Dec. 6, 1938. W. T. BRAND 2,139,298

HONEY UNCAPPING MACHINE

Filed June 2, 1937

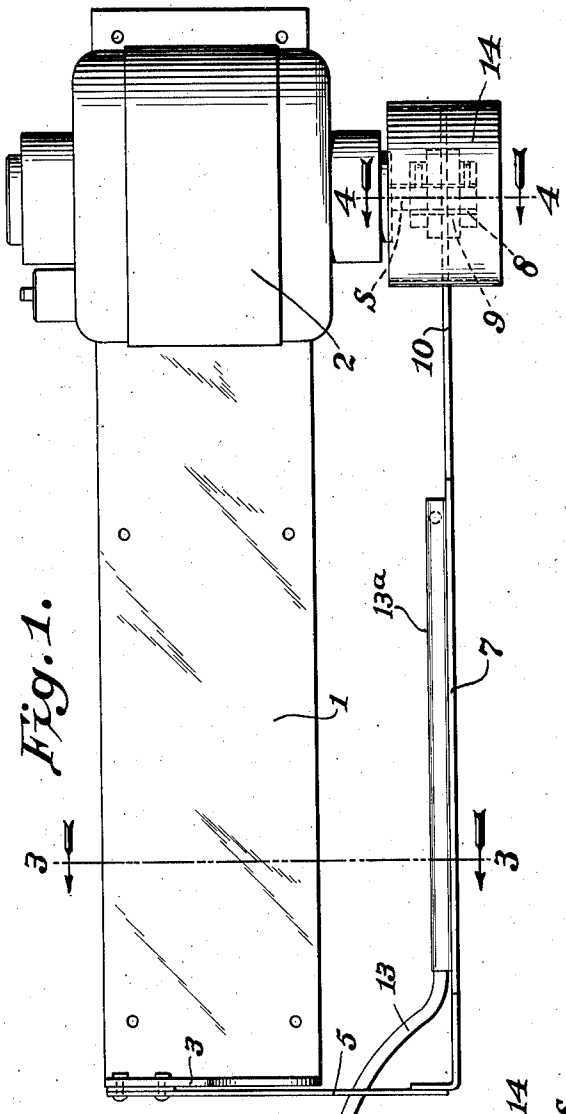


Fig. 1.

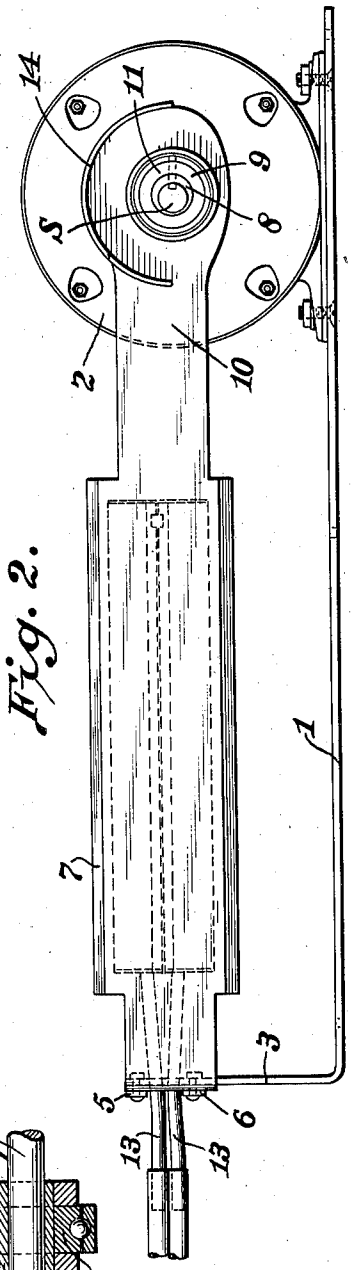


Fig. 2.

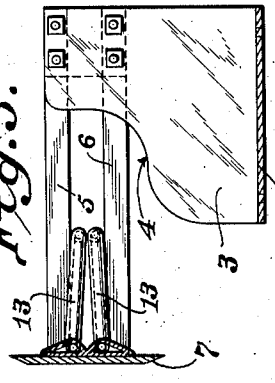


Fig. 3.

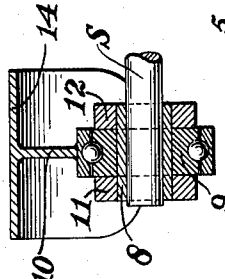


Fig. 4.

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HONEY UNCAPPING MACHINE

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16 Claims. (Cl. 6—12)

This invention relates to improvements in honey uncapping machines, and among its objects are to provide a device which is simple in structure and therefore economical to manufacture, and which is efficient in operation.

It is a further object to provide a machine of this character in which the knife moves with a chopping motion in addition to the reciprocating movement heretofore disclosed in the prior art.

For a more complete understanding of the present invention reference is made to the accompanying drawing, in which:

Figure 1 is a plan view of the device,

Figure 2 is a side elevation of the same,

Figure 3 is a cross-section taken on line 3—3 of Figure 1, and

Figure 4 is a cross-section of the bearing and eccentric taken on line 4—4 of Figure 1.

The machine comprises a base 1 at one end of which a motor 2 is mounted. The base is preferably made of metal although any other form of material, suitable for the purpose, may be used. The base, at the end opposite from the motor, is formed with an upwardly bent portion comprising a standard 3 which is cut away as shown at 4. Flexible strips 5 and 6 are secured to the standard by bolts, rivets, or other suitable fastenings, in the manner shown in the drawing. These strips extend parallel to the base and beyond the limits of one side thereof. A double-edged knife 7, the edges of which are preferably case-hardened, is secured at one end to these flexible strips, and at the other end is supported upon the shaft of the motor in such a manner as to impart a reciprocating and choping motion thereto when the motor is in operation. This is accomplished by mounting an eccentric sleeve 8 upon the shaft S of the motor. Upon this sleeve a roller bearing 9 is supported, and this roller bearing is carried in an extension 10 of the blade 7. The roller bearing is positioned upon the sleeve 8 by means of collars 11 and 12 at each side thereof. The knife 7 is heated by passing steam thereto through tubes 13. Soldered or otherwise suitably fastened to the knife along its rear face is a seamless tube 13a which may be of copper or other suitable material. This tube is preferably flattened on one side to form a large surface area for union with the knife blade, thereby strengthening the steam chamber against the possibility of breaking from the knife under the action of the vibration to which it is subjected. The tubes 13 pass to the knife between the flexible strips, thus enabling them to perform their function without obstructing the operation of the machine or hindering the operator in the handling of the honey comb. The eccentric sleeve 8 and the bearing 9 are provided with a guard plate 14 to prevent drippings from the honey comb from coming into contact with the moving portions of the machine and thereby impairing its efficiency.

It will be seen that I have provided a simple, efficient, and compact device, with all moving parts reduced to a minimum so as to reduce wear and tear, which is light in weight, and therefore portable, should this be desired, and which is designed for economical production.

While I have shown and described a preferred embodiment of my invention, it is to be understood that changes may be made in the construction thereof without departing from the spirit of the invention as described in the specification and defined in the appended claims.

I claim:

1. In a honey uncapping machine, a base, a knife mounted thereon and means for reciprocating said knife, said means having an eccentric sleeve thereon, said knife being carried at one end by said sleeve.

2. In a honey uncapping machine, a base, a knife flexibly supported at one end thereof and means at the other end thereof for driving said knife.

3. In a honey uncapping machine, a base, one end thereof extending at an angle thereto to form a standard, flexible means secured to said standard, and having a knife secured to said flexible means, and means for reciprocating said knife.

4. In a honey uncapping machine, a base and a knife, one end of said base extending upwardly therefrom to form a standard, said standard being formed with a cutaway portion adjacent the knife, flexible strips secured at one end to said standard adjacent said cutaway portion, the other end thereof secured to said knife, and means for reciprocating said knife.

5. In a honey uncapping machine, a base and a knife supported thereby at one end thereof, a motor mounted on said base, the other end of said knife supported by said motor.

6. In a honey uncapping machine, a base and a knife flexibly supported thereby at one end thereof, the other end of said knife supported by said motor.

7. In a honey uncapping machine, a base, a knife, and a motor for reciprocating said knife,

said motor having an eccentric sleeve mounted on the shaft thereof, said knife being carried by said sleeve.

8. In a honey uncapping machine, a base, a knife, and a motor for reciprocating said knife, said motor having an eccentric sleeve mounted on the shaft thereof, a bearing mounted on said sleeve, said knife being supported by said bearing.

9. In a honey uncapping machine, a base, a knife, and a motor for reciprocating said knife, said knife being flexibly secured to said base at one end, said motor having an eccentric sleeve mounted on the shaft thereof, and a bearing mounted on said sleeve, the other end of said knife being supported by said bearing.

10. In a honey uncapping machine, a base having an upright standard formed at one end thereof, spaced flexible strips secured to said standard, a knife mounted on said base and supported at one end by said flexible strips, means for heating said knife and a motor on said base for driving said knife.

11. In a honey uncapping machine, a base having an upright standard formed at one end thereof, spaced flexible strips secured to said standard, a knife mounted on said base and supported at one end by said flexible strips, means for heating said knife comprising a conduit for supplying steam thereto, said conduit extending between said flexible strips, and a motor for driving said knife.

12. In a honey uncapping machine, a base having an upright standard formed at one end thereof, spaced flexible strips secured to said standard, a knife mounted on said base and supported at one end by said flexible strips, means for heating said knife comprising a conduit for supplying steam thereto, said conduit extending between said flexible strips, a motor for driving said knife, an eccentric sleeve mounted on the shaft thereof, said knife being carried by said sleeve to impart an eccentric motion thereto.

13. In a honey uncapping machine, a base, a knife, and a motor for driving said knife, said knife being flexibly secured to said base at one end, said motor having an eccentric sleeve mounted on the shaft thereof, and a bearing mounted on said sleeve, a guard for said bearing and sleeve, the other end of said knife being supported by said bearing.

14. In a honey uncapping machine, a base, a knife flexibly supported thereby, and means for reciprocating said knife and imparting a chopping motion thereto.

15. In a honey uncapping machine, a base, a knife flexibly supported thereby at one end thereof, and means at the other end of said knife for reciprocating the knife and for imparting a chopping motion thereto.

16. In a honey uncapping machine, a base, a knife, and means for reciprocating said knife, said means comprising a rotatable shaft having an eccentric sleeve mounted thereon, said knife being carried by said sleeve and a guard carried by said knife for protecting said sleeve.

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