

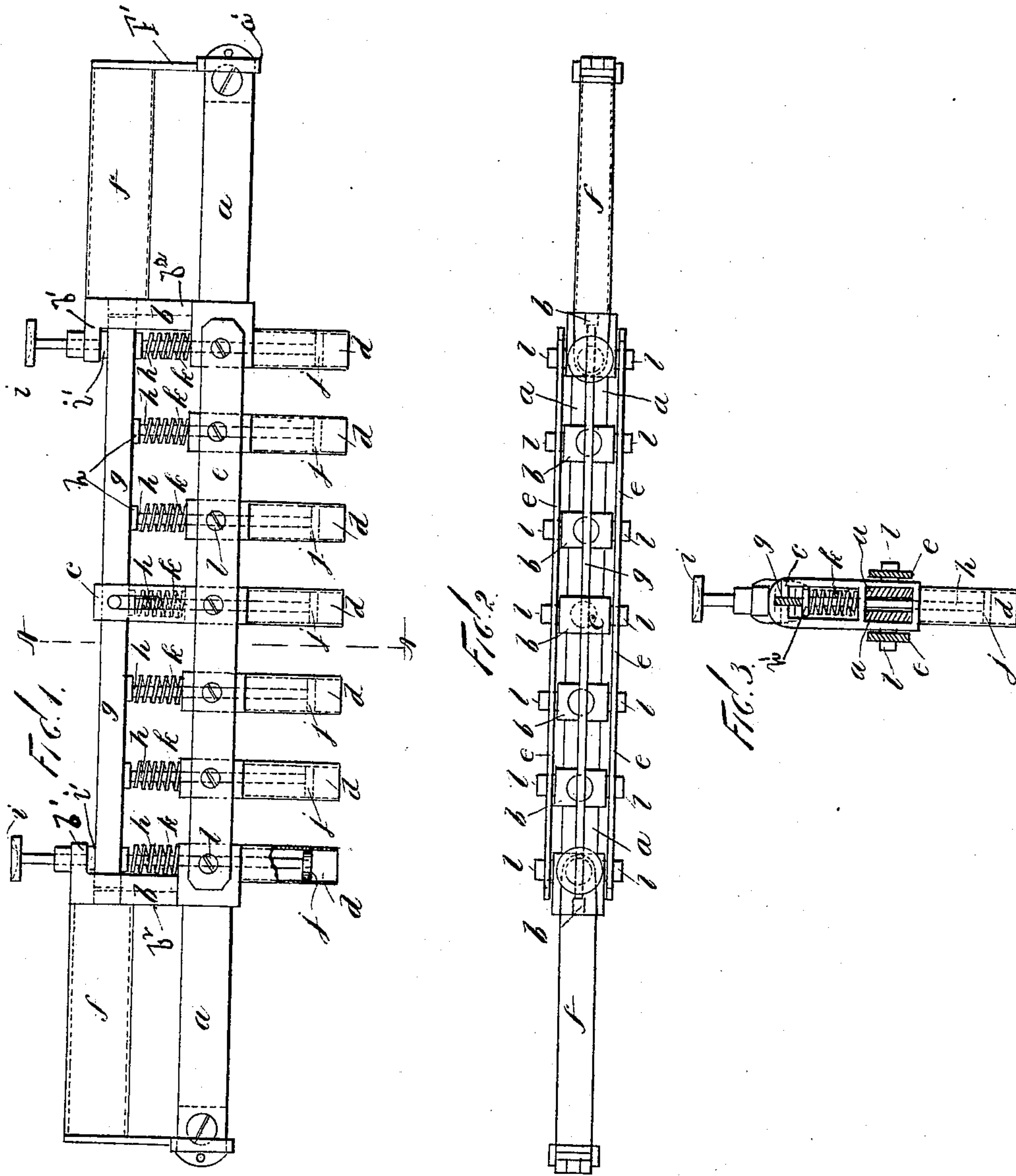
No. 615,804.

Patented Dec. 13, 1898.

E. CARR.  
APPARATUS FOR CUTTING BISCUITS.

(Application filed Oct. 16, 1897.)

(No Model.)



WITNESSES.

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# UNITED STATES PATENT OFFICE.

ELLIS CARR, OF LONDON, ENGLAND, ASSIGNOR TO PEEK, FREAN & CO.,  
OF SAME PLACE.

## APPARATUS FOR CUTTING BISCUITS.

SPECIFICATION forming part of Letters Patent No. 615,804, dated December 13, 1898.

Application filed October 16, 1897. Serial No. 655,403. (No model.)

*To all whom it may concern:*

Be it known that I, ELLIS CARR, a subject of the Queen of Great Britain, residing at Drummond road, Bermondsey, London, in the county of Surrey and Kingdom of Great Britain, have invented certain new and useful Improvements in Apparatus for Cutting Biscuits and the Like, (patented in Great Britain June 19, 1897, No. 3,440,) of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The invention is the same as that for which Letters Patent were granted in Great Britain, No. 3,440, dated February 9, 1897, on an application accepted June 19, 1897; and said invention relates to apparatus for cutting biscuits and other like articles of food, and has for its object the production of an apparatus of the above-described class which may be so utilized as to prevent the rehandling of the dough, which, as is well known, tends to deteriorate the quality of the same, and thus reduce to an inferior quality the biscuits made therefrom.

It is also the object of my invention to provide a cutter which will form a number of biscuits at once and hold the same in such relation as will admit of their being deposited directly from the cutter in the baking-pan and which will be capable of ejecting the same without altering the form thereof.

The invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed, and is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side elevation of my improved cutter; Fig. 2, a plan view thereof, and Fig. 3 a section on the line A A of Fig. 1.

Like letters refer to like parts throughout the several views.

In the accompanying drawings, *a a* denote two parallel bars extending laterally throughout the entire breadth of my device, having mounted thereon a plurality of sliding blocks *b* and an immovable central block *c*. Each of the blocks *b*, occupying the position nearest the end of the rods *a*, is provided with an

upward extension *b*<sup>2</sup>, having a lateral lug *b*<sup>1</sup>, preferably made integral therewith, and an opening by means of which said extension *b*<sup>2</sup> is adapted to slide on a rod *g*, parallel with the double rod *a*. Each of the sliding blocks *b*, and also the rigid block or saddle *c*, is provided at the lower extremity thereof with a die or cutter *d*, which may be of any desired configuration. *j* denotes a plunger or ejector capable of a vertical movement within each of said dies and operated by means of a rigid connection *h*, rising from the plunger and having a plate or head *h*<sup>1</sup>, which is adapted to bear permanently against the lower edge of the rod *g*. To preserve this relation, I provide a spiral spring *k*, seated upon the top of each of the blocks and exerting a constant upward pressure against the plates or heads *h*<sup>1</sup>, adapted to be in contact with the said bar.

To limit the lateral movement of the sliding blocks and to insure a simultaneousness of action, I securely attach to each of said blocks, by means of a screw-bolt *l*, a flexible band *e*, which will prevent said blocks from traveling to an extent greater than the extreme length of said band.

To aid in the maintenance of the various parts in their proper relation, I extend the central immovable block *c* upwardly, and by uniting said extension over the bar *g* form a seat for the same within said bar and by a slot in said extension and coöperating pins on said bar prevent a lateral motion of the same when my apparatus is in use.

Rigidly mounted on the upward extension *b*<sup>2</sup> of the end blocks *b* is a handle *f*, the extremities of which are supported on a standard *F*<sup>1</sup>, attached to a sliding collar *a*<sup>1</sup>, encompassing the rods *a*, as clearly shown in Fig. 1.

To accomplish a uniform operation of the plunger or ejectors, I provide thumb-keys *i i*, mounted in the lugs *b*<sup>1</sup> on the end blocks *b* and provided at their lower extremity with a bearing-plate *i*<sup>1</sup>, adapted to engage the upper surface of the rod *g* in order that when said rod is free from the openings in said end blocks it may be depressed simultaneously at both ends by means of these thumb-keys, thus simultaneously operating all of the ejec-



tors. The slot in the central immovable block will permit of this vertical movement.

The operation of my improved apparatus for cutting biscuits and other like articles of food is as follows: The dough having been reduced to the desired thickness, the various dies or cutters are brought into intimate relation by means of the handles *f* and the connections between the same and the sliding blocks *b*, the central block *c* remaining stationary, so that the remaining blocks will be grouped about the same. It will readily be observed that the openings in the upward extensions *b*<sup>2</sup> of the end blocks *b* and the flexible connections between said blocks will readily admit of this concentration of dies. When the dies have been brought into this relation, it will be observed that the biscuits or other articles may be taken from a very limited space, thus obviating the waste of surplus material, which is unavoidable, in order to render the ordinary machine for cutting a number of biscuits simultaneously operative.

In the common construction of cutters the dies are mounted rigidly upon a block and at a distance apart at which the biscuits must be placed in the baking-pan, which distance is material. This form of device necessarily left a portion of the dough on the board, necessitating the rehandling and rerolling of the same. This process detracts greatly from the quality of the dough, as aforesaid, and a resulting deterioration of the quality of the article of food made therefrom.

When it is desired to place the biscuit in the pan, it is merely necessary to restore the sliding blocks to their former position, which motion is limited as well as facilitated by means of the flexible connection between said blocks. The dies or cutters having been brought in the proper relation with the baking-pan, the biscuits contained therein may be deposited on the same by merely pressing down the thumb-keys *i*, which by reason of the bearing-plates *i'* bearing on the vertically-sliding rod *g* and the plate or head *h'*, connected with the plungers or ejectors *j* within each of the dies by means of the rigid connection *h*, will simultaneously eject all of the biscuits. The springs *k* will operate to restore the parts to their normal position and prevent any interference with the perfect operation of the cutters by reason of the plungers not being in their proper position.

By the means above described I have fully attained the objects of my invention. I have produced a device which can be so utilized as to prevent the rehandling of any material amount of dough, thus preserving a uniformity in the quality of the articles made at one baking.

The construction which admits of the concentration of the cutters or dies, it will be readily observed, permits of the cutting of

the biscuits with a minimum of waste material and at the same time permits the biscuits to be deposited in the baking-pan at the proper distance apart without rehandling or destroying the quality or configuration of the same.

The cutter as herein described is simple in construction, efficient in operation, and comparatively inexpensive to manufacture, having all the advantages of the rigid cutters before described and those advantages additionally hereinbefore enumerated.

It is to be observed that it is not my intention to limit the invention to the precise construction herein described, as it is obvious that there may be many variations in minor detail of construction without departing from the spirit of my invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In an apparatus for cutting biscuits and similar articles, a longitudinal bearing, a plurality of sliding dies or cutters mounted thereon, elastic devices connected therewith for concentrating said dies or cutters, spring-supported plungers mounted in said dies or cutters and means for operating said plungers and for separating said dies or cutters, against the action of said elastic tension devices, substantially as shown and described.

2. In an apparatus for cutting biscuits, a longitudinal bearing, a plurality of dies or cutters slidably mounted thereon, devices for yieldingly holding said dies or cutters together or concentrated, and means for sliding said dies or cutters apart to separate the same.

3. In an apparatus for cutting biscuits, a longitudinal bearing, a plurality of dies or cutters slidable thereon, elastic connections between said dies or cutters to normally hold the same together or concentrated, and means for separating said dies or cutters against the action of said elastic connection.

4. In an apparatus for cutting biscuits, a longitudinal bearing, a plurality of dies or cutters slidable thereon, elastic connections between said dies or cutters to normally hold the same together or concentrated, and handles connected with the outer dies or cutters for separating the same against said elastic connections.

5. In an apparatus for cutting biscuits and other like articles, a laterally-extended rod, a plurality of sliding blocks mounted thereon, dies supported by said blocks, extensions on the end blocks thereof, a collar encompassing said rod, a standard on the rod, a handle supported thereby and secured to the extension, whereby said blocks may be concentrated and separated, and means for ejecting the dough from said dies, substantially as shown and described.



6. In an apparatus for cutting biscuits and other like articles, a laterally-extended rod, a plurality of sliding blocks mounted thereon, dies supported by said blocks, extensions on the end blocks thereof, a collar encompassing said rod, a standard on the rod, a handle supported thereby and secured to the extension, whereby said blocks may be concentrated and separated, and means for ejecting the dough from said dies, a flexible band attached to the blocks to limit the lateral movement of the same, substantially as shown and described.

7. In an apparatus for cutting biscuits and other like articles, a plurality of sliding dies or cutters, and a central rigid cutter, a bearing upon which said dies are adapted to slide, and means whereby said dies may be concentrated and separated, substantially as shown and described.

8. In an apparatus for cutting biscuits or other like articles, a laterally-extended rod, a plurality of sliding blocks mounted thereon, and a central immovable block, dies supported by said blocks, handles supported by a sliding collar encompassing said rod, and extensions on said end blocks, a flexible band connected with each of said blocks to limit the lateral movement thereof, and means in conjunction with said dies whereby the dough therein may be simultaneously ejected, substantially as shown and described.

9. In an apparatus for cutting biscuits or other like articles, a laterally-extended rod, a plurality of sliding blocks mounted thereon, and a central immovable block, dies supported by said blocks, handles supported by a sliding collar encompassing said rod, and extensions on said end blocks, a flexible band connected with each of said blocks to limit the lateral movement thereof, and a vertically-sliding rod, a plunger in each of said dies, and connections between said rod and said plunger, whereby the dough therein may be simulta-

neously ejected, substantially as shown and described.

10. In an apparatus for cutting biscuits or other like articles, a laterally-extended rod, a plurality of sliding blocks mounted thereon, and a central immovable block, dies supported by said blocks, handles supported by a sliding collar encompassing said rod, and extensions on said end blocks, a flexible band connected with each of said blocks to limit the lateral movement thereof, and a vertically-sliding rod, a plunger in each of said dies, and connections between said rod and said plunger, whereby the dough therein may be simultaneously ejected, and springs seated between said rod and said blocks whereby said plungers automatically assume their normal position, substantially as shown and described.

11. In an apparatus for cutting biscuits or other like articles, a laterally-extended rod, a plurality of sliding blocks mounted thereon, and a central immovable block, dies supported by said blocks, handles supported by a sliding collar encompassing said rod, and extensions on said end blocks, a flexible band connected with each of said blocks to limit the lateral movement thereof, and a vertically-sliding rod, a plunger in each of said dies, and connections between said rod and said plunger, springs seated between said rod and said block whereby said plungers automatically assume their normal position, and thumb-keys acting upon said vertically-sliding rod, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 24th day of September, 1897.

ELLIS CARR.

Witnesses:

RANDLE S. ASH,  
C. ERRINGTON PEGLER.