No. 802,816. PATENTED OCT. 24, 1905.

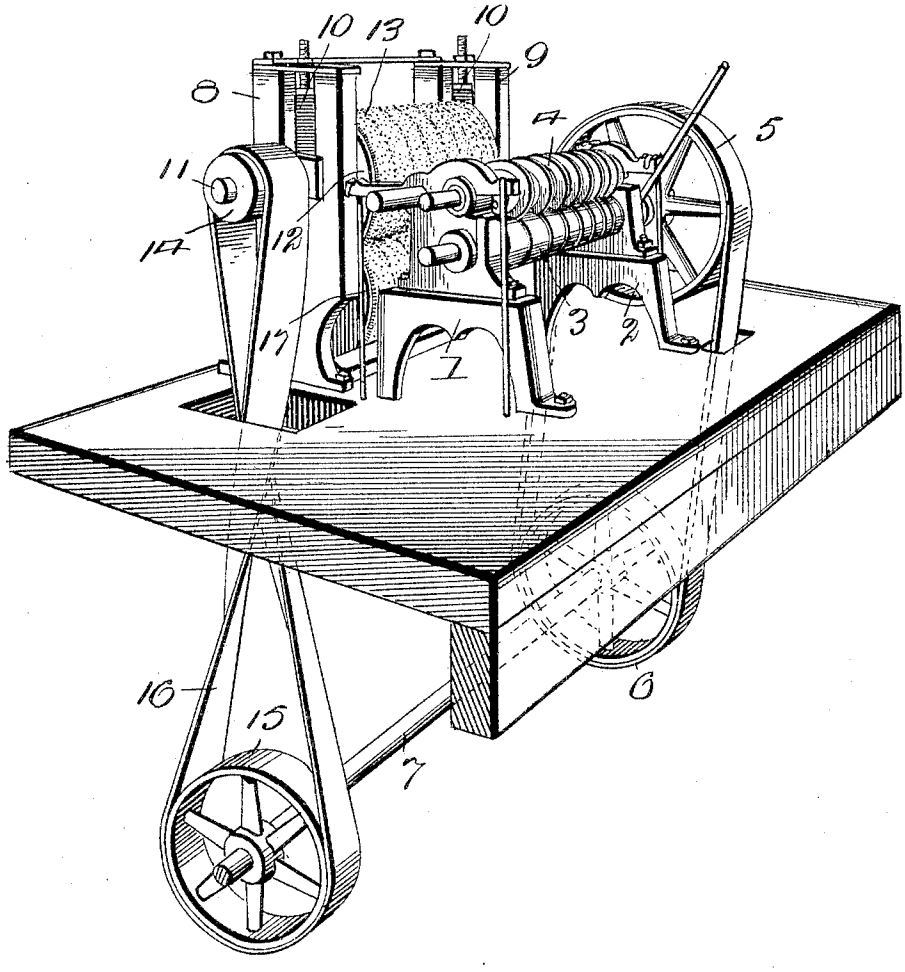
W. C. LAWRENCE.

STRAP POLISHING MACHINE.

APPLICATION FILED JAN. 14, 1905.

2 SHEETS—SHEET 1.

Fig. 1.




Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

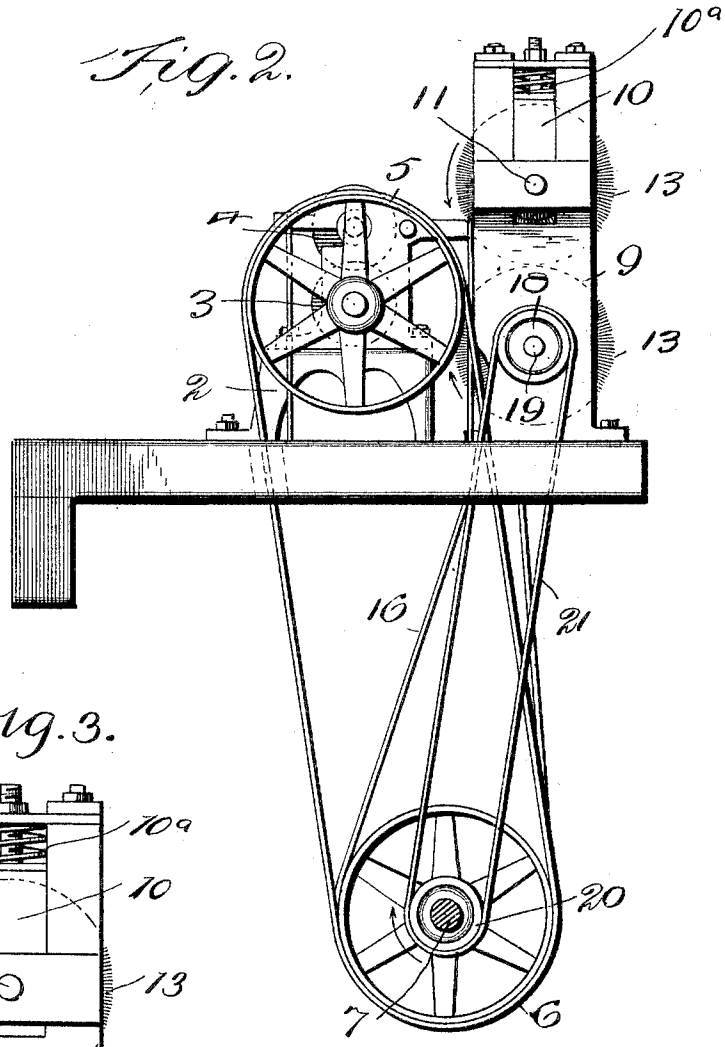
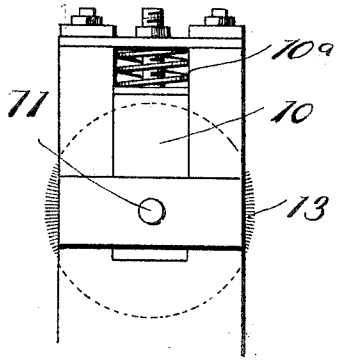



Fig. 3.




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# UNITED STATES PATENT OFFICE.

WILLIAM C. LAWRENCE, OF PORTLAND, OREGON.

## STRAP-POLISHING MACHINE.

No. 802,816. Specification of Letters Patent. Patented Oct. 24, 1905.

Application filed January 14, 1905. Serial No. 241,082.

*To all whom it may concern:*

Be it known that I, WILLIAM C. LAWRENCE, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Strap-Polishing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to machines for cleaning and polishing leather straps and the like after they have passed through a creasing-machine of the usual or any preferred construction; and my invention consists of certain novel details of construction and combination of parts, which will be hereinafter fully set forth and pointed out in the claim.

The first object, among others, of my invention is to provide a machine of the character specified which will thoroughly remove from the sides and edges of leather straps and the like all adhering dirt or foreign matter of any kind, whereby the surfaces will be left in a smoothed, polished, and very desirable condition.

Other objects and advantages will be made hereinafter clearly apparent, reference being had to the accompanying drawings, which are considered a part of this application, and in which—

Figure 1 shows a perspective view of my invention complete ready for use. Fig. 2 shows an end view thereof, taken from the opposite end from that shown in Fig. 1. Fig. 3 shows a detail view of the bearings for the polishing-roll.

In order to conveniently describe the various parts of my invention and coöperating accessories, numerals will be employed, the same numeral applying to a similar part throughout the several views, and, referring in detail to the drawings, I mount in suitable bearings 1 and 2 a pair of coöperating rollers 3 and 4, driven from a common source of power, as the band-wheel 5, the latter being mounted upon the extended end of one of the shafts or journals of said rollers, and said wheel is driven by the actuating-pulley 6, keyed upon the driving-shaft 7, said shaft being disposed in suitable bearings (not shown) arranged at a common point. I also provide a pair of standards 8 and 9 contiguous to the standards 1 and 2, and mounted in adjustable bearings 10 are the journals 11 of the rotary drum 12, which latter is provided upon its surface with a suitable covering, preferably of bristles, thus, in effect, producing a continuously-acting brush.

The rotary drum or polishing-roller 12 is preferably mounted in yielding bearings, which may be accomplished by use of the compression-spring $10^a$, located above the bearing-block 10, as more fully illustrated in Fig. 3. When the polishing-rollers or drums are covered with carpet or other suitable material, it is very important and desirable that a reasonable amount of elasticity shall be provided for the bearings, and this I am enabled to accomplish by the use of said spring, it being understood that the tension of the spring is normally directed with a view to disposing the upper roller or drum 12 closely in contact with the auxiliary roller or drum 17.

When the surfaces of the drums are covered with bristles, it is not so essential that a yielding movement of their drums shall be provided, though the employment of springs will prove no disadvantage, but will be found absolutely essential when the drums are covered with cleansing and polishing material other than brushes, inasmuch as compensation is provided for the passage between the rollers or drums of any unyielding substance. I therefore reserve the right to mount the rotary drums in either manner above indicated, according as I may find productive of the best results in practice.

Upon the extended journal or shaft 11 I mount the pulley 14, placed in communication with the pulley 15 in any suitable way, as by the belting 16 or the equivalent thereof. It will be further observed that I also mount in the standards 8 and 9 an auxiliary roller 17, corresponding to the roller or drum 12, and designed to coöperate therewith, it being understood that said roller or drum 17 is also covered with bristles of suitable character, thereby insuring that both the upper and lower sides of the straps extending from the creasing-rollers 3 and 4 will be acted upon by the bristles, the latter being designated by the numeral 13.

The rollers or drums 12 and 17 are, it will be understood, driven at a relatively more rapid speed than the rollers 3 and 4, whereby both the upper and lower surfaces of the straps will be acted upon by the bristles and thoroughly cleansed of grease or other foreign substances adhering thereto. By this arrangement the rollers 3 and 4, it will be ob-

vious, will hold the straps while the rollers or drums 12 and 17 are acting upon the same, said rollers 12 and 17, as before stated, being arranged to rotate more rapidly, will bring the bristles to bear thereon as the strap is slowly paid off by the rollers 3 and 4.

In some instances it may be desirable to cover the drums or rollers 12 and 17 with carpeting or the like instead of the bristles above referred to, though it is thought that best results will be attained from the use of a brush-like covering for said members. Inasmuch as the roller or drum 12 is positively driven through the mediation of the pulley 14, I also prefer to positively drive the drum or roller 17, and this I accomplish by means of the pulley 18, keyed upon the journal or shaft 19, and I place said pulley in communication with the pulley-wheel 20 upon the shaft 7 and connect the pulleys 18 and 20 by suitable belting 21, as clearly shown in Fig. 2. By this arrangement the drums 12 and 17 are preferably driven at the same speed of rotation, though it is obvious that they may be differently rotated, if desired, said relative rotation being easily attained by a proper graduation of the size of the pulleys 18 or 20, as will be obviously clear.

The straps to be acted upon by the bristles or brushes are entered through the rollers 3 and 4 and the ends thereof will be engaged by the rotary brushes, and inasmuch as said brushes are rapidly driven relative to the movement of the rollers 3 and 4 the entire surface of the straps will be many times acted upon before the straps are allowed to pass through between the brushes, as will be clearly apparent by reference to Fig. 2.

The various parts of my invention may be cheaply and expeditiously manufactured and each assembled in its operative position, and while I have described the preferred combination and construction of elements I desire to comprehend in this application all such substantial equivalents and substitutes as may be considered as falling fairly within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The herein-described machine for creasing and polishing leather straps and the like, comprising standards, a pair of polishing-rolls journaled in the standards, sliding bearings for one of the rolls, adjustable means contacting with said bearings for normally pressing the rolls together, auxiliary standards adjacent and connected to the first-mentioned standards, coacting combined creasing and holding rolls journaled within said auxiliary standards, the pass between the creasing and holding rolls being parallel and in the same horizontal plane with the pass between the polishing-rolls, a power-shaft, and means for transmitting rotary motion therefrom directly to each of the polishing-rolls and to the creasing and holding rolls, said means being constructed to rotate the polishing-rolls at a greater speed than the creasing and holding rolls.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM C. LAWRENCE.

Witnesses:
HERMAN SCHARRINGHAUSEN,
FREDERICK SCHARRINGHAUSEN.