

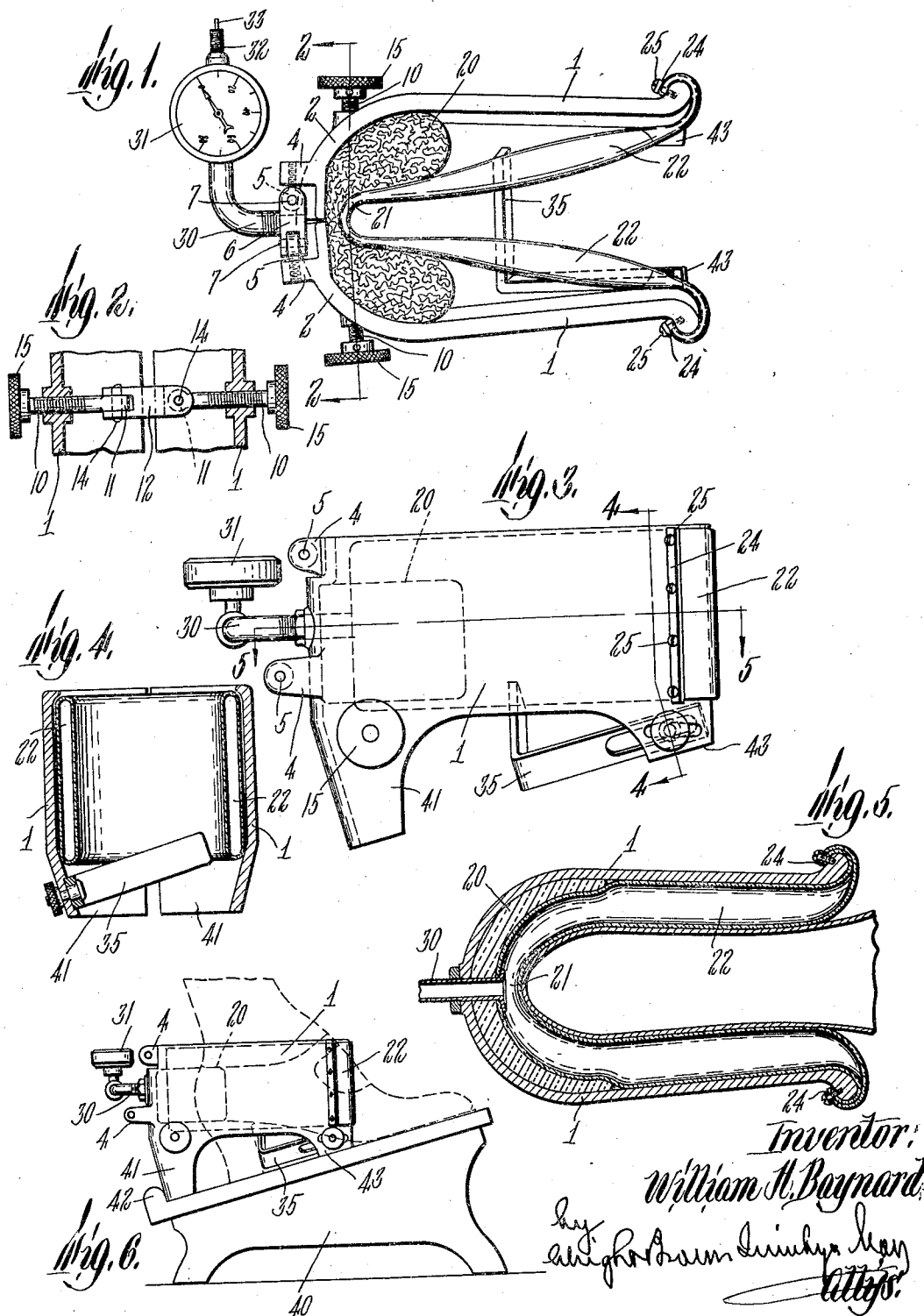
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MOLDING MECHANISM

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UNITED STATES PATENT OFFICE

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MOLDING MECHANISM

Application filed July 6, 1928. Serial No. 290,853.

In the application for patent of Harry H. Beckwith Serial No. 290,310 filed July 5, 1928 for method of treating counter portions of shoes, is disclosed and claimed the molding of the counter portion of a shoe directly to the foot of the wearer, the counter having a stiffener which may be temporarily softened for the molding operation after which it is permitted to rigidify.

The present invention relates to a device particularly designed for effecting the molding operation in accordance with the Beckwith process, although some or all of its novel features might be found useful in other relations and for different purposes. To these ends the device comprises a frame shaped to receive the heel and shank portion of a shoe while on the wearer's foot and having yieldable means which may be made to press the counter portion of the shoe into molding engagement with the foot.

For a more complete understanding of this invention, reference may be had to the accompanying drawings in which

Figure 1 is a top plan of one form of the device shown in condition to receive a shoe.

Figure 2 is a detail section on line 2—2 of Figure 1.

Figure 3 is a side elevation of the device.

Figure 4 is a detail section on line 4—4 of Figure 3.

Figure 5 is a section on line 5—5 of Figure 3, but showing the position of the parts when a shoe is being molded to the foot.

Figure 6 is a side elevation of the device as applied to a shoe fitting stool, the position of the wearer's foot being shown by dotted lines.

Referring to these figures, the device as shown comprises a two part frame of generally U shape consisting of a pair of side members 1 having their rear ends turned toward each other as at 2 and fixed together adjustably so that the free ends or open portion of the frame may be adjusted to the desired width in accordance with the size of the foot which it is desired to mold. For the purpose of joining the sections in this manner, each is shown as provided with a rearwardly extending lug 4 adjacent its upper end into

which is fixed, as by threaded engagement therewith, an eye 5. These eyes are arranged with their axes at right angles to each other and they are connected together by a link 6 having forked extremities also arranged at right angles to each other which take about the eyes 5 and are pivoted thereto as by means of the pin 7 held in the forked portions and passing through the eyes. In order that the frame parts may be adjusted for spacing and held in adjusting position, an additional means comprising a universal joint may also be provided. Such means is shown in detail in Figure 2. In the lower portions of the members 1 are shown thumb screws 10 threaded therethrough, the inner ends of these thumb screws having eyes 11 which are pivoted at right angles to each other to an intermediate connecting link 12 bifurcated at its ends, the bifurcations at opposite ends being at right angles to each other and straddling the eyes and being pivoted thereto as by means of the pivot pins 14. By turning either or both of the thumb screws as by means of their knurled heads 15, the spacing between the members at their open ends may be adjusted, the universal joint permitting the change of angularity of these members 1 as they are so adjusted without causing binding of the adjusting means.

As shown, the rear closed end portion of the frame carries a cushion member 20 which may well be made of sponge rubber. Engaging within the hollow forward portion of this cushion member is a rear bent intermediate portion 21 of an inflatable tube 22. This tube may well be a piece of inner tube such as is commonly used for automobile tires. The forward ends of this tube 22 are closed off, and are fixed in any suitable way, as by clamping strips 24 secured by screws 25, to the members 1 adjacent to their forward extremities and thus form an inflatable cushion member. For the purpose of inflating and deflating this member a valved connection thereto as at 30 may be employed. This valve connection may be of the type commonly employed for automobile tires and is shown as extended through the rear portion of the frame 1 through the cushion 20 and into the

tube in the usual manner. This valve means acts to retain the cushion 20 between the portions 1 of the frame.

In order that the customer may see that the counter is being molded to the foot by pressure, it is preferable to include in the valve connection 30 a pressure gage 31. At 32 is shown the threaded connection having the valve stem 33 projecting therefrom, this connection being preferably such as is ordinarily used for the ready attachment and detachment of a suitable inflating device such as an ordinary tire pump. At 35 is shown a stop member which may be arranged forwardly of the heel of the shoe so as to prevent the pressure exerted on the shoe when the tube 22 is inflated from forcing the shoe out from between the members 1.

As shown in Figures 3 and 6, the frame member may be designed to be supported on the ordinary fitting stool shown at 40 in Figure 6, and where it is used in connection with high heeled shoes, such as are commonly worn by women, the rear end portions of the members 1 may be downwardly extended to form feet 41 which may rest on the upper face of the stool 40 forwardly of the usual flange 42 thereon which acts to hold the frame from slipping off the stool. At the forward end the members 1 are shown as provided with shorter feet 43 and to one of these may be adjustably fixed the stop 35 hereinbefore referred to. These feet 41 and 43 act to position the upper portions of the members 1 to which the tube 22 and the cushion 20 are attached along the counter portion of the shoe, so that when the tube 22 is inflated it surrounds the counter portion of the shoe and presses it yieldingly to the contour of the foot within the shoe, particularly the contour over the os calcis and astragalus bones of the foot where ill fitting of the counter portion of the shoe is liable to produce discomfort to the wearer. The cushion 20 acts as a cushioning reinforce for the intermediate portion of the inflatable tube 22 and prevents it from dropping out of its proper position about the shoe and seems to improve the molding action. The position of the tube and cushion material when the device is in use is shown in Figure 5. The inflatable tube when in inflated condition forms a cushion which conforms to the shoe with a uniform pressure over a considerable area so as to properly conform the shoe to the foot with uniform pressure regardless of surface irregularities thereof.

A preferred embodiment of this invention having been described, it should be understood that various changes and modifications might be made therein without departing from the spirit or scope of this invention as defined by the appended claims.

I claim:

1. A device of the class described comprising

a frame within which the rear portion of a shoe while on the foot may be placed, means for holding the shoe in such position, and an expansible cushion within said frame in position to press the counter portion of the shoe against and conform it to the wearer's foot when said cushion is expanded.

2. A device of the class described comprising a U-shaped frame, an inflatable tube having its end portions closed and fixed to opposite sides of said frame, its central portion extending toward and within the closed end of said frame, and valved means through which air may be forced into or allowed to escape from said tube.

3. A device of the class described comprising a two part generally U shaped frame, means for adjustably fixing said parts together at the closed end of said frame to permit adjustment of the spacing of the open ends thereof, and an inflatable cushion extending from and between said open ends toward said closed end.

4. A device of the class described comprising a U-shaped frame within which the counter portion of a shoe on the wearer's foot may be placed, an inflatable cushion between said frame and said counter portion, inflation of said cushion pressing said counter portion about the foot, and means for holding said shoe in position within said frame.

5. A device of the class described comprising a U shaped frame between the sides of which may be placed the rear portion of a shoe while on the foot, cushion material within said frame at its closed end, and a section of inflatable tube having its ends closed and fixed to opposite sides of said frame at its open end and passing about the sides and heel end of the shoe, its intermediate portion bearing on said cushion material, valved means through which said tube may be inflated and deflated, and means for holding said shoe within said frame.

6. A device of the class described comprising a two part U shaped frame, means including a universal joint for fixing said parts together with capability of adjustment of the spacing of their free ends, and means including a universal joint for adjusting said parts to determine said spacing.

7. A device of the class described comprising a frame within which the rear portion of a shoe while on the foot may be placed, means for holding the shoe in said frame, and a cushion within said frame conformable to the shoe, said device having means for facilitating pressing said cushion against the shoe with sufficient force to conform the shoe to the wearer's foot.

In testimony whereof I have affixed my signature.

WILLIAM H. BAYNARD.