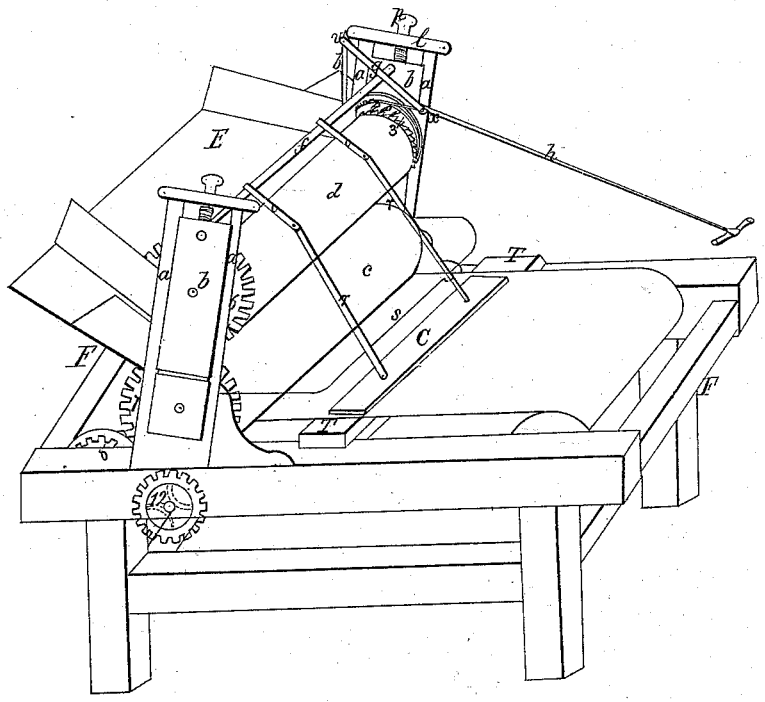
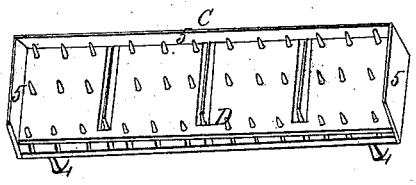
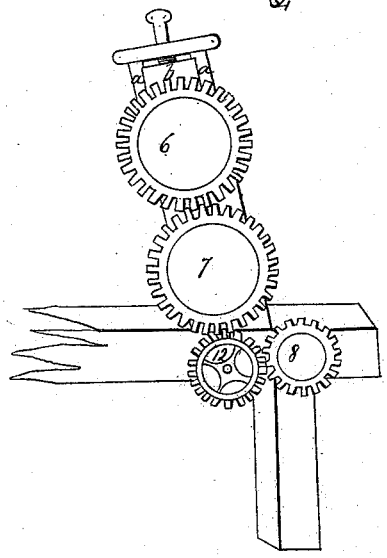
W. Cary,

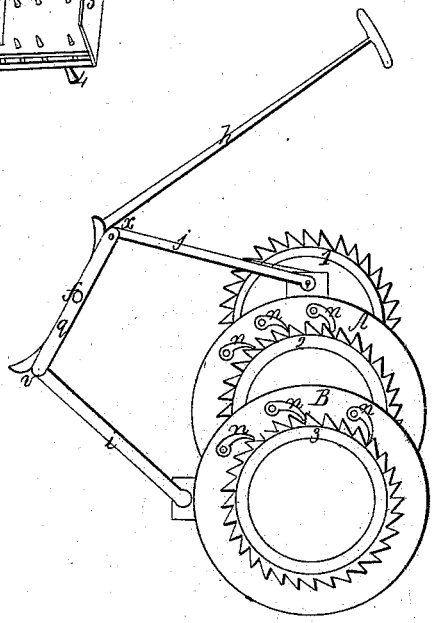
Bread Machine.

No. 3,192. Patented July 22, 1843.









UNITED STATES PATENT OFFICE.

WM. CARR, OF BATH, MAINE.

CONSTRUCTING MACHINES FOR MAKING BREAD.

Specification of Letters Patent No. 3,192, dated July 22, 1843.

To all whom it may concern:

Be it known that I, WILLIAM CARR, of Bath, in the State of Maine, have invented a new and useful Machine for the Purpose of Preparing Ship and other Bread for Baking, of the construction and operation of which the following is a full and exact description, reference being had to the accompanying drawings.

On a frame (marked F, F,) of from eight to ten feet in length, two or two and a quarter feet wide, and one and a half high, or such other similar dimensions as may be preferred, erect, and firmly fix on each side piece, at about one quarter of the distance from one end of the frame, a supporter, or frame, consisting of two side pieces, or posts of iron (*a*, *a*,) about an inch and a half square, and eighteen inches high, parallel to each other, and three inches apart, with a cross piece (*l*) to connect them at the top, and with grooves to permit a slide (*b*,) to be moved up or down in them about an inch, by means of a screw (*p*) passing through the cross-piece at the top into it. These supporters may be inserted at an angle of 50 degrees with longer end of the frame. In the lower part of these supporters, in the slide therein, which should however be separated from the upper part and firmly fastened to the posts, insert, on each side, the axis of a cylindrical roller of iron (*c*,) five or six inches in diameter, so that the lower side of the cylinder shall be an inch above the top of the frame. In the upper slide, at each side, insert the axis of another cylinder (*d*,) of the same size, so that when the slide is down the two cylinders may be within a quarter of an inch of each other; which last cylinder should have a rim at each end of more than an inch, passing closely over the ends of the first.

On one end of the upper cylinder, attach firmly to it, three ratchet wheels (1, 2, 3) separated from each other by two rims of metal (A, B,) about half an inch thick; playing freely around this cylinder, as an axis, and so much larger than the ratchets as to allow three or more pawls (*n*,) affixed to the exterior edge, on each side of both, to fall upon the contiguous ratchets, moving them, and consequently the cylinder, as these rims are moved.

At a convenient distance, say eight or ten inches, above the wheels, pass a strong axle or shaft (*f*,) through the movable slides so as partially to revolve in them. On this shaft, over the ratchet wheels, affix, firmly, a brake about a foot long (*g*,) by the middle, to move the axle or shaft and brake each way, up and down, eight or ten degrees; with a mortise in each end of the brake for the insertion of a lever (*h*). From the end of the brake (*v*,) next to the shorter end of the frame, let an arm (*i*,) extend to one of the rims, downward, nearly at a tangent thereto, and be affixed at each end by a joint, so as to permit the motion of the brake, and thereby cause the motion of the rim, and from the other end of the brake (*x*,) let another arm (*j*,) extend nearly horizontally to the top of the other rim, also nearly as a tangent, and to be affixed at each end as the first. In this manner the downward motion of both ends of the brake will cause the cylinder continually to revolve in the same direction, the pawls on the outward rim acting upon the outward and middle, and those on the inward rim, acting upon the middle and inward, ratchet wheels. Thence the continued up and down motion of the brake will cause the continued revolution of the cylinder. On the other end of this cylinder, and the same end of that below, place cog-wheels of equal size (6, 7), interlocking, so that the motion of the upper cylinder may cause the motion of the lower one in the opposite direction, and both may draw in the dough between them. The cogs of these wheels should be long enough to interlock when the cylinders are farther separated, to permit the passage of dough nearly an inch thick. Near each end of the frame place a wooden cylinder about the size of the others, with axes revolving in the side-pieces, to be moved by a cog-wheel on one (3) connected by an interposed cog-wheel (12) with that of the lower cylinder (7) and by a band of cloth passing over both, nearly as wide as the frame, and so placed that the upper side may press against the lower metal cylinder. On the side of the shaft or axle, next to the longer part of the frame, at each end, about one quarter part of the distance, toward the other end, affix an arm (*o*, *o*,) extending six or eight inches, on a line with the brake. From the end of each of these arms with a joint, let fall another arm downward (*r*, *r*,) so long that the cutter hereafter described, fixed upon the ends of them, may press firmly upon the upper side of the band, under

which, where the pressure is, should be a cross-piece (I, I,) on the frame to support it. These lower arms should be kept in place by passing through a curved piece of metal (*s*,) extending round from one supporter to the other. The lower ends of these arms are to be screwed into a cutter (*c*,) resembling that in Curtland's patent. The improvement in this cutter consists in the omission of the iron plate across the frame, through which the cutters and points pass, and instead thereof inserting a fall plate (D,) consisting of an iron plate within the frame (5, 5, 5) of the cutter similar to Curtland's, supported by pins (4, 4,) passing up from each corner through that frame, with heads which prevent its falling lower than edge of the cutter, and permit it to be pressed up while the cutter is in operation. The purpose of this is to press off the bread, when cut, from the cutters and points. Instead of this single fall, however, separate falls may be affixed in the same manner between each cutter.

On the side of the supporters next to the short end of the frame is to be affixed a kind of hopper or trough (E,) made by a board passing from between the metal cylinders upwards, at an angle of 20 or 25 degrees with the horizon, wide enough to hold the prepared dough, and so as to permit it to slide down to the cylinders and be taken in and pressed between them in their revolutions. Side pieces should be put on this to keep the dough from falling off.

By taking off the cutter, the cylinders may be used for breaking dough by passing it between them as often as necessary. The dough may also be broke and cut in one operation, by adding, with cog-wheels, as many similar pairs of additional cylinders as may be desired.

What I claim is—

The mode herein described of effecting the combined movement of the cylinders and brake for the purposes specified in the foregoing description.

WILLIAM CARR.

Witnesses:

BENJEN RANDALL,

SARAH O. SAMESON.