C. E. TAYLOR.

BRIQUET MOLDING MACHINE.

APPLICATION FILED MAR. 11, 1916.

1,265,138.

Patented May 7, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

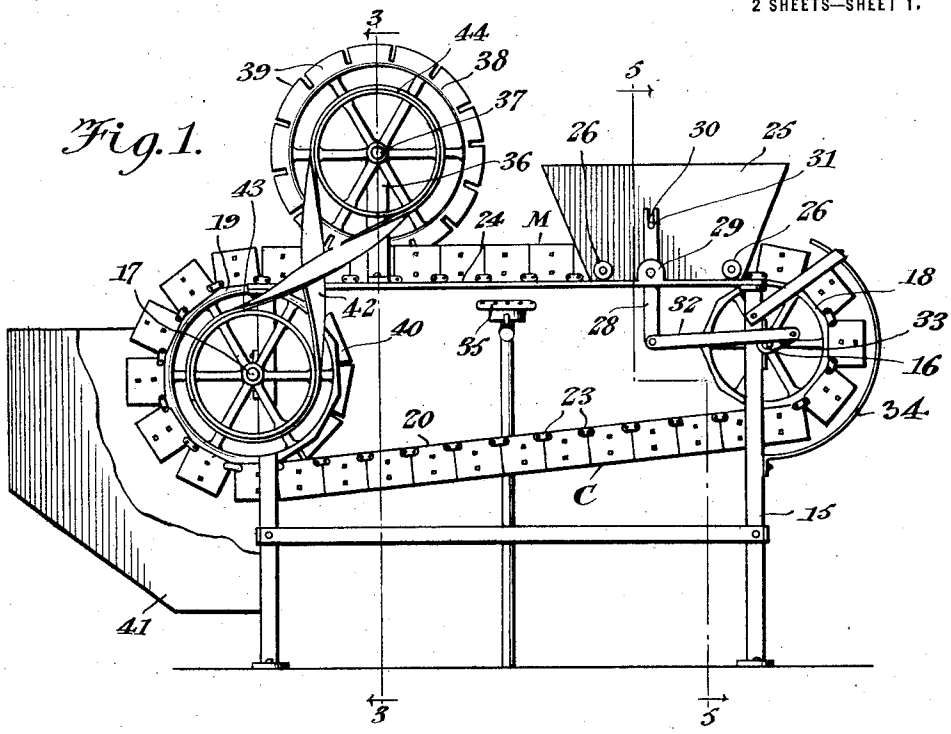
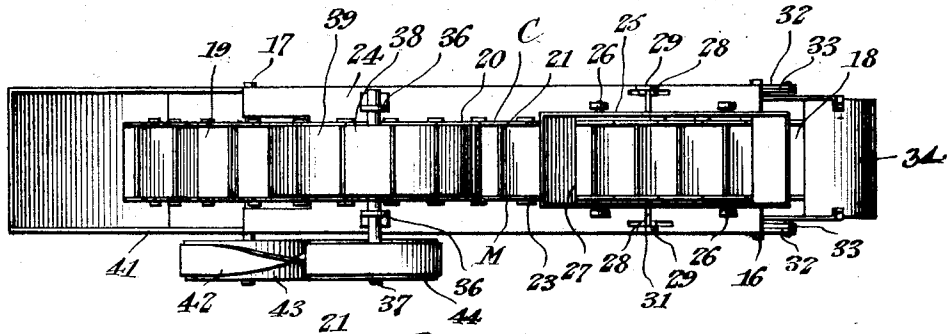


Fig. 2.



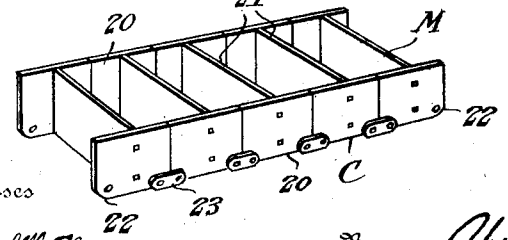


Fig. 6.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

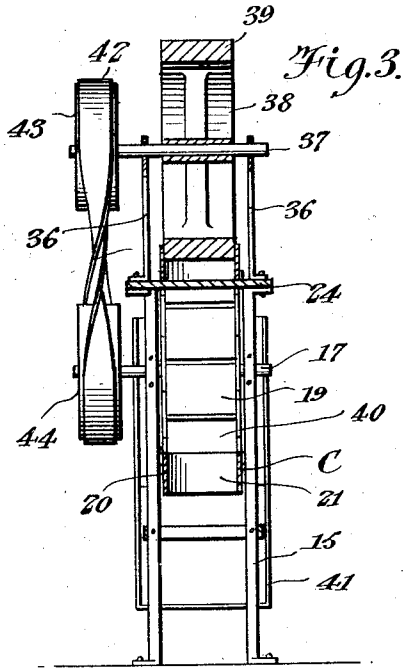


Fig. 4.

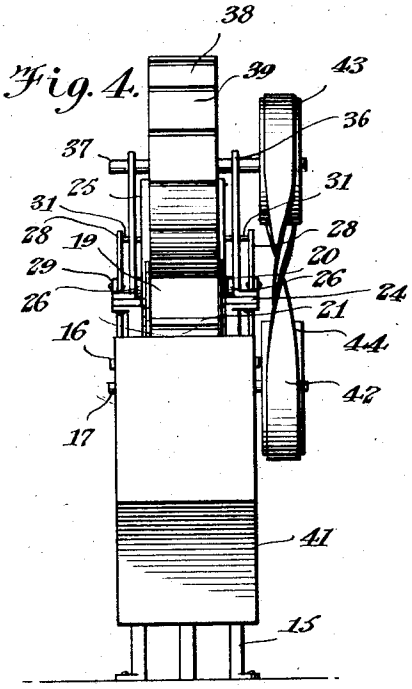


Fig. 8.

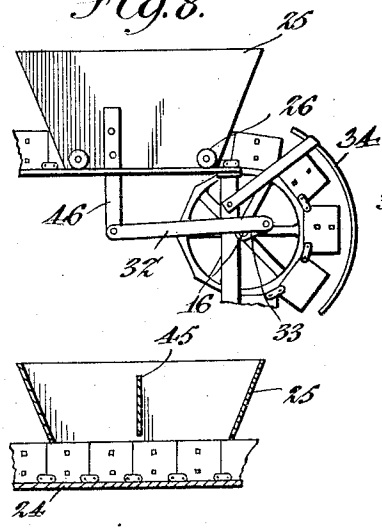
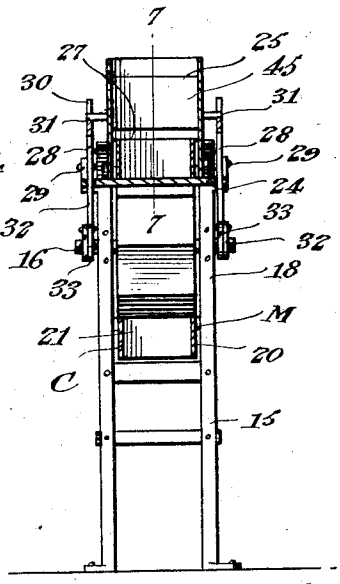


Fig. 7.

Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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BRIQUET-MOLDING MACHINE.

1,265,138. Specification of Letters Patent. Patented May 7, 1918.

Application filed March 11, 1916. Serial No. 83,569.

To all whom it may concern:

Be it known that I, CHARLES E. TAYLOR, a citizen of the United States, residing at Hillsboro, in the county of Montgomery and State of Illinois, have invented new and useful Improvements in Briquet-Molding Machines, of which the following is a specification.

This invention relates to machines for forming or molding pop corn into oblong rectangular cakes or briquets.

The invention has for its object to produce a briquet molding machine of simple and improved construction and which will be continuous and substantially automatic in operation.

A further object of the invention is to simplify and improve the construction of the molds and of the compressing and expelling elements coöperating therewith.

A further object of the invention is to simplify and improve the means for feeding the pop corn mixture to the molds.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claim may be resorted to when desired.

In the drawings,—

Figure 1 is a view in side elevation, partly in section, of a machine constructed in accordance with the invention.

Fig. 2 is a top plan view of the same.

Fig. 3 is a transverse sectional view taken on the line 3—3 in Fig. 1.

Fig. 4 is an end view of the machine showing the tail or discharge end thereof.

Fig. 5 is a sectional detail view taken on the line 5—5 in Fig. 1.

Fig. 6 is a perspective detail view showing a portion of the endless chain which forms the mold element of the machine.

Fig. 7 is a sectional detail view taken on the line 7—7 in Fig. 5.

Fig. 8 is a detail side view of the hopper showing a modification.

Corresponding parts in the several figures are denoted by like characters of reference.

The frame 15 of the improved machine supports at its front and rear ends a pair of shafts 16, 17 carrying wheels or drums 18, 19 over which the endless chain C is trained, said chain being composed of a plurality of individual molds M which are hingedly connected together. Each of said molds is composed of side members consisting of plates 20 which are spaced apart and connected together midway between their ends by a vertically disposed wall member 21. The plates or side walls 20 have rounded lower corners 22, and the individual molds are connected together by means of links 23 which are pivotally connected with the plates 20 near the said rounded lower corners. The chain C is supported intermediate the front and rear ends of the frame by a top plate or table 24 to prevent sagging thereof while the molds are being filled and while the contents are being compressed.

For the purpose of filling the molds there is provided a hopper 25 having supporting wheels 26 that ride on the surface of the table 24, although it is obvious that a suitable track may be provided. The front and rear walls of the hopper are provided with openings 27 of proper size to admit of the passage of the mold chain longitudinally through the hopper, the latter being supplied with a hot mixture of pop corn and flavoring material which will gravitate into the molds, the surplus being raked from the molds as the latter pass through the opening 27 in the rear wall of the hopper. For the purpose of assisting the contents in settling or gravitating from the hopper into the molds the hopper is given a reciprocatory movement by means of levers 28, one at each side, said levers being fulcrumed on brackets 29 rising from the table 24 and provided at their upper ends with slots 30 engaging pins or pivot members 31 upon the side walls of the hopper, the lower end of each lever being connected by a pitman 32 with a crank 33 on the shaft 16. The forward portion of the mold chain is protected by a fender or casing 34.

For the purpose of assisting in keeping the contents of the molds at a proper tem-

perature while the molding process is in operation it is desirable to arrange beneath the table 24 a burner 35 of any desired construction and adapted to consume any preferred kind of fuel.

The table 24 is provided near the rear end thereof with uprights 36 affording bearings for a shaft 37 carrying a presser wheel 38 which is provided with circumferentially disposed blocks or plungers 39 adapted to engage the interspaces in the molds between the partition walls 21 for the purpose of compressing the material confined between the partition plates and side wall portions of two contiguous mold members M, the material being compressed between the hollow blocks 39 and the surface of the table 24. The wheel 19 on the shaft 17 over which the endless mold chain is guided is provided with ejecting blocks 40 whereby the contents of the molds will be ejected into a catch basin 41. The shaft 17 may be driven from a convenient source of power, and power is transmitted from said shaft to the presser wheel 38 by means of a twisted belt 42 which is trained over pulleys 43, 44 on the respective shafts.

In order to prevent the popcorn mixture from becoming packed and from sticking in the hopper 25 it is found desirable to provide said hopper with one or more transverse partitions, one such partition being shown at 45 in Fig. 5 and 7 of the drawings. The partition 45 need not extend entirely to the top of the hopper, thus permitting material to be readily supplied to said hopper. It is found that by the use of this partition the sticky and bulky material which is operated upon will have much less tendency to accumulate and to become packed in the hopper than where the partition or partitions are absent. In Fig. 8 there has been shown a slightly modified construction whereby the levers 28 may be dispensed with. In this view the hopper is shown as provided with a downwardly extending arm 46 riveted or otherwise secured thereon, said arm or bracket being connected by a pitman, here designated by 32′, with the crank 33 of the shaft 16. This simplified construction may sometimes be considered preferable, but it will be understood that any well known mechanical means may be used for imparting reciprocatory motion to the hopper. It will also be readily understood that a downwardly extending arm, such as 46, may be used at each side of the hopper in which event two pitmen may be used.

Having thus described the invention, what is claimed as new, is:—

A device of the character described comprising a frame including end uprights and a flat top mounted thereon, drums journaled at the ends of said frame, a chain of molds trained about said drums and passing over the flat top of said frame, and a reciprocatory hopper resting upon and slidable along said top, the end walls of said hopper being apertured for the passage of said molds and the sides of said hopper straddling said molds in close relation thereto whereby said hopper and said molds will mutually guide each other, said sides further preventing the spilling of material from the molds as the molds emerge from the hopper.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. TAYLOR.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."