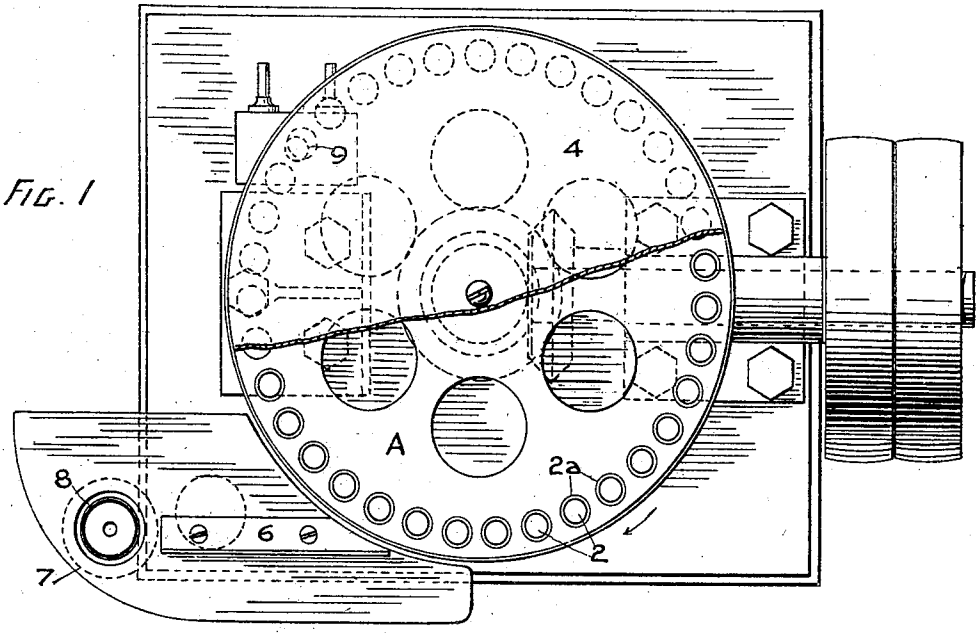
No. 879,528. PATENTED FEB. 18, 1908.

J. G. DORWARD.

SMOOTH EDGER FOR FABRICS.

APPLICATION FILED OCT. 4, 1907.

FIG. 1



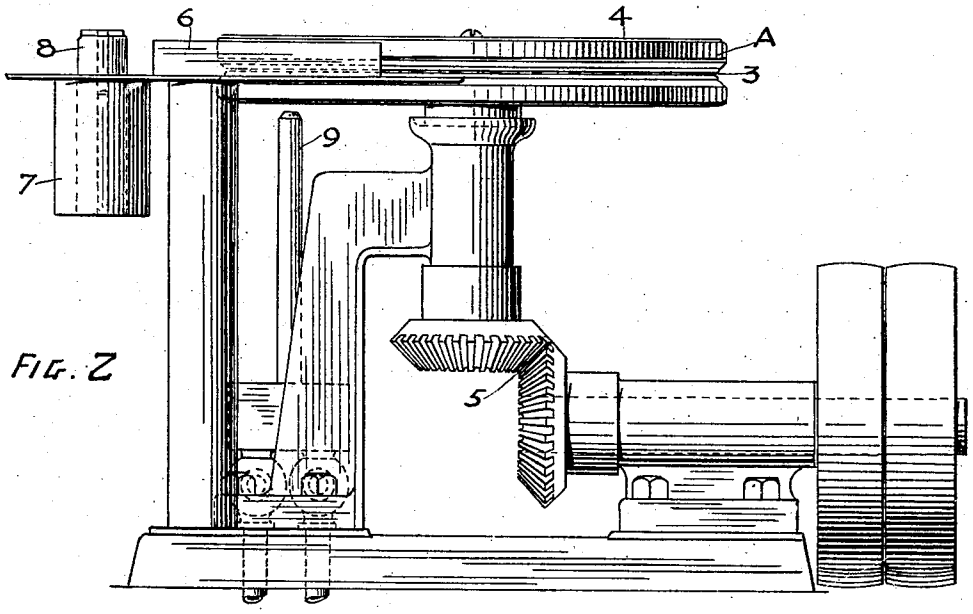
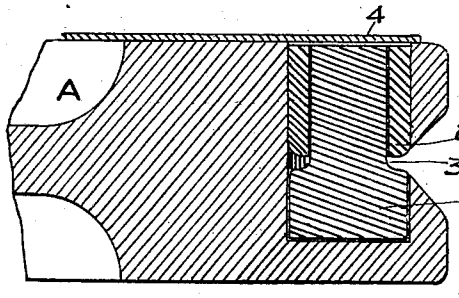


FIG. 2

FIG. 3



WITNESSES

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SMOOTH-EDGER FOR FABRICS.

No. 879,528. Specification of Letters Patent. Patented Feb. 18, 1908.

Application filed October 4, 1907. Serial No. 395,963.

To all whom it may concern:

Be it known that I, JOHN G. DORWARD, citizen of United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Smooth-Edgers for Fabrics, of which the following is a specification.

My invention relates to an apparatus which is especially designed for producing smooth edges on fabrics such as collars or cuffs, or other material upon which such edges may be desired.

It consists in the combination of parts, and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is an enlarged sectional detail view of one of the rollers.

In laundry and like work it is desirable to finish the edges of collars, cuffs, and the like, so that they will be perfectly smooth, and the rough edges ordinarily produced by the starch or other stiffening material avoided. For such purposes revoluble cylinders have been used having V-shaped grooves into which the edges of the fabric to be made smooth are introduced, but there is considerable friction in this action, and it is objectionable on this and other accounts.

In my invention, I provide a revoluble runner A, having a groove, preferably V shaped, in its periphery, and around the periphery of this runner are inserted a series of expansion rollers which are freely turnable, and so formed that the edges of the fabric being passed through and in contact with these rollers will be made perfectly smooth, and without the objectionable frictional action and the resultant wear and tear thereon. The rollers are here shown as made in two parts 2 and 2^a, the parts 2 being fitted into pockets in the runner A, in which pockets the rollers are freely revoluble. The part 2^a may be in the form of a sleeve fitting over the smaller upper end of the part 2, and between the two parts a V shaped groove is formed, as shown at 3.

Above the rollers is a spring plate 4 acting to normally hold the parts of the roller in position to form the necessary groove, but yielding sufficiently to allow a movement of the part 2^a upon the part 2 to accommodate varying thicknesses of material which may be passed through, and to allow the edges in any case to pass to the bottom of the groove.

By means of bevel gears, as at 5, or other suitable actuating mechanism, the runner is caused to revolve in one direction, as shown by the arrow in Fig. 1. 6 is an angle guide so placed that the edges of the articles being placed against this guide and the articles pushed forward, the contiguous edge will be received between the two-part rollers, and as these rollers are freely revoluble, they act to press and smooth the edges of the articles without undue friction thereon. In order to prepare the collars or other articles for this action, the edges are dampened. The dampener may consist of a cup or receptacle 7 partially filled with water, and within this is a vertically disposed roller 8 having a surface of flannel or other absorbent material, which by capillary attraction will be wetted so that as the article is passed over this roller the edge will be moistened previous to its passing through the smoothing rollers. As here shown, the dampening roller 8 is located anterior to the angle guide 6 and substantially in line therewith. As the article to be smoothed is introduced, it first passes over the dampening roller, thus moistening the edge, thence following the guide 6 it enters between the revoluble rollers 2 and 2^a. The dampening roller and guide are, as shown in Fig. 1, substantially tangential to the peripheries of the runner and rollers.

The shape of the groove between the two parts of the rollers is such that the opposite sides of the article are first brought into contact with the outer portion of the groove, and as it passes on the edge comes in contact with the bottoms of the roller grooves.

The elastic movement allowed to the part 2^a perfectly adjusts the rollers to any thickness of material which may be passed through, and insures the edges always coming in contact with the bottoms of the rollers.

The runner and rollers are heated so as to properly perform their service, by means of a gas burner or other heating device 9, which in the present case is shown located beneath the runner A, which is here shown as revolving horizontally upon a vertical axis. The runner is preferably made of brass or some metal which readily absorbs heat, and the heat is transmitted from it to the rollers turnable in the periphery.

The runner is made to revolve at a suitable number of revolutions per minute towards the incoming material; and this being passed over the dampener enters between the rollers so that the latter naturally take a grip on the material, and are thus caused to revolve in an opposite direction to that of the runner, and in the same direction to that of the material, thereby reducing the friction, and at the same time ironing and finishing the edge of the material passing through. It also relieves the operator of the necessity of pressing the goods against the rollers, as the grip taken by the rollers upon the material is sufficient for the desired purposes.

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

1. In an apparatus of the character described, a revoluble cylindrical runner and freely turnable grooved rollers mounted in the runner near the edge and exposed through the periphery thereof whereby the edges of material may be entered into the grooves of the rollers.

2. In an apparatus of the character described, a revoluble cylindrical runner, rollers freely turnable in the runner near the circumference thereof, and exposed through said circumference, said rollers having convergent and adjustable grooves formed in their peripheries.

3. In an appratus of the character described, a revoluble cylindrical runner having pockets around it near the periphery, two-part rollers turnable in said pockets and having V-shaped grooves formed between their meeting portions, and means for applying an elastic pressure to the rollers.

4. In an apparatus of the character described, a revoluble runner or support having cylindrical pockets formed around it near the periphery, rollers freely turnable in said pockets, said rollers consisting of a base portion having a reduced shank and a sleeve turnably fitting upon said shank, the meeting portion of said base and sleeve forming a V-shaped groove to receive the material to be treated.

5. In an apparatus of the character described, a revoluble runner having cylindrical pockets around it near the periphery and a V-shaped groove intersecting said pockets, rollers consisting of a base, a shank of smaller diameter, a sleeve freely slidable and turnable upon said shank, the meeting portions of said base and sleeve coinciding with the groove of the runner, and having coöperating edges, and a spring whereby the sleeve is yieldingly held in place with relation to the other part of the roller.

6. In an apparatus of the character described, a revoluble runner having a grooved edge and cylindrical pockets intersected by said groove, two-part rollers freely turnable in said pockets, having a coincident groove formed between their meeting portions, and a spring whereby the two-parts of the rollers are yieldingly held with relation to each other, and a guide plate located with relation to the runner so that the edges of articles to be operated upon may be introduced into the roller grooves, and the rollers caused to rotate in a direction opposite to that of the runner.

7. In an apparatus of the character described, a revoluble runner having peripherally grooved freely turnable two-part rollers fitted in pockets disposed near the periphery of the runner, a dampening roller and a guide located in the direction of travel of the article to the periphery of the runner, whereby articles are simultaneously dampened and their edges introduced in the roller grooves.

8. In an apparatus of the character described, a revoluble runner having pockets formed in it near the periphery, two-part rollers freely turnable in the pockets and having grooves formed between the two parts, a dampening roller and guide substantially tangent to the peripheries of the runner and rollers, and means for heating the runner and rollers.

9. In an apparatus of the character described, a horizontally revoluble runner having a grooved edge, and cylindrical pockets intersected by said edge, rollers fitting and freely turnable in said pockets, said rollers being composed of two independent parts with their meeting portions forming grooves coincident with that of the runner, a spring plate whereby the two parts of the rollers are yieldingly pressed toward each other, a heating apparatus located beneath the runner, a dampening roller, and a guide plate fixed approximately tangent to the line of travel of the rollers, whereby the dampening, ironing and smoothing of the articles are successively effected in a single operation.

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

JOHN G. DORWARD.

Witnesses:
C. A. PENFIELD,
S. H. NOURSE.