Oct. 25, 1932. O. MEYER 1,884,074

HONEY UNCAPPING MACHINE

Filed May 21, 1931

Fig. 1.

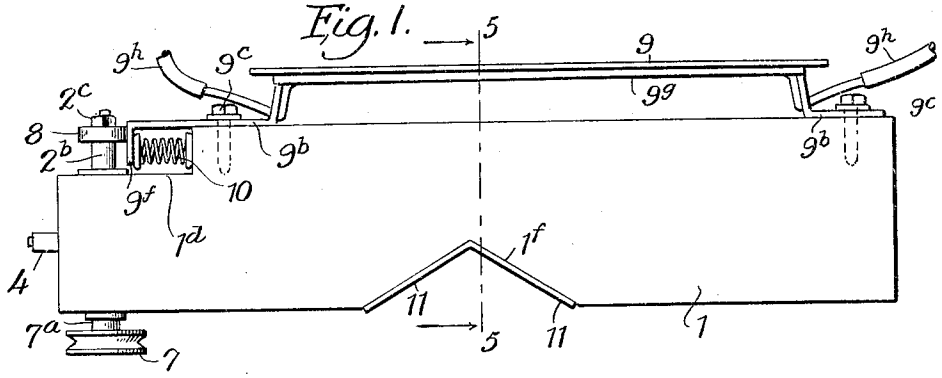


Fig. 2.

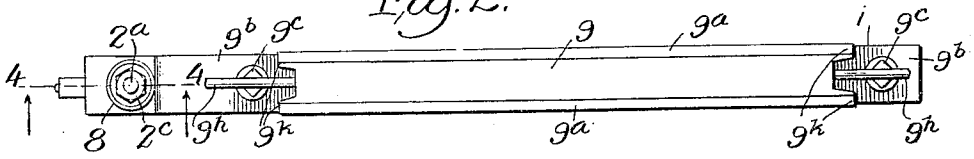


Fig. 3.

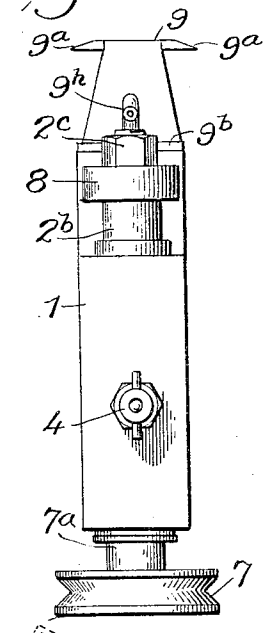


Fig. 4.

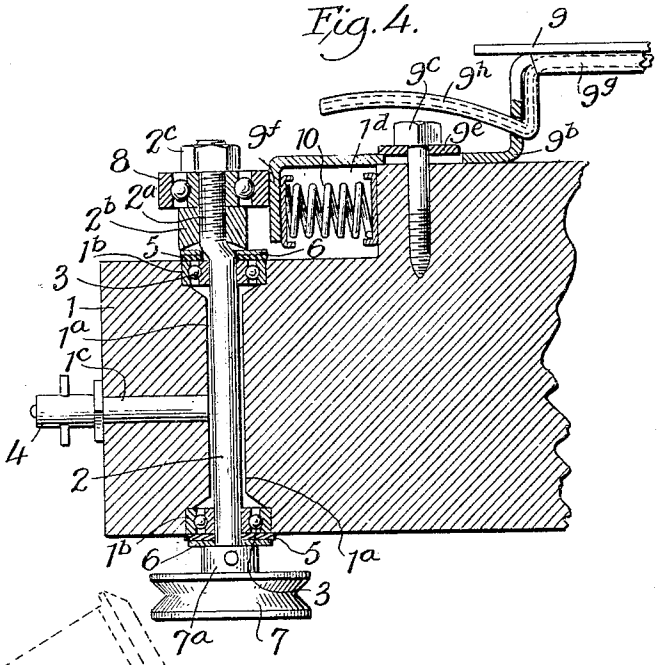
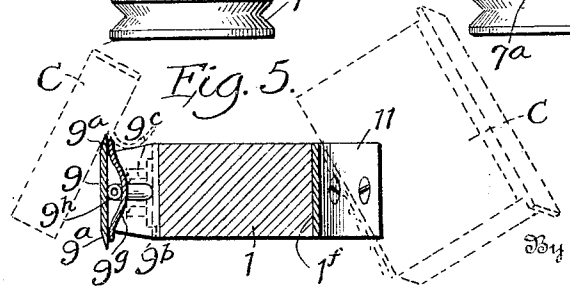


Fig. 5.



Inventor

Oliver Meyer

By

Attorneys

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UNITED STATES PATENT OFFICE

OLIVER MEYER, OF PRESTON, IOWA

HONEY UNCAPPING MACHINE

Application filed May 21, 1931. Serial No. 539,078.

This invention is a novel improvement in honey uncapping machines, and the principal object of the invention is to provide a simple, novel and efficient reversible machine adapted to be positioned or attached across the top of a barrel or other capping receptacle and secured thereto by means of hook bolts or the like; also to provide in such machine simple bearings for the reciprocating blade whereby the blade may be removed quickly for grinding or repairs; also a machine having a double-edged steam heated blade making the machine reversible, the blade having projecting corners which will permit easy uncapping of the comb corners and other close places; also a machine in which the blade is long enough to uncap full size standard combs in one operation; also a machine which is reversible, i. e., in which either side may be considered the top, both sides being clear of all working parts whereby any honey drippings thereon may be wiped off quickly with a damp cloth; also a novel burr-comb scaper for such reversible machine adapted to work equally well either right or left handed; also a reversible machine adapted to allow four different pulley positions, i. e., a machine in which the pulley can be positioned at any corner; also to provide a machine which will be quiet in operation.

I will explain the invention with reference to the accompanying drawing which illustrates one practical embodiment thereof to enable others familiar with the art to adopt and use the same; and will summarize in the claims the novel features of construction, and novel combinations of parts, for which protection is desired.

In said drawing:

Fig. 1 is a top plan view of my novel machine;

Fig. 2 is a side elevation of the machine looking towards the reciprocating blade.

Fig. 3 is an end elevation of the machine looking towards the cam shaft.

Fig. 4 is a horizontal section on the line 4—4 of Fig. 2, showing the blade reciprocating mechanism.

Fig. 5 is a section on the line 5—5, Fig. 1, showing the combs in dotted lines being acted upon by the blade and burr-scrapers.

As shown in the drawing, my novel machine preferably comprises a reversible table top 1 comprising a relatively thick board of substantially rectangular shape. Table top 1 is provided adjacent one end with a transverse bore 1*a* therethrough for the reception of a cam shaft 2 mounted in ball bearings 3, housed in recesses 1*b* at the ends of the bore 1*a*, suitable means such as an alemite nipple 4 being provided in the adjacent end of the top 1 for communicating with the bore 1*a* through duct 1*c* for supplying lubricant to the bearings 3. The lubricant is confined within the bore 1*a* by means of felt washers 5 on shaft 2 held against the outer faces of the ball bearings 3 by means of metal washers 6, as shown in Fig. 4.

On one end of the shaft 2 is secured a pulley 7 whereby the shaft 2 may be rotated by a belt or the like from a suitable prime mover which may be a small electric motor. The corner of the table top 1 opposite the pulley 7 is cut away as at 1*d*, and in the cut-away portion 1*d* on shaft 2 is an off-set crank 2*a* upon which is mounted a ball bearing roller cam 8, whereby as shaft 2 is rotated the cam will be reciprocated by crank 2*a*. Offset portion 2*a* of shaft 2 is threaded for the reception of nuts 2*b*, 2*c* which lock the roller cam 8 in place thereon as shown in Fig. 4.

The metal washers 6 are held against their felt lubricant retaining washers 5 by the hub 7*a* of pulley 7, and by the nut 2*b*, at their respective ends of the shaft 2.

On the side edge of the table top 1 adjacent the recess 1*d* is mounted a double edged honey uncapping blade 9, the same consisting of a steel or metal bar of substantially the same width as the thickness of the table top 1, said bar extending substantially the full length of the table top. The main portion of the blade is spaced from the side of the table top and forms a double edge blade sharpened at its upper and lower edges as at 9*a*. The ends of blade 9 are joggled inwardly so as to form slides 9*b* engaging the side of the table top 1, said slides 9*b* being reciprocably secured to the table top 1 by

means of bolts 9c passing through elongated slots 9e therein adjacent each end of the table top. The end of the slide 9b adjacent the roller cam 8 is flanged inwardly as at 9f for engagement with the cam, a spring 10 being interposed between the flange 9f and the inner end of the recess 1d as shown in Figs. 1 and 4 whereby the blade 9 will be reciprocated by and with the cam 8 as shaft 2 is rotated. The simple plate bearings 9b secured by bolts 9c, above described, allow for quick removal of the blade 9 for grinding and for repairs. The blade 9 is provided on its inner face with a steam casing 9g (Fig. 5) through which steam is passed from conduits 9h receiving a supply from a suitable steam generator, in order to maintain the blade heated. The double-edged feature of the blade 9 makes the table top 1 reversible, i. e., either face of the table top may be turned uppermost.

The ends of the blade 9 are formed with projecting corners 9k in order to make uncapping of the comb corners and close places easy, and the blade 9 is made long enough to uncap full size standard combs in one operation.

The side edge of the table top 1 opposite the blade 9 is provided adjacent its center with a V-shaped recess 1f (Figs. 1 and 5) in which are mounted steel plates 11 of slightly greater width than the thickness of top 1, said plates 11 having square edges forming burr-comb scrapers. The V-shaped formation of the scrapers 11 render the same equally efficient when used either right-handed or left-handed.

The top and bottom faces of the table top, by the above construction, is maintained clear of all working parts so as to render same reversible, and to permit quick and easy wiping of honey drippings with a damp cloth. The machine is quickly attachable to the top of a barrel or any other capping receptacle by means of hook bolts or other simple means. The simple blade bearings allow for quick removal of the blade for grinding and repairs.

In operation, the operator stands on the side opposite from the blade, and the blade 9 which is long enough to uncap the deepest combs is heated by steam through hose connection to a small boiler or steam line, and the blade is vibrated lengthwise of the table top 1 by shaft 2 rotated at a speed which will give the best working conditions, depending on the condition of the combs to be uncapped. The operator merely guides the combs C with his hand against the reciprocating blade 9 in the position indicated in Fig. 5 and the weight of the comb on the blade does the uncapping.

In my machine the combs are uncapped lengthwise instead of crosswise as is the usual practice, i. e., the combs are uncapped starting at the bottom bar of the comb frame and cutting upwardly to the top bar. The burr-comb scrapers 11 are used for scraping burr-combs and bits of wax from the top and bottom bars of the comb frames, the comb frames C being pushed over the blade with the top or bottom bars scraping, as indicated in Fig. 5.

I do not limit my invention to the exact form shown in the drawing, for obviously changes may be made therein within the scope of the claims.

I claim:—

1. A honey uncapping machine, comprising a base; a transverse shaft at one end of the base; a pulley on one end of the shaft; an eccentric on the other end of the shaft; a reciprocable blade mounted on the base lying in the path of swing of the eccentric whereby as the shaft is rotated the blade will be reciprocated, and means for yieldably maintaining the blade in engagement with the eccentric.

2. In a machine as set forth in claim 1, said blade being spaced from the base; bearing members at the ends of the blade slidably mounted on the side of the base; and extensions at the corners of the blade projecting beyond the bearing members.

3. A honey uncapping machine, comprising a base having a transverse bore; a shaft extending through said pulley on one end of the shaft; an eccentric on the other end of the shaft; a reciprocable blade slidably mounted on the base having an offset portion to be engaged by the eccentric whereby as the shaft is rotated the blade will be reciprocated, and means for yieldably maintaining the offset portion of the blade in contact with the eccentric.

4. In a machine as set forth in claim 3, said blade being spaced from the base; bearing members at the ends of the blade slidably mounted on the side of the base; and extensions at the corners of the blade projecting beyond the bearing members.

5. A reversible honey uncapping machine, comprising a base having its upper and lower faces free of working parts and having a transverse bore; a shaft extending through said bore; a pulley on one end of the shaft; a roller eccentrically mounted on the other end of the shaft; a reciprocable double-edged blade slidably mounted on the side edge of the base and having an off-set portion engaging the roller whereby as the shaft is rotated the blade will be reciprocated, and means for yieldably maintaining the offset portion of the blade in contact with the roller.

6. In a machine as set forth in claim 5, said blade being spaced from the side of the base; bearing members at the ends of the blade slidably mounted on the side of the base; and extensions at the corners of the blade projecting beyond the bearing members.

7. A reversible honey uncapping machine, comprising a base having its upper and lower faces free of working parts; said base having a recess in one corner and having a transverse bore entering the recess; a shaft extending through said bore; a roller eccentrically mounted on the end of the shaft within the recess; a pulley disposed on the other end of the shaft; a reciprocable double-edged blade slidably mounted on the side edge of the base having an offset portion entering the recess and engaging the roller whereby as the shaft is rotated the blade will be reciprocated, and a spring interposed between the offset portion and recess for yieldably maintaining the offset portion in contact with the roller.

8. In a machine as set forth in claim 7, said blade being spaced from the side of the base; bearing members at the ends of the blade slidably mounted on the side of the base; and extensions at the corners of the blade projecting beyond the bearing members.

OLIVER MEYER.