

No. 682,819.

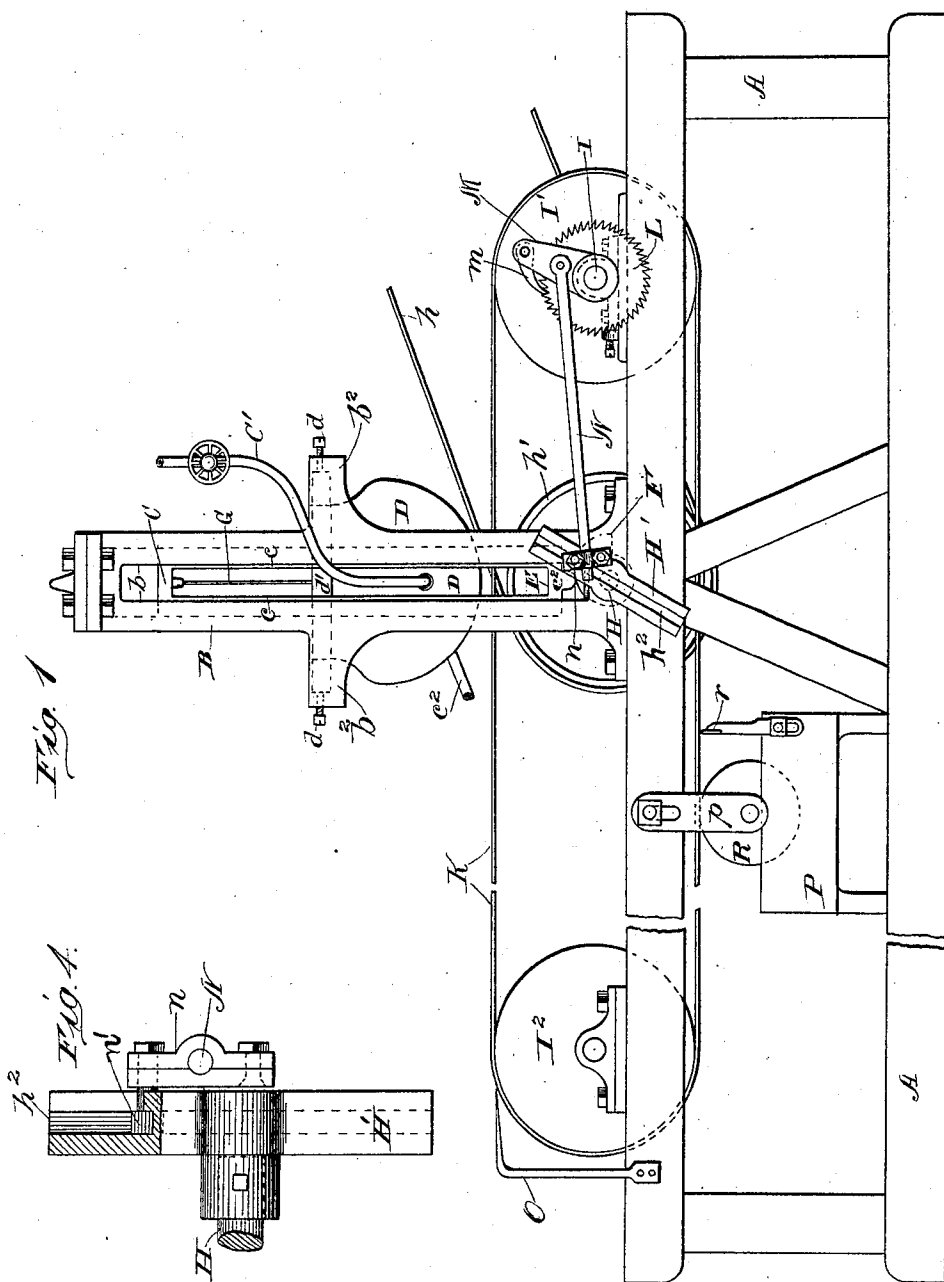
Patented Sept. 17, 1901.

H. SPORLAND.
CANDY MAKING MACHINE.

(Application filed Apr. 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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Inventor:

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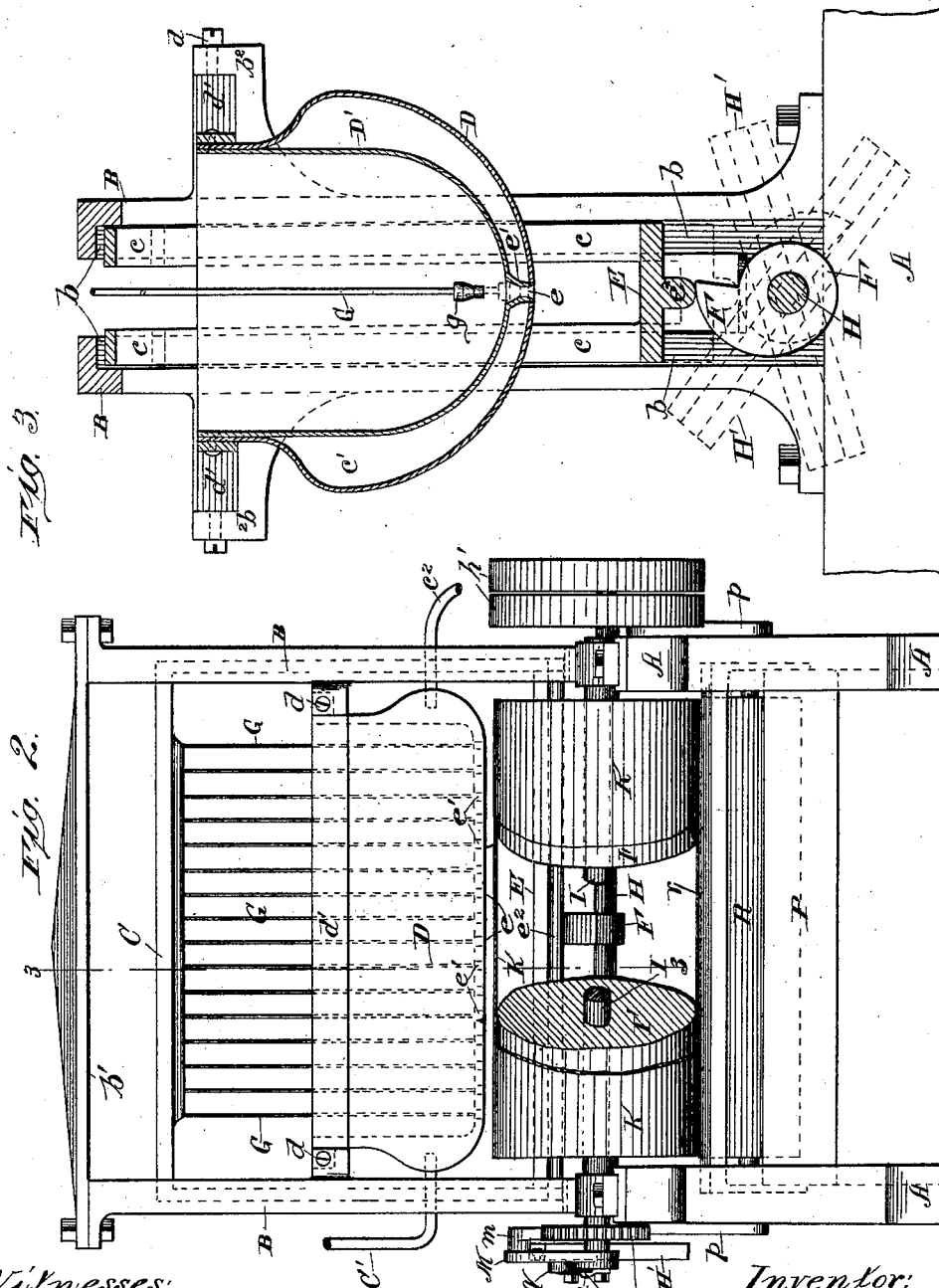
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Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY SPORLAND, OF CHICAGO, ILLINOIS.

CANDY-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 682,819, dated September 17, 1901.

Application filed April 22, 1901. Serial No. 56,908. (No model.)

To all whom it may concern:

Be it known that I, HENRY SPORLAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Candy-Making Machines, of which the following is a specification.

This invention relates to improvements in machines for forming candy or other plastic material into tabules, drops, or small cakes of various shapes and sizes; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a machine for making candy tabules, drops, or small pieces which shall be simple and inexpensive in construction, strong, durable, and effective in operation; second, a machine in which the syrup out of which the drops or small pieces are made will be kept heated, so as to be of the proper consistency to run into or through the molds, and, third, a machine of the above-described character in which an intermittently-traveling apron is employed for carrying off the product of the machine and which apron is automatically cleaned.

Other objects and advantages will be disclosed in the subjoined description.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in side elevation of a machine embodying my invention, showing the frame and apron shortened for the convenience of illustration. Fig. 2 is an end view partly in elevation and partly in section. Fig. 3 is a vertical section through the jacketed vessel for holding the syrup and through the main or driving shaft, said section being taken on line 3 3 of Fig. 2; and Fig. 4 is a detailed view in side elevation, partly in section, of the rocker-arm and the journal which it carries.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the main or supporting frame, which may be made of any suitable size, form,

and material and on which is mounted the operating mechanism of the machine. Located on the upper surface of the sides A are 55 uprights B, which are provided with vertical guideways *b* for the reception and operation of the sides of the movable frame C, which is preferably rectangular in shape and of a size to fit snugly between the uprights B, which 60 are secured together at their upper ends by means of a cross-piece *b'*, which is bolted thereto or may be otherwise secured in position. The uprights B are provided on their sides with arms or brackets *b''*, on which the jacket D 65 of the vessel D' rests, and which jacket may be held in place by means of screws *d*, passing through the said arms or brackets and resting against the flanges *d'* of the jacket. As shown in Figs. 2 and 3 of the drawings, the 70 vessel D' and its jacket D are slightly separated to form a steam space or chamber *c'*, to which steam may be admitted through a supply-pipe C', leading from a boiler, (not shown,) and exhausted through a pipe *c''*, located at any suitable point. 75

The bottom of the jacket D is formed with a series of openings *e*, of any suitable size and form, and the bottom of the vessel D' is provided with a series of funnel-shaped extensions *e'*, which fit into the opening *e* of the jacket or are so connected with the inner surface of the jacket that their openings will register with the openings *e*. The sides *c* of the movable frame C are united at their lower 85 portions by means of the cross-piece E, which is provided on its lower surface with a longitudinal rib *e''*, with which the cam F impinges, as will be presently explained. Secured to the upper portion of the frame C and extending 90 vertically into the vessel D' are a series of rods G, each of which has on its lower end a head or plunger *g*, of a shape to fit the openings of the extensions *e'* in the bottom of the vessel. 95

Journaled on the sides of the frame A is a driving-shaft H, to which power may be applied by means of a belt *h* and pulleys *h'*, which pulleys are located on one end of said shaft. On the other end of this shaft is fixed a grooved 100 rocker-arm H', and between said arm and the pulleys and on said shaft is keyed or otherwise fixed the cam F, which impinges the rib *e''* on the lower portion of the movable frame,

as above stated. Transversely journaled on the main frame near the shaft H is another shaft I, which carries a drum I', over which the apron or endless belt K passes. Fixed on the end of the shaft I adjacent to the rocker-arm H' is a ratchet-wheel L, and loosely mounted on said end of the shaft I is an arm M, which carries a pawl *m* to engage the teeth of the ratchet-wheel. Pivotally connected at one of its ends to the arm M is a rod N, which is movably connected at its other end by means of a journal *n* to the rocker-arm H', which journal is provided with an extension *n'*, projecting into the groove *h*² of the rocker-arm. Journaled on the main frame near the opposite end from the drum I' is another drum I², over which the apron K passes. Secured to the frame A near the drum I² is a scraper O, which rests on the upper surface of the apron and is for the purpose of scraping the candy drops or tablets therefrom. Located beneath the apron is a tank P, and journaled on suitable hangers *p*, secured to the sides of the main frame, so as to allow it to be rotated by means of the apron K, and within the tank, is an idler R, employed for moistening the apron. Secured to the tank P so as to extend crosswise of the apron is a squeegee *r*, which is employed for removing the water and any portions of the candy which might adhere to the apron, thus cleansing the same. It will be understood that the tank P should have a sufficient quantity of water so that the idler R may be partly submerged, thus permitting it in its rotations to carry up a sufficient quantity of water to moisten the surface of the apron.

The operation of my machine is simple and as follows: The syrup of which the candy drops or other small pieces are formed is placed in the vessel D' and may be heated by means of steam admitted to the chamber *c'*, between the jacket D and said vessel. By applying power to the shaft H and rotating the same the frame C will be raised and lowered through the instrumentality of the cam F on said shaft and the lower portion of the movable frame, which operation will remove the heads or plungers *g* from the extensions *e'* in the bottom of the vessel, thus allowing the syrup to pass into said extensions, at which time the plungers *g* will be caused to descend by reason of the gravity of the frame C, thus

forcing the syrup or candy from the extensions and allowing it to drop in the form of small cakes, tablets, or drops upon the apron, where it will become hardened. In the rotation of the shaft H the rocker-arm H' through its connection with the arm M on the shaft I will cause the drum I' to rotate, and thus move the apron a slight distance forward, after which the above operation of the movable frame will be repeated. As the apron passes over the drums I' and I² it is apparent that the idler R will be rotated and will carry up a sufficient quantity of water to moisten the surface of the apron, so that the squeegee *r* may scrape any adhering substance therefrom.

While my machine is more especially intended for forming candy into small pieces of various shapes, yet it is applicable for giving form to other plastic materials, and for this reason I do not desire to be limited to the manufacture of candy in its use.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with the main frame, of a steam-jacketed vessel mounted thereon and having a series of openings in its bottom, a frame movably mounted on the main frame, a series of rods carried by the movable frame and adapted to extend into said openings, a driving-shaft journaled on the main frame below the movable frame, a cam fixed on the driving-shaft, a rocker-arm fixed on one end of said shaft, two drums journaled crosswise on the main frame, an endless apron passing over said drums, a ratchet-wheel fixed on the shaft of one of the drums, an arm loosely secured on said shaft and carrying a pawl to engage the ratchet-teeth, a rod pivotally connected at one of its ends to said arm and movably connected at its other end to the rocker-arm, a tank located below the apron, a squeegee secured to the tank and extending crosswise the apron and resting thereagainst, an idler journaled so as to extend into the tank and to rest against the apron, substantially as described.

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Witnesses:

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