S. E. YOUNG.

MOLD.

APPLICATION FILED JUNE 23, 1919.

1,326,246.

Patented Dec. 30, 1919.

3 SHEETS—SHEET 1.

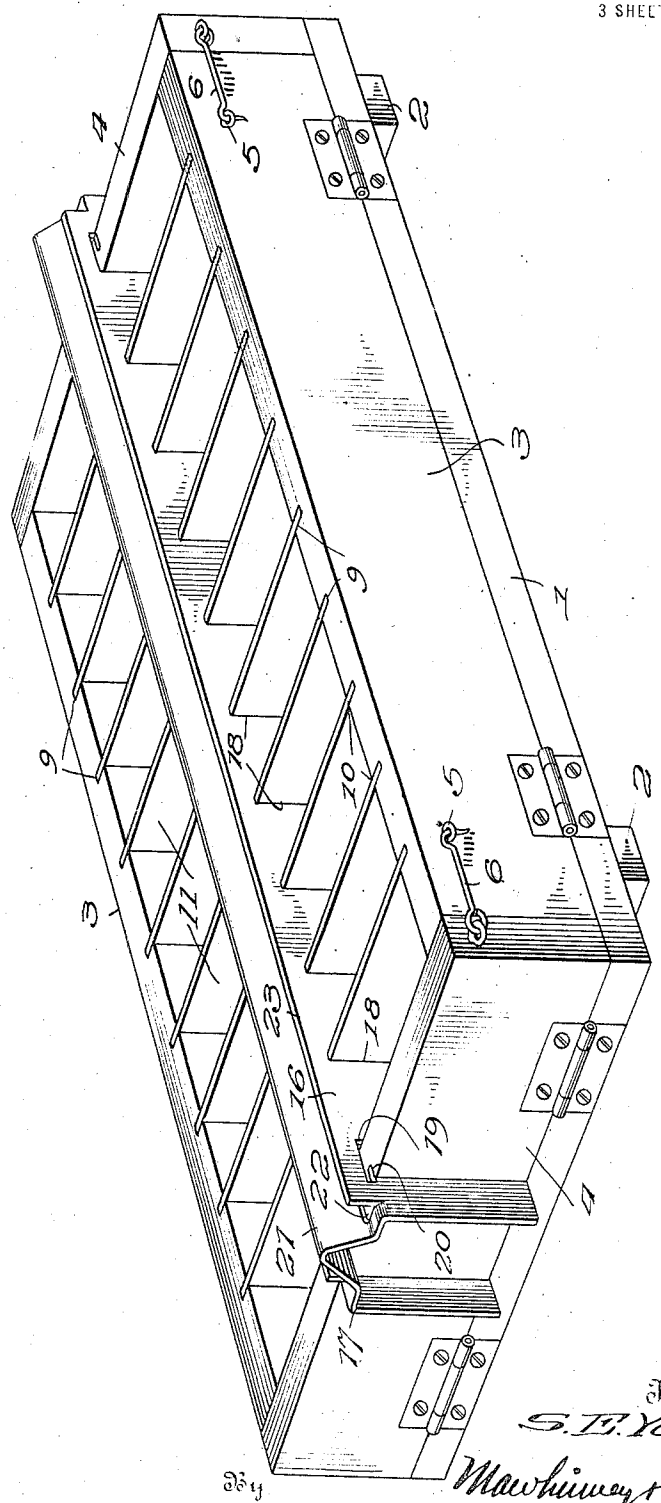


Fig. 1.

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3 SHEETS—SHEET 2.

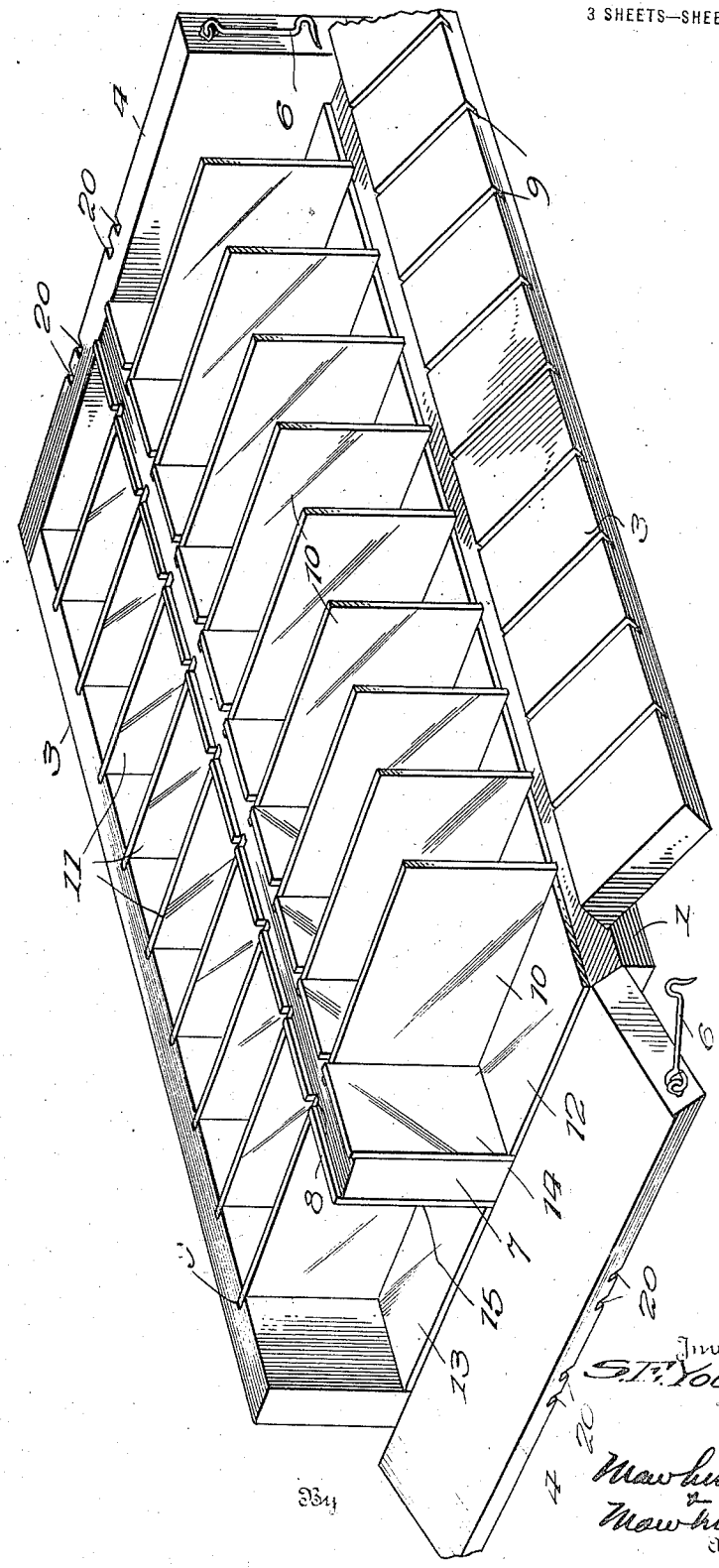


FIG. 2.

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3 SHEETS—SHEET 3.

FIG. 3

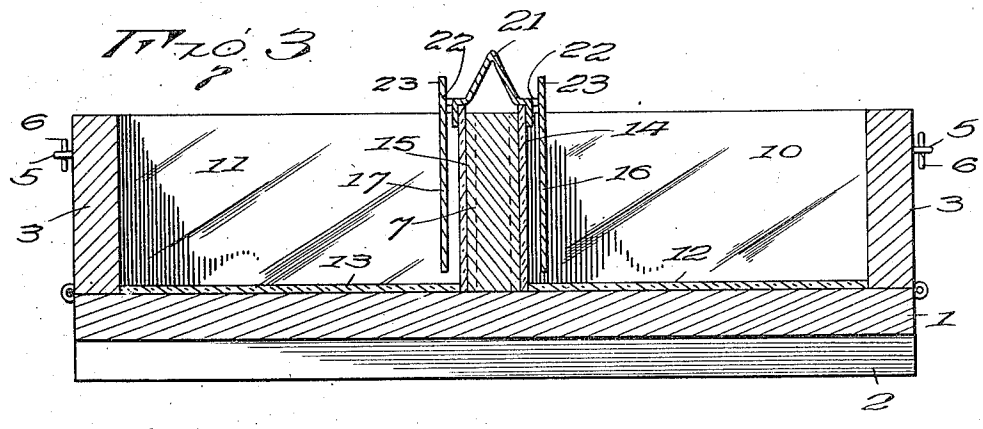


FIG. 4

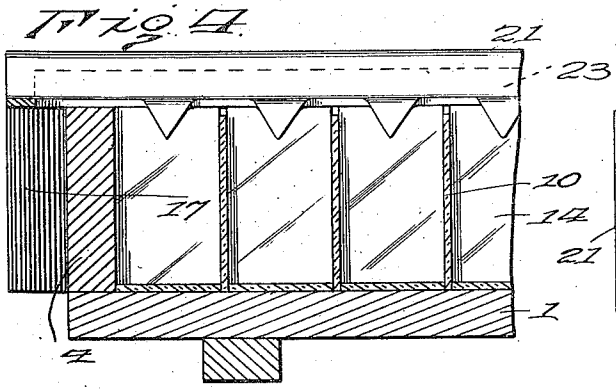


FIG. 5

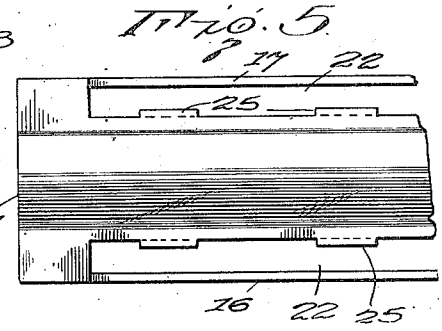


FIG. 6

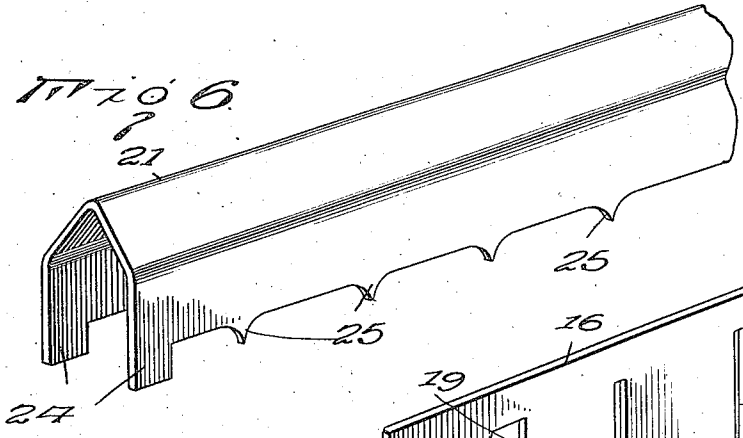
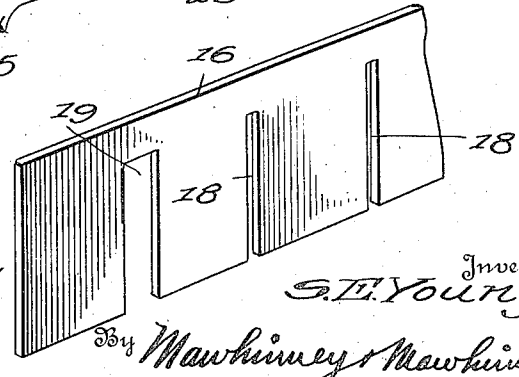


FIG. 7



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UNITED STATES PATENT OFFICE.

SAMUEL E. YOUNG, OF ATLANTA, GEORGIA.

MOLD.

1,326,246. Specification of Letters Patent. Patented Dec. 30, 1919.

Application filed June 23, 1919. Serial No. 306,000.

To all whom it may concern:

Be it known that I, SAMUEL E. YOUNG, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Molds, of which the following is a specification.

The present invention relates to improvements in molding machines and has for an object the provision of an improved machine in which bricks, blocks, or other similar articles may be molded with facings made of a compound giving the same a glossy or polished appearance or finish.

It is another object of the present invention to provide an improved mold box in which separators are used to segregate the facing composition from the body of the bricks or the like.

A further object of the present invention resides in providing a simple and inexpensive device for use in connection with mold boxes wherein the facings of bricks or other articles may be molded at the same time with the body portions of the brick with a view to the production of bricks or like articles having smooth and glossy surfaces imparted by a more expensive material, while the main body portion of the brick is composed of a rough inexpensive material.

The invention also contemplates the use of glass or other vitreous linings for the mold, which coöperate with the material used for the facings to impart a smooth and glossy finish to the exterior of the articles.

The invention will be more fully described in connection with the accompanying drawings, wherein like parts are designated by like symbols throughout the several views, and in which:

Figure 1 is a perspective view of an improved molding machine constructed in accordance with the present invention.

Fig. 2 is a similar view showing a partially knock-down condition of the machine.

Fig. 3 is a cross sectional view taken through the machine.

Fig. 4 is a fragmentary longitudinal sectional view.

Fig. 5 is a fragmentary top plan view of the separators and shed.

Fig. 6 is a partial perspective view of a slightly modified form of shed, and

Fig. 7 is a similar view showing one of the separators used in connection with the shed illustrated in Fig. 6.

Referring now more particularly to the drawings, 1 designates a base supported on cleats 2, and having hinged thereto side and end walls 3 and 4 respectively. Eyes 5 on the sides 3 are arranged to receive hooks 6 pivoted on the ends 4 whereby the sides and ends may be held in an upright position as shown in Fig. 1 to form an inclosed mold box.

A partition 7 is arranged centrally within the mold box between the ends 4, and said partition 7 and the sides 3 are provided with slots 8 and 9 respectively to slidably and removably receive series of division plates 10 and 11. These division plates are spaced suitable distances apart to give the required width of the bricks or other articles to be molded.

The partitions 10 and 11 are arranged to rest upon glass or other vitreous pallets 12 and 13 which are laid on the base 1 and these pallets are preferably made in such sizes that each pallet will extend beneath approximately five of the mold spaces defined by the division plates 10 and 11. Glass, porcelain, or other vitreous liners 14 and 15 are positioned against opposite sides of the partition 7 within the various mold spaces, and such pallets and liners act to impart a smooth and glossy finish to the exterior surfaces of the bricks or other articles molded in the machine.

In conjunction with the glass pallets and liners I also preferably use a composition for the facings of the bricks, which is different from the body portions of the bricks which may be made of cheaper and rougher material, and in carrying out this object I employ separators 16 and 17, which are slotted throughout as indicated at 18 in order to straddle the division plates 10 and fit down within the mold spaces between such division plates. As shown in Fig. 3, these separator plates 16 and 17 terminate a short distance above the glass pallets 12 and 13 in order to allow the facing compound to escape beneath the separators and to be spread over the upper surfaces of said pallets.

The separator plates 16 and 17 are also preferably provided with enlarged slots 19 adapted to fit over the ends 4 of the mold box, and to prevent possible lateral displace-

ment of the separators it is preferable to form slots 20 in the outer facings of the end walls 4 for the purpose of receiving the portions of the separator plates adjacent the slots 19. In the form shown in Fig. 1 the two separator plates 16 and 17 are formed in one piece with a shed 21 made in inverted V-shape and having diverging walls sloping toward the opposite separator plates whereby to direct the facing compound which is poured onto the shed 21 down into the spaces confined between the separator plates 16 and 17 and the end liners 14 and 15. There are longitudinal running slots 22 at the lower edges of the divergent walls of the shed 21 and, where the shed and separators are made from a single piece of sheet metal, these slots 22 are provided by stamping out and striking up flanges 23, which form continuations of the separator plates and act to catch the facing compound as it flows down the divergent walls of the shed 21 in order to insure the passage of the compound through the slots 22.

The shed is further furnished with claws 25 projecting downwardly from the lower longitudinal edges of the divergent walls of the shed 21, and these claws 25 are provided to engage the glass liners 14 and 15 as clearly shown in Fig. 3, thus centering the shed and maintaining the liners in upright position. Referring more particularly to Figs. 6 and 7, a modification of the invention consists in making the shed and the two division plates all in separate pieces and in accordance with this form of the invention, while the separators 16 and 17 are substantially unchanged, the shed 21 differs in that there are added thereto lugs 24 provided to embrace the outside faces of the end walls 4 of the mold box so as to hold the shed against longitudinal movement.

In use, the machine is set up substantially as shown in Fig. 1 and the facing compound poured over the shed 21, which deflects such compound and causes it to flow down the divergent walls and into the spaces confined between the glass liners 14 and 15 and the separator plates 16 and 17. As the facing compound is more expensive than the body compound it is desirable to use as little of such facing compound as is necessary to impart a smooth and glossy facing to the articles and the separators are so arranged as to cut off small spaces at the ends of each brick or block in the machine, into which such facing compound enters and partially sets before the body compound is poured into the several mold spaces formed between the division plates outside of the separators. After such facing compound has partially set and the body compound has been poured into the mold spaces the separators 16 and 17 are removed to allow the facing and body compounds to flow together and become cemented in a solid mass. The object in allowing the facing compound to partially set before the division plates are removed is to avoid the heavier and rougher material composing the body compound finding its way through the facing compound to the exterior of the bricks or blocks.

Where the shed and separators are made in separate pieces, these parts are more convenient and less troublesome to handle especially in the larger machine, as the same may be put in place and removed individually.

The use of glass, porcelain, or some other vitreous material for the construction of the pallets 12 and 13 and the end liners 14 and 15 is for the purpose of imparting to the outer surfaces of the bricks or blocks the desired glossy or polished appearance, and by the use of this invention bricks or blocks may be manufactured having a highly polished appearance resembling marble. The facing compound used may be made out of various materials in accordance with several different formulas. For instance, one satisfactory formula consists in uniting one part of common gray cement with two parts fine sand and ten per centum by weight of cement of hydrated lime. Another formula may consist in one part white cement, two parts fine white sand and ten percentum by weight of cement of hydrated lime. Still another formula consists in uniting one part of water-proof white cement with two parts of ground marble. Still another formula for this facing compound may consist in one part white water-proof cement with one part marble dust and one part ground marble, passing 20–30 sieve.

Of course the above are merely examples of compounds that may be used in connection with the improved molding machine above described and if desirable any mineral colors may be added to secure the desired color in the brick, tile, or other articles molded.

In the use of this machine there is no burning or tamping required, but the compounds are allowed to remain in the machine for twenty-four to forty-eight hours, depending on climatic conditions, after which the articles are removed and allowed to set thoroughly before using, which requires from two to four weeks.

I have described and illustrated preferred and satisfactory constructions, combinations, and arrangements of parts, but it is obvious that various changes may be resorted to without departing from the spirit of my invention, provided such changes fall within the scope of the appended claims.

What I claim is:

1. A mold box having a plurality of compartments for molding a number of articles, a separator extending into said sev-

eral compartments and for segregating the facing material from the body material of the articles, and means between the mold box and separator for preventing the lateral displacement of the separator.

2. A mold box having a plurality of compartments for molding a number of articles, a separator extending into said several compartments for segregating the facing material from the body material of the articles, and a hopper in connection with said separator and common to all of said compartments for delivering the facing material into the spaces confined by said separator.

3. A mold box having a mold space therein, a separator for cutting off a portion of the mold space from the remainder thereof whereby to segregate the facing material from the body material of the articles to be molded, and a shed for directing the facing material into such cut-off portion of the mold space.

4. A mold box, a partition in said mold box, separators at opposite sides of said partition and spaced therefrom for segregating the facing material from the body material of the articles to be molded, and a shed for directing the facing material into the spaces confined by said separators and partition.

5. A mold box having means to form segregated spaces therein for receiving the facing material of the articles to be molded, liners in the ends of the segregated spaces, and means to direct the facing material into the segregated spaces and acting to hold the liners in place.

6. A mold box including sides and ends, a partition in said mold box, division plates arranged between said sides and partition, and separator plates fitted in the mold box at opposite sides of said partition and spaced therefrom for segregating the facing material from the body material of the articles to be molded.

7. A mold box including knock-down sides and ends, a partition extending between said ends, division plates between said sides and partition, and separators arranged at opposite sides of said partition and extending into the spaces formed by said division plates for segregating the facing material from the body material of the articles to be molded.

8. A mold box including a base, sides and ends hinged to said base, fastenings for holding said sides and ends together in upright position, division plates arranged between said sides, a partition to which said division plates are joined, and separators at opposite sides of said partition and extending into the spaces between said division plates for segregating the facing material from the body material of the articles to be molded.

9. A mold box, a partition therein, division plates in the box, separator plates adapted to be placed close to the partition on opposite sides thereof and cutting off segregated spaces to receive facing material, and an inverted V-shaped shed on the partition for directing the facing material into the segregated spaces.

10. A mold box, a partition in said mold box, a vitreous pallet in the bottom of said mold box, vitreous liners placed against said partition, separators at opposite sides of said partition and spaced from said vitreous liners for segregating the facing material from the body material of the articles to be molded, and a shed for directing the facing material into the spaces confined by said separators and liners.

11. A mold box composed of a base, knock-down sides and ends on said base, said sides having slots therein, a central partition in said box also having slots therein, division plates slidably fitted in the slots in said side walls and partition, glass pallets in the bottom of said mold box, glass liners arranged against said partition, a pair of separator plates fitted at opposite sides of said partition and having slots fitting over said division plates, and a shed mounted between said separators for directing facing material into the spaces confined between said glass liners and separators.

SAMUEL E. YOUNG.