Sept. 2, 1930. R. P. M. DAVIS 1,774,547

MOLD

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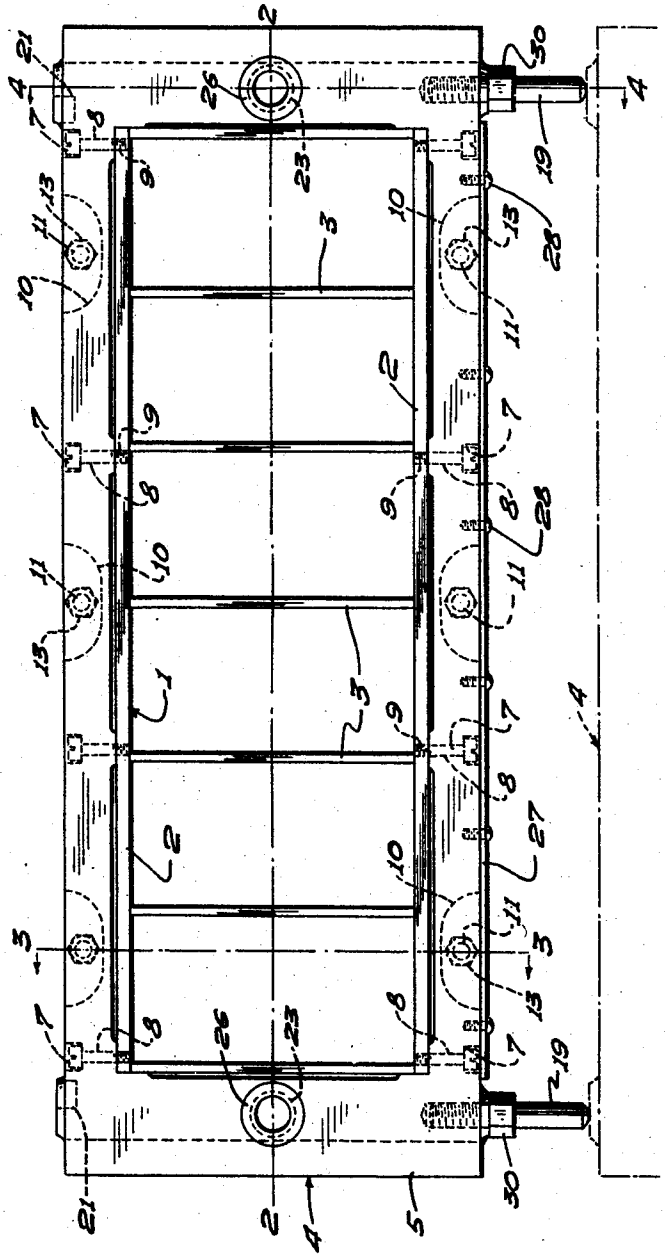


Fig. 1.

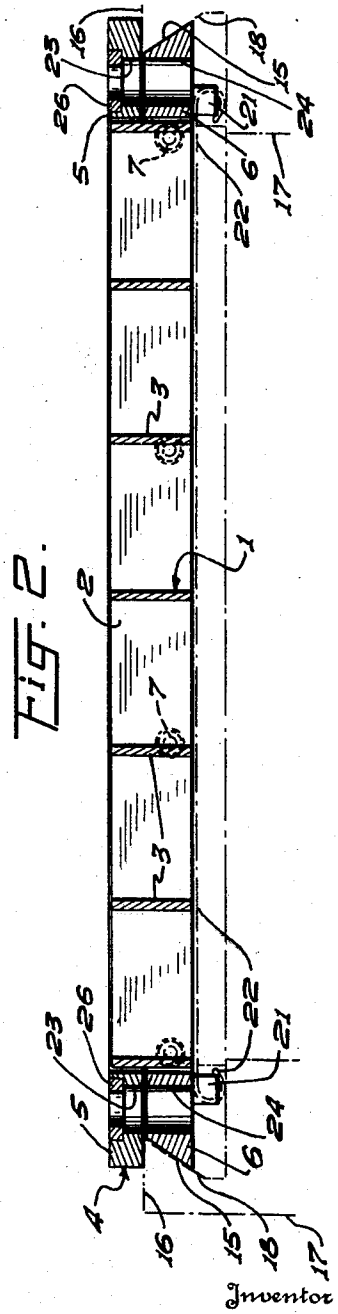


Fig. 2.

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Fig. 3.

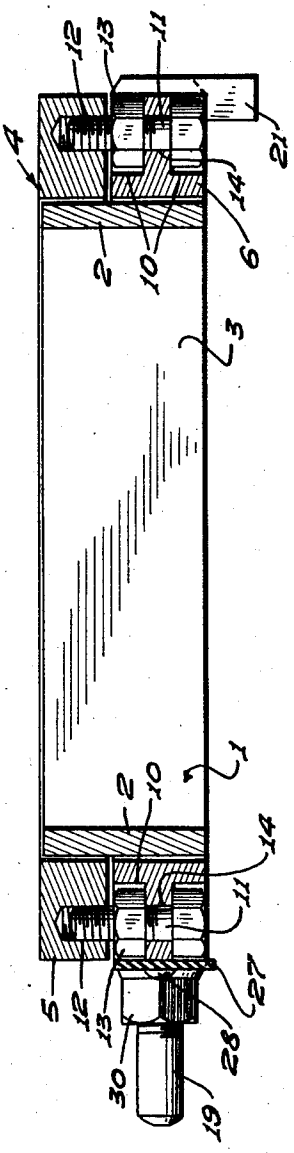
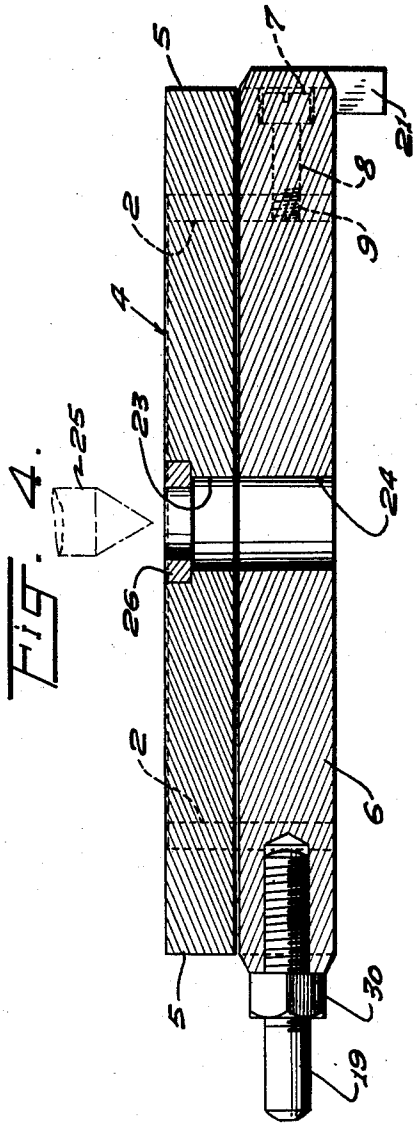


Fig. 4.



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UNITED STATES PATENT OFFICE

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MOLD

Application filed August 11, 1928. Serial No. 299,027.

My invention relates to molds for brick making machines.

In the manufacture of molded brick it has been the practice to discard the mold when the wear due to slicking has decreased the thickness of the brick to the allowable limit.

In practice the mold is discarded when it has been reduced by wear 1/16″ in thickness, which according to good authority results in the scrapping of about 95% of the original material of which molds are made. Furthermore, when the old mold is worn away and replaced with a new mold, according to present practice, the brick from the new mold are thicker than the brick from the old mold.

The object of my invention is to eliminate such wear from the mold proper and to cause it to occur on a less expensive part.

A further object of the invention is to practically eliminate any variation in the brick by obviating the necessity of replacing worn molds with new and thicker molds.

Other and further objects of the invention will be in part described and in part obvious as the description is proceeded with.

In the accompanying drawings forming part of this specification:

Figure 1 is a plan view of the improved mold.

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1; and

Figure 4 is a section on the line 4—4 of Figure 1.

Referring more particularly to the drawings wherein like reference numerals refer to corresponding parts throughout the several views, 1 denotes an open mold shell of the multiple compartment type comprising side walls or bars 2 and partitions 3. This mold shell is supported within a split casing 4 molded or otherwise formed to snugly receive the shell.

The casing 4 is composed of upper and lower rectangular members 5 and 6 respectively, the sides and ends of which snugly enclose the side walls 2 and end partitions 3 of the mold, when the two members 5 and 6 are assembled in superposed position.

The mold is rigidly screwed to either upper or lower casing member, but as here shown to the lower casing member 6 by means of bolts 7 which pass through openings 8 in the side walls of the member 6 and screw into threaded openings 9 in the side walls 2 of the mold.

In order to bring the wearing surface of the top member 5 of the casing 4 slightly above the upper surface of the mold shell 1, in practice about 1/32 of an inch, headed screws 11 are employed which are located in recesses 10 in the lower casing member 6. These screws 11 extend upward through the opening 14 in the lower casing 6 and into threaded openings 12 in upper casing member 5, and are locked in place by jamb nuts 13. As wear occurs on the upper casing member 5 it is taken up by means of the adjusting screws 11, restoring the upper casing member 5 to its normal position which is about 1/32 of an inch above the mold shell 1. A thin liner or spacer plate, not shown, may also be inserted between the two sections 5 and 6 of the casing 4.

After the maximum amount of wear of the top member has been obtained and compensated for by the adjusting screws 11, or by the use of spacer plates of increasing thickness, the upper casing member 5 is discarded and replaced with a new and interchangeable corresponding part. As the breadth of the casing members is much greater than that of the standard mold, as used at present, proportionately greater resistance to wear is offered and a correspondingly increased use is possible before adjustments become necessary. It will of course be understood that shell 1 and member 6 will last indefinitely. Should the wear on the upper section 5 become so uneven as to render this part unserviceable it may be replaced in an inverted position, thus presenting a new wearing surface.

In order to facilitate movement of the mold to and from various parts of the brick machine for filling, stripping, cleaning and other operations, not shown, the ends of the lower casing member 6 are notched or beveled as at 15 to accommodate the reversely beveled rails 16, suitably mounted in the main frame 17

of the brick machine. These rails serve as a guide and support for the mold, and restrain the latter against upward movement. In other words these rails constantly confine the molds in their travel through the machine. It will be noted that the bevel faces 15 of the ends of the lower casing member 6, engage the reversely beveled face 18 of the rails 16 and that the upper casing member 5 rests at its ends upon the flat top surface of the rails thus effectively securing the molds against lateral and upward movement but with freedom of longitudinal movement with respect to the rails. It is understood that any design of notch may be used.

An opening 23 in the upper casing member 5 and a corresponding opening 24 in the lower casing member 6 are engaged by the dowel 25 of the stripper, not shown. This dowel serves to center the mold with relation to the stripper. The opening 23 is fitted with a renewable bushing 26 which may be replaced as the dowel hole becomes worn. The opening 24 in the lower casing member, and the lower part of the opening 23 in the upper casing member, are made larger than the hole in the bushing 26. This is done to permit dirt or mud to pass through readily, preventing a possibility of clogging the opening.

In practice the mold is pushed along the tracks 16 by any suitable means, not shown, and on this rail are located a multiple of molds in the various positions required for filling, stripping, slicking, etc. Intermittingly these molds are advanced forward along the rail, and in the process of advance pallets 22 are introduced on a level immediately below the lower surface of the mold. Lug 21 on the mold, which is a part of lower casing 6 and extends below the lower surface of the mold comes in contact with the pallet as the mold moves forward on the rail and carries or pushes the pallet forward with the mold as the mold continues in its forward motion in the machine, and also locates the pallet in its relation with the mold. This lug eliminates the necessity of separate push fingers for each and every pallet in the machine and keeps the pallet in the proper relationship with the mold, which in the process of manufacture is vitally important.

As described before, the mold rides on rail 16 and in the machine there are a multiple of molds located one in advance of the other at the locations required for filling, slicking and stripping. Studs 19 screwed into the upper portions of said casing member 6 are adjustable in length by nuts 30 to properly locate the molds in their relation to one another so that in the forward motion of the molds the lugs 19 on each mold coming in contact with the rear of the advance mold pushes the advance mold forward when the rear mold is advanced by a pusher, not shown. These lugs on the mold obviate the necessity of having a separate pusher for each individual mold, and when the molds are advanced in the process of manufacture in the machine the rear mold by means of these lugs advances each mold immediately ahead.

Should there be a deposit of dirt, mud or scum on the pallet 22, or cover plate, not shown, this may be removed by means of a scraper strip 27 such as rubber held on the forward side of the mold by screws 28 as the mold advances over the pallet or cover plate. This cleaner or scraper prepares a clean surface for the mold to rest upon.

What I claim is:

1. A brick mold comprising a two part casing, an inner mold shell connected to one part of the casing, the wearing part of said casing projecting above the top of the mold shell.

2. A brick mold comprising a two part casing, an inner mold shell connected to one part of the casing, the wearing part of said casing projecting above the top of the mold shell, said last named part being readily removable and replaceable.

3. A brick mold comprising a mold shell, upper and lower casing members adapted to receive therein said shell and spacer means acting between said casing members for maintaining the top surface of the removable casing member above the top of the mold shell.

4. In a brick making machine, a main frame, tracks mounted in said frame, a mold shell, a casing for the shell comprising upper and lower members, means for connecting said members together and means for connecting the shell to one member of the casing, one or both members being notched to receive the said tracks.

5. A brick mold comprising upper and lower casing members detachably connected together, a mold shell within said members comprising sides and ends and partitions and connected to one of said members, the upper edges of said sides and ends and partitions being below the wearing surface of said upper member and means for compensating for the wear of said upper member.

6. A brick mold comprising a mold shell, upper and lower casing members for said mold shell, the wearing surface of the upper casing member being above the upper parts of the shell, means for connecting said casing members together in superposed relation, and means for maintaining the effective thickness of said casing members.

In testimony whereof I affix my signature.

ROY P. M. DAVIS.