B. R. BACON.

BREAD KNIFE.

APPLICATION FILED AUG. 11, 1916.

**1,227,234.** Patented May 22, 1917.

Fig. 1

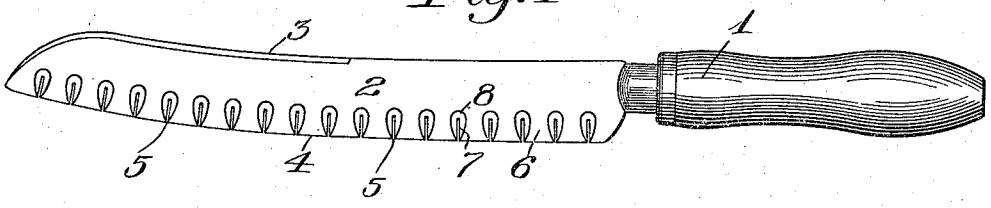



Fig. 2

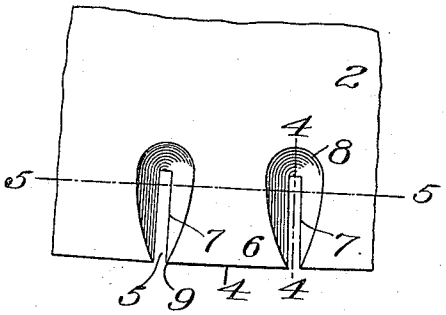



Fig. 4

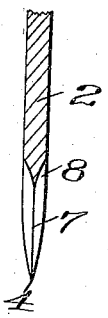



Fig. 3

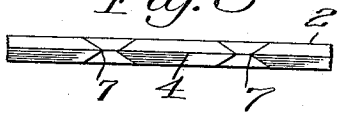
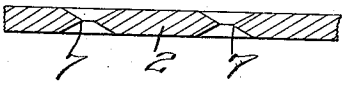



Fig. 5




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# UNITED STATES PATENT OFFICE.

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## BREAD-KNIFE.

1,227,234. Specification of Letters Patent. Patented May 22, 1917.

Application filed August 11, 1916. Serial No. 114,366.

*To all whom it may concern:*

Be it known that I, BYRON R. BACON, of North Chili, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Bread-Knives; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to cutlery and more particularly to carving knives or hand knives and it has for its object to provide an efficient and durable knife that will be cheap to manufacture and will possess certain advantages over the ordinary form of knife enabling it to cut more quickly and with less effort and more economically, the improvements being directed in part toward preventing waste of the material being cut, particularly bread and similar substances that have a tendency to produce crumbs. To these and other ends the invention resides in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claim at the end of the specification.

In the drawings:

Figure 1 is a side elevation of a knife constructed in accordance with and illustrating one embodiment of my invention;

Fig. 2 is an enlarged fragmentary view of a portion of the knife blade showing one of the cutting sections in greater detail;

Fig. 3 is an edge view of the portion of the blade shown in Fig. 2;

Fig. 4 is a transverse fragmentary section on the line 4—4 of Fig. 2, and

Fig. 5 is a longitudinal section taken substantially on the line 5—5 of Fig. 2.

Similar reference numerals throughout the several figures indicate the same parts.

As to its major element, the knife of my invention may comprise a handle 1 and a blade 2 as usual, 3 being the back of the blade and 4 the usual cutting edge. The edge 4 is, however, not continuous but is interrupted by a series of parallel slots 5 extending at right angles therefrom in the preferred form into the body of the blade and being of uniform width. Otherwise, the edge 4 is the normal knife edge tapered or ground from both sides so that it lies in the median plane of the blade and can be sharpened on a stone or steel in the customary manner by abrading both sides equally.

The slots 5 thus divide the blade into a series of cutting sections 6 and the margins or edges of the sections, other than the edge 4, defined by the walls of the slots are also made cutting edges as indicated at 7. These edges are similarly tapered or ground from both sides so that they also lie in the median plane of the blade and hence in the same plane with the edge 4.

In the process of manufacture, the normal blade with the edge 4 produced thereon is first run into a slotting machine that forms the slots 5 and then into a grinding machine having a grinding wheel or tool of proper configuration to form a depression 8 in the region of each slot on each side of the blade, producing a continuous cutting edge 7 on each wall of the slot extending throughout the length of the latter. Of course, these depressions or cavities 8 may be ground individually or in gangs and both sides of the knife may be ground simultaneously or first one side and then the other may be run against the grinding wheels.

The advantages of a knife constructed in accordance with my present invention are numerous. The points 9 formed by the junction of the cutting edges 7 and 4 are so disposed and proceed in such a direction with the natural cutting movement of the blade that they eat into the material being cut with great effect. The material crowded into the slots 5 by reason of the edge 4 sinking more rapidly into the substance is immediately and directly exposed to the cutting edges 7 so that a sharp edge is always proceeding directly against the material in both a forward and a downward direction—the two directions in which a knife is naturally moved—and the actual effective cutting edge is really increased to the extent that it is almost doubled, for the sum of the edges 7 must be added to the sum of the normal edges 4. In spite of the interruptions in the continuity of the side faces of the blade, it will be noted that there are no abrupt shoulders or surfaces to come in contact with the walls of the cut and produce crumbs as in the cutting of bread, due to particles of bread being scraped or

torn. Instead, there is presented only the inclined surfaces of the cutting edges 7 that slide over the walls of the cut with little effect, if any. Both the depressions 8 and the slots 5 permit a certain latitude in the inward or pinching expansion of the material being cut against the natural wedge of the blade in its downward progress materially lessening the resistance to its passage through the material.

It is furthermore pointed out that the usual processes of honing or sharpening or setting the edge 4 do not in any way alter the original formation of the knife, that is, the wear on the edge 4 does not affect the edges 7 otherwise than to shorten their lengths. In other words, the knife may be treated as an ordinary knife in sharpening and eventually the edges 7 and slots 5 might be eradicated but as long as they exist at all they maintain their efficiency in proportion to their lengths.

The knife is adapted for ordinary kitchen or household use and will be found most effective in cutting bread, cake, cold meats, etc.

I claim as my invention:

A bread knife comprising a handle and a blade having a longitudinal edge ground and tapered from both sides and divided by right angle slots of uniform width into a series of cutting sections, the transverse margins of which are also tapered or ground from both sides to form cutting edges lying in the same plane with the first named edge and in the median plane of the blade the taper of the cutting sections being gradual and continuous from their first named edges to their bases.

BYRON R. BACON.

Witnesses:
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**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."**