R. HELMS.

CIGAR END OR TUCK FORMING MACHINE.

APPLICATION FILED APR. 6, 1908.

940,248. Patented Nov. 16, 1909

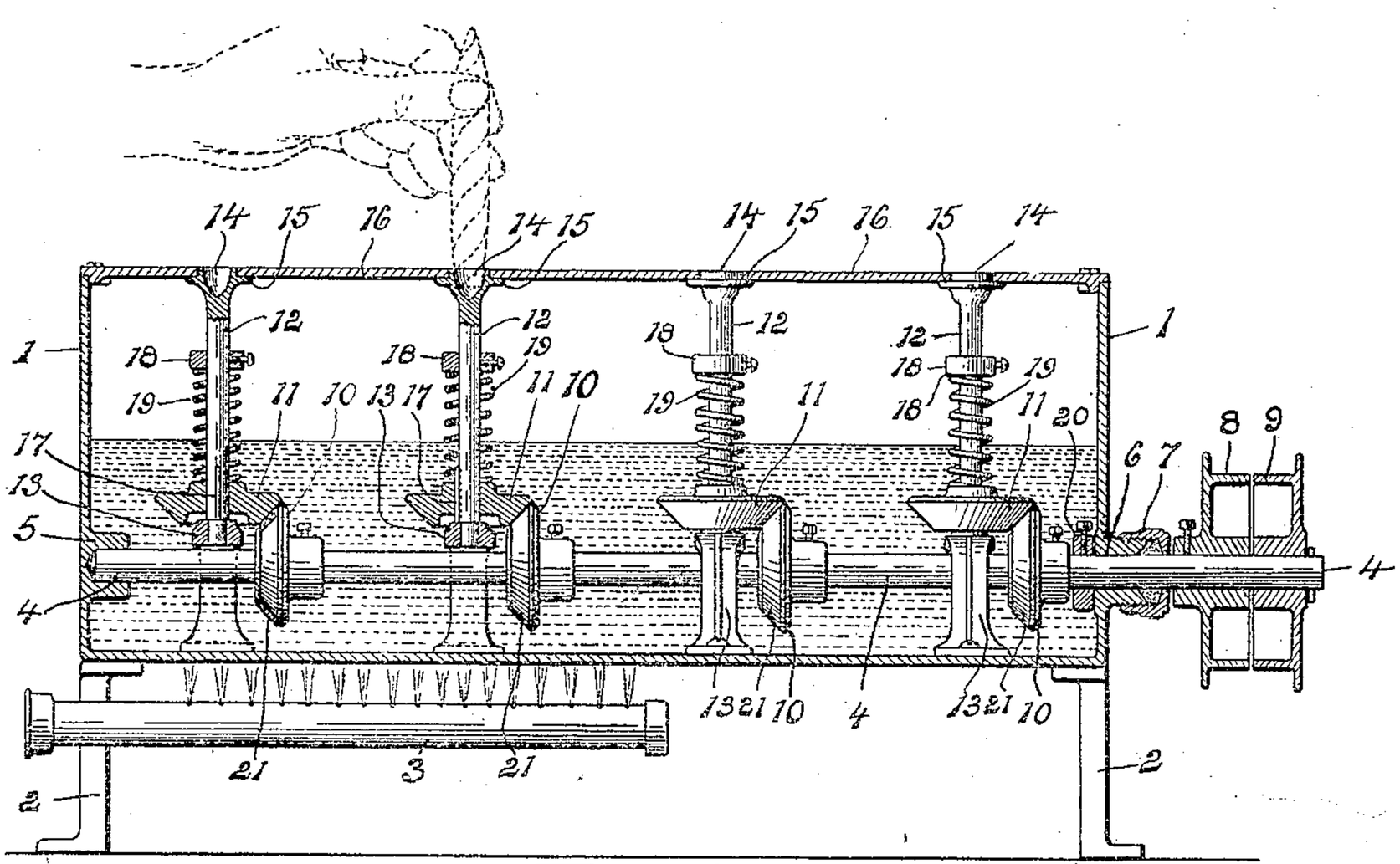

Fig. 1.

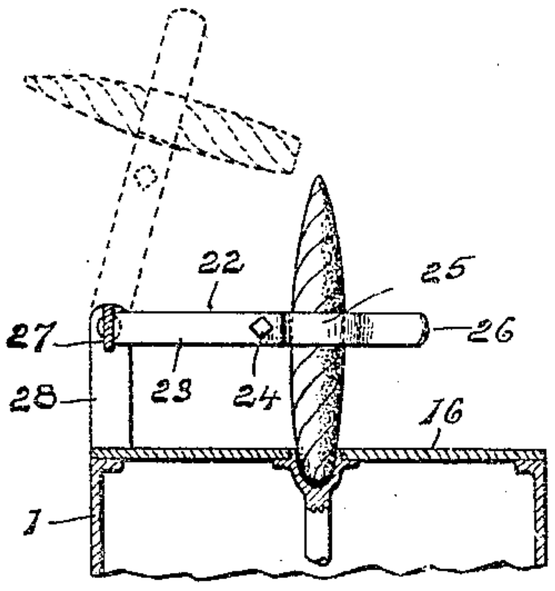

Fig. 4.

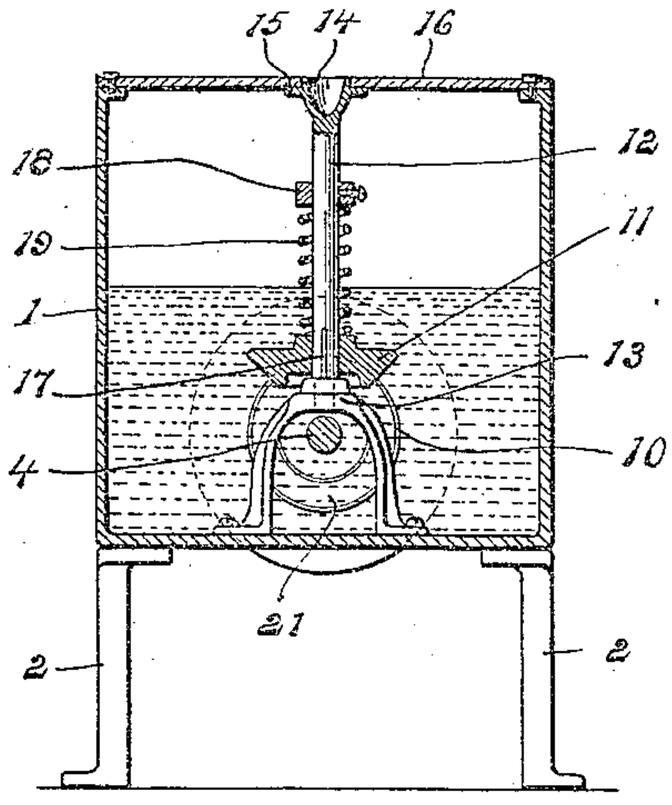

Fig. 2.

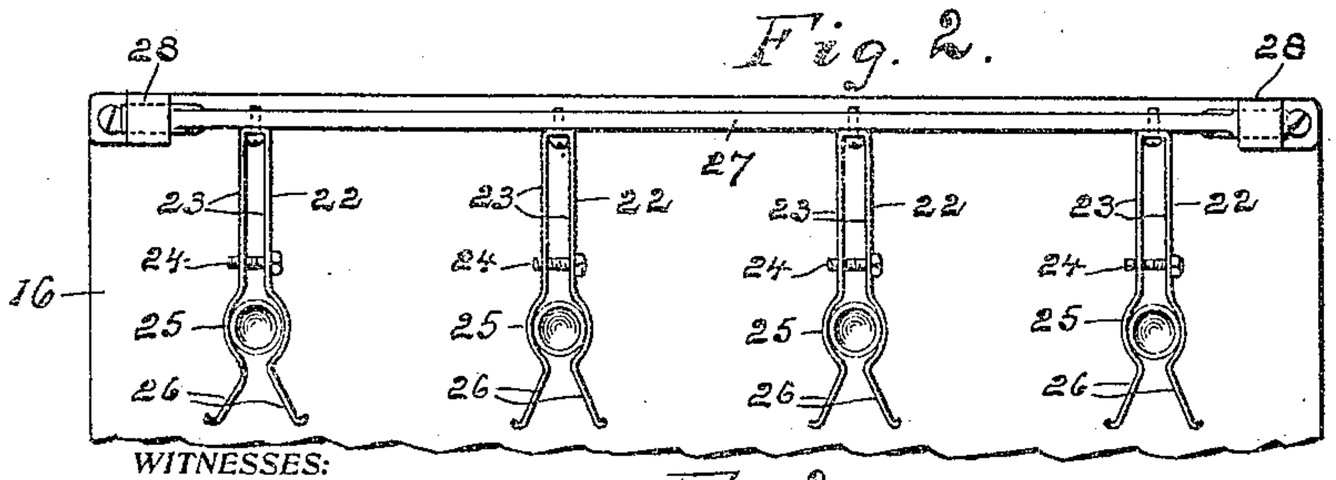

Fig. 3.

WITNESSES:

A. W. Dorr.

G. R. Van Ween

INVENTOR

Richard Helms

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

RICHARD HELMS, OF DETROIT, MICHIGAN, ASSIGNOR TO SAN TELMO CIGAR MFG. COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

CIGAR END OR TUCK FORMING MACHINE.

940,248. Specification of Letters Patent. **Patented Nov. 16, 1909.**

Application filed April 6, 1908. Serial No. 425,313.

To all whom it may concern:

Be it known that I, RICHARD HELMS, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Cigar End or Tuck Forming Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improved cigar end or tuck forming machine and its object is to provide a simple and cheap device for the purpose which will very rapidly form, smooth or round the end or tuck of a cigar in an efficient manner, and further, to provide a machine having the several advantages of the particular construction, arrangement and combination of parts all as hereinafter more fully described, reference being had to the drawing in which—

Figure 1 is a longitudinal, vertical section of a device embodying the invention; Fig. 2 a transverse section thereof; Fig. 3 is a partial plan view of the tank showing attached thereto in position for use, a series of clips for holding cigars in position to be operated upon; and Fig. 4 is a transverse section of the same.

As shown in the drawing, 1 is a suitable rectangular receptacle or tank adapted to contain a quantity of water and supported upon suitable legs 2. Beneath the tank is a suitable burner 3 of any desired construction adapted to direct the flame against the bottom of the tank and heat the water therein. Within the tank and extending longitudinally thereof is a drive-shaft 4 supported in a bearing 5 on the end of the tank at one end and extending outward through a bearing 6 on the opposite end of the tank, the bearing 6 consisting of an outwardly extending boss, screw-threaded on its outer surface to receive a packing-nut 7 to prevent leakage around the shaft. On the outer end of the shaft is secured a pulley 8 and adjacent thereto a loose pulley 9 by means of which the shaft is driven at the desired speed by a suitable belt.

Secured at intervals on the shaft within the tank, is a series of friction-cones 10 to engage similar cones 11 upon vertical spindles 12 mounted at their lower ends in bearings 13 secured to the bottom of the tank. The upper end of each of the spindles 12 is formed with a cup 14 of the desired size and shape to receive the end of a cigar. Each cup is provided with an outwardly extending flange 15 which engages the under side of a removable cover 16 on the tank, openings being provided in said cover to receive the upper end of the cup and form a bearing for the upper end of the spindle.

The friction-cones 11 are secured to their spindles by splines 17 to turn with the spindles and are free to move longitudinally thereof. A collar 18 is secured upon each spindle at a distance from its upper end by set screws and sleeved upon each spindle between said collar and the friction-cone 11 is a coil-spring 19 which yieldingly holds the said cone in contact with the cone 10. Longitudinal movement of the drive-shaft is prevented by a collar 20 secured upon said shaft in contact with the inner end of the bearing 6. The cones 10 are preferably provided with a friction surface 21 of rubber or other suitable material to increase the frictional contact between the cones and prevent slippage.

The cups 14 may be of any desired form to shape the end of the cigar or form the tuck and these cups being revolved rapidly and at the same time thoroughly heated by the hot water in the tank, the end is quickly and efficiently formed and smoothed to the desired shape. Any desired number of these spindles may be provided in the tank so that one or more operators may use the machine at the same time. Motion is transmitted from the drive-shaft to the spindles by the cones without noise and perform their work efficiently in the hot water with but little wear.

Instead of the operator holding each cigar while being operated upon by one of the cups, as illustrated in Fig. 1, a series of spring clips 22, as shown in Figs. 3 and 4, may be provided, one clip for each cup. These clips preferably consist of parallel spring arms 23 connected intermediate their ends by an adjusting screw or bolt 24 so that the normal distance between their outer free ends may be adjusted for different sizes of cigars. The free ends of the arms are oppositely curved at 25 to form a socket to receive the cigar and are provided with divergent outer ends 26 to aid in inserting the cigar. At their rear ends these clips are preferably secured to a bar 27 journaled in

bearing brackets 28 on the tank so that the clips may be turned up as shown in dotted lines in Fig. 4, to insert the cigars and then turned down to bring the end of the cigars into the cups. The work is greatly facilitated by the use of the clips or holders as one operator may hold several cigars while being operated upon, instead of only one in each hand.

Having thus fully described my invention what I claim is:—

1. A device of the character described comprising a fluid receptacle, means for heating the fluid in said receptacle, a cover for the receptacle having an opening, a vertical spindle in the receptacle, a forming cup on the upper end of the spindle within the opening in the cover with its rim in the plane of the upper surface of the cover, and means within the receptacle for rotating the spindle.

2. A device of the character described comprising a fluid receptacle, means for heating the fluid in said receptacle, bearings in the ends of said receptacle, a drive shaft in said bearings, a series of vertical spindles in the receptacle, cups on the upper ends of said spindles projecting through the top of the receptacle, friction cones on the lower ends of said spindles near the bottom of the receptacle, and friction cones on the drive shaft engaging the cones on the spindles.

3. The combination with a tank adapted to contain hot water, of a removable cover for the tank provided with a series of openings, a longitudinally extending drive-shaft in the tank, a series of vertically extending spindles in the tank mounted in bearings at their lower ends, cups on the upper ends of the spindles engaging the openings in the cover, friction-cones on the lower ends of the spindles, cones on the drive-shaft engaging cones on the spindles, and means for revolving the drive-shaft.

4. The combination with a tank adapted to contain hot water and provided with bearings in its ends, of a longitudinally extending drive-shaft mounted in said bearings, a series of friction-cones on said drive-shaft, a series of vertical spindles, cups on the upper ends of said spindles, cones on the spindles to turn therewith and movable longitudinally thereon and springs to yieldingly hold the cones on the spindles in contact with the cones on the drive-shaft.

5. The combination with a tank adapted to contain water, and means beneath the tank for heating the water, of a drive shafe mounted in bearings in the ends of the tank, a series of friction-cones on the drive-shaft within the tank, a series of vertical spindles within the tank, bearings on the bottom of the tank for the lower ends of the spindles, a removable cover for the tank having a series of openings, cups on the upper ends of the spindles adapted to engage the openings in the cover, flanges on the cups engaging the under side of the cover, friction-cones on the spindles to turn therewith and movable longitudinally thereon, collars on the spindles and coil-springs on the spindles between the collars and the cones to yieldingly hold said cones in contact with the cones on the drive-shaft.

6. A device of the character described comprising a series of cups for forming the ends of cigars, means for rotating said cups, and a series of members for detachably holding cigars with their ends centered within the cups during the forming operation.

7. A device of the character described comprising a series of forming cups, means for rotating said cups, and a series of pivotally supported members adapted to receive and detachably hold cigars and to be turned to bring the ends of the cigars within the cups in position for forming.

8. A device of the character described comprising a series of upwardly open forming cups, means for rotating said cups, a series of members for receiving and detachably holding cigars, and a pivoted bar to which said members are secured said bar being adapted to be turned to simultaneously bring the ends of cigars held by said members into forming position with their ends within the cups.

9. The combination with a series of cigar-end formers, of a bar pivotally supported at each end and extending longitudinally of said series of formers, a series of clips each consisting of opposing spring arms secured at one end to said bar, and means intermediate the ends of said spring arms for adjusting the same toward and from each other.

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

RICHARD HELMS.

Witnesses:
GEORGE E. FITZSIMMONS,
EDITH RIDER.