E. H. MUMFORD.

JOLT RAMMING APPARATUS.

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1,052,086.

Patented Feb. 4, 1913.

Fig. 1

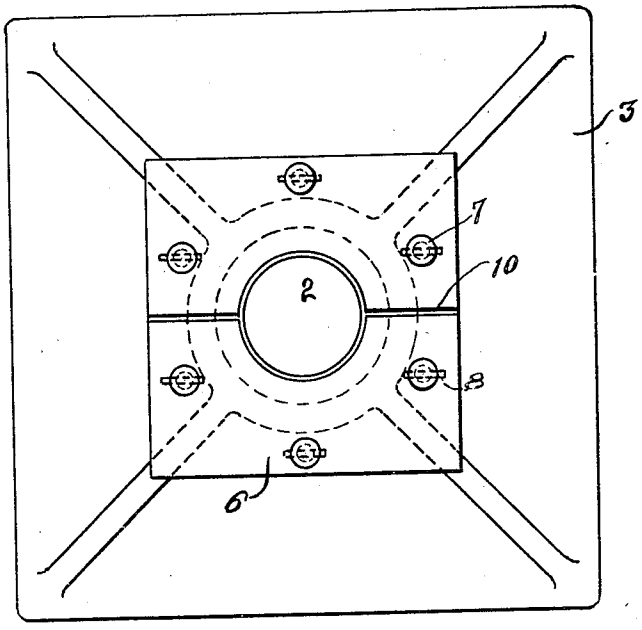
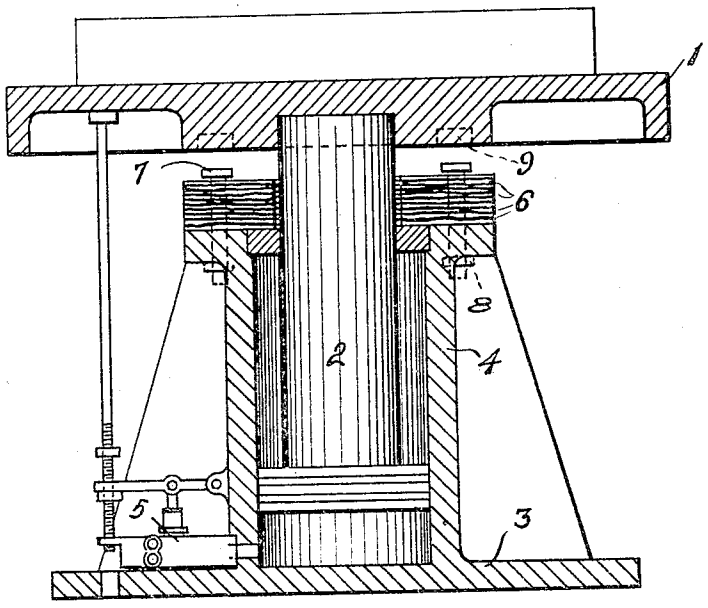


Fig. 2



WITNESSES

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JOLT RAMMING APPARATUS.

1,052,086. Specification of Letters Patent. Patented Feb. 4, 1913.

Application filed November 9, 1911. Serial No. 659,292.

To all whom it may concern:

Be it known that I, EDGAR H. MUMFORD, a citizen of the United States, residing at Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Jolt Ramming Apparatus, of which the following is a specification.

The invention relates to jolt ramming apparatus, and particularly to the impact receiving means and has for its primary object; the provision of an improved and simplified impact receiving device so arranged and constructed as to deaden the impact incident to the drop of the table, and thereby reduce the tendency of the sand in the molds carried by the table to rebound and loosen. One embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a plan view of the apparatus with the mold table removed; and Fig. 2 is a vertical section through the apparatus.

As the invention relates to the impact receiving means, the particular construction of the body of the machine is immaterial, the invention being applicable to all types of machines having impact surfaces. In the simple type of machine shown for illustration, 1 is the table for carrying the molds; 2 is the plunger for giving the table its reciprocatory movement; 3 is the base or anvil carrying the cylinder 4 in which the plunger moves; and 5 is the automatic valve mechanism for governing the operation of the plunger.

The impact receiving means consists of a series of relatively thin plates 6, preferably of ordinary sheet steel arranged one upon the other to form a pack. It is important that the sheets lie upon each other loosely, but in order to hold the plates in proper lateral position and to prevent too great a rebound of such plates, the bolts 7 are provided, which bolts extend loosely through the plates and are provided at their lower ends with cotter pins 8 to prevent their accidental displacement. The heads of these bolts 7 lie at such a distance from the cotter pins that a slight vertical movement of the plates is permitted. The lower surface of the table is drilled as indicated at 9 in order to receive the heads of the bolts. The plates 6 may be made in one piece, but for convenience in assembling are sometimes made in a plurality of sections, the plates as indicated in Fig. 1 being divided at 10 into two parts.

The plates 6 as indicated in Fig. 2 are not perfectly flat, but are preferably somewhat uneven, so that air spaces are provided between the various surfaces. These air spaces or pockets confine the air to a certain extent upon the fall of the table and materially assist in deadening the impact of the table, and rendering the device more effective. The number of plates may be varied to suit conditions, the deadening effect being proportional to the number of plates employed. By the use of this device the sharpness of the impact may be reduced to any desired extent, the rebound in the flasks and sand of the molds being correspondingly reduced. One of the important advantages incident to the structure consists in its durability, the plates being practically indestructible and therefore more economical in use than the leather and similar deadening means heretofore employed, which means require frequent replacing.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. The combination with a jolt ramming machine having a vertically reciprocable table, an anvil, and means for reciprocating the table, of an impact receiving means comprising a plurality of relatively hard plates arranged loosely in contact one upon the other.

2. The combination with a jolt ramming machine having a vertically reciprocable table, an anvil, and means for reciprocating the table, of an impact receiving means comprising a plurality of sheet metal plates arranged in a relatively loose pack.

3. The combination with a jolt ramming machine having a vertically reciprocable table, an anvil, and means for reciprocating the table, of an impact receiving means comprising a plurality of sheet metal plates arranged one upon the other in a pack, and means for maintaining the plates in position.

4. The combination with a jolt ramming machine having a vertically reciprocable table, an anvil, and means for reciprocating the table, of an impact receiving means comprising a plurality of uneven sheet

metal plates arranged one upon the other in a pack.

5. The combination with a jolt ramming machine having a vertically reciprocable table, an anvil, and means for reciprocating the table, of an impact receiving means comprising a plurality of sheet metal plates arranged loosely one upon the other, and means for limiting the vertical movement of the plates.

6. The combination with a jolt ramming machine having a vertically reciprocable table, an anvil, and means for reciprocating the table, of an impact receiving means comprising a loose sheet metal plate lying between the anvil and table.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

EDGAR H. MUMFORD.

Witnesses:
JAMES C. BRADLEY,
LETITIA A. MYERS.