

No. 652,165.

Patented June 19, 1900.

H. E. CAMPBELL & B. G. DODGE.

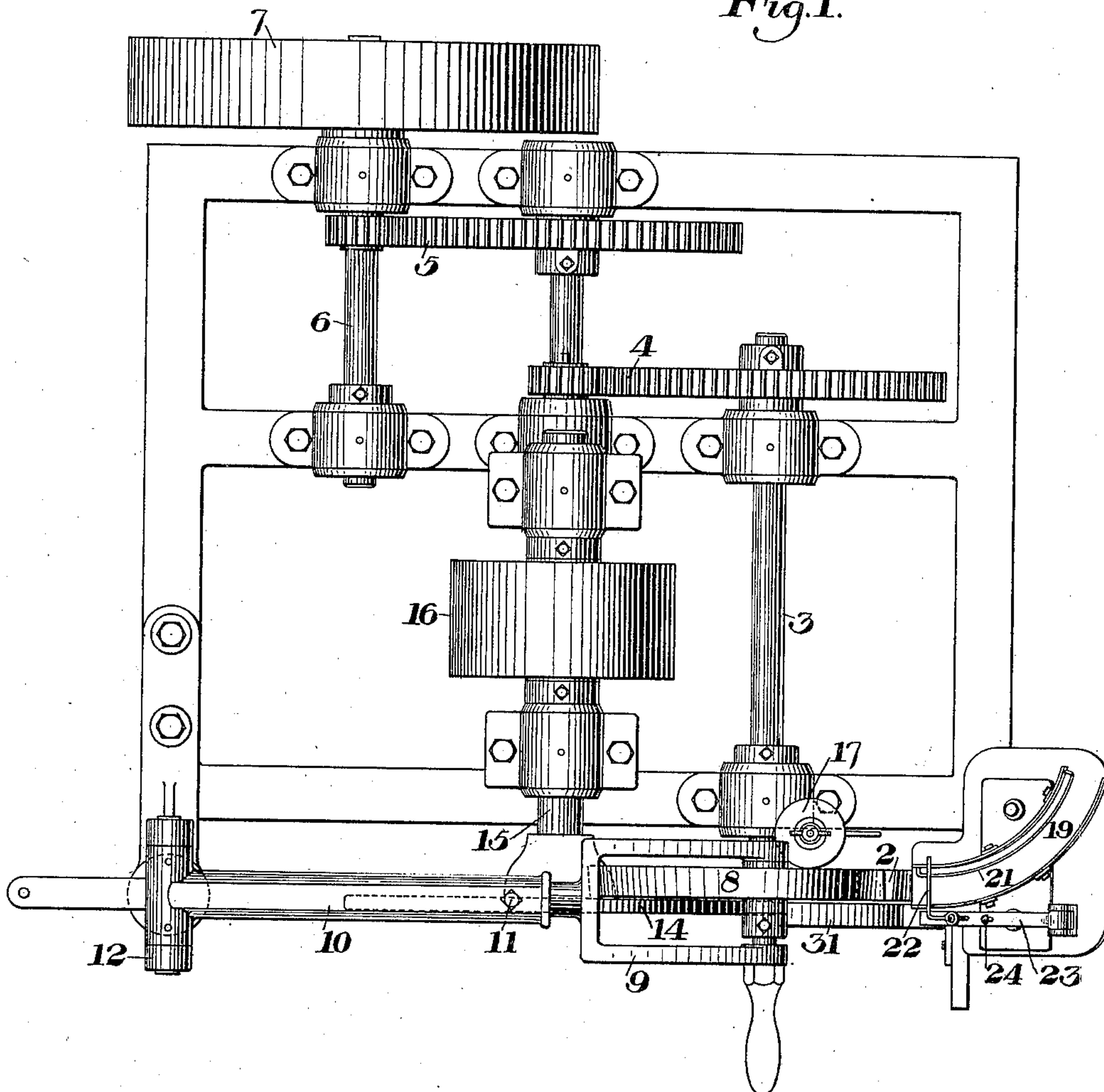
CORK POLISHING MACHINE.

(Application filed Oct. 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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2 Sheets—Sheet 2.

Fig. 2.

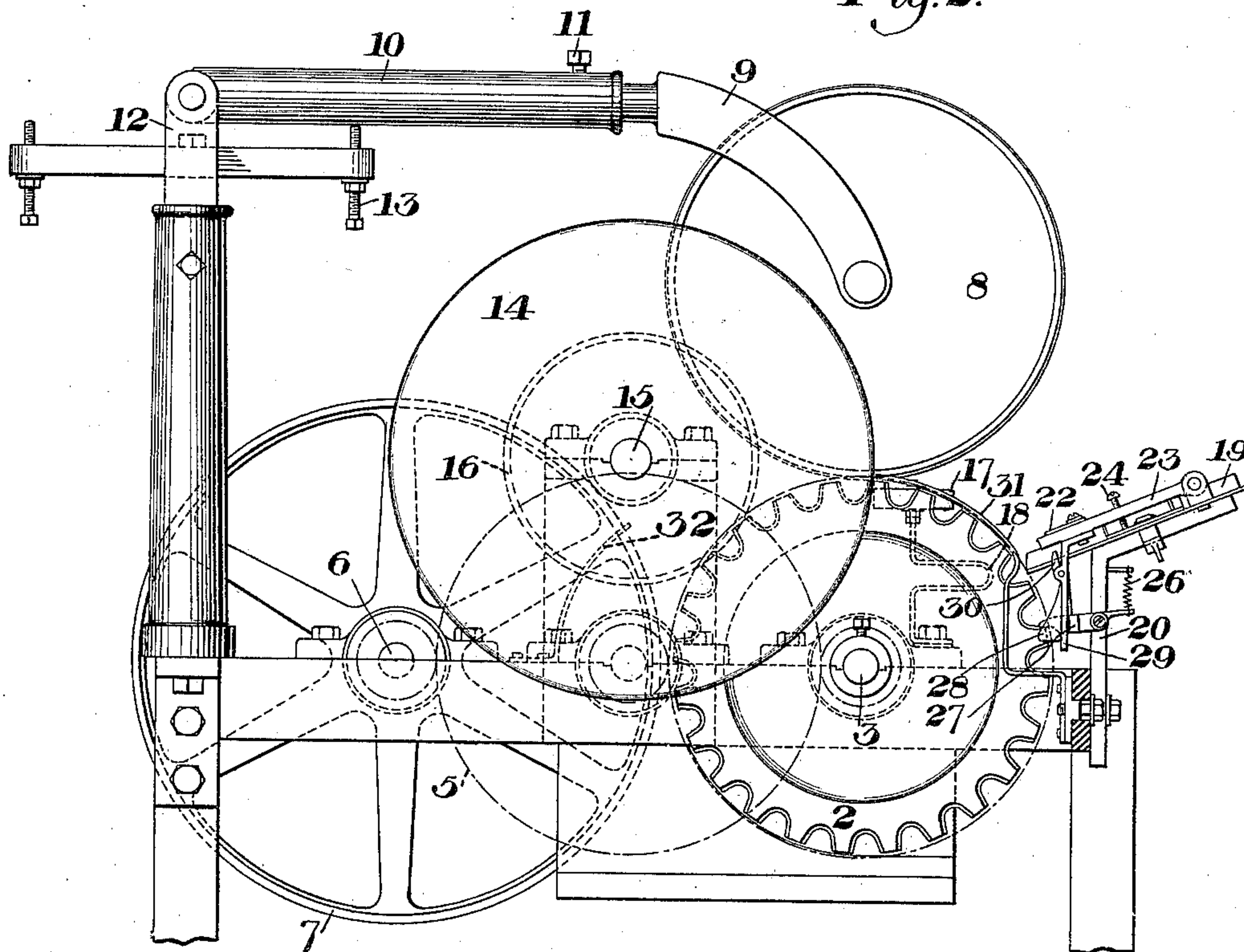


Fig. 3.

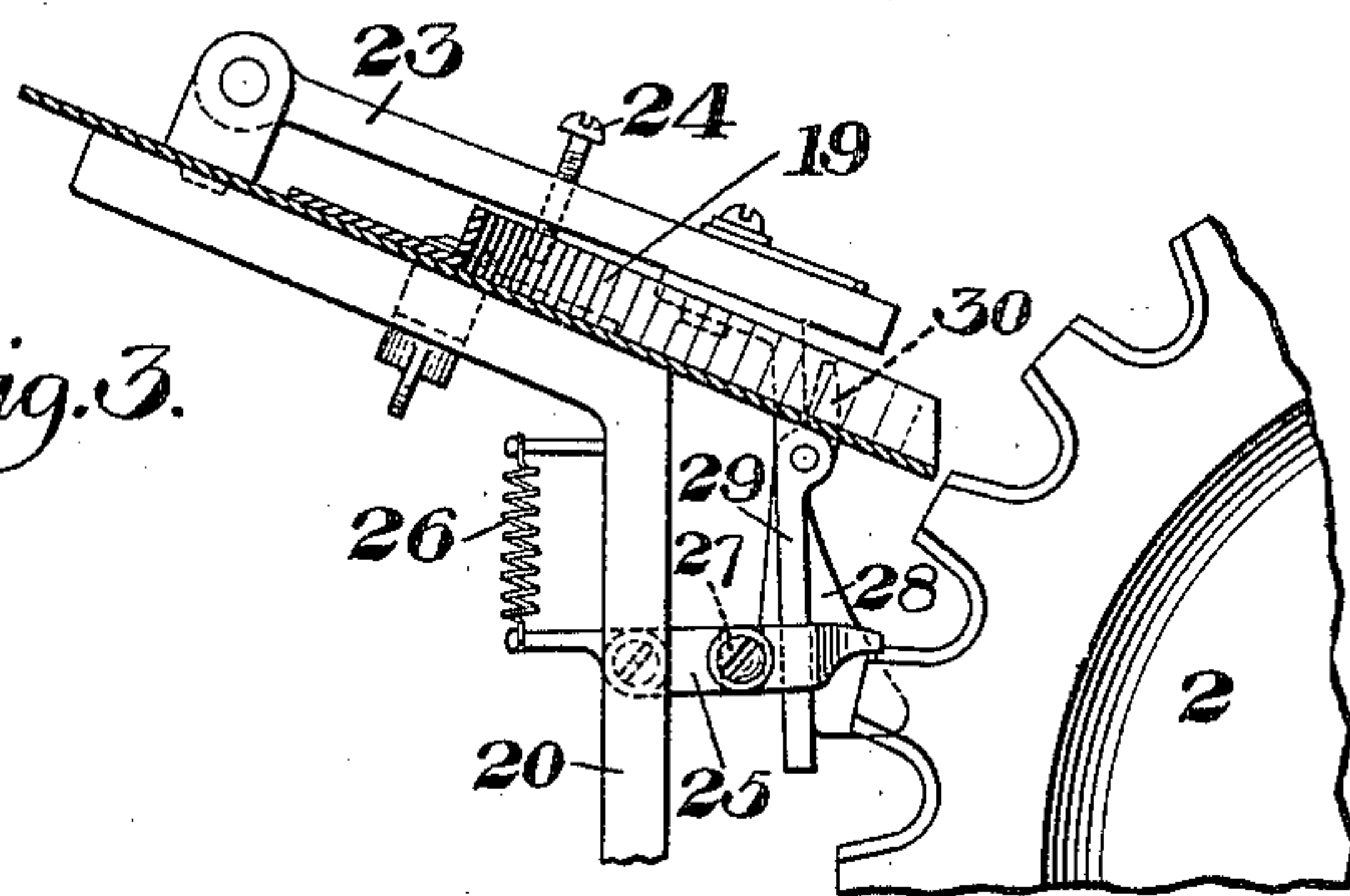
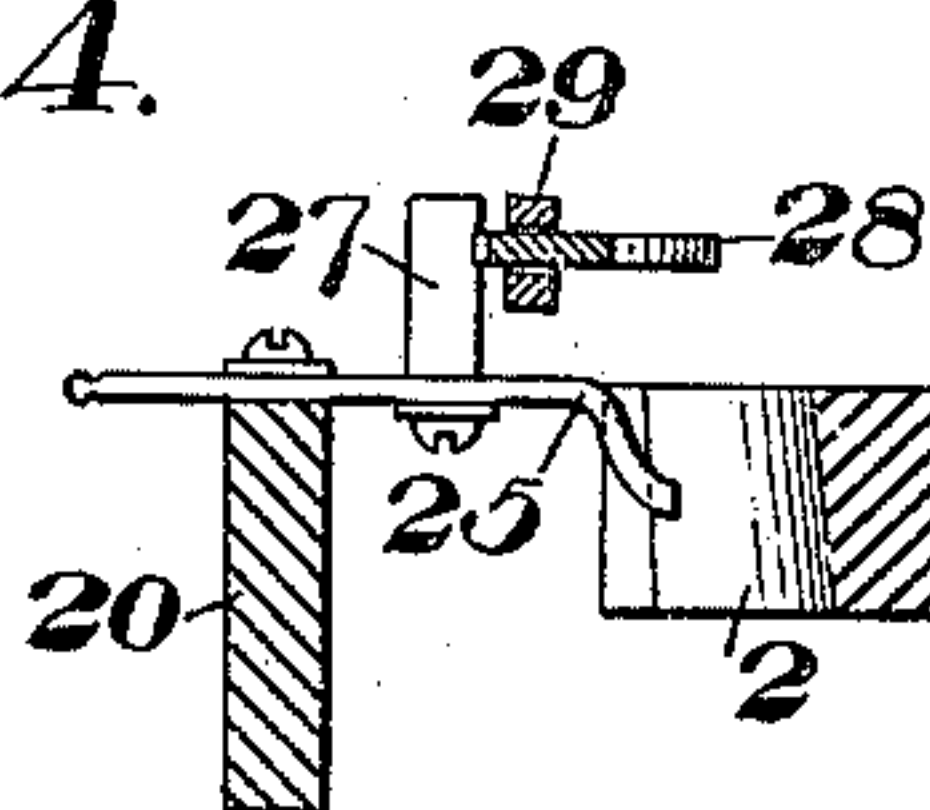


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## CORK-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,165, dated June 19, 1900.

Application filed October 24, 1899. Serial No. 734,601. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY E. CAMPBELL, of Pittsburg, in the county of Allegheny, and BYRON G. DODGE, of Lancaster, in the county of Lancaster, State of Pennsylvania, have invented a new and useful Improvement in Cork-Polishing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of our improved machine. Fig. 2 is a partial end elevation of the same, partly broken away, and Figs. 3 and 4 are enlarged detail views of the feed mechanism.

Our invention relates to the polishing of the ends of corks, and is designed to provide an automatic machine to which straight or tapered corks may be fed and which will polish one or both ends of the corks and then eject them.

In the drawings, 2 represents a toothed wheel mounted on a shaft 3, having slow-motion gearing connections 4 and 5 with a shaft 6, driven by suitable pulley 7.

8 is a plain-faced wheel or disk the rim of which is arranged to bear upon the sides of the corks and hold them between the teeth during polishing, this wheel being supported on an arm 9, which slides telescopically within a tubular stem 10 and is secured at the desired point by a set-screw 11. The tubular stem is pivoted to a standard 12 and may be adjusted by set-screw 13, so as to bring the disk 8 to the desired elevation.

The polishing-disk 14 is mounted on a short shaft 15, driven by belt-pulley 16, and the inner sandpaper face of this polishing-disk overlaps a segment of the toothed wheel, so as to act upon the ends of the corks held between the teeth. A horizontal disk 17, mounted on spring-support 18, contacts with the inner ends of the corks and forces them against a gage 31, thus insuring their being properly positioned lengthwise.

The corks are fed by the operator into a curved channel or guideway 19, carried upon a suitable bracket 20 and containing in its lower portion a longitudinally-extending wire 21. The series of corks are held from rolling

down the inclined guideway by a stop consisting of a transverse wire 22, secured at one side to a swinging link 23. A set-screw 24 limits the downward movement of the link, this being adjusted so that the wire stop will hold the corks when in its lowermost position. The link is oscillated by means of a pawl 25, pivoted to the bracket 20 and having its forward end engaging the teeth of the wheel 2. This pawl is yieldingly pressed into engagement with the teeth by a spring 26 and is provided with a lateral pin 27, which acts upon the rear portion of a gravity-pawl 28, pivoted within a slotted arm 29, rigidly secured to the link 23. The upper end of the pawl 28 terminates in a nose 30, which limits the swing.

The use of the curved feed-channel is an important part of our invention where tapered corks are being fed to any cork-machine, as it overcomes a difficulty which has always occurred when tapered corks were fed. If cylindrical corks are being fed, a straight feed-channel may be used.

The operation is as follows: The toothed wheel being driven at slow speed and the polishing-disk rotated at high speed, the operator feeds the corks into the inclined guideway. The wire stop holds the series from rolling down into contact with the wheel, and as the trigger 25 is acted upon by the successive teeth it lifts the stop and allows a cork to roll into the space between the teeth, the stop immediately dropping to prevent the next cork rolling down until the next space between the teeth comes into registry with the end of the trough. The corks between the teeth being forced against the curved gage 31 by disk 17 and these brought to proper position will be pressed down and held by disk 8 and their ends polished by the disk 14 while thus held. As soon as they are released by the disk 8 they will be ejected from between the teeth and striking a curved shield 32 drop down into a suitable receptacle.

The advantages of the invention result from the rapid polishing of the ends of the corks, the whole operation being automatic. The machine is simple and easily adjusted for different sizes of corks and is not liable to get out of order.



Both ends of the corks may be polished simultaneously by placing a polishing-disk, similar to the one shown, upon the other side of the toothed wheel; and many other changes  
5 may be made in the form and arrangement of the parts without departing from our invention.

We claim—

1. The combination with a rotatory wheel,  
10 having peripheral recesses, of means for clamping corks in said recesses through a part of the revolution of the wheel, and a polishing-disk arranged to act upon the ends only of the corks while held in the recesses; sub-  
15 stantially as described.

2. The combination with a wheel, having peripheral recesses, of automatic feed mechanism arranged to feed corks into the recesses, a clamp for holding the corks through  
20 a part of the revolution of the wheel, and a polishing-disk arranged to finish the ends of the cork while so held; substantially as described.

3. The combination with a rotary wheel having peripheral recesses, of a pawl or lever contacting with the wheel, and automatic feed mechanism actuated thereby; substantially  
25 as described.

4. In cork-finishing machines, a wheel having a toothed periphery, a lever arranged to contact with the teeth, an inclined chute having a stop arranged to be lifted by the lever, and a gravity-pawl or similar device arranged to act upon the stop to hold the next cork in  
35 the series; substantially as described.

5. In cork-finishing machines, a toothed wheel, a disk arranged to contact with and hold the cork in the recesses between the teeth, and a polishing-disk arranged to act upon the corks thus held; substantially as described. 40

6. The combination with a toothed wheel, of feed mechanism arranged to introduce corks in the successive spaces between the teeth, a spring-mounted roller arranged to contact with the ends of the corks, and a polishing-disk arranged to polish their other ends; substantially as described. 45

7. A cork-machine for acting upon tapered corks, said machine having a laterally-curved feeding-channel and mechanism for feeding the corks along said channel; substantially as described. 50

8. The combination with a wheel, having peripheral recesses, of mechanism for holding the corks in said recesses, a gage arranged to contact with the ends of the corks, and a polishing device arranged to polish their other ends; substantially as described. 55

In testimony whereof we have hereunto set our hands. 60

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