No. 880,886. PATENTED MAR. 3, 1908.

F. C. HOHN.

MACHINE FOR MAKING CEMENT BRICK AND THE LIKE.

APPLICATION FILED MAY 31, 1907.

2 SHEETS—SHEET 1.

Fig - 1 -

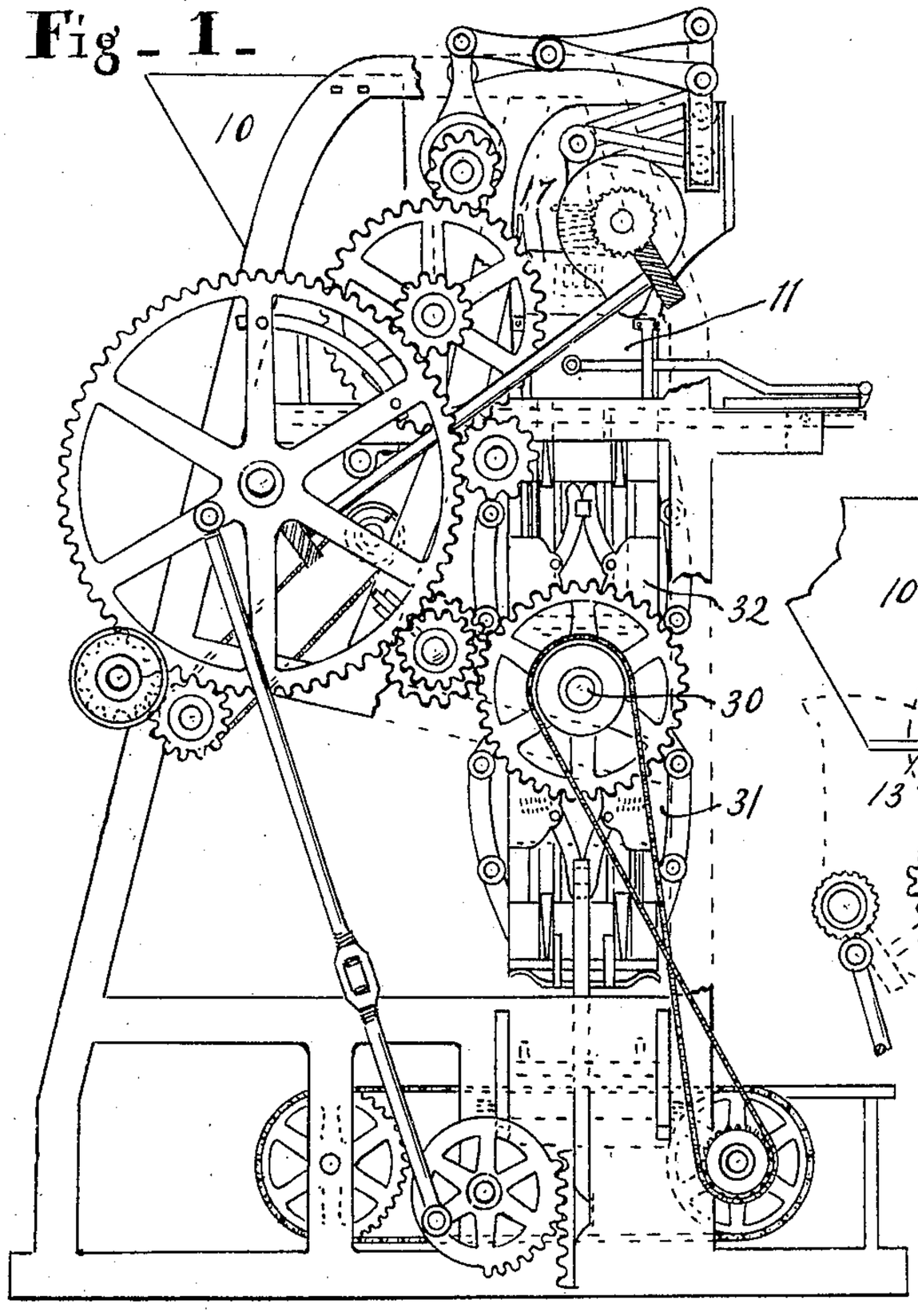


Fig - 2 -

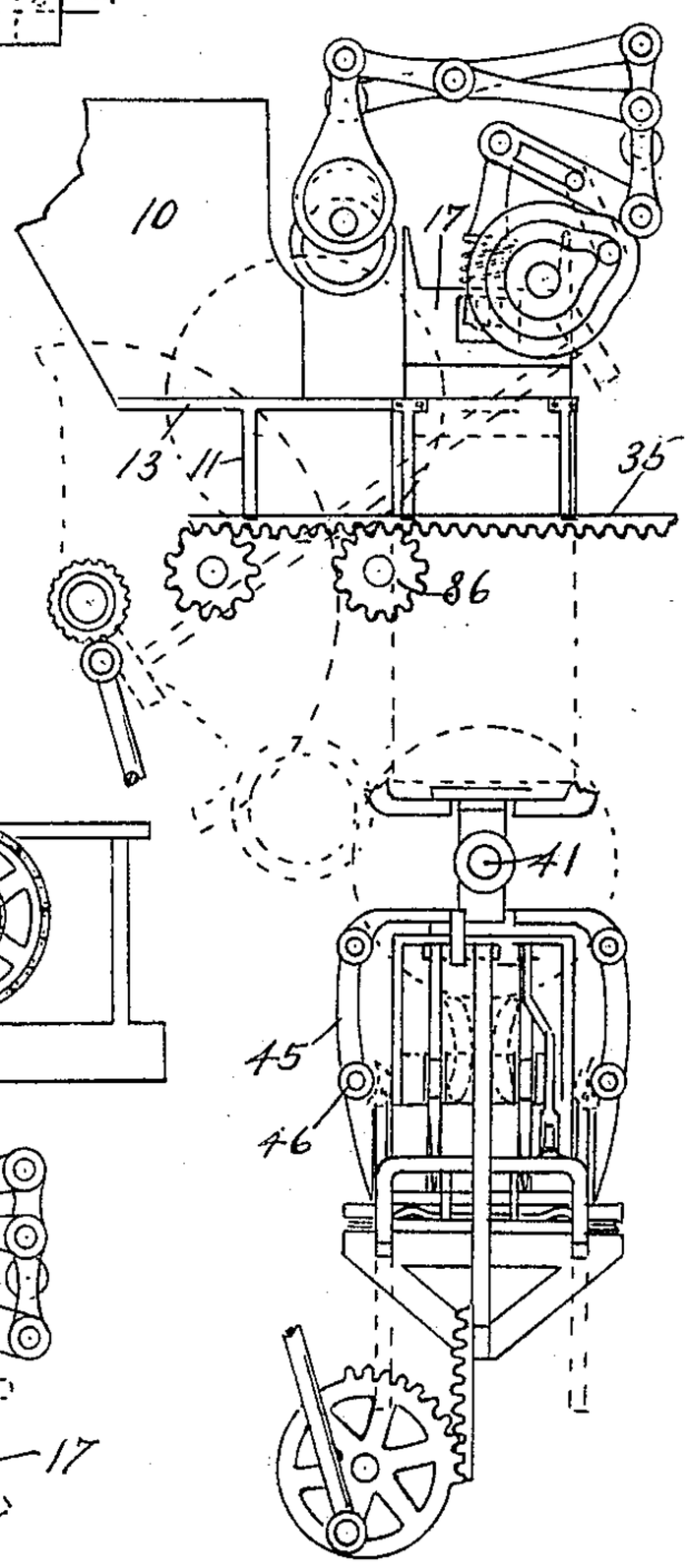
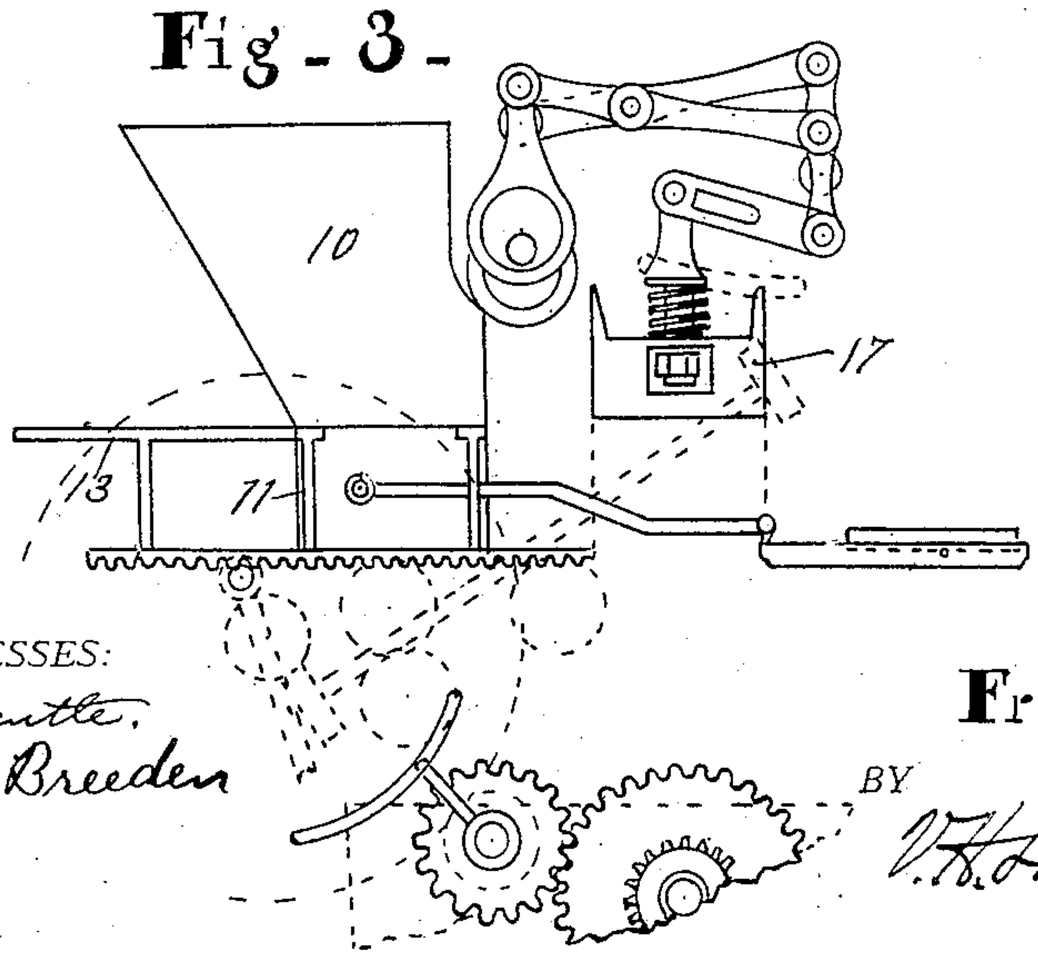


Fig - 3 -



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2 SHEETS—SHEET 2.

Fig. 4.

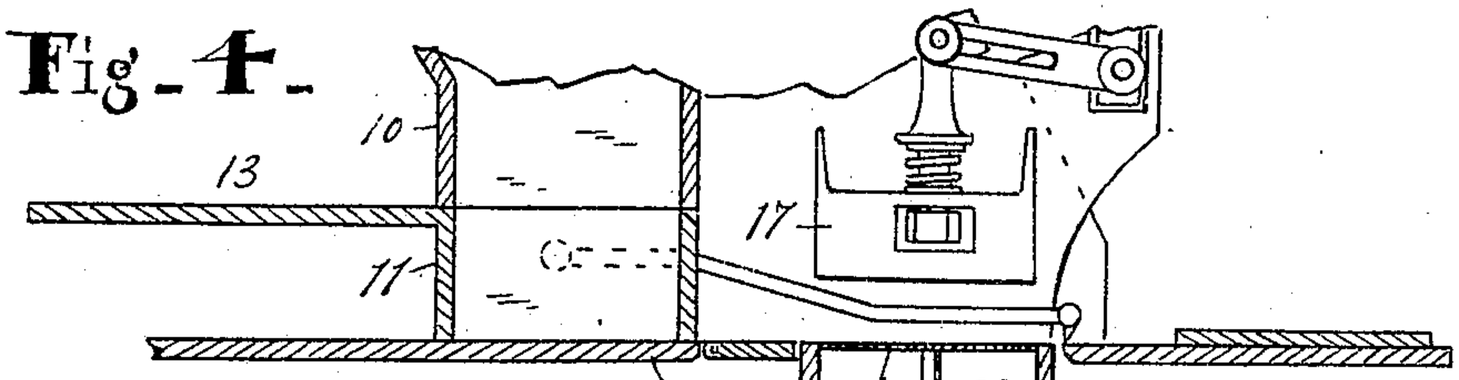


Fig. 5.

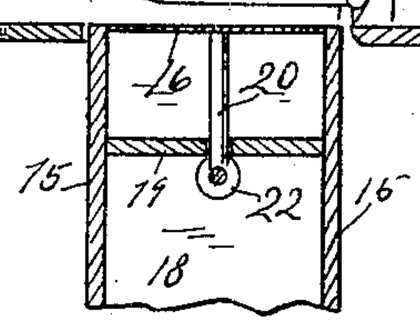


Fig. 6.

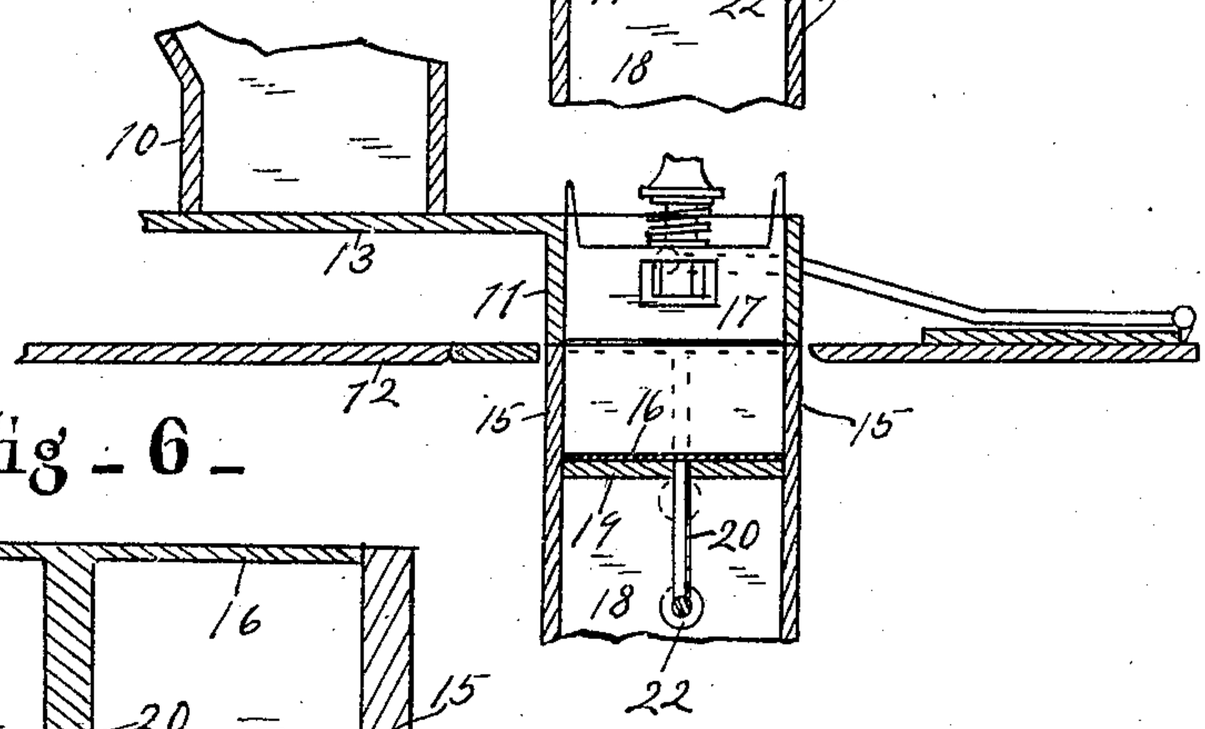


Fig. 7.

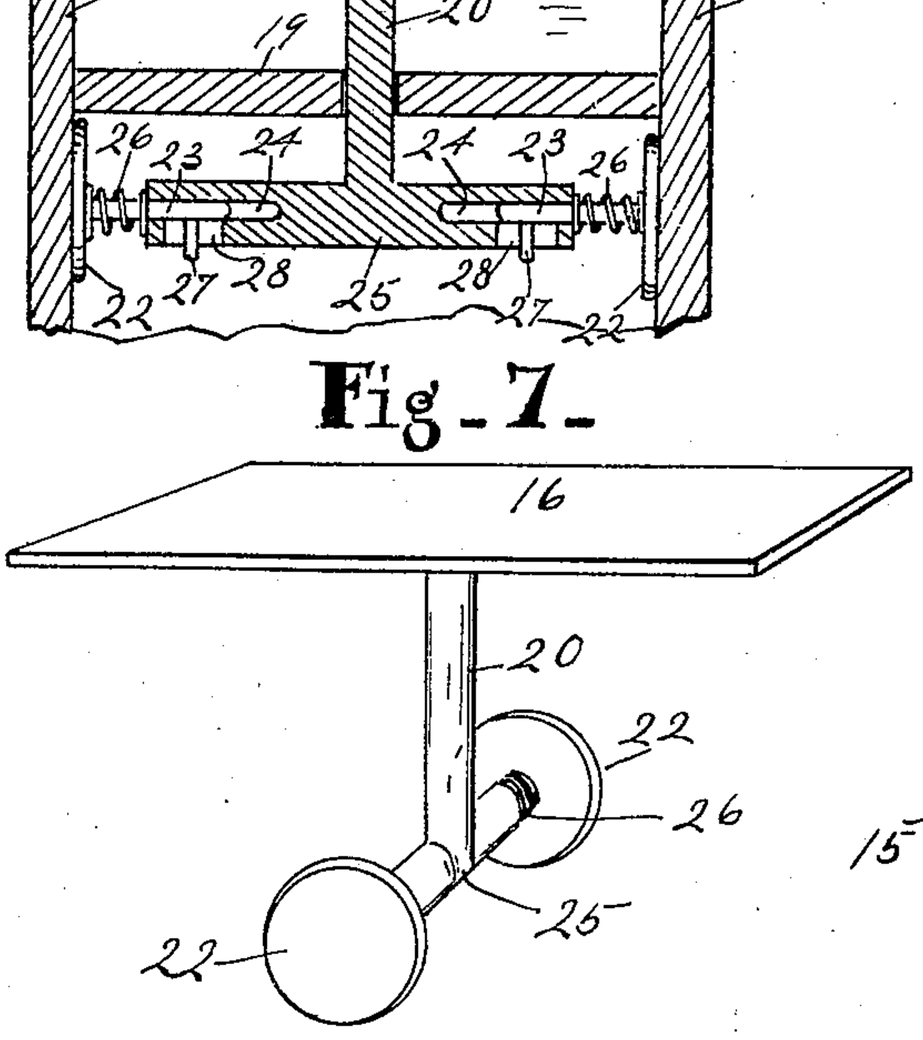
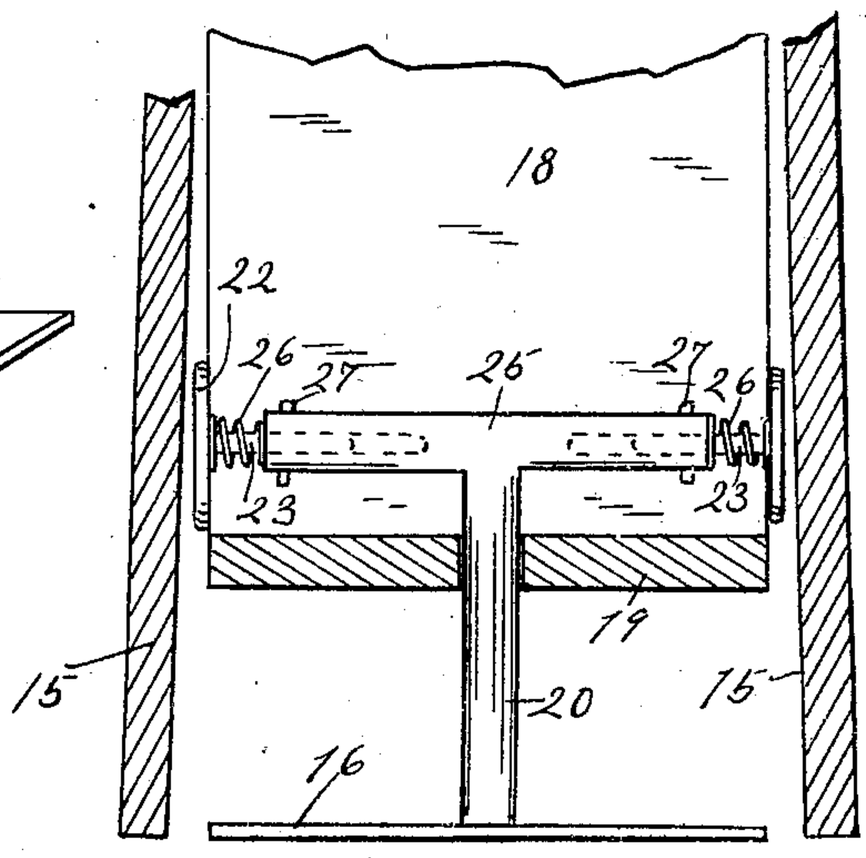


Fig. 8.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR MAKING CEMENT BRICK AND THE LIKE.

No. 880,886. Specification of Letters Patent. Patented March 3, 1908.

Application filed May 31, 1907. Serial No. 376,526.

To all whom it may concern:

Be it known that I, FRED C. HOHN, of Greencastle, county of Putnam, and State of Indiana, have invented a certain new and useful Machine for Making Cement Brick and the Like; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

The object of this invention is to improve the machine for making cement brick and the like set forth in United States Letters Patent, granted to me November 21, 1905, No. 805,294.

This improvement relates to a movable or false bottom in the mold in which the bricks are tamped. Without this false bottom in the mold, the concrete is not uniformly distributed in the mold as it is discharged from the sliding hopper. As the sliding hopper moves over the mold with a supply of concrete, the concrete begins to drop into the mold as soon as the hopper starts to move over the mold and the mold is well filled on that side while on the opposite side the mold may not be full. Consequently when the tampers come down, the concrete is not evenly distributed and an even symmetrical brick cannot be formed. In this invention a false bottom is provided upon which the concrete still in the sliding hopper moves and is supported and held until the tamper comes down upon the concrete and forces it and the false bottom down. That moves the body of the concrete uniformly into the mold and makes a perfect brick.

The nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings Figure 1 is a side elevation of the machine which is substantially the same as it was in my former patent. Fig. 2 is the same view with many parts omitted, showing the operation somewhat further advanced while the tamping is going on. Fig. 3 is the same as Fig. 2 with some additional parts omitted, some parts indicated by dotted lines, showing the machine still further operated. Fig. 4 is a central vertical section through the stationary hopper, sliding hopper while under the stationary hopper, and a mold in its upper position and empty, parts being broken away. Fig. 5 is the same with the sliding hopper moved over the mold and the concrete forced down into the mold, parts being broken away. Fig. 6 is a central vertical section through the upper part of the mold on a larger scale and transversely of the machine, that is at right angles to the section of Figs. 4 and 5. Fig. 7 is a perspective view of the false bottom construction. Fig. 8 is a vertical section transversely of the machine through the mold in its downmost position with the sides separated so that the false bottom will drop down, parts being broken away.

In this machine there is a stationary hopper 10 in which the concrete is deposited with a contracted open bottom. Under it a sliding hopper 11 slides upon the plate 12 and has secured to it a plate 13, which serves as a false bottom for the stationary hopper when the sliding hopper is not under the stationary hopper. The sliding hopper is open at the top and bottom so that it is filled with concrete from the stationary hopper, and when the sliding hopper is moved from the positions shown in Fig. 4, which is its left-hand limit, to the position shown in Fig. 5, which is the right-hand limit, it carries with it a full charge of concrete. In its right-hand limit of movement it is over the mold 15 and the false bottom for the mold 16. While in that position, the tamper 17 moves down upon the concrete in the sliding hopper 11 and forces it and the false bottom down to the positions shown in Fig. 5. In the mold on the support 18 and between the two sides there is a partition or permanent bottom 19 through which a guide rod or stem 20 extending down from the false bottom moves. The false bottom is held normally in its upward position, as shown in Figs. 4 and 6 by friction disks 22 which engage frictionally the under surfaces of the sides 15 of the mold. These disks 22 are mounted on pins 23 operating in holes 24 in a transverse bar 25 secured to the end of the guide rod 20. The friction disks 22 are pushed into engagement with the sides 15 of the mold by springs 26, and the pin 27 and rod 23 operate in the slot 28 in the bar 25 to limit the outward movement of the rod 23 and disk 22.

After the tamper has forced the cement out of the sliding hopper into the mold and tamped it therein, it withdraws, and the sliding hopper moves back to its original position under the stationary hopper. Then the mold is revolved from its upward position shown in Fig. 5 to the downward position shown in Fig. 8 for discharging the brick.

In discharging the brick the sides 15 of the mold are separated somewhat, far enough to disengage said sides of the mold from the friction disks 22, whereupon the false bottom 16 drops down, as shown in Fig. 8, so that when the mold is revolved again to its upward position the false bottom will be flush with the top of the mold, as in Fig. 4. It is thus seen from this description that the false bottom is flush with the top of the mold when the sliding mold loaded with concrete moves over, and the concrete is forced down by the tamper, the false bottom moves down to the position shown in Fig. 5, and when the mold is revolved and the brick discharged, and while the sides of the mold are still separated from the rest of the mold, the false bottom returns to its position flush with the top of the mold by gravity.

Any suitable means may be employed, such as that shown herein for actuating the tamper 17. The molds are carried and revolved on a shaft 30, there being secured to said shaft two oppositely extending mold holders 31 to which the sides of the mold are secured and whereby the mold is held while being revolved, and the sides thereof opened somewhat to discharge the brick. Any suitable mechanism for holding the mold while being charged and while the brick is being discharged will suffice as well as that herein shown.

I do not wish my invention to be limited to the particular machine shown herein or in my former patent.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a machine for making cement brick and the like, the combination with a mold, a sliding hopper movable over the mold for charging the same with cement or the like, and a tamper operable through said sliding mold to force the cement into the mold and tamp the same, of a false bottom, a rod extending centrally therefrom through the bottom of the mold, and yielding means connected with said rod beyond the bottom of the mold for holding the false bottom flush with the top of the mold.

2. In a machine for making cement brick and the like, the combination with a mold, a sliding hopper movable over the mold for charging the same with cement or the like, and a tamper operable through said sliding mold to force the cement into the mold and tamp the same, of a false bottom, a rod extending centrally therefrom through the bottom of the mold, a transverse bar connected with said rod beyond the bottom of the mold, and a yielding friction disk extending from each end thereof in engagement with the sides of the mold.

3. In a machine for making cement brick and the like, the combination with a mold, a sliding hopper movable over the mold for charging the same with cement or the like, and a tamper operable through said sliding mold to force the cement into the mold and tamp the same, of a false bottom, a rod extending centrally therefrom through the bottom of the mold, a transverse bar connected with said rod beyond the bottom of the mold, said bar having a hole in each end thereof, a pin mounted loosely in each of said holes and extending beyond the end of said bar, a friction disk carried on the outer end of each of said pins, a spring coiled about said pin between said disk and bar, and means for limiting the outward movement of said pins, substantially as set forth.

4. In a machine for making cement brick and the like, a revoluble mold with the sides thereof laterally movable somewhat for the discharge of a brick when the mold is inverted, a sliding hopper movable over said mold when in its upper position for charging the same with cement, a tamper operable through said sliding hopper for forcing the cement into the mold and tamping the same, a flalse bottom in said mold with a rod extending centrally therefrom through the bottom of the mold, a laterally extending bar on the end of said rod beyond the bottom of the mold, yielding means mounted on the ends of said bar for frictionally engaging the sides of the mold, and means for limiting the outward movement of said yielding means so that when the mold is inverted said frictional means will be disengaged from the side of the mold and enable the false bottom to drop down by gravity to the position where it will be engaged by the top of the mold when in its upper position.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

FRED C. HOHN.

Witnesses:
JOHN H. JAMES,
MANNIE WHITE.