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H. L. SAWYER ET AL

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METHOD OF APPLYING ADHESIVES TO COUNTERS

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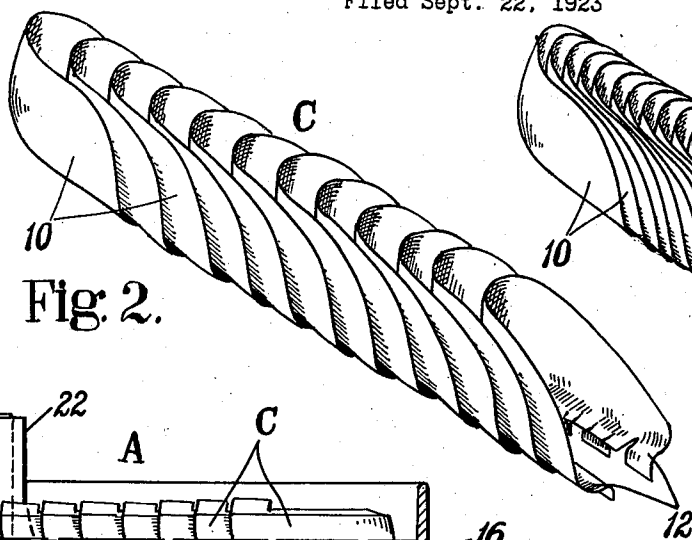


Fig. 2.

Fig. 1.

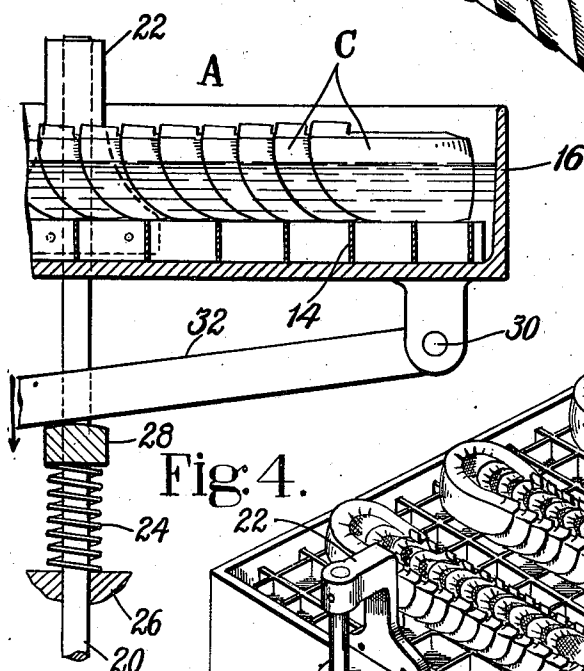


Fig. 4.

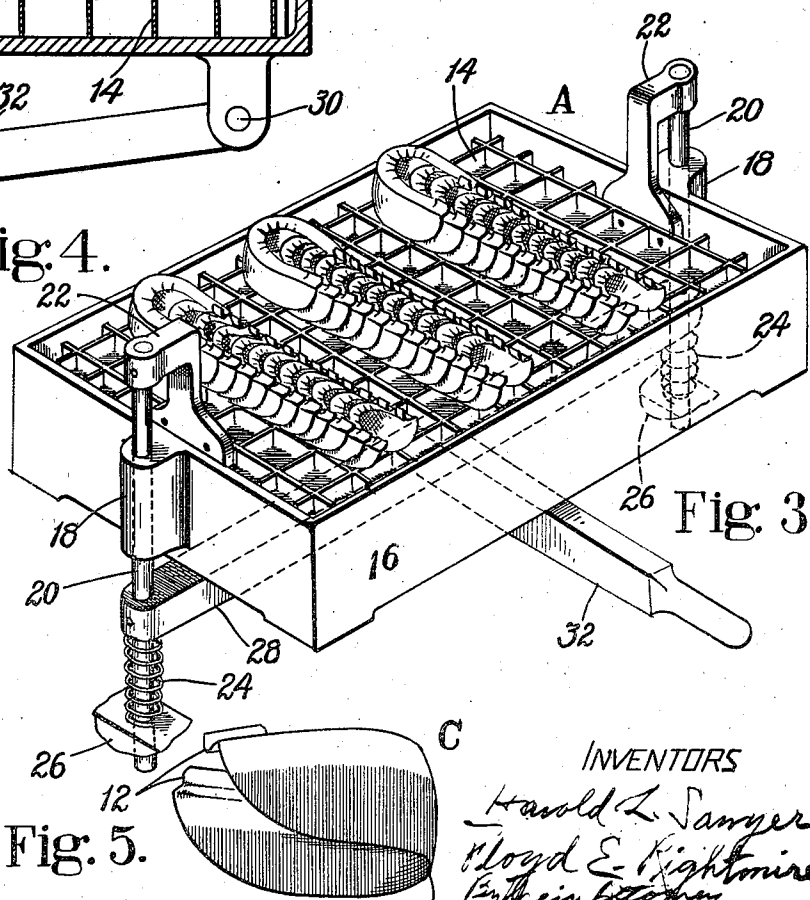


Fig. 3.

Fig. 5.

INVENTORS

Harold L. Sawyer
Clayton E. Fichtner
By their attorney
Wilson & Edwards

UNITED STATES PATENT OFFICE.

HAROLD L. SAWYER, OF LYNN, MASSACHUSETTS, AND FLOYD E. RIGHTMIRE, OF BINGHAMTON, NEW YORK, ASSIGNORS TO UNITED SHOE MACHINERY CORPORATION, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

METHOD OF APPLYING ADHESIVES TO COUNTERS.

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This invention relates to a method of applying an adhesive to the counters of shoes, as the coating them with paste prior to assembling with the shoe-uppers.

5 In assembling the elements of an upper, this including inserting a counter between the rear of the quarters and the lining, it is customary to first coat the counter with paste, to cause it to adhere to the associated
10 elements, and unite all into a firm structure which will resist fulling, wrinkling and like displacements tending to affect the appearance and comfort of the finished shoe. The practice varies as to the particular portions
15 of the counter coated; but it is desirable to thus treat the inside and outside of the body or upstanding portion, so that it may be joined both to the upper-leather and to the lining. It is unnecessary to paste the flange
20 of the counter, which is firmly attached to the upper-elements and insole by the assembling tacks, and often also by the heel-attaching nails. So far as we are aware, the paste has heretofore been applied by the
25 use of a brush held in one hand of the operator while the counter is grasped in the other hand, the opposite sides being successively coated, and no particular attention being paid to the area covered. This process is wasteful of both time and paste. An
30 object of our invention is to provide a method of pasting counters by which the coating of a considerable number may be effected simultaneously, with precision as to the surface covered and resulting economy in
35 the adhesive used. Our method is also cleanly for the operator, it being unnecessary to touch the coated surfaces, or expose the hands to contact with the coating instrumentalities.

40 As herein illustratively set forth, the present invention provides for placing the counters in inverted position upon a support, with the upper edges of their bodies resting thereon and their flanges uppermost
45 and immersing the support in the adhesive sufficiently to cover a portion of the counter-bodies, the flanges remaining above the adhesive. In another aspect, considered
50 with particular reference to applying an ad-

hesive to nested counters, the method of the present invention, as herein exemplified, consists in placing upon a support a series of nested counters arranged in frictional engagement with each other so that they
55 retain their relative positions as a unit and immersing the support with the series of counters in the adhesive. The nested counters are preferably drawn out until the rear portions are separated from one another,
60 and predetermined portions of the entire series are dipped simultaneously in the adhesive as a unit.

A particular means for carrying out our improved method is illustrated in the accompanying drawing, which also represents
65 the successive steps taken.

Fig. 1 shows, in perspective, a series of counters as they are packed for shipment.

Fig. 2 is a perspective view of the same
70 series drawn out or separated from one another in accordance with the first step of our method;

Fig. 3 is a perspective view of a pasting apparatus by which the succeeding step of
75 the method may be performed;

Fig. 4 is a vertical transverse section through the machine, illustrating the immersion of the counters in the paste; and

Fig. 5 shows, in perspective, a coated
80 counter ready for the assembling operation.

The counters C are commonly supplied to shoe-manufacturers packed in nested series, as appears in Fig. 1, the body-portions
85 10 being placed successively one within another and the flanges 12 being similarly superposed. These are placed in close relation, to occupy as little room as possible, the rear portions of each counter being in close
90 proximity to those adjacent to it, and the sides contacting over practically their entire surfaces. In carrying out the present method, the operator takes such a series, of suitable length, and draws it out, as is represented in Fig. 2, the body-portions now
95 being separated, so that contact exists only over a very limited area at the forward extremities of the side walls of one counter and corresponding lines at intermediate 100

points of the next counter. The series, however, still maintains its unitary character because of the frictional engagement of the units thereof with each other, with the result that it may be grasped by the operator and lifted as a whole, without separation and that this series relation will be maintained during the coating operation. In this relation, a suitable number of the separated series are placed side by side, with their flanges uppermost, upon a support, which may be furnished by the grid 14 of a coating apparatus A. This apparatus, which may be of any suitable type, is illustrated as consisting of a receptacle 16 for the adhesive which is to be employed, the receptacle having extending from its opposite extremities vertically perforated lugs 18, 18, within which may reciprocate rods 20, 20. Fixed upon the upper end of each rod and overhanging the receptacle is a bracket 22, to which the grid 14 is secured. The grid may be of any desired form which will offer a suitable support for the series of counters and permit free passage of the paste or other adhesive contained in the receptacle through the grid into contact with the counters. It is held normally elevated, so that the supported objects are above the contents of the tank, by springs 24, 24 surrounding the rods 20 and interposed between portions of the frame indicated at 26 and a bar 28 fixed to the rods. Pivoted at 30 upon lugs depending from the under side of the receptacle is an actuating lever 32 lying above the bar and having a handle at the front of the apparatus. By a depression of the lever, the rods 20, 20 may be lowered against the expansive force of the springs, carrying the grid below the surface of the paste, and thus immersing in such paste the supported counters. The dimensions of the grid are preferably such that a plurality of the series of counters may be carried side by side. Three of the series are so shown in Fig. 3 of the drawing. The depth of the paste is sufficient to at least cause the immersion of the counters to the desired level at some point short of the flanges when the lever 32 has been fully depressed, the limit of movement in the apparatus illustrated being determined by the contact of the grid with the bottom of the receptacle. If desired, the paste may be maintained at a constant level by a barometric feed connection. When the operator releases the actuating lever, the grid is raised by the springs, returning to the position of Fig. 3, the counters thereon being uniformly coated by their immersion both inside and outside, in the manner illustrated in Fig. 5. The body-portion is almost completely covered, save for a narrow area adjacent to the flange, while said flange receives none of the paste. The counters may

now be utilized one by one from the series until all have been applied to shoe-uppers. In doing this, each counter as taken from the grid may be grasped by its unpasted portion, so the operator's hands do not come in contact with the paste, and the smearing of this upon the upper is avoided. When the supply of pasted counters has been exhausted, the coating operation may be repeated, the time necessary to operate upon a relatively large number being very brief.

It will be seen that the coating operation of our method involves less labor for many counters than for a single counter when brush-coated, and that the only preparation necessary for this is the extending of the nested series. Moreover, the coating is uniformly applied to the precise portions of the counters desired, and to these only, and the operator need not bring his hands into contact with the paste upon the counters or upon the apparatus.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:—

1. The method of applying an adhesive to counters, which consists in placing the counters upon a support with the upper edges of the bodies of the counters resting upon the support and their flanges turned upwardly, and immersing the support in an adhesive to a depth sufficient to cover a portion of the counter-bodies, the flanges remaining above the adhesive.

2. The method of applying an adhesive to nested counters, which consists in placing upon a support a series of the nested counters arranged in frictional engagement with each other so that they retain their relative positions as a unit, and immersing the support with the series of counters in the adhesive.

3. The method of applying an adhesive to nested counters, which consists in drawing out a series of nested counters until the rear portions are separated from each other, and simultaneously dipping predetermined portions of the entire series as a unit in the adhesive.

4. The method of applying an adhesive to nested counters, which consists in drawing out a series of nested counters until the rear portions are separated from each other, placing the thus drawn out series upon a support, and immersing the support with the drawn out series of counters in the adhesive.

5. The method of pasting nested counters, which consists in drawing out a series of the nested counters until the rear portions are separated from each other, placing the thus drawn out series upon a support with the upper edges of the bodies of the counters resting upon the support and their flanges turned upwardly, immersing the

support in a receptacle containing paste to a depth sufficient to cover a portion of the counter-bodies, the flanges remaining above the paste, and removing the pasted counters
5 one by one by their uncoated portions for utilization.

In testimony whereof I, the said HAROLD

L. SAWYER, have signed my name to this specification.

HAROLD L. SAWYER. 10

In testimony whereof I, the said FLOYD E. RIGHTMIRE, have signed my name to this specification.

FLOYD E. RIGHTMIRE.