March 3, 1931. A. H. F. PERL 1,795,231

INSTRUMENT FOR STRINGING AND SLICING BEANS

Filed May 26, 1927

Fig.1.

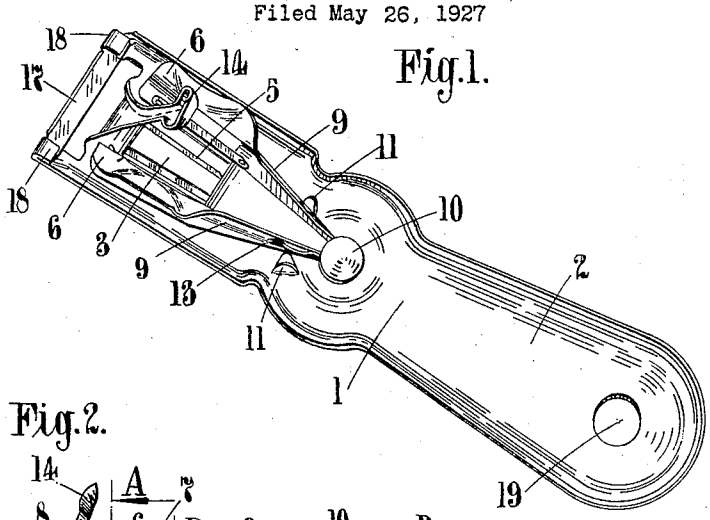


Fig.2.

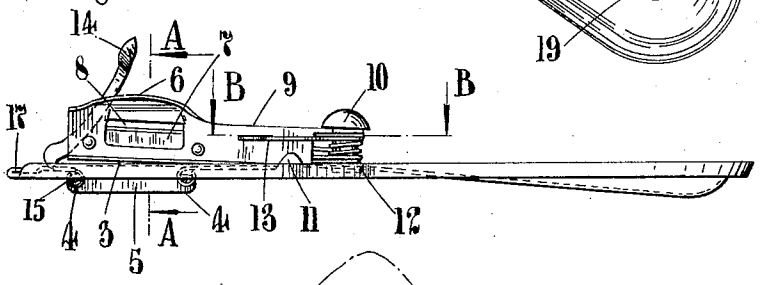
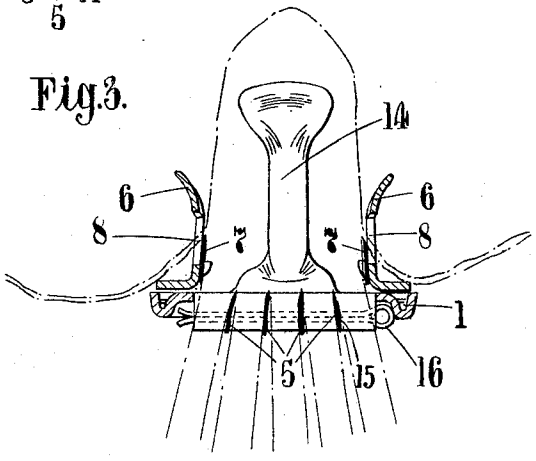


Fig.3.



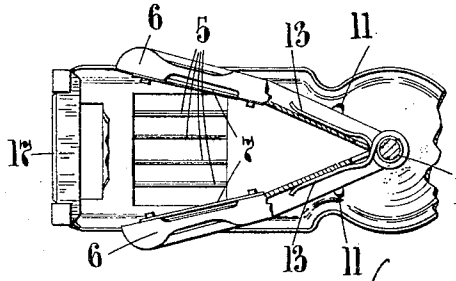


Fig.4.

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UNITED STATES PATENT OFFICE

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INSTRUMENT FOR STRINGING AND SLICING BEANS

Application filed May 26, 1927, Serial No. 194,316, and in Great Britain February 17, 1927.

The object of the invention is to produce an improved instrument for stringing and slicing beans or bean-pods, which shall be strong and simple in construction, cheap to manufacture and efficient in use.

According to the invention, the instrument comprises a long base plate having an aperture therethrough for the passage of the bean-pods, with the metal of the base plate at opposite edges of the aperture curled over, on the under side, to form partial tubes, a pair of gullet arms resiliently pivoted to the base-plate, stringing blades attached to the gullet arms, and a plurality of slicing knives detachably mounted on the base-plate.

The above aperture may be situated at one end of the said base plate, which is preferably of sheet metal, and the other end of the base plate be adapted to serve as a handle.

A portion of the base-plate in front of said aperture may be bent upwards and backwards, to cooperate with the gullet arms in guiding the pods during their passage through the instrument. A topping knife may be attached to the base-plate at the edge remote from the handle portion.

In order that the invention may be readily understood and carried into practice, drawings are appended illustrating an example of the invention. Fig. 1 is a perspective view of the instrument, Fig. 2 is a side view, Fig. 3 is a section at A A of Fig. 2 to an enlarged scale, looking in the direction of the arrows, and Fig. 4 a fragmentary plan view, partly in section at B B of Fig. 2.

Referring to the drawings, the base-plate 1 is preferably made of thin sheet metal flanged at the edges by pressing or stamping, to stiffen it and to make its handle portion 2 convenient for holding in the hand. A rectangular aperture or throat 3 is made in the base-plate by piercing and curling, the metal at the transverse edges of the aperture being curled back as shown at 4 (Fig. 2) to support a plurality of slicing knives 5. The two gullet arms 6, each having a stringing blade 7 secured to its inner face, are arranged above the aperture 3. They are mounted on a common pivot 10 fixed to the base-plate, a spring 12 tending to press the gullet arms 6 together. The spring 12 is preferably made of wire surrounding the pivot 10, and its ends 13 engaging with the gullet arms. The topping knife 17 is secured to the front edge of the base-plate remote from the handle portion 2, its ends being nipped thereto by means of the folded-over parts 18. A hole 19 is pierced near the handle end of the base-plate, to provide for hanging the instrument from a hook or the like.

The front portion of the base-plate is bent upwards and backwards to form a guide member 14, which cooperates with the gullet arms 6 in guiding the bean-pods as they are forced past the slicing knives 5 and through the aperture 3. Such disposition of the guide member 14 ensures that the bean-pods on their passage through the instrument have a component motion along the edges of the slicing knives 5, as well as a component motion at right angles thereto. The cutting action is thereby made more efficient, and the slicing knives and stringing knives will function efficiently much longer without resharpening, than when the motion of the pods past the edges of slicing knives is substantially at right angles thereto, as has been the case with bean slicing instruments hitherto.

The gullet arms 6 when closest together, are stopped by contact with the guide member 14, and the wide-open position is determined by stops 11 suitably pierced and bent up from the base-plate 1. The gullet arms are flared outwards above the cutting edges of the stringing blades 7, in order that they may yield laterally and open outwards to the width or thickness of the bean-pod which is being forced through. Apertures 8 are made in the gullet arms to permit the passage of the "strings" cut off by the blades 7.

The curled-back edges 4 of the aperture 3 are slotted at 15 to receive the ends of the slicing knives 5. Pins 16, preferably split pins, are passed through the partial tubes formed by said edges 4, and through holes pierced in the ends of the knives 5, whereby the knives are detachably fixed in position. The slots 15 are arranged at a small angle as shown, whereby the spaces between the knives are each of diverging width, thus facilitat-

ing the passage of the pod slices, as clearly shown in Figure 3. For a similar reason the stringing blades 7 are fixed at a small angle to each other on the gullet arms 6.

The pods having been topped by means of the knife 17 are pushed against the guide member portion 14 and between the gullet arms 6. The latter open to accommodate the pods against the action of the pivot spring 12, which causes the stringing blades to follow the contour of the bean-pods. The stringing blades 7 cut the strings from the edges of the pods, the strings escape sideways through the aperture 8, and the stringed pods are subsequently sliced during their passage past the slicing knives 5.

The slicing blades may be fixed into an independent frame adapted to be secured to the base-plate 1 or inserted in the aperture 3 or in guides at the rear of the aperture 3. The arrangement of parts may also be varied without extending beyond the scope of the invention.

I claim:—

In an instrument for stringing and slicing beanpods, the combination of a sheet-metal baseplate having an aperture therethrough, with the metal of the baseplate at opposite edges of the aperture curled over, on the under side, to form partial tubes, said tubes having aligned slots therethrough, slicing knives mounted in said slots, said knives having openings through the end portions thereof, pins extending through said partial tubes and openings in said knives to anchor the knives in position, gullet arms mounted on the upper side of said baseplate to extend over said aperture, and stringing knives carried by said arms.

In testimony whereof I have hereunto affixed my signature.

ALBERT HENRY FRANKS PERL.