June 11, 1929. A. L. NELSON 1,716,792

MOLDING APPARATUS

Filed June 15, 1925

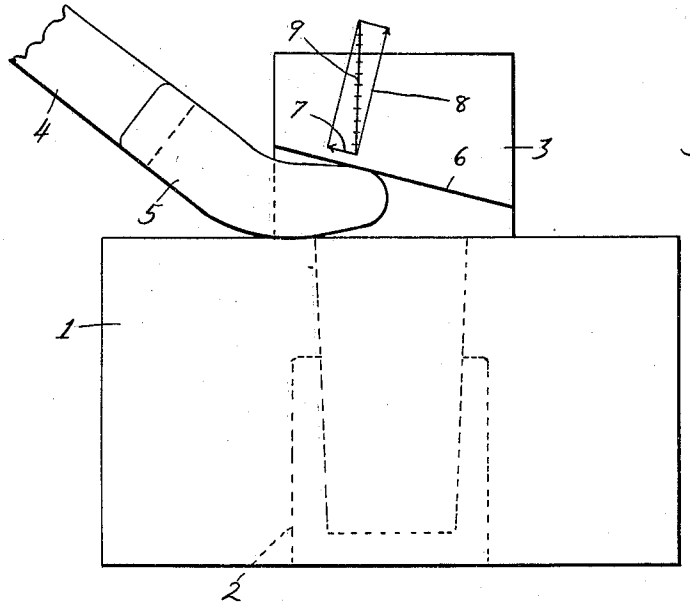
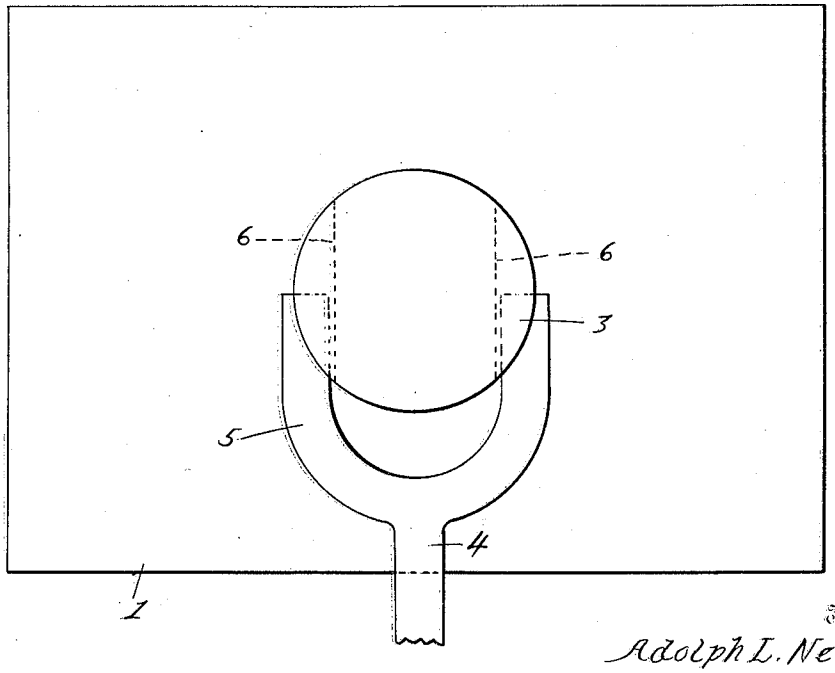


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

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MOLDING APPARATUS.

Application filed June 15, 1925. Serial No. 37,315.

The invention relates to molding apparatus and is particularly applicable to molding apparatus having as a part thereof a permanent core. One of the objects of the invention is to provide an apparatus which is so arranged that the permanent core may be easily and readily loosened from the mold. Another object is to provide the permanent core with a shoulder which is engageable by a rockable pry and is inclined to the direction of movement of the core by an amount such that the resultant force applied to the core through the pry is substantially parallel to the direction of movement of the core. Other objects of the invention reside in the novel features of construction and combinations and arrangements of parts as more fully hereinafter set forth.

In the drawings:—

Figure 1 is a side elevation of a molding apparatus embodying my invention;

Figure 2 is a plan view thereof.

1 is the mold, which is preferably formed of metal, and has in its lower portion the cavity 2. 3 is the core member insertable from the top of the mold into the cavity 2 thereof and guided by the portion of the mold between its top and the cavity. 4 is a pry for loosening the core member, this pry having the bifurcated end 5, the furcations of which engage the laterally extending shoulders 6 upon opposite sides of the core member, the pry being arranged to rock or fulcrum upon the top of the mold in the present instance.

For the purpose of readily and easily loosening the core member, I have, as shown in the present instance, inclined the shoulders 6 of the core member to the direction of movement of the core member and in the direction of movement of the contacting portion of the furcations of the pry, the amount of inclination being such that the resultant force applied to the core member through the pry is parallel to the direction of movement of the core member. As diagrammatically shown in Figure 1, a certain force indicated by the arrow 7 is exerted parallel to the shoulders 6 and in the direction of the movement of the contacting portions of the pry furcations. Also a certain other force, as indicated by the arrow 8, is exerted at right angles to the shoulders, the angle of inclination of these shoulders being such that the resultant force, as indicated by the arrow 9, is parallel to the direction of movement of the core member or longitudinally thereof.

To take care of inaccuracy in forming the shoulders upon the core members and at the same time to provide for lifting force upon each shoulder, clearance is provided between the inner sides of the furcations of the pry and the core member so that when applying the pry to the core the former may be swung about the axis of the latter to bring both furcations into contact with their respective shoulders. With this adjustment force upon the shoulders is assured during the raising movement of the core member.

What I claim as my invention is:

1. In molding apparatus, the combination with a mold, of a core member insertable into said mold, a rockable pry for loosening said core member, and cooperating bearing surfaces upon said core member and pry, one of said bearing surfaces being inclined to the direction of movement of said core member by an amount such that the resultant force applied to said core member through said pry is substantially parallel to the direction of movement of said core member.

2. In molding apparatus, the combination with a mold, of a core member insertable into said mold, a rockable pry for loosening said core member, and a shoulder upon said core member engageable by said pry and inclined to the direction of movement of said core member by an amount such that the resultant force applied to said core member through said pry is substantially parallel to the direction of movement of said core member.

3. In molding apparatus, the combination with a mold, of a core member insertable into said mold, a rockable pry for loosening said core member, and a shoulder upon said core member engageable by said pry and inclined to the direction of movement of said core member and in the direction of movement of the portion of said pry engageable therewith by an amount such that the resultant force applied to said core member through said pry is substantially parallel to the direction of movement of said core member.

4. In molding apparatus, the combination with a mold having a cavity, of a core member insertable into said mold and extending into said cavity, a rockable pry for loosening

said core member having furcations on opposite sides thereof, and shoulders on opposite sides of said core member engageable by said furcations and inclined to the direction of movement of said core member by an amount such that the resultant force applied to said core member through said pry is substantially parallel to the direction of movement of said core member.

5. In molding apparatus, the combination with a mold, of a core member insertable into said mold and provided with inclined shoulders on opposite sides thereof, and a pry provided with furcations on opposite sides of said core member engageable equally with said shoulders.

In testimony whereof I affix my signature.

ADOLPH L. NELSON.