(No Model.) 2 Sheets—Sheet 1.

W. F. CURRY.

DOUGH ROLLING AND CUTTING MACHINE.

No. 516,299. Patented Mar. 13, 1894.

Fig. 1.

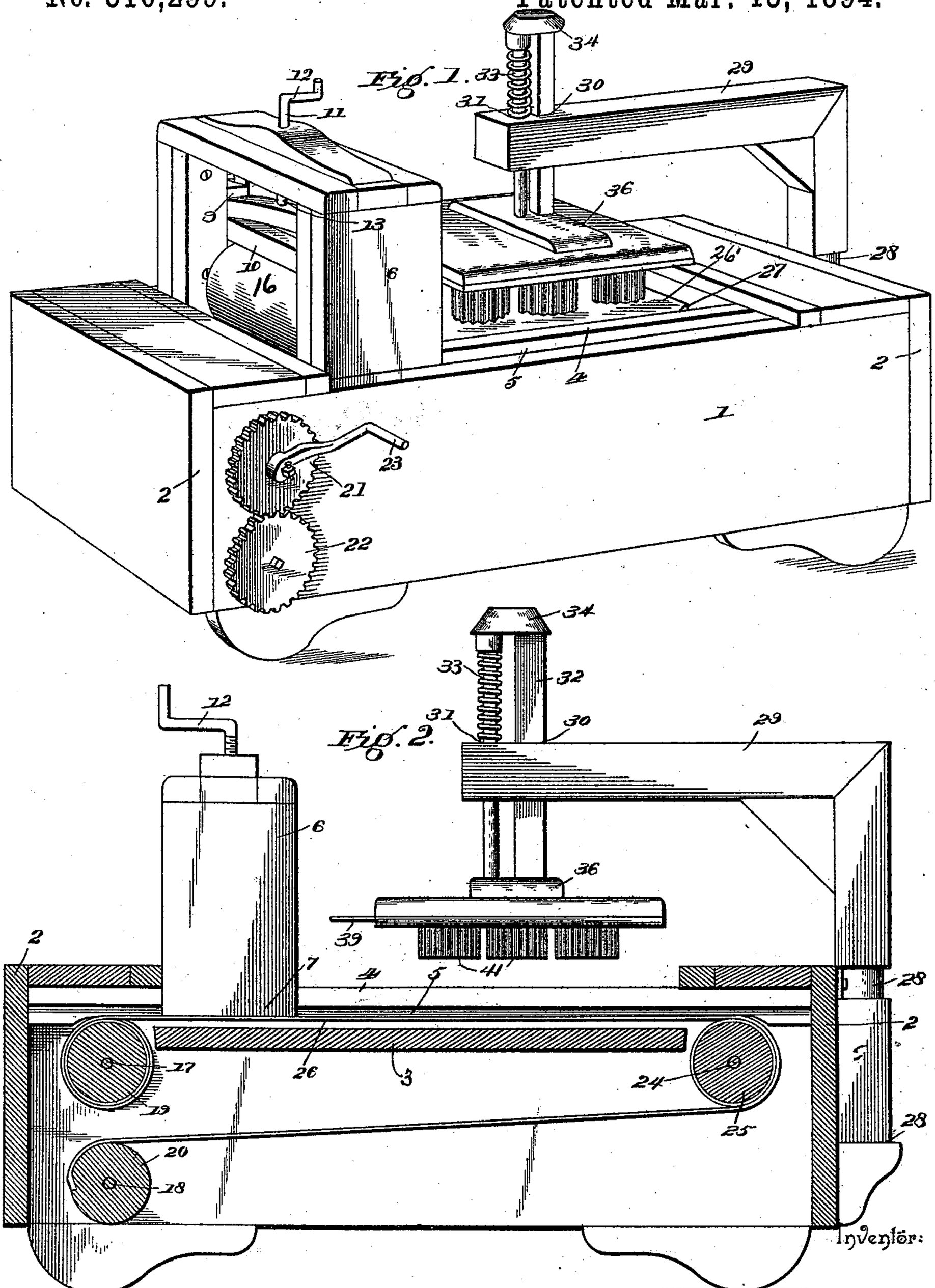

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

W. F. CURRY.

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Fig. 3.

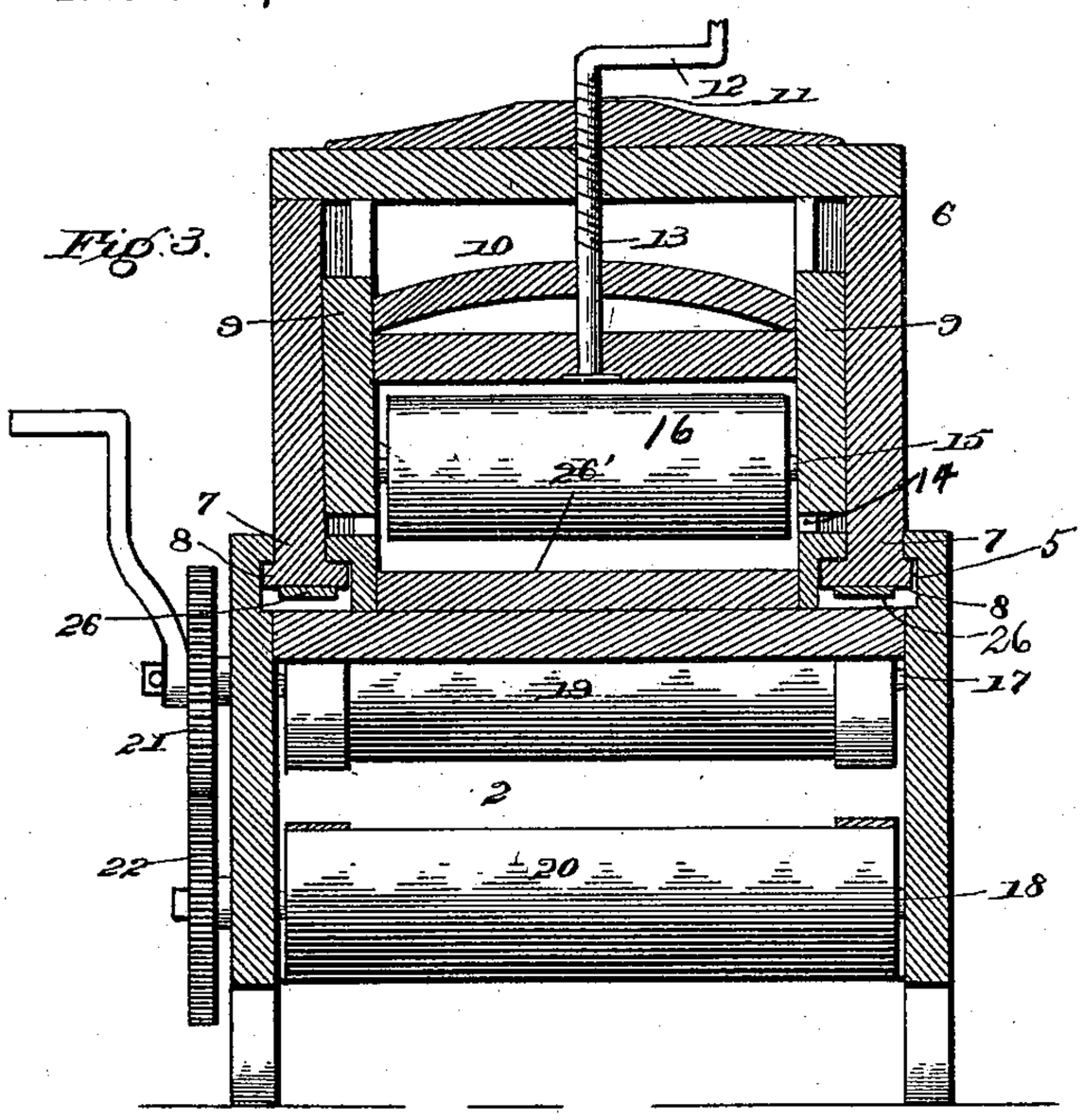


Fig. 6.

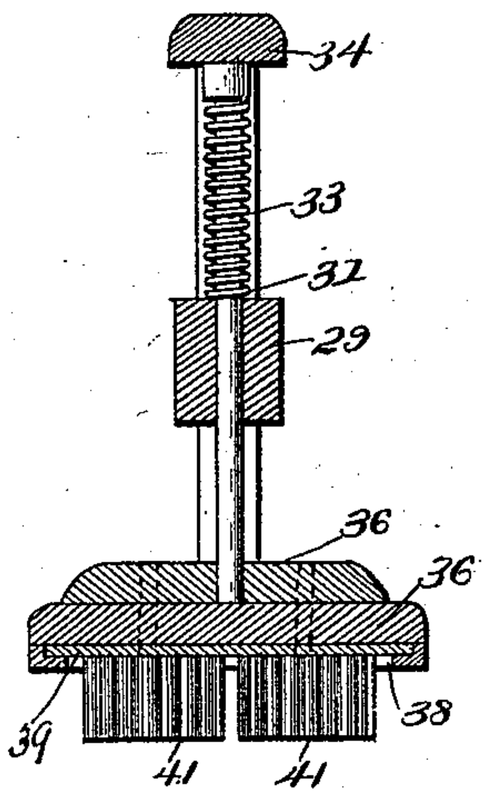


Fig. 4.

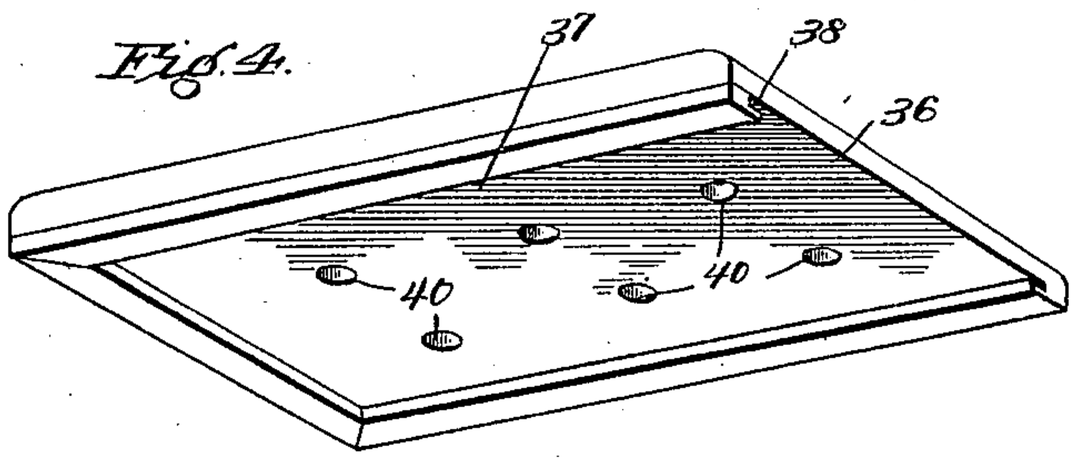
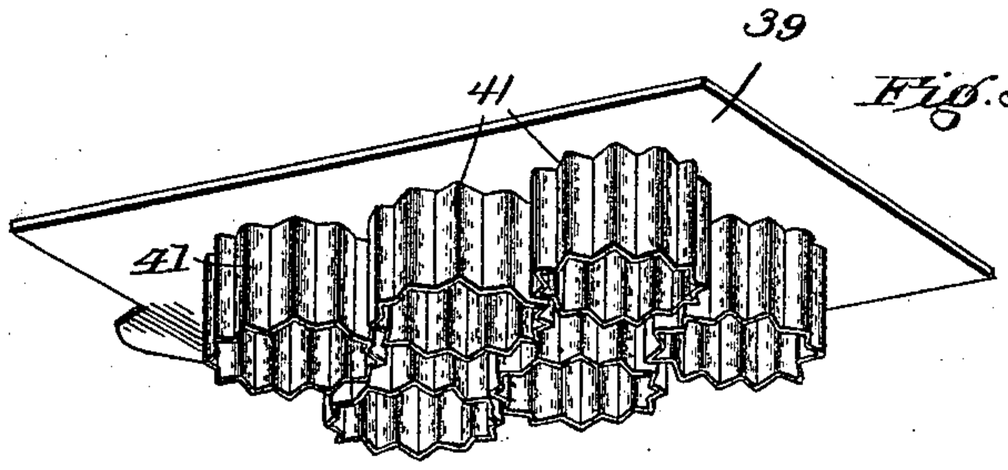


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM F. CURRY, OF NEVADA, MISSOURI, ASSIGNOR OF ONE-HALF TO MARION B. LAMEY, OF SAME PLACE.

DOUGH ROLLING AND CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 516,299, dated March 13, 1894.

Application filed November 16, 1893. Serial No. 491,154. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. CURRY, a citizen of the United States, residing at Nevada, in the county of Vernon and State of Missouri, have invented a new and useful Dough Rolling and Cutting Machine, of which the following is a specification.

My invention relates to improvements in dough-cutting and rolling-machines, the objects in view being to provide a very simple machine that may be used for domestic purposes or in factories, and which will be easy of operation and simple in construction and adapted to roll cake, cracker or bread-dough to a uniform thickness and subsequently cut or stamp the same into cakes, biscuits, or crackers, as the case may be. Furthermore, to provide for the cutting of various shapes, and finally for a thorough and efficient cleansing of the machine.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a vertical longitudinal sectional-view through the operating strap or belt. Fig. 3 is a transverse sectional-view through the rolling-pin and its support. Fig. 4 is a detail in bottom perspective of the die-carrying plunger. Fig. 5 is a detail of the die-carrying plate. Fig. 6 is a transverse sectional-view through the die-carrying plunger and its supporting-arm.

Like numerals of reference indicate like parts in all the figures of the drawings.

In the practice of my invention I construct a framework, which consists of the opposite longitudinal sides 1, which are shaped at their lower ends to produce supporting feet or may be otherwise adapted to rest upon a table, a floor, or other support, in accordance with the size of the machine built. The upper sides of the longitudinal sides 1 are connected by front and rear cross-pieces 2, and between these cross-pieces the sides are connected with a lower or depressed horizontal table 3. The table is provided at its opposite edges with longitudinal ribs 4, whose upper sides are on a level with those of the sides 1. The adjacent faces of the ribs 4 and the sides 1 are provided with grooves or ways 5. An inverted U-shaped frame 6 surmounts the framework thus described, and its vertical terminals 7 have their lower ends engaging between the ribs 4 and the sides 1 and are provided with guide-heads 8 which take into the grooves 5, whereby the frame is adapted to slide upon the lower frame above the table 3.

The terminals 7 are provided with vertical grooves or ways upon their inner sides, and in the same are located for vertical movement cleats or slide-bars 9, which are connected by means of a trussed-yoke 10 which is provided with a central socket into which extends and is swiveled the crank-shaft 11. This crank-shaft 11 is provided at its upper end above the frame 6 with a crank-handle 12, and below the same is threaded in a threaded perforation or opening 13 formed in the upper side of the said frame 6, so that by revolving the crank-shaft the trussed-yoke 10, together with the slide-bars 9, may be raised and lowered in the vertical ways of the frame 6. The slide-bars 9 below the trussed-yoke 10 are provided with transversely opposite bearings 14, and in these take the axial-trunnions 15 of a roller 16, said roller being raised and lowered with the slide-bars and trussed-yoke in a manner that will be obvious from the foregoing description.

At one end of the machine I journal in the sides 1 the shafts 17 and 18 of vertically opposite pulley-rolls 19 and 20 mounted respectively upon the shafts 17 and 18. The shafts 17 and 18 project beyond one of their bearings at one side of the machine and carry respectively spur-gears 21 and 22, whose teeth intermesh, as shown. One of said shafts, in this instance the upper shaft, has fitted thereto a crank-handle 23, by which the shaft may be operated. At the opposite end of the machine in suitable transverse bearings formed in the sides 1 a third shaft 24 is journaled, the same also carrying a pulley-roll 25. A pair of straps 26 are made fast to the roll 19 near the ends of the latter, pass under the interlocking feet 8 of the frame 6, over the roll 25, and back again to the starting point, where they are made fast to the roll 20, so that as will be obvious, by rotating the crank-

handle of the shaft 17 the strap will be wound from the roll 19 to the roll 20, or if the direction of rotation be reversed the strap will be unwound from the roll 20 and wound upon the roll 19. At the points where the straps pass under the interlocking feet 8 of the movable frame 6 they are made fast to such feet so that the frame will be moved back and forth upon the ways of the machine together with the roller 16.

26′ designates a dough-board of such shape as to fit snugly between the ribs 4 and rest upon the table 3, the ends of the board abutting against the depending ends of the cross-strips 2. Two of the corners of the dough-board 26′ are cut away and under-cut as indicated at 27, so that by moving the roller-frame 6 toward the opposite end of the framework the dough-board may be grasped by hand and removed from its position upon the table for the purpose of cleansing the same.

At one end of the machine I locate a pair of vertically opposite bearings 28, and swivel therein an inverted L-shaped arm or standard 29. This arm or standard is provided adjacent to its free end with a pair of vertically disposed openings 30 and 31 in which I locate respectively a square plunger 32 and a cylindrical plunger 33, the two being connected at their upper ends by a knob 34. A coiled-spring 35 is interposed between the knob 34 and the upper side of the arm 29 and encircles the cylindrical plunger 33. The lower ends of these plungers are secured rigidly to a head 36 whose under side is channeled or recessed at 37 and provided with opposite ways 38. Removably seated in the ways 38, by being slid endwise therein, is a metal plate 39, and the same is perforated at intervals to agree with the perforations 40 of the head 36. The under side of this plate 39 has affixed thereto in any suitable manner a series of cake, biscuit, or cracker cutting-dies 41, which may be of any shape desired. It will be obvious that this plate may be removed and instead other plates carrying other shapes and designs of dies may be substituted.

This completes the construction of the machine, whose operation I will now proceed to describe:—The dough is first placed upon the dough-board, after which through a manipulation of the crank-shaft the roller is lowered so as to be a proper distance from the dough-board and to reduce the dough to a uniform thickness. The shaft 17 is then operated through the medium of its crank, so as to cause the roller-carrying frame to traverse back and forth over the dough, thus rolling out the dough to a smooth uniform thickness. When this has been done the roller-carrying frame is left at one end of the machine, namely, the one opposite to which the dough cutters are located, and the inverted L-shaped arm, which has been previously during the rolling operation swung to one side, is now swung over the dough, and in order to cut or produce the cakes, biscuits, or crackers it is simply necessary to compress the cutters by hand against the tension of the coiled-spring. During such compression the air passes out through the perforations in the head, and the cutters operating upon the dough produce a series of forms of cakes, crackers, or biscuits as the case may be. These may be removed, the dough pushed toward the opposite end of the machine, and a re-rolling takes place, after which the cutting operation is repeated.

From the foregoing description in connection with the accompanying drawings it will be seen that I have provided a very simple, cheap, and effective machine, which may be conveniently manipulated for rolling out dough to a uniform thickness, and for rapidly and uniformly cutting cakes, biscuits and crackers in any form desired for a subsequent baking; and, furthermore, that the parts of the machine are few and simple, readily detachable, and may be readily cleansed when desired.

The machine may be built in various sizes, so as to adapt it for domestic as well as manufacturing purposes.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic.

Having described my invention, what I claim is—

1. In a machine of the class described, the combination with a framework and a dough board supported therein, of a vertically disposed inverted U-shaped roller carrying frame slidingly mounted on the framework and arranged to reciprocate over the dough-board, and a vertically adjustable roller carried by the frame, substantially as described.

2. In a machine of the class described, the combination with an oblong frame having opposite ways, of a pair of rolls arranged at one end of the frame, a single roll at the opposite end of a crank for operating the shaft of one of the rolls, a pair of gears connecting the pair of rolls, straps connected to the upper roll, passed longitudinally under the ways, over the single roll and back to the lower roll and made fast, a sliding-frame arranged endwise and connected to the straps, and a roller carried by the frame and located between the ways, substantially as specified.

3. In a machine of the class described, the combination of the oblong framework having longitudinal grooves at the inner faces of its sides, the intermediate depressed table provided at its sides with longitudinal ribs arranged opposite the grooves of the framework and forming with them ways, an inverted U-shaped frame having its ends engaging the ways, means for moving the frame back and forth upon the ways, and a vertically adjustable roller carried by said frame, substantially as described.

4. In a machine of the class described, the combination with a framework, a roller-car-

rying frame arranged for movement thereon, a roller journaled therein, and means for reciprocating said frame, of a swiveled inverted L-shaped arm, plungers arranged in the arm and spring supported, and a cutter-carrying head secured to the lower ends of the plungers, substantially as specified.

5. In a machine of the class described, the combination with the oblong frame, a rolling-mechanism carried thereby, and means for reciprocating the same, of a swiveled arm arranged at one end of the frame, spring actuated plungers carried by the arm, a head having a recess upon its under side and opposite grooves and secured to the plungers, and a removable plate inserted endwise in the grooves and having depending cutters, substantially as specified.

6. In a machine of the class described, the combination of a framework, a dough-board supported therein, a roller carrying frame slidingly mounted on the framework and adapted to reciprocate over the dough-board and provided at opposite sides with vertical grooves, means for reciprocating the roller carrying frame, slide-bars arranged in the grooves, a roller journaled on and carried by the slide bars, and means for raising and lowering the slide-bars, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM F. CURRY.

Witnesses:
F. E. CARR,
W. S. HARRIS.