

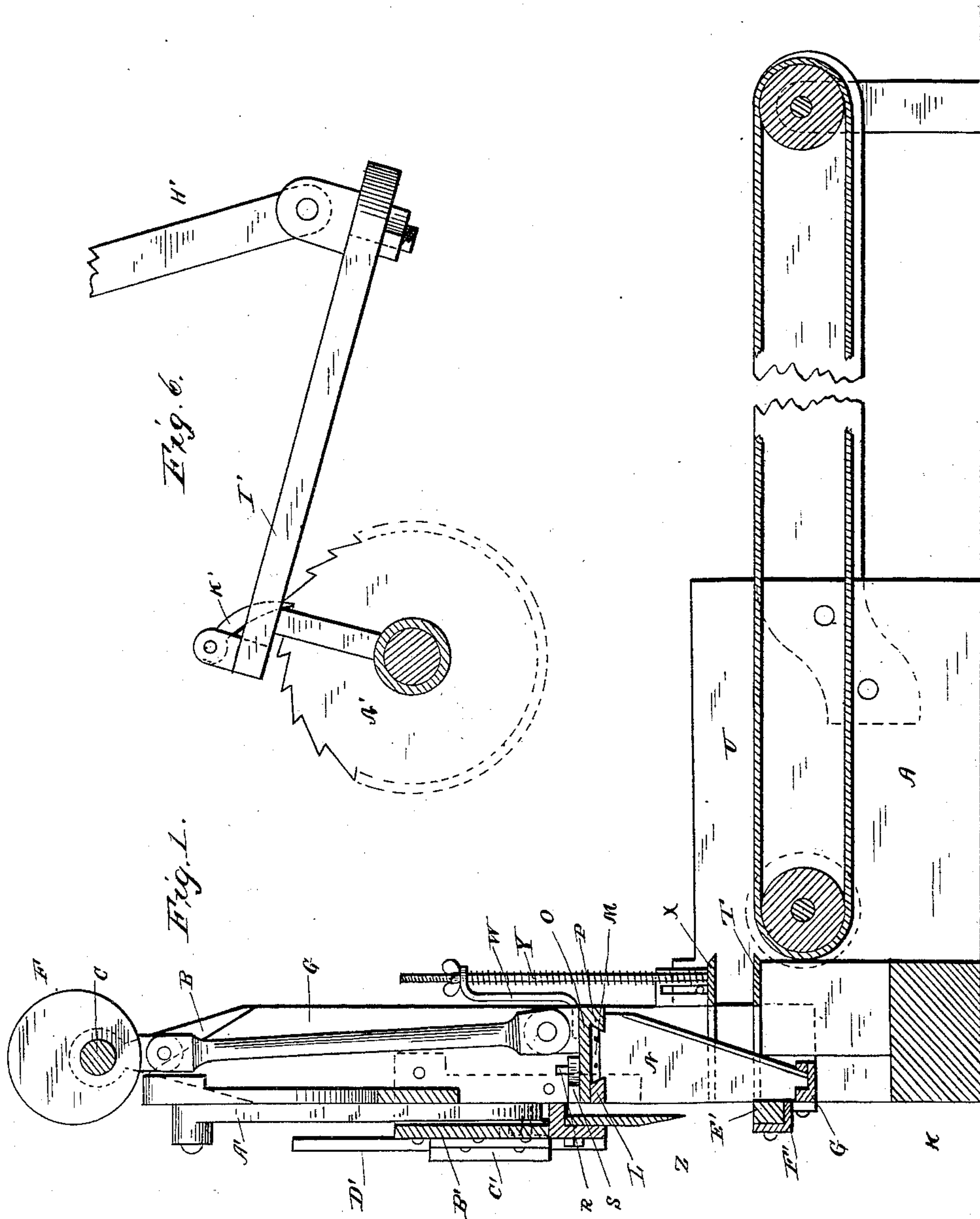
(No Model.)

3 Sheets—Sheet 1.

C. GERBER.
CARAMEL CUTTER.

No. 318,101.

Patented May 19, 1885



WITNESSES

Chas. Davis.

J. J. McCarthy.

INVENTOR

Chas. Gerber

By C. M. Alexander.

Attorney

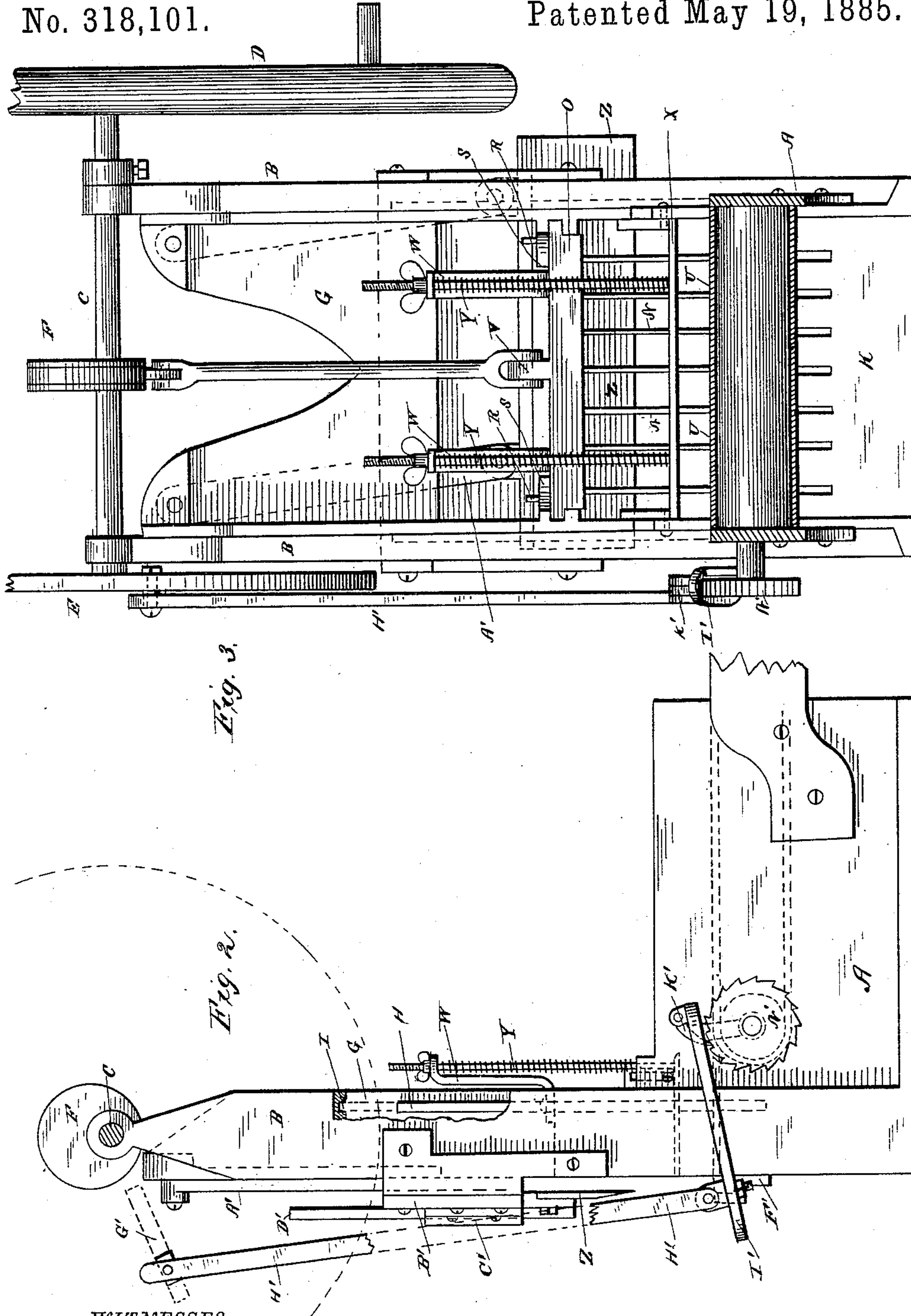
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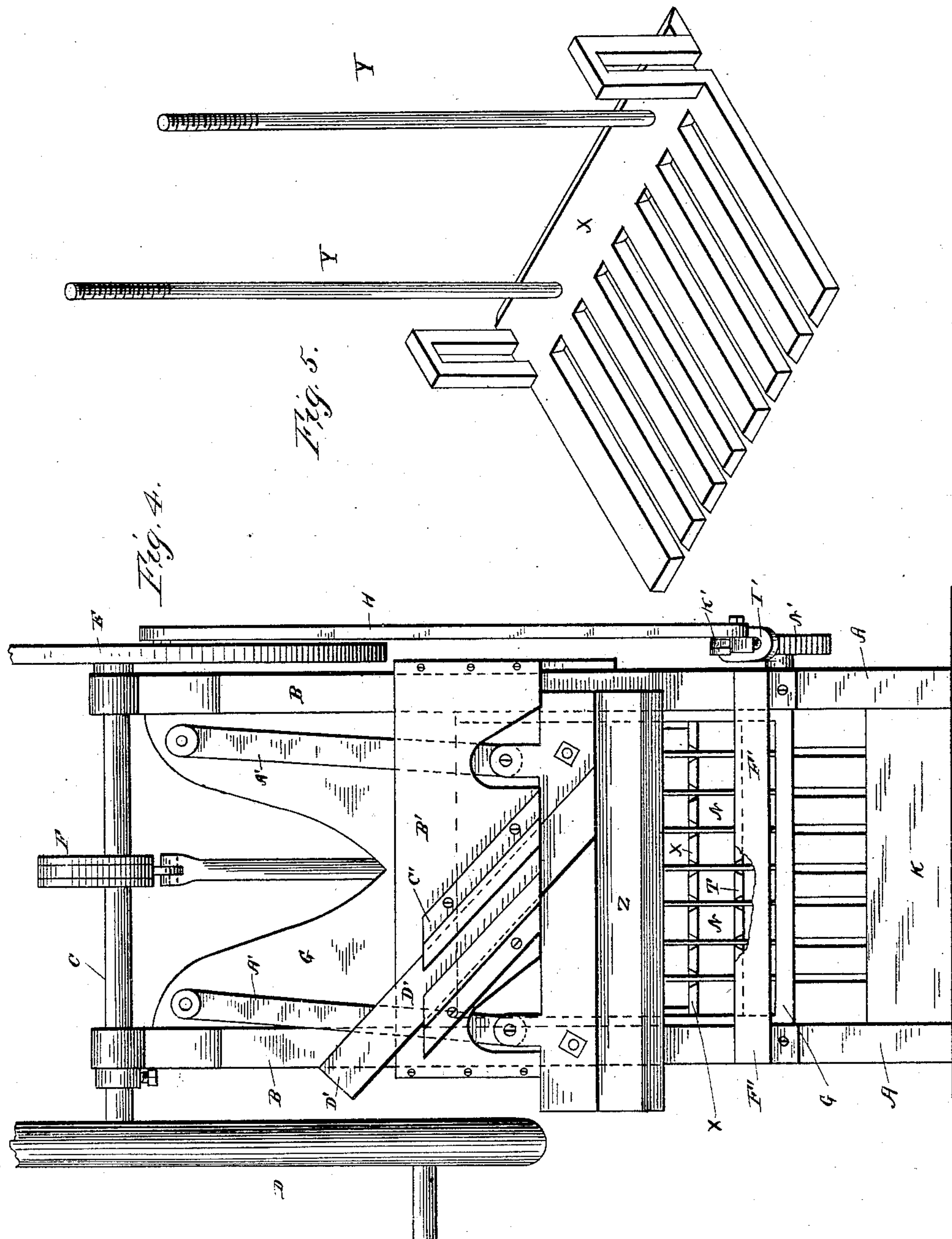
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UNITED STATES PATENT OFFICE.

CHARLES GERBER, OF YORK, PENNSYLVANIA.

CARAMEL-CUTTER.

SPECIFICATION forming part of Letters Patent No. 318,101, dated May 19, 1885.

Application filed August 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHAS. GERBER, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Caramel-Cutters, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain improvements in candy-cutters, and is used more particularly for cutting caramels. The machine is designed, objectively, to cut the candy into squares of more or less thickness at one operation.

The improvement consists in the peculiar arrangement of the cutting-knives, the feed mechanism, the pressure mechanism for holding the candy during the descent of the said knives, and the general operation and combination of the parts, all of which will be set forth in the following description, reference being had therein to the annexed drawings, in which—

Figure 1 represents a longitudinal section through the device; Fig. 2, a side view with a portion of the bed broken away; Fig. 3, a front view of the movable frame and attachments; Fig. 4, a rear view showing movable frame and attachments; Fig. 5, a perspective of one of the tongued plates, and Fig. 6, a detail of a portion of the feed mechanism.

The machine is supported on a bed, A, of proper size, having raised on it at each side of one end (the rear) a standard, B, having on top a bearing for the shaft C, which carries at one end, outside the bearing, a balancing and propelling wheel, D, and at the other, preferably, a disk-wheel, E, which counterbalances in a measure the drive-wheel. Between the bearings the shaft carries an eccentric, F. Moving vertically between the standards is a frame, G, guided by means of a tongue, H, on it, engaging in a slot, I, in the said standards. Between the two sides of the bed, at the rear, is fixed a slotted block, K. The frame G has about midway a beveled cross-piece, L, over the edge of which fits one side of the undercut beveled extension M of the triangular knife N. The knife is held in place and locked by means of a removable piece, O, which, when in place, has one edge resting on the piece L,

and the other provided with a beveled flange, P, which fits under one side of the extension M on the knife. The piece O is secured by means of pins R, which pass through extensions or flanges S on the frame G. The lower edge of the knife sets in a slot in the bottom cross-piece of the frame G, and has its slanting or sharpened edge toward the front or "feed" of the machine. The extension M is preferably thicker than the rest of the blade, and is made so by securing a small piece of metal on one side. This prevents wobbling or loosening in operation.

The knives, which in number vary according to the size of the machine and the width of the caramel, operate between a series of tongues, the spaces between them coinciding with the slots in the block K, to which the plate T, carrying the said tongues, is secured, the said spaces being just wide enough to allow the passage of the knives, which are guided therein. The tongues extend to the rear till they are flush with the edge of the frame G. The front of the plate T is beveled, so as to allow the close contact of the feeding-belt U, the operation of which will be hereinafter explained. To a flange, V, on the top of the piece O, is pivoted a pitman, which is connected to the eccentric on the driving-shaft, and so, when in motion, gives the frame G an up-and-down movement between the standards B. The knives thus give a shear cut on anything that may be fed to them, the cutting-edge being at an angle to the motion of the said knives.

By means of uprights W, secured to the plate or piece O and projecting beyond the front edge of the same, a plate, X, coincident with and tongued similarly to the plate T, is hung adjustably on spring-surrounded screw-bolts Y, thumb-nuts being provided for facilitating the adjustment. The plate X rises and falls with the frame G, and serves to hold the candy while the knives are cutting. The knives are so placed as to start the cuts longer than the width of the caramel, so that the next descent and those following will not begin to cut till the plate X rests firmly on the sheet of candy, the springs allowing the knives to finish the cut while the plate remains stationary.

On the rear of the frame G is hung a later-

ally-extending knife, Z, by means of two arms, A', pivoted to the knife-holding frame and to the frame G. This allows the knife to rock in a pendulous manner. A cross-piece, B', is secured to the standards B at the rear of the frame G and carries the slanting guides C'. Within these guides operates a post or bar, D', having the same angle of slant as the said guides, and secured to the knife-frame. It is evident from this arrangement that as the frame G moves downward, the cross-piece B' remaining stationary, the knife will have a downward and advancing motion, thereby giving a sliding cut. The knife operates a short distance from the end of the tongues on the piece T, but close enough to prevent the reuniting of the edges of the strips of candy, yet at a sufficient distance to prevent the splintering of the edge of, say, a wooden strip, E', which forms the cutting-bed, and by means of a bracket, F', has its upper edge kept about on a line with the surface of the said tongues. If the knife struck too near the tongue it would clip the edge of the wooden strip, which when worn can easily be replaced by another being merely slipped in the bracket. The disk-wheel E has in it a radial slot, G', in which is adjustably pivoted a pitman, H', the other end of which is adjustably pivoted in a longitudinal slot in an L-lever, I', one end of which is fulcrumed on the end of the shaft of the roller of the belt U. At the angle of the L is pivoted a pawl, K', which passes through the slot in the lever and engages with a ratchet, M', on the end of the said belt-roller. By adjusting the pitman at either the disk-wheel or at the lever, or at both, the belt is made to advance a definite distance—the width or length of a caramel. This advance is made just prior to the descent of the frame G, and while the knives N are advancing the longitudinal cuts into the sheet of candy, the knife Z cuts off the portion that has advanced beyond the rear of the tongues on the plate T, and thus the sheet is cut into rectangular pieces of varying thickness. The rear of the knives N are flush with the ends of the tongues, so that the knife Z will cut the strips before they can reunite, as they would otherwise do, as the candy is necessarily slightly soft. The knives N are adjusted by using plates with tongues of varying widths.

Having described the device, what I claim is—

1. In a candy-cutting machine, a series of knives advancing parallel cuts into a sheet of candy and a single knife operating at an angle to the others to divide the strips into blocks.
2. In a candy-cutting machine, a series of knives advancing parallel cuts into a sheet of candy and adjustable as to the width of the strips cut and a knife operating at an angle to the others to divide the said strips into blocks.
3. In a candy-cutting machine, a series of knives advancing parallel cuts into a sheet of candy and adjustable as to the width of the

strips, a knife operating to cut the strips into blocks, and a feed giving an adjustable intermittent advancing motion to the candy.

4. In a candy-cutting machine, a reciprocating frame guided between two standards, the said frame carrying a series of knives removably secured to it for cutting a sheet of candy into strips, and a knife at an angle to the others for cutting the strips into blocks.

5. In a candy-cutting machine, a reciprocating frame guided between two standards and given motion by a drive-shaft, to which it is connected, the said frame carrying a series of knives for cutting a sheet of candy into strips, a knife at an angle to the others for cutting the strips into blocks, and a clamp for holding the sheet while being cut.

6. A series of triangular knives sharpened on the slanting edge and secured in a frame, the said frame moving perpendicular to the material to be cut, so that the knives will make an advancing or shear cut in operation.

7. In combination with a frame having a beveled cross-piece, a triangular knife sharpened on the slanting edge and provided with an extension having an undercut bevel, and a lock-piece fitting over both the extension on the knife and the cross-piece on the frame and provided with a beveled flange which engages with one side of the said extension on the knife, the lock-piece being removably secured in the frame, substantially as and for the purpose specified.

8. In combination with a movable frame, a knife hung to the frame by pivoted links and provided with a slanting bar or post operating in ways or guides set at the same angle as the said bar and secured to a piece or plate which is fastened to the standards in which the movable frame operates, the knife having an advancing downward motion as the frame descends.

9. In combination with a frame carrying a series of triangular knives, a slotted bed or block carrying on its upper surface a plate having a series of tongues projecting from one side, the knives operating between them and being guided thereby, the plate being beveled on the other side, substantially as and for the purpose specified.

10. In a candy-cutting machine, a clamp consisting of a tongued plate secured to a movable frame by means of spring-surrounded bolts provided with thumb-screws and supported by standards.

11. A candy-cutting machine consisting of a bed having at one end standards carrying a drive-shaft, a movable frame having a series of triangular knives removably and adjustably secured to it, an adjustable spring-clamp secured also to the frame, a knife at an angle to the others and hung by pivoted links to the said frame having a slanting post which is guided in ways secured by a plate to the standards, and an adjustable intermittent advancing mechanism consisting of a ratchet secured to a belt-roller shaft and a pawl pivoted to a

slotted lever operated by a pitman secured to a wheel on the drive-shaft, which also operates the movable frame by means of a pitman and an eccentric, the series of knives being
5 guided by a tongued plate which receives a sheet of candy from the feeding-belt, the several parts combining to cut the sheet into blocks at one operation, substantially as and for the purpose specified.

10 12. In combination with a cutting-knife, a renewable bed consisting of a bracket secured to the standards supporting the knife

at some distance above their base and a comparatively-narrow strip of wood or like material adapted to be slipped into the
15 bracket and on which the edge of the knife rests after having severed the candy-strips.

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

CHARLES GERBER.

Witnesses:

EDWARD LONG,
JOHN A. WILLIS.