H. C. IZOR.

TOBACCO PLUG CUTTER.

APPLICATION FILED OCT. 26, 1910.

990,272.

Patented Apr. 25, 1911.

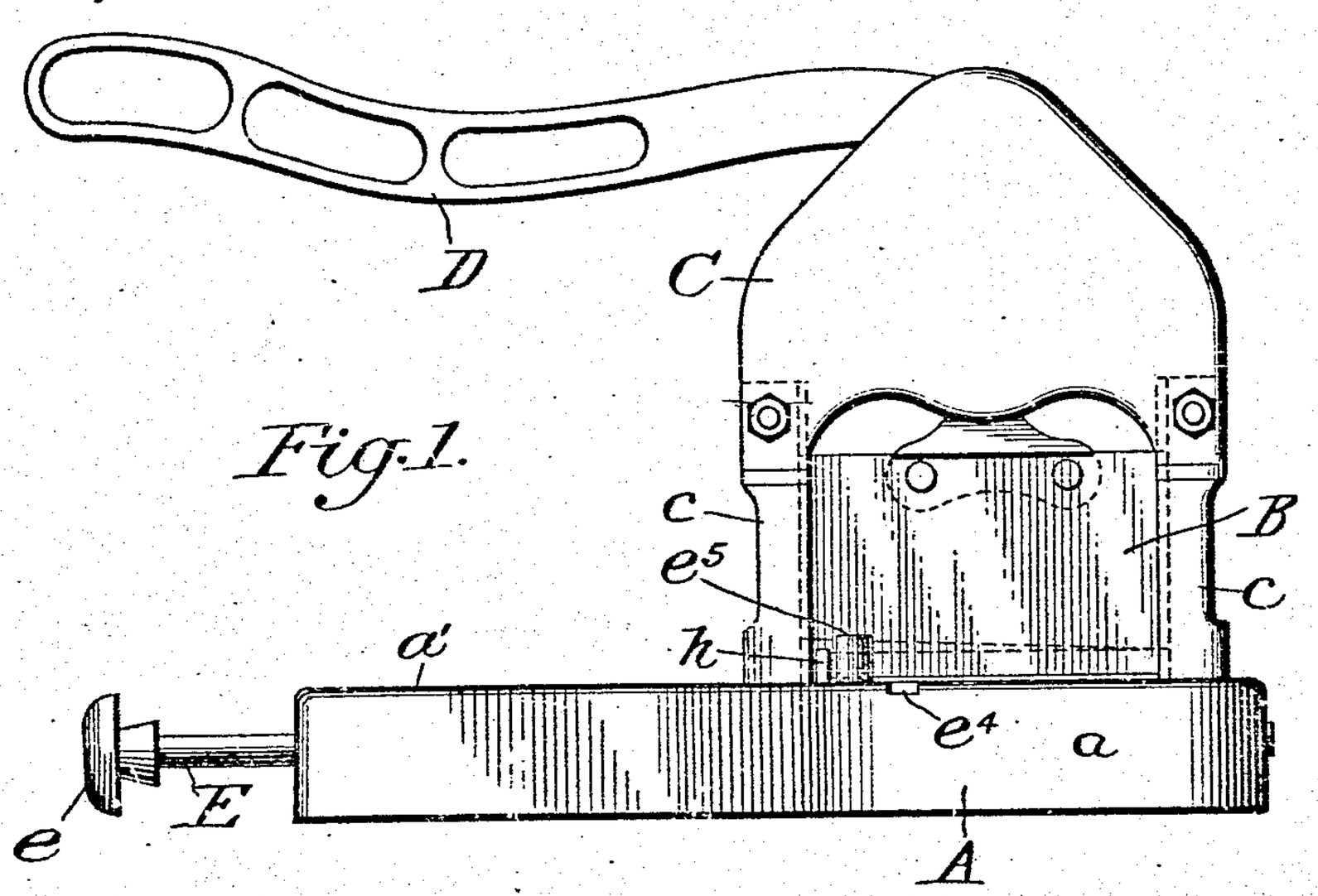


Fig. 1.

Fig. 2.

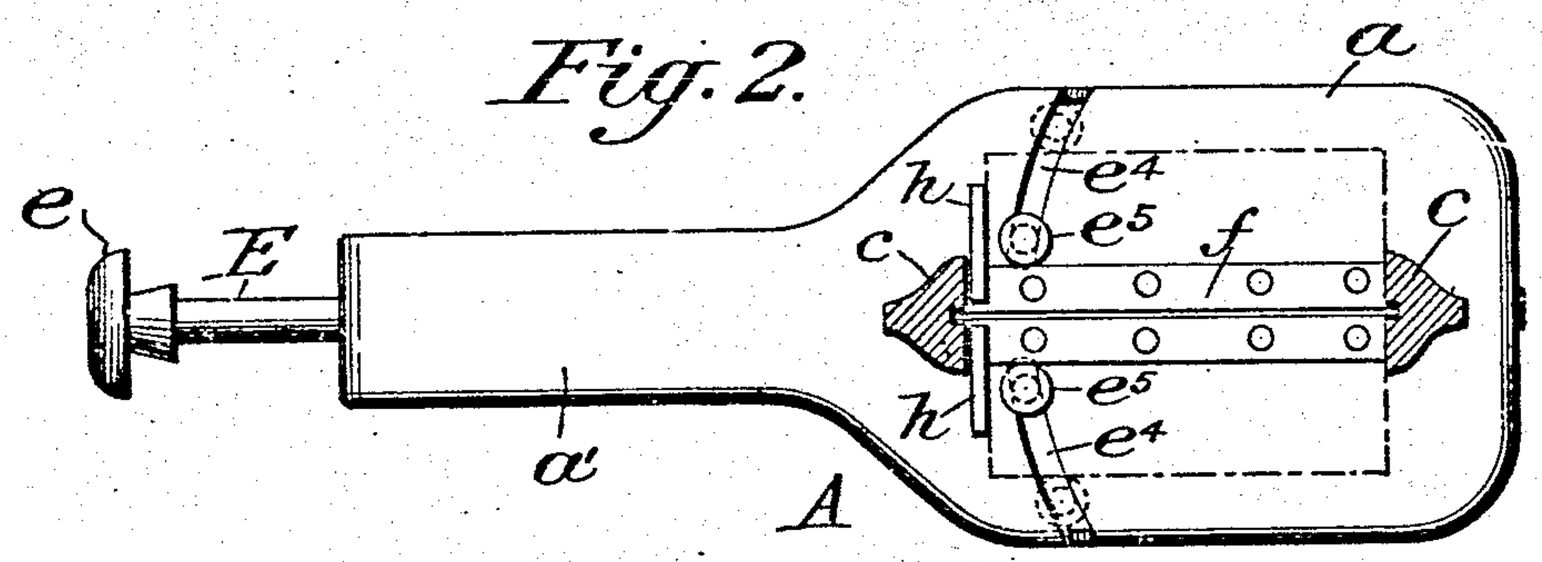
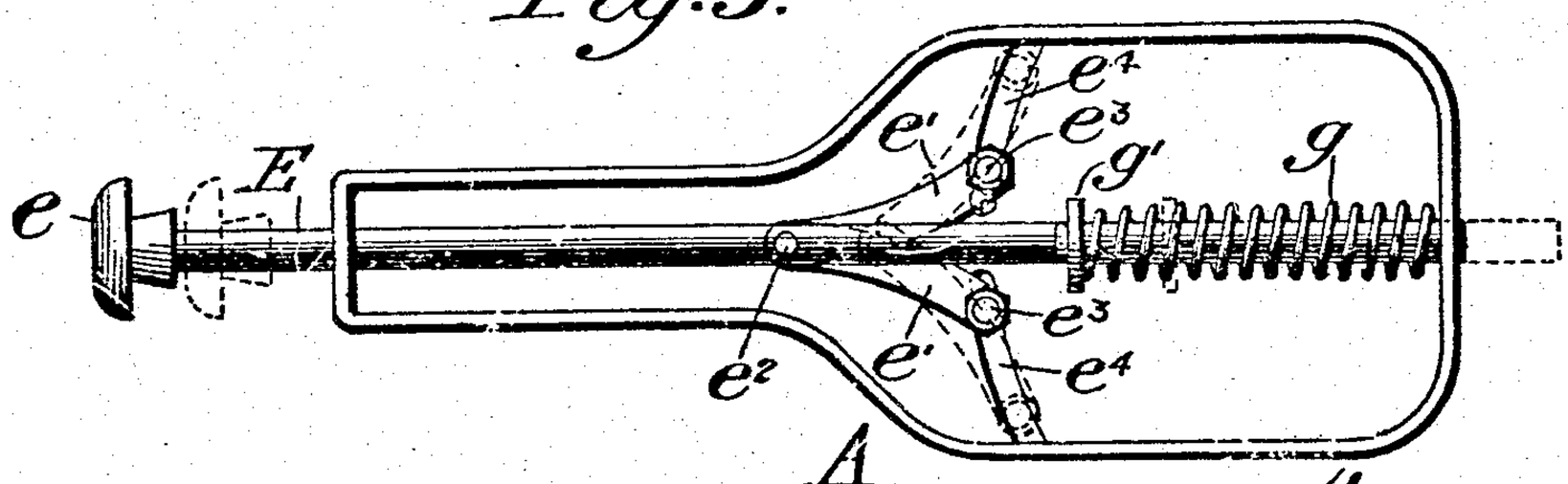


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

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TOBACCO-PLUG CUTTER.

990,272. Specification of Letters Patent. Patented Apr. 25, 1911.

Application filed October 26, 1910. Serial No. 589,155.

To all whom it may concern:

Be it known that I, HOMER C. IZOR, a citizen of the United States, residing at Logansport, county of Cass, State of Indiana, have invented certain new and useful Improvements in Tobacco-Plug Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to cutters of the kind used for cutting plug tobacco and the like.

The object of the invention is to provide a cutter of this type with an improved form of base, by means of which the plug is clamped in position beneath the cutting knife.

The invention also aims to provide a clamping device for the plug that will center the latter with respect to the knife, so that the plug can be cut in half and the resulting parts or sections thereof similarly divided. The clamping device also has the advantage that it is of very simple form and can be easily manipulated, it being merely necessary, in placing the plug in position beneath the knife, to interpose it between two spring pressed pins or similar devices which are arranged to grip the plug and hold it in the required position.

The novel features of the invention will appear from the following description and claims.

In the accompanying drawing, illustrating a preferred embodiment of the invention, Figure 1 is a side elevation of the cutter as a whole, showing the knife near the limit of its downward stroke, Fig. 2 is a horizontal section on line 2—2 of Fig. 1, and, Fig. 3 is a bottom plan view of the cutter.

Referring to the drawing, the cutter is shown as comprising a base A, a vertically slidable knife B, a guide or support C mounted on the base and in which the knife B operates, and a knife operating handle D. It is to be understood, however, that the cutting mechanism, including the knife, the guide therefor, and the operating handle, forms no part of the present invention, which concerns itself solely with the plug clamping or holding mechanism associated with the base A, as will hereinafter appear. In other words, the invention resides particularly in the construction of the base, and the latter may be used in connection with cutters of various types.

In the embodiment shown, the base A is made of metal and is closed in at the top and sides but open at the bottom. The main portion a of the base supports the cutting mechanism which, in the embodiment illustrated, includes the upright knife guides c which rise from said base portion. Extending laterally from the portion a of the base is an extension a'.

Guided longitudinally in the base A is a push rod E which passes through suitable holes in the end walls of the part a and extensions a' respectively and is provided at one end with an operating knob e. Referring to Fig. 3, it will be seen that this push rod has pivoted to it two arms e' which are connected with each other and with the rod by a common pivot pin e^2. The ends of the arms e' are equipped with pins e^3 which are guided in arcuate slots e^4 cut in the top of the base portion a and extending transversely thereof. The slots e^4 are located on opposite sides of a cutting guide f situated at the top central part of the base and through which the knife B passes, and said slots e^4 preferably extend from the guide f completely to the respective sides of the base, as shown. The pins e^3 are provided at their upper ends with heads e^5, which serve to clamp or grip the tobacco plug, as will hereinafter appear. The push rod E is normally held in the position shown in Fig. 3, wherein the pins e^3 are at the inner ends of their slots, by a helical spring g interposed between a collar g' on said rod and an end wall of the base.

The operation of the device is substantially as follows: Supposing the knife B to be raised to a sufficient height to enable a plug of tobacco to be placed beneath it on the base A, such plug is interposed between the heads e^5 of the pins e^3 which are spread apart sufficiently to receive and grip the opposite side edges of the plug by pushing inward the rod E into the position shown in dotted lines in Fig. 3. This movement of the rod against the action of the spring g produces the spreading of the pivoted arms e' and the outward travel in the slots e^4 of their terminal pins. As soon as the rod E is released, the spring g will move it in the op-

posite direction, as will be manifest, which will cause the pins e^3 to move inward in their slots and thereby grip firmly the edges of the plug. Owing to the fact that the pins e^3 are located at the same distance from the knife, and as they are moved uniformly through the actuation of the push rod, the plug will be clamped in such a position beneath the knife that it will be divided into two equal parts when the knife B is forced downward through it. If one of the resulting halves or sections of the plug is to be divided, it is placed between the clamping pins in the same way, it being obvious, however, that the preliminary spreading movement given to the pins by the manipulation of the push rod will not have to be as great as before. A plug of tobacco can therefore be uniformly divided into such a number of sections as is permitted by the length of the slots e^4 and the travel of the clamping pins therein.

In order to facilitate the positioning of the plug beneath the knife, fixed abutments h are formed or secured on the base adjacent the clamping pins. When the plug is clamped by the pins, one edge of the former is engaged with said abutments, and the plug is held in the proper position against the same by the clamping action of the pins. In placing the plug in position for subdivision, one edge is held in contact with the abutments h during the time that the pins are spread apart so that when the latter are released they will engage the side edges of the plug symmetrically, the cutting guide f being thereby alined with the imaginary center line of the plug. It will be noted that the slots e^4 are so directed that the clamping pins have a tendency to hold one edge of the plug firmly against the sectional abutment formed by the parts h, as indicated by the dotted lines in Fig. 2. The slots converge toward the abutment slightly, as shown, so that the clamping devices are not only yieldingly urged toward each other but also toward said abutment.

What I claim is:—

1. In a tobacco plug cutter, a base, centering devices guided in the base and yieldingly urged toward each other, and means for spreading said devices.

2. In a tobacco plug cutter, a base, centering devices associated therewith, means yieldingly urging said devices toward each other, and manually operated means to separate said devices, for the insertion of the plug therebetween.

3. In a tobacco plug cutter, a base having an abutment thereon, and clamping devices projecting upward through the base and yieldingly urged toward each other and toward said abutment.

4. In a tobacco plug cutter, the combination of a base, a knife above the same, an abutment on the base with which one edge of the plug is engaged, and centering devices guided in the base at opposite sides of the knife and yieldingly urged toward the latter to center the plug beneath the knife and against said abutment.

5. In a tobacco plug cutter, the combination of a base, a knife above the same, pins guided transversely in the base at opposite sides of the knife, and a push rod connected with said pins.

6. In a tobacco plug cutter, a base, clamping pins guided in the base toward and away from each other, arms on which the pins are supported, and a push rod on which said arms are pivoted.

7. In a tobacco plug cutter, a base, clamping pins guided in said base toward and away from each other, arms carrying said pins, a push rod on which said arms are pivoted, and a spring acting on said rod and normally holding said pins at the limit of their movement toward each other.

8. In a tobacco plug cutter, a base, a spring-pressed push rod slidable in said base and carrying pivoted arms, and clamping pins on the free ends of said arms and movable transversely of the base in slots formed in the latter.

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

HOMER C. IZOR.

Witnesses:
MARGARET GRADY,
MARIE EARLEY.