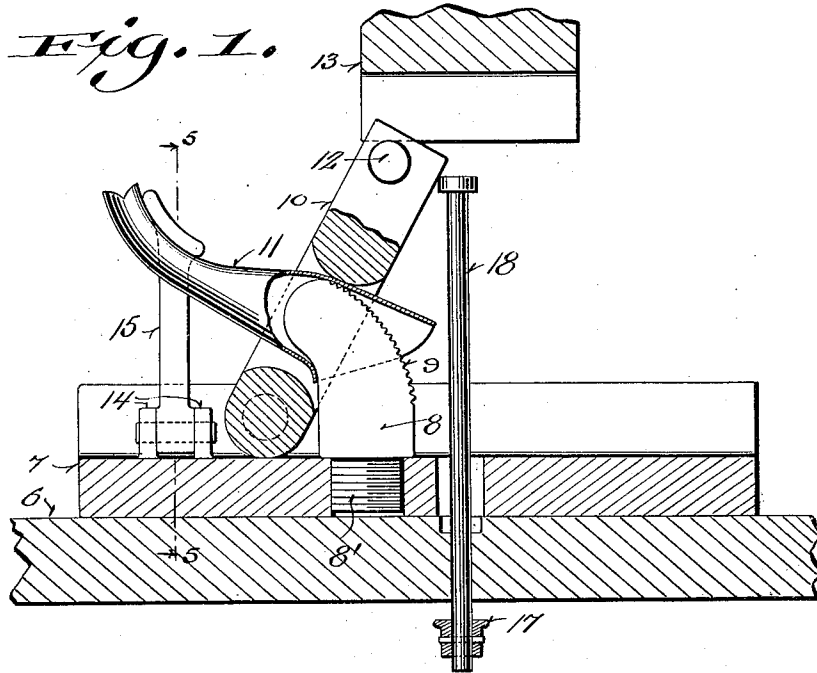


J. KOENIG.
DRAWING PRESS.
APPLICATION FILED APR. 5, 1915.

1,162,374.

Patented Nov. 30, 1915.

2 SHEETS—SHEET 1.



Witnesses:
Carroll Young
May Downey.

By *Joseph Koenig*
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Attorneys.

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Fig. 3.

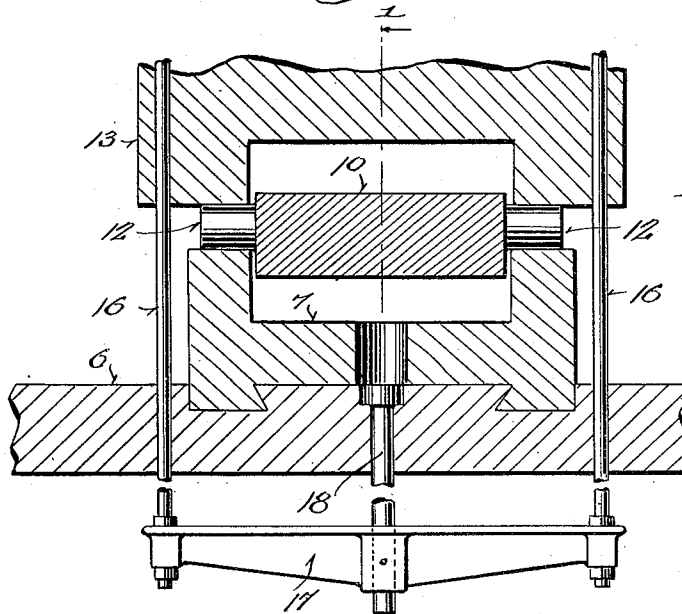


Fig. 5.

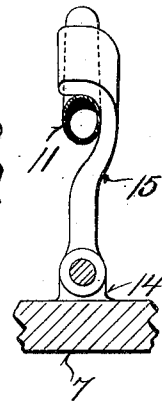
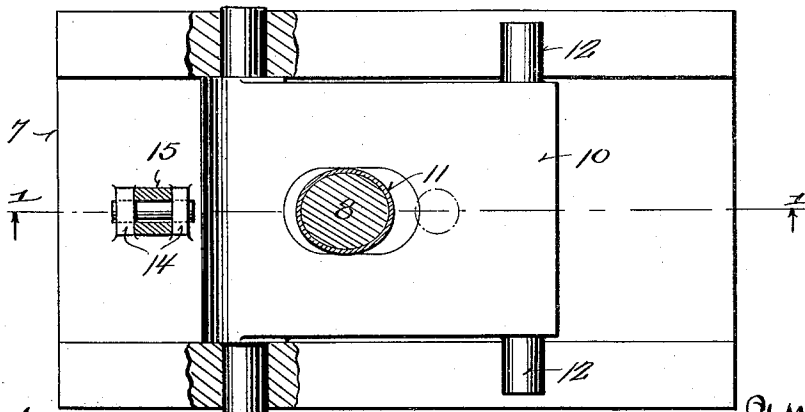


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH KOENIG, OF TWO RIVERS, WISCONSIN.

DRAWING-PRESS.

1,162,374.

Specification of Letters Patent.

Patented Nov. 30, 1915.

Application filed April 5, 1915. Serial No. 19,323.

To all whom it may concern:

Be it known that I, JOSEPH KOENIG, a citizen of the United States, and resident of Two Rivers, in the county of Manitowoc and State of Wisconsin, have invented certain new and useful Improvements in Drawing-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide simple drawing presses by which to facilitate the production of curved and preferably sheet-metal seamless spouts for coffee and tea pots, in performing the final step in a novel process of making such spouts for which aluminum is the preferred material.

Figure 1 of the drawings represents a sectional view of a fragment of a drawing press embodying my improvements and illustrates a partly completed spout positioned in the press for a drawing operation, the plane of the section being indicated by line 1—1 in Fig. 3; Fig. 2, a similar view illustrating a completion of the drawing operation; Fig. 3, a cross-section view indicated by line 3—3 in Fig. 2; Fig. 4, a plan view partly in horizontal section, the view being generally indicated by line 4—4 in Fig. 2, and Fig. 5, a partly sectional view of a detail of the machine, the view being indicated by line 5—5 in Fig. 1.

Referring by numerals to the drawings, 6 indicates the bed of my improved drawing press, and 7 a die-holder rigid on the bed. As a matter of detail, the die-holder is shown in tongue and groove union with the bed 6, but it may be otherwise in detachable rigid connection with said bed. In screw-thread union with the die-holder is a straight shank 8' of a preferably shouldered curvilinear horn 8, its shoulder being abutted against said die-holder, said horn being elliptical in cross-section and preferably file-cut or otherwise roughened upon the back thereof, as shown at 9.

Trunnioned in the die-holder is a drawing-die 10 for a partly completed curved spout 11 placed upon the horn 8, and the face of the drawing hole in the die is of rounding contour. The die 10 is provided at its free end with lateral lugs 12 designed to be in the path of the descending plunger

13 of the press and clearance for said die is had in its holder and said plunger.

The die-holder is shown provided with a pair of lugs 14 between which a spout-holder 15 is pivoted, and guided in the bed and plunger of the press are rods 16 connected to a crosshead 17 carrying a headed knockout rod 18 that is of itself guided in the bed and die-holder of said press. The plunger, and the knockout are reciprocative in practice by means common in drawing presses of common knowledge.

The plunger 13 and knockout 18 being elevated, a partly formed curved spout 11 is engaged with the drawing-die 10 and positioned on the horn 8, said die being then supported by said knockout, as shown in Fig. 1, to have its lugs 12 in the descending path of said plunger. The die is then in opposition to a flaring portion of the spout over the horn, and the holder 15 is swung up over the outer end of said spout. On descent of the plunger the die is swung down to shape the spout on the horn as shown in Fig. 2, the roughened portion of said horn preventing slipping down of said spout on said horn. The above operation having been completed, the plunger is returned to normal position, and at the same time the knockout 18 is actuated to lift the die to its former position, after which the spout is released from the holder and withdrawn from the horn of the press.

From the foregoing it will be understood that I provide a simple, economical and efficient drawing press for the final step in the shaping of a curved seamless spout, the pivotal drawing die being a novel feature of said press. The spout-holder may be variously applied to the press or it may be absent and the spout held by hand.

I claim:

1. A drawing press comprising a curvilinear horn, a pivotal die having a drawing hole that encompasses the horn in opposition to a curved spout thereon, and means for actuating the die.

2. A drawing press comprising a curvilinear horn having a roughened back, a pivotal die having a drawing hole that encompasses the horn in opposition to a curved spout thereon, and means for actuating the die.

3. A drawing press comprising a curvilinear horn, a pivotal die having a drawing hole that encompasses the horn in opposition

to a curved spout thereon, a spout holder, and means for actuating the die.

4. A drawing press comprising a curvilinear horn, a pivotal die having a drawing hole that encompasses the horn in opposition to a curved spout thereon, a pivotal holder for the spout positioned as aforesaid, and means for actuating the die.

5. A drawing-press comprising a curvilinear horn, a pivotal die having a drawing hole that encompasses the horn in opposition to a curved spout thereon, lugs extending from the die in the descending path of the plunger of the press, and means for returning the die to normal position when said plunger is lifted.

6. A drawing-press comprising a curvilinear horn, a pivotal die having a drawing hole that encompasses the horn in opposition to a curved spout thereon, lugs extending from the die in the descending path of the plunger of the press, and a die knockout reciprocative with said plunger.

7. A drawing press comprising a curvilinear horn attached to the die-holder of the press, a die trunnioned in said die-holder and having a drawing hole that encompasses the horn in opposition to a curved spout thereon, and means for actuating the die.

8. A drawing press comprising a curvilinear horn attached to the die-holder of the

press, a die trunnioned in said die-holder and having a drawing hole that encompasses the horn in opposition to a curved spout thereon, a spout-holder in connection with the aforesaid die-holder, and means for actuating the die.

9. A drawing press die-holder, and a curvilinear and shouldered horn having a shank screw-threaded in the die-holder, said horn being for engagement with a curved spout encompassed by the drawing hole of a die in pivotal connection with said die-holder.

10. A drawing press die-holder provided with lugs, a spout-holder in pivotal connection with the lugs for engagement with a curved spout on a curvilinear horn with which the die-holder is provided, the horn and spout thereon being encompassed by the drawing hole of a die pivotally connected to said die-holder.

In testimony that I claim the foregoing I have hereunto set my hand at Two Rivers, in the county of Manitowoc and State of Wisconsin, in the presence of two witnesses.

JOSEPH KOENIG.

Witnesses:

M. J. GAFFNEY,

A. H. GLOE.

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