(No Model.)

H. J. LYSTAD.

TOAST CUTTER.

No. 462,055. Patented Oct. 27, 1891.

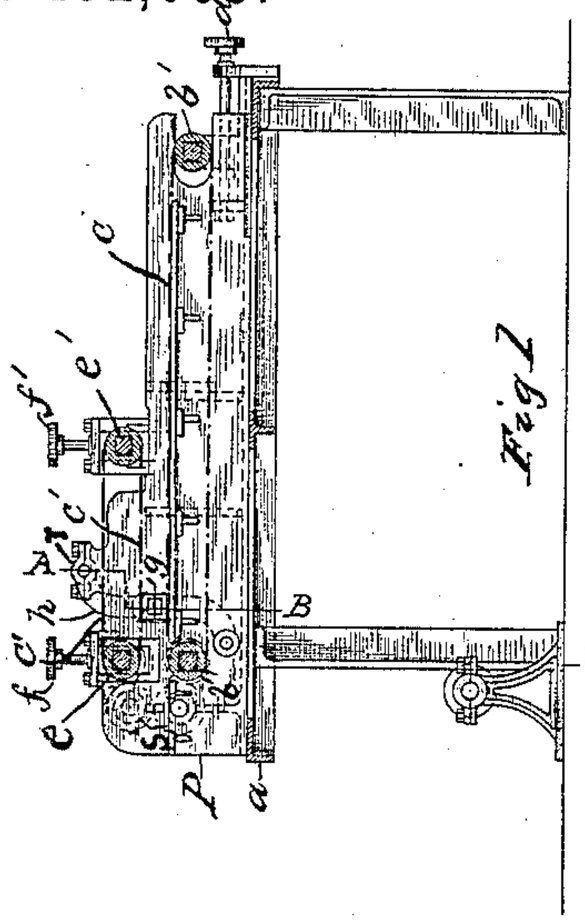

Fig 1

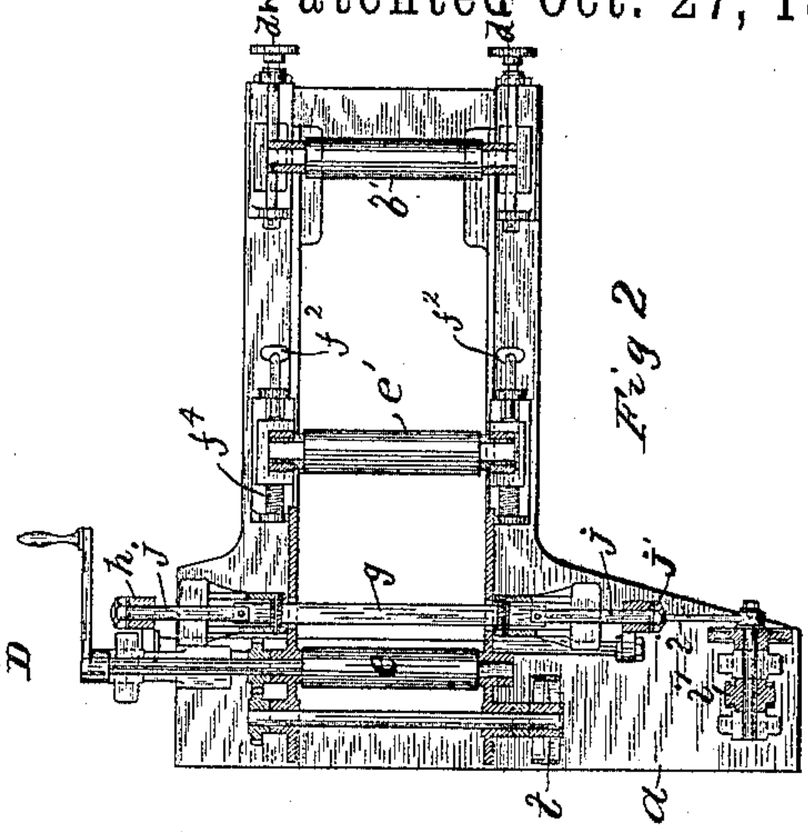

Fig 2

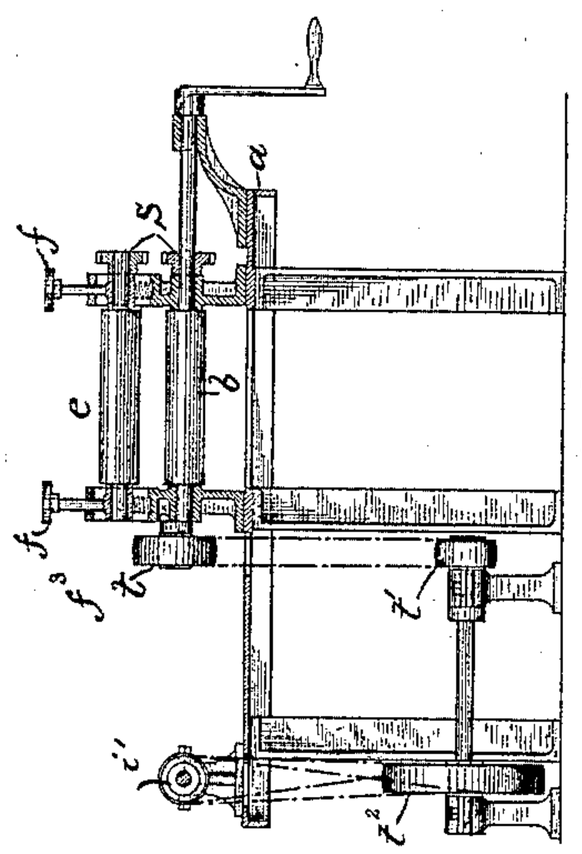

Fig 3

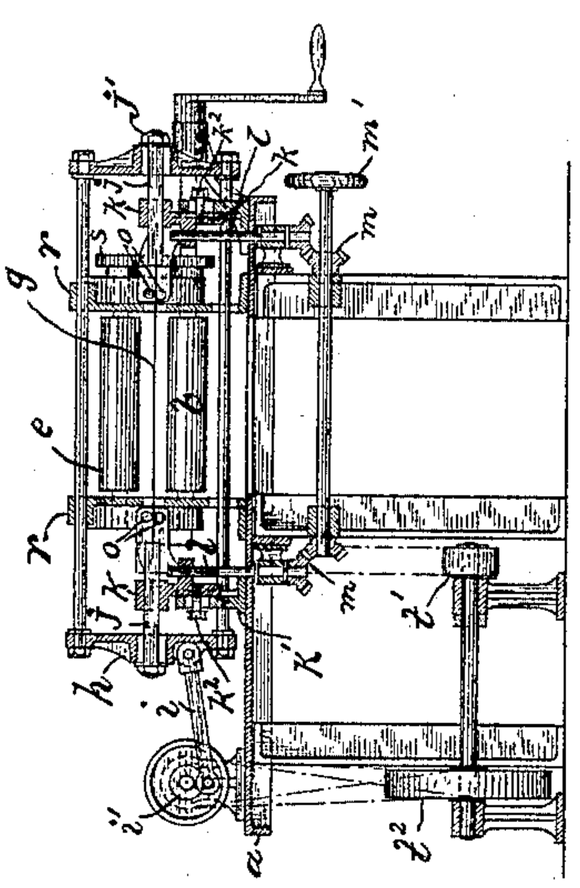

Fig 4

Witnesses
C. H. Wood.
J. H. Winslow

Inventor
Hans J. Lystad
By his Attorney Wm Zimmerman.

UNITED STATES PATENT OFFICE.

HANS J. LYSTAD, OF CHICAGO, ILLINOIS.

TOAST-CUTTER.

SPECIFICATION forming part of Letters Patent No. 462,055, dated October 27, 1891.

Application filed July 13, 1891. Serial No. 399,388. (No model.)

To all whom it may concern:

Be it known that I, HANS J. LYSTAD, 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 Toast-Cutters, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows my said toast-cutter in side elevation, with a projecting portion toward the observer cut away by a vertical plane parallel to the side of the machine. Fig. 2 shows the same in plan view, with the projecting portion restored and the journal-boxes of the rollers b', e', and e cut by a horizontal plane each through the centers of the axes of their journals, and also by such a horizontal plane just above the cutter g the frame h is cut. Fig. 3 shows a transverse vertical section of Fig. 1 on a plane at C D. Fig. 4 shows a transverse vertical section of Fig. 1 on planes indicated by the lines A B.

Like letters refer to like parts.

The object of my invention is to produce a toast-cutter for slicing or cutting biscuits into substantially equal halves for the purpose of toasting said parts, and in order to produce such a machine which shall be of greater practical use than any heretofore produced I make my said newly-improved machine in substantially the following way, namely: On a suitably-mounted bed-plate a are placed a pair of rollers b b', which carry an endless apron c. (Indicated in Fig. 1 in broken lines.) The roller b is non-adjustable; but the roller b' is carried in blocks which are made adjustable by means of screws d, which pass through lugs on the end of said frame into threaded lugs on said blocks. By means of this construction the apron c may be strained as tightly as desired.

In another horizontal plane above and parallel to that in which the rollers b b' operate is a pair of rollers e e', whereof the roller e is adjustable vertically by means of screws f and springs f^3 under the journal-boxes of said roller. Said roller is provided with like springs and vertical set-screws f', also with horizontal springs f^4 and set-screws f^2 to adjust said roller to and from the roller e. Said rollers e e' carry an endless apron c', (indicated in Fig. 1,) like the apron c. By means of said construction the apron c' may be made to operate in a plane more or less remote from that of the parallel apron c. In a plane parallel to said aprons and about midway between them and a short distance back of the rollers b e is a cutting blade or knife g, carried in a frame h, set transversely on the machine parallel to the rollers b e and adapted to reciprocate in its longitudinal direction by means of a pitman-rod i, connected to a crank on the shaft of the pulley i'.

In the center of the heads of the frame h are vertically-adjustable straining-bars j, with nuts j', which extend inward as far as practicable, and to their inner ends are attached the ends of said cutter g, which by said nuts j' may thus be strained to any requisite degree to cut straight and true. Said straining-bars are adjustable in vertical slots in the ends of said frame h, in which they are held to place, when once adjusted, by the strain of said nuts j'. The upper rod of the frame h plays in fixed boxes r, and the lower rod of said frame plays through large openings where it passes through other parts of the machine. Said straining-bars reciprocate longitudinally in bearings k, which are adjustable vertically by means of screws l, connected to bevel-gearing m at their lower ends, which are operated by a hand-wheel m', and said screws turn in a threaded lug on the side of a downwardly-extending arm of said bearing k, passing closely by the side of a post k' on the bed-plate a. Through said post is a vertical slot in which plays a bolt k^2, threaded into said arm of the bearing k. By means of this construction the cutter g may be adjusted to cut on various planes above the apron c. On each side of the rod j and forming a part of the bearings k, its arm, and lug are curved arms extending inward toward the apron, as far as practicable, and in their ends are rollers o above and below said cutter, which shorten its unsupported length and also hold it steady to its work. The lower longitudinal rod of the frame h plays in openings in the walls p, which rest on the bed-plate a and inclose the aprons, and the upper longitudinal rod of said frame plays in fixed guides r.

The rollers *b* and *e* are provided with spur-wheels *s*, which are connected to intermediates *s'* to secure uniform motion for the aprons *c c'* and to at the same time permit vertical adjustment of the roller e^5. The shaft of the roller *b* extends outward through a bracket and is provided with a crank, which actuates the entire mechanism. The lower one of the intermediates *s'* is attached to a shaft carrying at its opposite end a pulley *t*, which is connected by a belt to a smaller pulley *t'* on a shaft carrying a drum t^2, which is connected by a quarter-turned belt with the pulley *t'*, whereby more rapid motion is given to the cutter *g*. The object of this construction and adjustability of said aprons and cutter is to adapt the machine to split biscuits of various thickness in the middle. The upper apron is shortened at its front end to make room upon the lower apron to receive the biscuits to be fed to the cutter.

When the machine is in operation, the biscuits move under the apron *c'* and are then held between the two uniformly-moving aprons and pushed against the cutter with sufficient force to split them as they move forward, after which they are discharged at the other end of the aprons into a suitable receptacle ready for toasting.

What I claim is—

1. In a toast-cutter, the combination, with the uniformly-speeded parallel aprons, whereof the front end of the upper apron is set back of the lower apron and is vertically adjustable thereto, of a cutter vertically adjustable between the adjacent surfaces of said aprons, to operate substantially as specified.

2. In a toast-cutter, the combination, with the uniformly-speeded parallel aprons, whereof the front end of the upper apron is set back of the lower apron and is vertically adjustable thereto, of a longitudinally-reciprocating cutter vertically adjustable to said aprons, substantially as specified.

3. In a toast-cutter, the combination, with the parallel aprons *c c'*, whereof the upper apron is set back of the lower one and wherein the lower apron is adjustable longitudinally and the upper apron is adjustable both longitudinally and vertically, of a longitudinally-reciprocating and vertically-adjustable cutter between said aprons carried in a straining-frame, substantially as specified.

4. In a toast-cutter, the combination, with the parallel aprons *c c'*, whereof the upper one is set back of the lower one and is vertically adjustable thereto, of a longitudinally-reciprocating and vertically-adjustable cutter between said aprons carried in a straining-frame actuated by one of the roller-shafts of the lower apron and connected to said straining-frame through intermediate mechanism, substantially as specified.

HANS J. LYSTAD.

Witnesses:
WM. ZIMMERMAN,
C. H. WOOD.