

Nov. 6, 1956

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2,769,252

SHOE CONSTRUCTION

Filed Dec. 2, 1954

FIG. 1

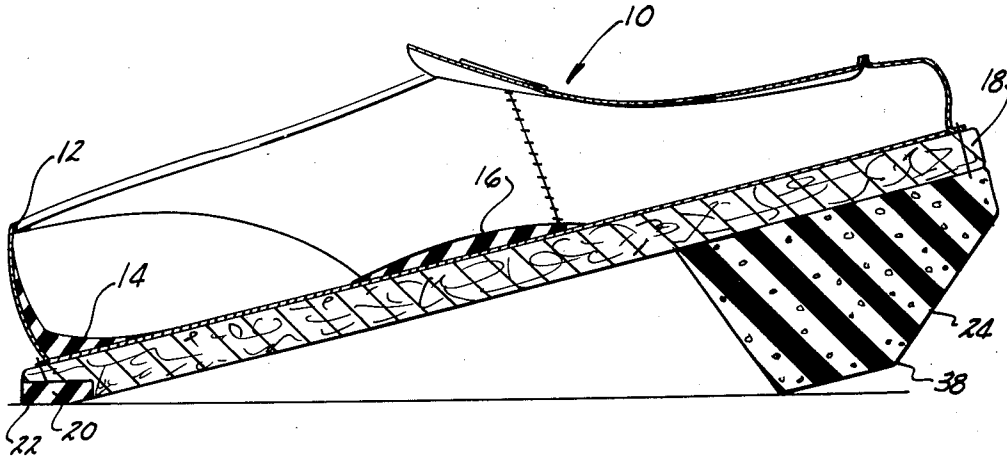


FIG. 2

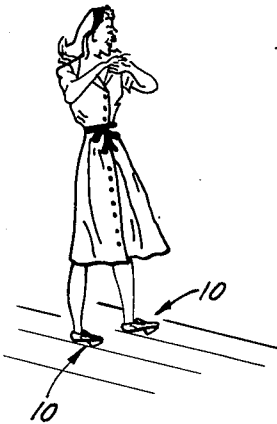


FIG. 3

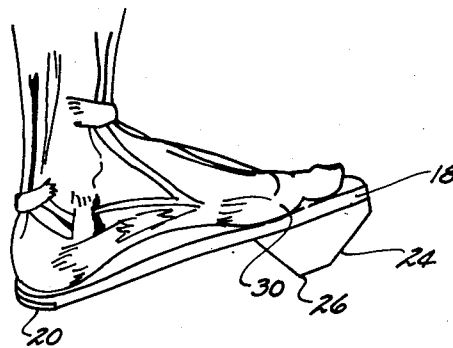
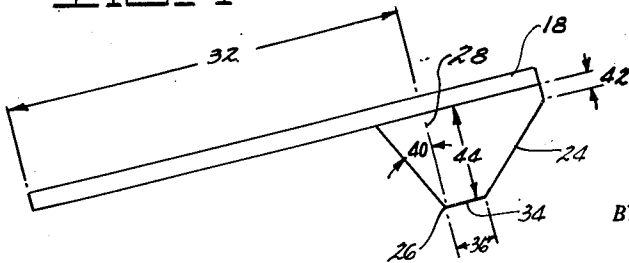


FIG. 4



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2,769,252

SHOE CONSTRUCTION

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Application December 2, 1954, Serial No. 472,589

4 Claims. (Cl. 36—8.5)

The present invention relates to a novel shoe, and more particularly to a shoe construction which is designed to aid the wearer to improve his or her figure and posture by strengthening the abdominal muscles.

As is well known, the vast majority of people whether male or female, but particularly the latter, have a strong desire to keep their figures as neat and trim as possible. A protruding abdomen is considered especially undesirable. It has been found that this condition can be alleviated to a great extent in obese people, and completely in more slender people, whose posture may be poor by a planned program for exercising the abdominal muscles.

It is the principal object of the present invention to provide a novel shoe construction which can be utilized for limited periods of time so that when the wearer walks the abdominal muscles will be exercised in such a manner as to strengthen them and tend to produce in the wearer a flat abdomen.

It is another object of the present invention to produce a novel shoe construction of the foregoing character which is constructed and arranged to have an elevated toe portion so that the wearer of the shoe will be required to walk with his or her toes raised above the heels, thereby producing an abnormal walking or standing position which results in exercising the muscles of the abdomen.

It is still another object of the present invention to provide a novel shoe construction of the foregoing character which is proportioned to give the optimum results and which will not be injurious to the feet of the wearer and will provide maximum comfort.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

In the drawings:

Fig. 1 is a section of a shoe construction embodying the present invention, the sole and heel being shown in section;

Fig. 2 illustrates the present invention as it is used by a wearer;

Fig. 3 is a fragmentary view showing the sole and heel portions of the shoe construction as they will be fitted to the foot of a prospective user; and

Fig. 4 illustrates schematically the sole and heel portions and the dimensions thereof.

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also, it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

Referring now to the drawings a more detailed description of the invention will be given. The shoe 10 is preferably constructed in its upper portions much the same as

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conventional shoes, and it is to be understood that other suitable designs than that illustrated may be used. When the illustrated shoe construction is worn, it will be in the inclined position shown, resulting in the heel of the wearer bearing against the upper rear portion of the shoe as at 12. For this reason, the rear portion is cut a little lower than the conventional shoe so that the rear upper edge 12 does not cut into the foot of the wearer. Also, in order to provide a more comfortable shoe, a soft inner lining 14 and an arch support 16 may be added.

The under portion of the shoe 10 includes a relatively stiff sole 18 having a rubber insert 20 at the rear which acts in the same manner as the rubber heel of a conventional shoe, but as can be seen in the drawings, the insert 20 does not project below the plane of the stiff sole 18, and thus, does not serve to elevate the heel of the wearer. It also has a flat portion 22 near its tip to provide a larger walking surface.

Rigidly secured to the forward portion of sole 18 is an elevating toe member 24 which serves to elevate the toe portion of the shoe to a considerable extent. When shoes embodying the present invention are worn, the toes of the wearer will be elevated as shown in Fig. 2. This results in the wearer walking or standing in a state of unequilibrium so that the muscles of the abdomen are necessarily drawn tense. It is found that shoes having the relative dimensions shown in the drawings are most satisfactory for effecting the optimum results of exercising the muscles of the abdomen so that they will thereafter tend to maintain a flat abdomen.

In fitting a shoe embodying the present invention to a prospective wearer, it is initially desirable to select a shoe in which the contact point 26 is located on a line 28 perpendicular to the sole 18 and which will pass through the second joint of the big toe of the wearer, as at 30.

One embodiment of the present invention which has been found to be extremely effective in carrying out the objects of the invention has the same relative proportions of the sole and heel construction as are schematically illustrated in Fig. 4. Referring to this figure it will be seen that the dimension 32 is determined in each instance by the foot of the prospective wearer, and in particular by the distance between the joint 30 and the rear of the heel of such wearer.

The base 34 of the toe member 24 is parallel to the sole 18 and the limits of dimension 36 are from one to three and one half inches. The forward edge 38 of the base 34 is preferably rounded to a small extent to facilitate walking. Under normal circumstances the angle 40 should be thirty degrees or less, and the dimension 42 should be no greater than one quarter the value of dimension 44. The latter will vary, depending on the length of dimension 32, but preferably will not be less than one and one half inches nor more than four inches.

A shoe construction having the characteristics described above and the relative proportions shown in the drawings is found to be admirably suited for carrying out the objects of the present invention. While the present invention can be beneficially used by both sexes, it is especially well suited for housewives and the like who spend a considerable portion of each day in the home doing housework or other chores. The invention can be used for limited periods of time each day while the housework is being done and very effective results can then be obtained.

Having thus described my invention, I claim:

1. A shoe for use in exercising the muscles of the abdomen comprising an upper and a relatively rigid full sole, flat on its under surface with the heel end of said under surface cut-out for receiving an insert, a rubber-like insert secured to the sole in the cut-out, said insert having a flat surface inclined rearwardly and upwardly away

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from the plane containing the under surface of said sole so that no portion of said insert projects below said plane, and an elevating member secured to the underside of said sole at the forward end only thereof for maintaining the forward part of the shoe substantially higher than the rear of the shoe, said elevating member having a flat base parallel to said sole and a flat inclined portion sloping from said base upwardly to a position substantially vertically even with the front edge of said sole, said insert being inclined to said sole at the same angle that the elevating member causes the sole to be inclined to a horizontal surface on which the shoe is resting so that the flat surface of said insert will be in the plane of said horizontal surface.

2. A shoe for use in exercising the muscles of the abdomen comprising an upper and a relatively rigid full sole, flat on its under surface with the heel end of said under surface cut-out for receiving an insert, a rubber-like insert secured to the sole in the cut-out, said insert having a flat surface inclined upwardly rearwardly and away from the plane containing the under surface of the sole so that no portion of said insert projects below said plane, and an elevating member secured to the underside of said sole at the forward end only thereof for maintaining the forward part of the shoe substantially higher than the rear of the shoe, said elevating member having a flat base parallel to said sole and a flat inclined portion sloping from said base upwardly to a position substantially vertically even with the front edge of said sole, the rear edge of said flat base being in a plane perpendicular to the longitudinal axis of said shoe, said plane passing through the upper portion of the shoe which is normally occupied

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by the second joint of the large toe of the wearer, said insert being inclined to said sole at the same angle that the elevating member causes the sole to be inclined to a horizontal surface on which the shoe is resting so that the flat surface of said insert will be in the plane of said horizontal surface.

3. A shoe as defined in claim 1 wherein said inclined portion terminates below said sole and a vertical front surface joins the front edge of the sole and the inclined portion, said inclined portion providing a surface for use when the wearer wishes to assume a kneeling position.

4. A shoe as defined in claim 1 wherein said flat base extends approximately one inch in a fore and aft direction.

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