

No. 813,839.

PATENTED FEB. 27, 1906.

F. TERRAMORSE.
POLISHING MACHINE.
APPLICATION FILED JAN. 21, 1905.

FIG. 1

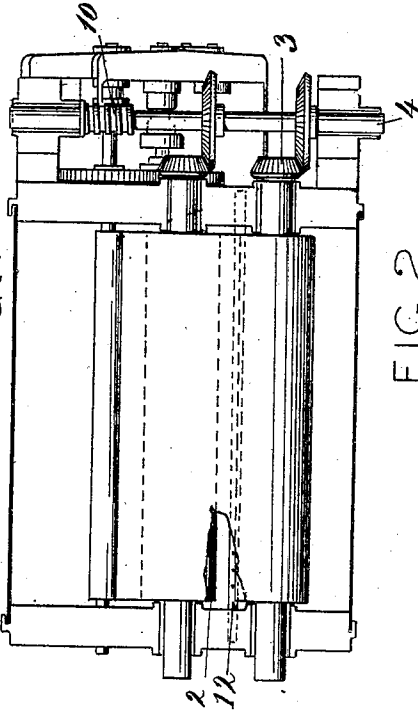


FIG. 2

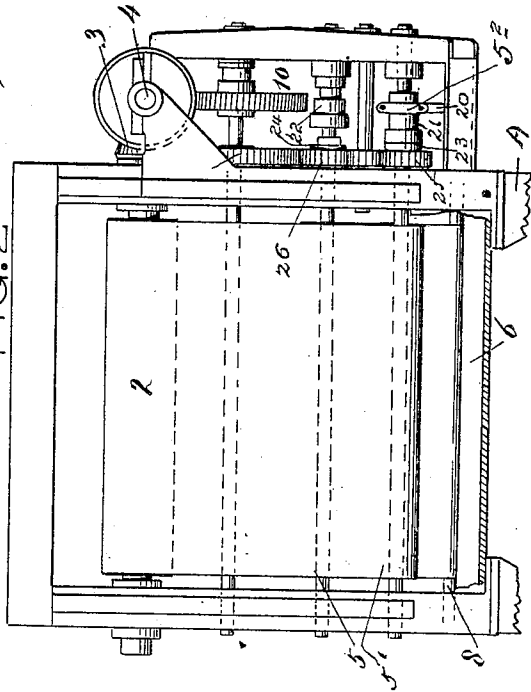
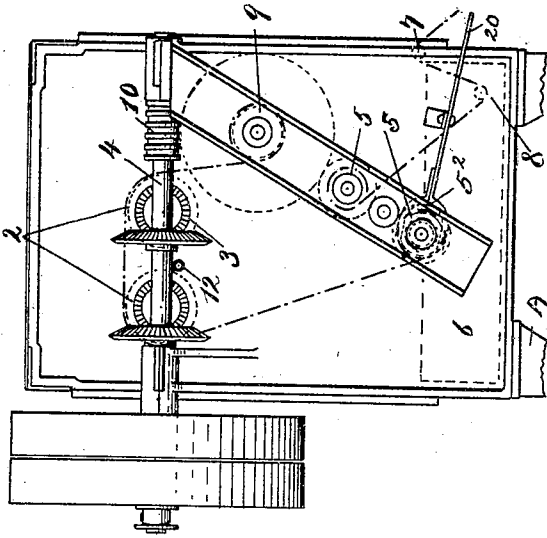


FIG. 3



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK TERRAMORSE, OF SAN FRANCISCO, CALIFORNIA.

POLISHING-MACHINE.

No. 813,839.

Specification of Letters Patent.

Patented Feb. 27, 1906.

Application filed January 21, 1905. Serial No. 242,066.

To all whom it may concern:

Be it known that I, FRANK TERRAMORSE, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Polishing-Machines, of which the following is a specification.

My invention relates to an apparatus which is especially designed for polishing the surface of cloth which is to be afterward coated, as in the manner of oilskin clothing and the like.

It consists in the combination of mechanism whereby the cloth is slowly passed over polishing-surfaces carried by revoluble rollers.

It also comprises details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan. Fig. 2 is a side elevation with top plate removed and tank broken to show interior. Fig. 3 is an end elevation.

Cloth such as is employed for the manufacture of oil-clothing originally has a nap and small fibers upon the surface, which, if not removed, cause the finished material to present a rough and uneven surface. It is the object of my invention to prepare this cloth previous to coating it so that when finished it will have a smooth and even surface.

As shown in the drawings, A represents any suitable framework adapted to carry the requisite mechanism. Upon this framework are journaled shafts carrying drums 2, which drums extend substantially across from side to side of the machine. The shafts project at one end, and by means of bevel-gears, as shown at 3, these shafts are rotated at any desired rate of speed. Power is transmitted to both shafts through the gears from a transverse shaft 4, journaled across one end of the machine and carrying one member of each of the driving-gears. Journaled across the lower part of the frame are rollers or drums 5, which are adapted to receive the cloth to be treated.

There are two rollers 5 and 5', (shown in Fig. 3,) and the object of this is to allow said rollers to be used alternately—that is, the cloth is moistened and wound upon one roller—say the upper roller 5—while the other or lower roller 5' (which has already been loaded) is delivering its contents to pass over the abrading-rollers. As soon as the lower roller 5' has delivered its contents, the upper

roller 5 meanwhile being charged, the cloth from it is passed over the abrading-rollers, and thus the operation is rendered substantially continuous and no delay results. This is of value in two ways: First, it enables the operator to treat the cloth in comparatively short sections, and each roll, which is moistened in the tank, has a short interval in which to become moistened and slightly shrunk before being delivered to the abrading-rollers. To provide for the simultaneous winding and unwinding of the rolls 5 5', respectively, any well-known form of mechanism, such as a clutch mechanism, (shown generally at 5²,) may be employed for throwing one of the rolls out of gear with the other to allow for a reverse direction of rotation.

Any well-known and appropriate form of clutch mechanism may be used for the purposes I have in view.

In Fig. 3 is shown a clutch-lever 20, the inner end of which is shown connected with a friction-sleeve 21, which slides upon the shaft of the roller 5'. In practice a similar lever will project from the friction-sleeve 22, likewise mounted on the shaft of the roller 5, said lever being omitted from the drawing for the sake of clearness and to avoid confusion with the lever 20. The object of these friction mechanisms is to drive the rolls from the respective shafts and to allow a little slippage of one of the driven rolls. Thus the friction may be sufficient to allow one roll (the one that is unwinding) to be driven with sufficient slippage to compensate for the difference between the gradually-unwinding cloth from, say, the roll 5 and the gradual winding of the cloth upon the roll 9, as there would be a little difference in speed between the rolls. The friction-faces of the sleeves 21 22 engage companion friction-faces 23 24, fixed to the driving-gears 25 26 in any well-known manner. The cloth is coiled upon these rollers in suitable lengths and is submitted to the action of water, so that it is thoroughly dampened. This water may be supplied from a tank, as at 6, which is conveniently located with relation to the rollers, and the cloth passes first over guide-rollers 7 on the edge of the tank, thence beneath rollers 8, located within the tank, and from this point up to one of the rollers 5 or 5', upon which it is coiled. From one of the rollers 5 the cloth is then carried around one of the rollers 2. Thence it is passed around the other roller and from this point

to a roller 9, upon which it is finally coiled after completion. This roller 9 is driven slowly by a worm, as at 10.

The surfaces of the rollers 2 are covered 5 with sandpaper or equivalent abrasive substance sufficient to cut away the roughnesses on the surface of the cloth without destroying the texture. The dampening of the cloth materially assists this operation, and 10 in order to further dampen the cloth when necessary I have shown a spray pipe or pipes located with relation to the abrading-drums as shown at 12. The water-supply to these pipes is controlled by suitable cocks, and the 15 moistening of the cloth may be regulated at pleasure.

The operation will then be as follows: The cloth taken from one of the rollers 5 is passed over the rollers 2, as described, and being retarded by the tension and the slowly-moving 20 winding-drums the surface of the cloth will be submitted to the abrasive action of the more rapidly rotating drums 2, and thus the surface will be given the requisite smoothness. From these drums it passes upon the 25 winding-drum 9, as before described, and is then ready for further processes.

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

1. An apparatus for abrading and polishing the surface of cloth, comprising revoluble rollers having an abrasive surface, rollers upon which independent rolls of cloth 35 may be supported, means whereby the last-named rolls are caused to respectively rotate in the same directions to simultaneously wind

and unwind the cloth, and means whereby the cloth may be drawn over the abrading-rollers from either of the cloth-supporting 40 rollers.

2. In an apparatus for abrading and polishing cloth, revoluble rollers having an abrading-surface, mechanism by which the rollers are revolved, a plurality of rollers upon which 45 lengths of cloth are first wound, either of said last-named rollers adapted to deliver the cloth to the abrading-rollers, means for rotating the last-named rollers simultaneously and in the same direction whereby the cloth 50 is wound upon one roller and simultaneously unwound from the other roller, means for moistening the cloth before and during the operation, and means for retarding the movement of the cloth over the abrading-rollers. 55

3. In an apparatus for polishing cloth, revoluble rollers having abrading-surfaces, mechanisms by which said rollers are revolved, other rollers upon which the cloth is first coiled, a water-tank, guide-rollers over which 60 the cloth is passed through the tank before being thus coiled, a supplemental spraying device located contiguous to the abrading-rollers, and a receiving-drum and mechanism by which it is revolved in unison with the 65 movement of the abrading-rollers and in the same direction.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK TERRAMORSE.

Witnesses:

N. F. RUNYON,
E. B. CUSHMAN.