

944,442.

3 SHEETS—SHEET 2.

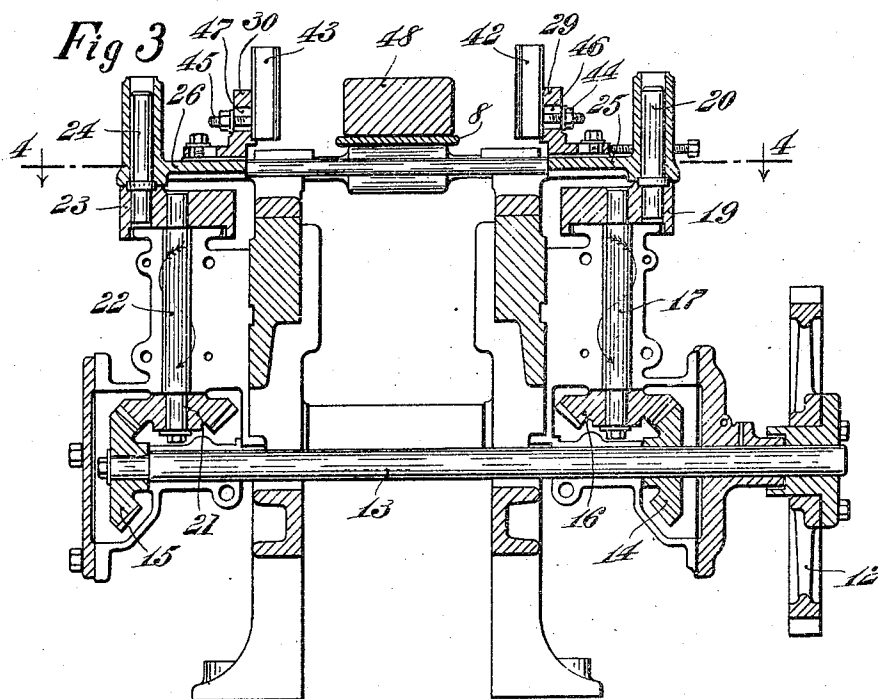
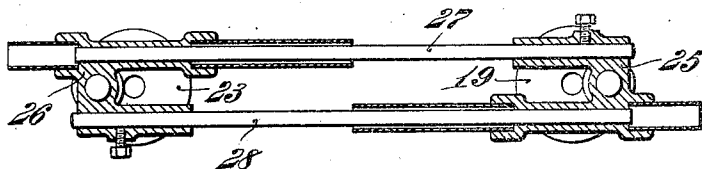


Fig 4



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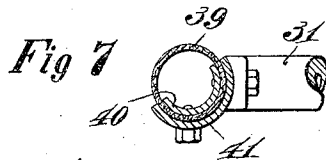
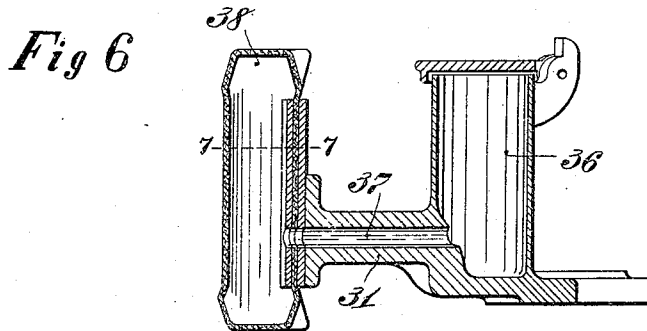
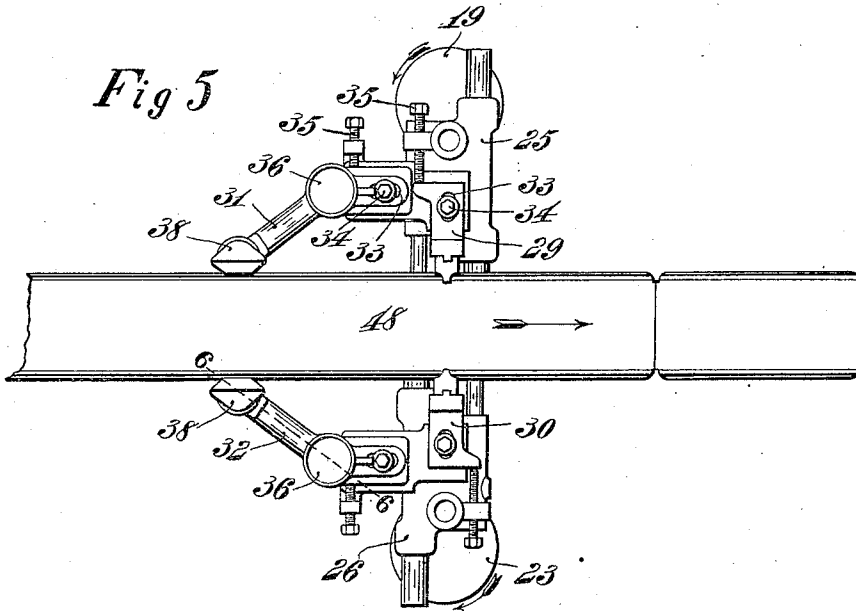
ATTORNEY. .

H. K. KING.
BRICK MACHINE, INDENTING.
APPLICATION FILED MAR. 17, 1908.

944,442.

Patented Dec. 28, 1909.

3 SHEETS—SHEET 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HOWARD K. KING, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO CHAMBERS BROTHERS COMPANY, A CORPORATION OF PENNSYLVANIA.

BRICK-MACHINE, INDENTING.

944,442.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed March 17, 1908. Serial No. 421,619.

To all whom it may concern:

Be it known that I, HOWARD K. KING, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented a new and useful Brick-Machine, Indenting, of which the following is a specification.

My invention relates to improvements in brick machines of the class in which the moving bar of clay is indented at regular intervals at points where the same is to be cut into brick lengths.

The invention comprises means whereby the indenting mechanism will operate upon the clay bar without adhering thereto.

Referring to the drawings:—Figure 1 is a plan view of a portion of the brick machine showing my mechanism. Fig. 2 is an elevation of the same. Fig. 3 is a vertical cross section through the cranks, the drawing being on a somewhat larger scale than that of Figs. 1 and 2. Fig. 4 is a horizontal section on line 4—4 of Fig. 3. Fig. 5 is a plan view showing the parts in the different position from that shown in Fig. 1. Fig. 6 is a section on line 6—6 of Fig. 5. Fig. 7 is a section on line 7—7 of Fig. 6.

Similar numerals refer to similar parts throughout the several views.

My invention comprises an improvement over a device such as is described in patent to Staley and Converse No. 663,689; Dec. 11, 1900.

My improved mechanism is adapted to be operated in connection with the well known Chambers brick machine, such as is described in Letters Patent to Chambers No. 362,204; May 3, 1887.

The regulating belt 8 and the regulating pulley 9 are substantially similar to the regulating belt and regulating pulley shown and described in the said last mentioned patent. On the regulating shaft 10 is secured the gear wheel 11 meshing with the gear wheel 12 operating shaft 13. Shaft 13 carries the two beveled gears 14 and 15. Gear 14 coöperates with beveled gear 16 on shaft 17, carrying at the upper end thereof the crank disk 19 and crank pin 20. The beveled gear 15 coöperates with the beveled gear 21, carried on shaft 22, which is provided at its upper end with crank head 23 and crank pin 24. The member 25 is operatively connected with the crank pin 20, and member 26 is operatively connected with

the crank pin 24. Secured in member 25 is the rod 27 having a sliding engagement with member 26, and secured to member 26 is rod 28 having a sliding engagement with member 25. To members 25 and 26 are adjustably secured the indenting brackets 29 and 30 respectively. To these brackets 29 and 30 are secured the indenting dies 42 and 43 respectively. These dies have a vertical adjustment with respect to their supporting brackets and are secured by bolts 44 and 45 in slots 46 and 47 respectively. To members 25 and 26 are also secured the brackets 31 and 32 respectively. Suitable horizontal adjustment of these brackets is secured by means of the bolts 34 operating through slots 33, and by means also of the set-screws 35. The brackets 31 and 32 are each provided with the oil tank 36, the tube 37 and the oil sack or receptacle 38 made of felt or other suitable porous material 39, suitably reinforced at the required points by the plates 40 and 41.

The operation of my device is as follows:—It is to be understood that the regulating pulley and regulating shaft are operated in the usual way, and move relatively to the movement of the bar of clay 48. Movement is communicated from shaft 10, through gear wheel 11 and gear wheel 12, to shaft 13, and through the beveled gears to the crank disks 19 and 23, and through crank pins 20 and 24 to the members 25 and 26 carrying the indenting dies 42 and 43 and the brackets carrying the oil sacks 38. The gear wheels are so proportioned with respect to the proportions of the cranks and other mechanisms, that the two members 25 and 26 will be reciprocated toward and away from each other being maintained in constant parallel relationship with each other by the sliding rods connected therewith, so that the indenting members 29 and 30 will be forced into the bar of clay as indicated in Fig. 5 and afterward withdrawn therefrom to the position shown in Fig. 1. It will also be understood that in view of the movement of the crank pins in the direction of the arrows in Fig. 5, the indenting members 29 and 30 will move in arcs of circles tangential to the clay bar and consequently will move with the bar of clay as long as the same are in engagement therewith. It is also to be understood that when the indenting dies are in the position shown in Fig.

5, that is, projecting into the sides of the bar of clay the oil sacks 38 will be pressed slightly against the sides of the clay bar a brick length to the rear of the points of engagement of the indenting dies. The oil sacks are of yielding material sufficiently porous to permit the oil to ooze through the wall thereof, and as the sack is brought into engagement with the clay bar, a coating or film of oil is delivered thereto, of slightly greater area than the area of engagement with the clay bar of the indenting die, so that after a complete revolution of the crank heads the indenters will again engage the clay bar on the oiled surface, which oiled surface will effectively prevent any of the clay from sticking or adhering to the ends of the indenting dies. This method of preventing the clay from sticking to the indenters has been found much more efficacious and economical than by first oiling the surface of the indenting dies. It is obvious that the oil will stand at the same height in the oil sack 38 as it does in the reservoir 36. Consequently it will only be necessary to keep the oil of sufficient height in reservoirs 36 to insure the required oiling surface of the sack. The required pressure of the sack against the clay bar is secured by the adjustment of the bracket with respect to the members 25 and 26.

In the use of the term oil I intend to include any analogous substance that would prevent the clinging of the clay to the indenting dies.

What I claim is:—

1. In combination with mechanism for indenting a bar of plastic material, comprising an indenting die and operating means therefor, means for providing a coating of oil to said bar at separated points corresponding to the separated areas of engagement therewith of the indenting die, for the purpose specified.

2. In a brick machine, the combination of means for supporting and conveying a bar of clay, an indenting die, mechanism actuated in unison with the bar of clay for operating the indenting die, and means operating relatively to the indenting die for delivering a coat or film of oil to the clay bar prior to the engagement therewith of the die, for the purpose specified.

3. In a brick machine, the combination of a regulating belt for supporting and convey-

ing a bar of clay, an indenting die for operating upon said bar of clay, mechanism, actuated from said regulating belt, for causing the indenting die to move toward and away from the bar and while in engagement with said bar to travel in unison therewith in the arc of a circle to which said bar is tangential, and means, operating relatively to the indenting die for delivering a coat or film of oil to the clay bar of area as great as the area of engagement with the bar of the indenting die, prior to said engagement.

4. In combination with mechanism for indenting bars of plastic material, comprising an indenting die and operating means therefor, means for providing a coat of oil on the surface of the bar prior to the engagement therewith of the die, said means comprising an oil receptacle of yielding porous material and means for actuating the same toward and away from the clay bar.

5. In combination with mechanism for indenting bars of plastic material, comprising an indenting die and operating means therefor, means for providing a coat of oil on the surface of the bar prior to the engagement therewith of the die, said means comprising a receptacle having a wall of yielding porous material, an oil reservoir delivering thereto, and means for moving the same to and away from the clay bar.

6. In combination with mechanism for indenting bars of plastic material, comprising an indenting die and operating means therefor, means for providing a coat of oil on the surface of the bar prior to the engagement therewith of the die, said means comprising a receptacle having a contacting wall of yielding porous material, an oil reservoir delivering thereto, and supporting means therefor, connected with and actuated by the indenting die support.

7. In combination with mechanism for indenting bars of plastic material, comprising an indenting die and operating means therefor, means for providing a coat of oil on the surface of the bar corresponding substantially in area and location with the area and location of engagement of the die with the bar.

HOWARD K. KING.

Witnesses:

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WM. G. TAYLOR, JR.