A. HORMEL.

GRINDING MACHINE.

APPLICATION FILED FEB. 7, 1914.

1,108,176.

Patented Aug. 25, 1914.

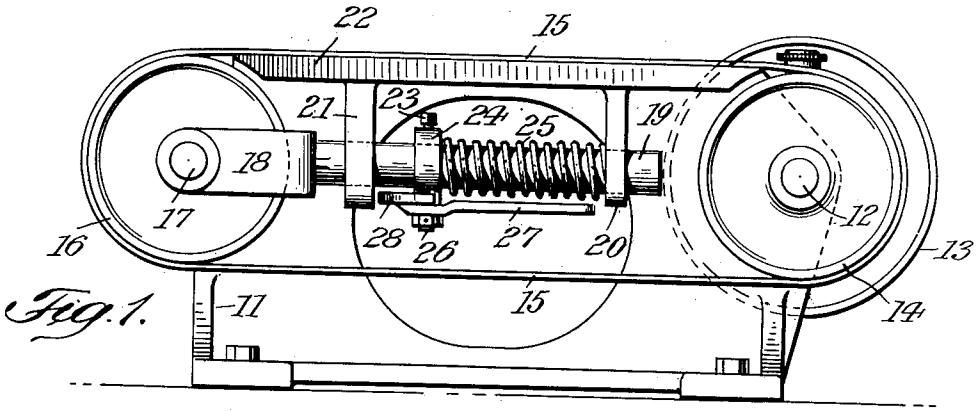



Fig. 1.

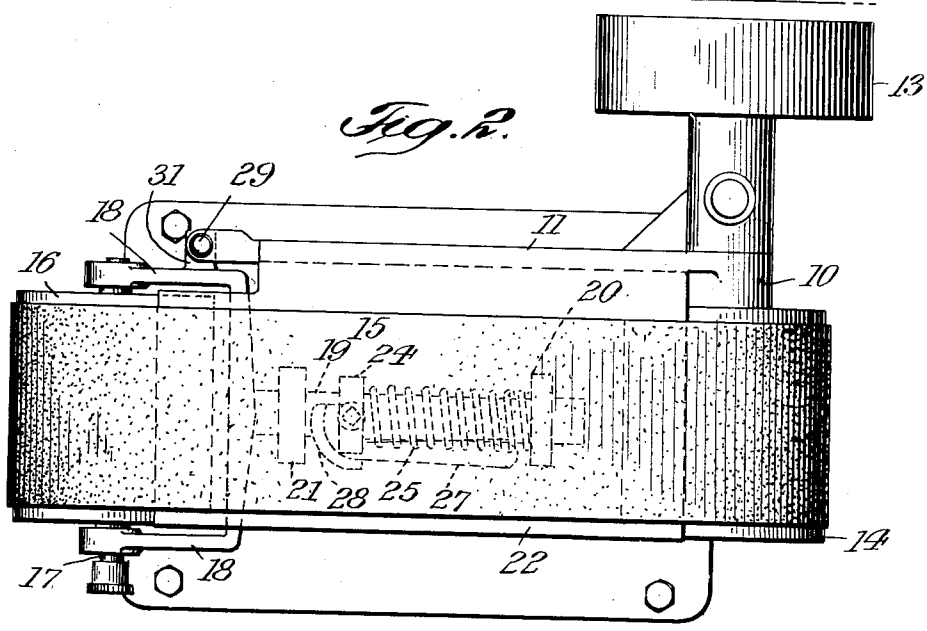



Fig. 2.

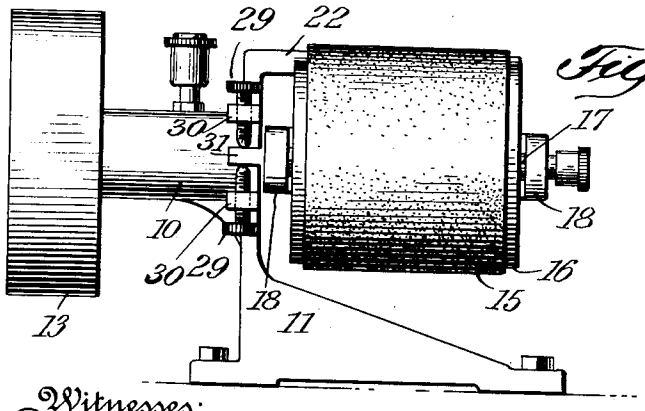



Fig. 3.

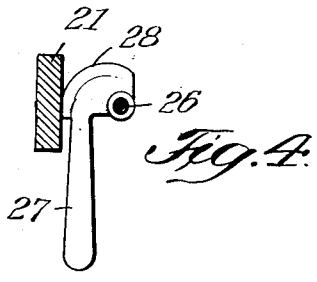



Fig. 4.

Witnesses:
Julius F. Smith
Madeline Hirsch

Inventor
August Hormel
By his Attorneys
Briesen & Knight

# UNITED STATES PATENT OFFICE.

AUGUST HORMEL, OF NEW YOR , N. Y.

## GRINDING-MACHINE.

1,108,176. Specification of Letters Patent. Patented Aug. 25, 1914.

Application filed February 7, 1914. Serial No. 817,104.

*To all whom it may concern:*

Be it known that I, AUGUST HORMEL, a citizen of the United States, and residing at New York city, county and State of New York, have invented certain new and useful Improvements in Grinding-Machines, of which the following is a specification.

This invention relates to a grinding machine of novel construction which is more particularly designed to impart a straight surface grain to metal or other articles.

The machine comprises briefly stated, an endless grinding apron running over a pair of drums, one of which acts as an apron tightener and is provided with means for imparting to the same, a slight inclination relatively to the other drum, such inclination being designed to correct any imperfection in the travel of the belt which would otherwise tend to run the apron sidewise off the drums.

In the accompanying drawing: Figure 1 is a side elevation of a grinding machine embodying my invention, Fig. 2 a plan thereof, Fig. 3 an end view, and Fig. 4 a detail of the tension-releasing handle.

In a suitable bearing 10 of a frame 11 is journaled a shaft 12 which receives motion through a suitable pulley 13. Shaft 12 carries a relatively fixed roll or drum 14 that is engaged by an endless grinding apron 15 made of any suitable material and covered by an appropriate abrasive coating. Apron 15 engages a second roll or drum 16 carried by a shaft 17 that is journaled in the forked end 18 of a rod or plunger 19. The latter is slidably mounted in a pair of bearings 20, 21 depending from a table 22 that forms part of the machine frame. Table 22 is arranged intermediate drums 14, 16 and its upper surface extends substantially tangentially to said drums, the active upper run of apron 15 traveling over said table that thus forms a support for the article to be ground. To plunger 19 is clamped, by screw 23, an adjustable collar 24 between which and bearing 20, there is interposed a spring 25 that tends to force drum 16 outward, thereby tightening apron 15. To collar 24 is pivoted at 26, a handle 27 carrying an eccentric 28 that is adapted to engage bearing 21. Normally handle 27 occupies the position shown in Figs. 1 and 2, so that spring 25 is free to advance drum 16 and thus stretch belt 15. When the latter is to be exchanged, handle 27 is swung outward whereby eccentric 28 is brought into engagement with bearing 21 to retract the plunger and drum 16 thus slacking the apron.

In order to insure a straight run of the apron during operation, means are provided for adjusting drum 16 relatively to drum 14 which adjustment is desirable for the reason that endless aprons when not quite true, have a tendency to run sidewise off the drums. It is this tendency which I have succeeded in checking by slightly setting the shaft 17 of drum 16 out of parallelism with the shaft of drum 14, such setting counteracting the running-off tendency of the apron. These means are shown to consist of a pair of opposed adjusting screws 29 tapped into lugs 30 of frame 11. Screws 30 engage a projection 31 extending laterally from one of the shanks of fork 18. By manipulating these screws, this fork will be tilted to correspondingly tilt drum 16 and thus insure the proper adjustment of the belt as will be readily understood.

I claim:

1. A grinding machine of the character described, comprising a frame, a first drum journaled therein, a second drum, an endless grinding apron engaging said drums, spring-controlled means for forcing the second drum away from the first drum, thereby tightening the apron, and means for tilting the second drum relatively to the first drum.

2. A grinding machine of the character described, comprising a frame, a first drum journaled therein, a second drum, an endless grinding apron engaging said drums, spring-controlled means for forcing the second drum away from the first drum, means for tilting the second drum relatively to the first drum, and means for rendering inactive the first named means.

3. A grinding machine of the character described, comprising a frame, a first drum journaled therein, a second drum, an endless grinding apron engaging said drums, a plunger having a fork in which the second

drum is journaled, a table arranged below the upper apron run, a pair of bearings engaged by the plunger, a collar adjustably secured to the plunger, a spring interposed between said collar and one of the bearings, an eccentric fulcrumed to the collar and adapted to engage the other bearing, and a set screw tapped into the frame and engaging the fork, whereby the second drum may be tilted relatively to the first drum.

AUGUST HORMEL.

Witnesses:
ARTHUR E. ZUMPE,
MARGA GRÜNBERG.