Aug. 1, 1967 F. D. BUZZELLI 3,333,749

REMOVER FOR STIRRUPED TROUSERS

Filed Feb. 12, 1965

FIG. 1

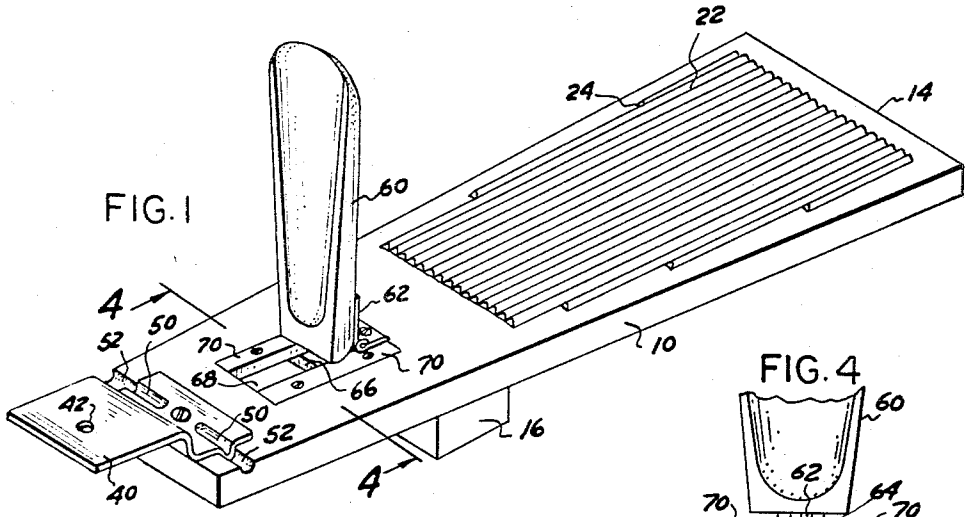


FIG. 4

FIG. 2

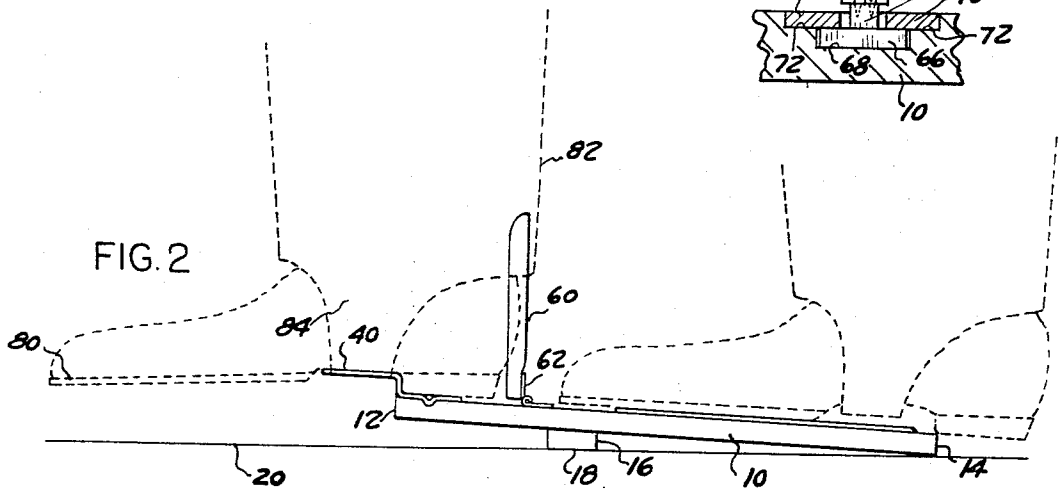


FIG. 3

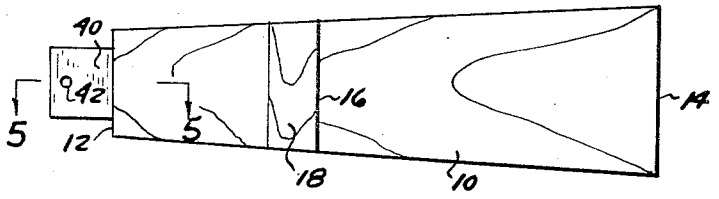
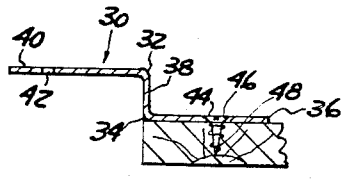


FIG. 5



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REMOVER FOR STIRRUPED TROUSERS

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ABSTRACT OF THE DISCLOSURE

An elongated board has a block fixed to one of its surfaces so that it may be supported on a floor at a slightly inclined angle. A bracket projects from the upper end of the board most separated from the floor, beyond the end of the board, parallel thereto and is adapted to be inserted between a stirruped pant end and the foot of the wearer. A horn member is pivotably supported on the board so that it may project upwardly therefrom or be folded down parallel thereto. The horn is also slidably supported toward and away from the bracket. The horn is adapted to be inserted between the angle of the wearer and the pant while the bracket is inserted over the stirrup. The bracket may also be reversed for use with stirrups that are closed at the ankle end and in this mode the horn is folded out of the way against the board.

Summary of the invention

This invention relates to a device which is useful in removing the stirruped ends of trousers and particularly those formed of stretch fabrics.

Trousers having sections of cloth extending between opposed edges of their lower ends in order to receive the wearer's feet and maintain the pants in a neat extension have long been employed on riding britches and have more recently been employed in pants for use in skiing and casual wear. These pants are commonly formed of semi-elastic stretch materials so that they closely hug the legs of the wearer. While these pants are very fashionable at the present time and provide a functional aspect in that they do not wrinkle or catch the wind when the occupant is moving rapidly, as in skiing, they do severely restrict certain motions of the wearer, such as bending down. Accordingly, difficulty is often encountered in releasing the wearer's foot from the stirrup portion in order to remove the pants.

The primary object of the present invention is therefore to provide an appliance which may be used by wearers of stretch pants and which will assist in the removal of the foot from the stirrup by the wearer.

In essence this device comprises a relatively flat horizontal member which may be affixed with respect to the floor or other supporting surface and which may be inserted between the inner side of the stirrup and the foot of the wearer so as to grab the stirrup and retain it while the foot is withdrawn from the stirrup. In the preferred embodiment of the invention, which will subsequently be described in detail, this horizontal member is formed integrally with a vertical member which extends upwardly from a platform or base. The base is adapted to be engaged by the foot of the wearer opposite to that from which the stirrup is being removed so as to rigidly retain the horizontal member with respect to the floor. In the preferred embodiment of the invention the horizontal member may assume either of two positions, 180 degrees displaced from one another, with respect to the supporting board. This allows the flat member to be inserted into the stirrup from either the front or the back of the pant depending upon the specific pant and stirrup structure.

In the preferred embodiment of the invention, the board also supports an elongated, concave, horn member which is adapted to be inserted between the rear side of the lower edge of the pant and the ankle of the wearer prior to the insertion of the stirrup over the horizontal member. Subsequently to the insertion of this horn member the stirrup is engaged with the horizontal member and moved so as to engage the stirrup with the horizontal member and remove it from the foot. This same motion causes the horn to slide the lower rear edge of the pant over the heel of the wearer to remove the heel from the pant. In the preferred embodiment the horn member is both pivotably supported with respect to the base and slidably supported thereon so as to be removable toward and away from the horizontal stirrup engaging member. In this manner the horn may remain in the pant as the foot is moved rearwardly to bring the stirrup over the forward edge of the foot. Then the rear of the pant is slid over the heel.

When the horizontal member is rotated with respect to the base so that it engages the front of the stirrup to remove it over the heel the horn member is not employed. The pivotal connection of the horn member with its sliding support allows it to be pivoted out of the way.

It is therefore seen to be the primary object of the present invention to provide an appliance for assisting in removing stirruped pants from the wearer which essentially consists of a projecting member which is supported with respect to the floor or other surface and is adapted to be inserted between the stirrup and the foot of the wearer to assist in removing the stirrup from the foot.

Another object is to provide such a device wherein the stirrup engaging member is supported by a base which may be retained on the floor by the opposite foot of the wearer.

Another object is to provide such a device wherein a horn member is provided which extends upwardly from the base and is adapted to project between the rear side of the pant of the wearer and the ankle so as to ease the removal of the pant over the ankle.

Another object is to provide the horn on a sliding support with respect to the projecting stirrup member so that the two may be used in cooperating relation to one another.

Other objects, advantages and applications of the present invention will be made apparent by the following detailed description of the preferred embodiment of the invention. The description makes reference to the accompanying drawings in which:

FIGURE 1 is a perspective view of a preferred embodiment of the present invention;

FIGURE 2 is a side view of the invention showing it in operating engagement with the rear end of the pair of stirruped stretch pants and illustrating alternate positions of the device in dotted lines;

FIGURE 3 is a bottom view of the device;

FIGURE 4 is a sectional view through the horn slide mechanism taken along line **4—4** of FIGURE 1; and

FIGURE 5 is a sectional view through the attachment between the base and the stirrup engaging bracket taken along line **5—5** of FIGURE 2.

Referring to the drawings the preferred embodiment of the invention is built about a base board **10** which is preferably formed of wood although it might be fabricated or molded in plastic. The board **10** is generally rectangular in shape with its two elongated sides sloping between a narrow forward end **12** and a wider rear end **14**. A riser member **16** is attached to the underside of the board **10** and extends across the width of the board approximately ⅓ of the length of the board from the narrow end **12**. The lower surface **18** of the riser member **16** is inclined with respect to the lower surface of the board **10**, so that when the board is supported on the surface **18** and on the lower edge of the rear end **14**, the

surface **18** is disposed in parallel contact with the support. For example, FIGURE 2 illustrates the board disposed on a floor **20**. The surface **18** of the riser member **16** is disposed in contact with the floor as is the lower edge of the rear end **14**. The board **10** itself is inclined with respect to the floor **20** with its forward end **12** lifted above the floor **20**.

The rear half of the upper surface of the base **10** is largely covered with a rubber or other relatively high friction material foot pad **22** attached to the base by means of brads **24**. As shown in FIGURE 2 the user of the device places one foot on the pad **22** in order to securely retain the base **10** on the floor with the end **12** at an elevated position.

A stirrup engaging bracket indicated at **30** is supported on the top side of the forward end of the base **10**. The bracket consists of a metal strap with two right angle bends **32** and **34** extending across its width so as to divide it into a base section **36**, a vertical section **38**, and an extending horizontal section **40**. The section **40** extends out beyond the front end of the base at a slight elevation with respect to the base. The base section **36** is attached to the forward end of the wooden base member **10** by means of a screw **44** which passes through a recessed hole **46** in the plate and is received in a threaded hole **48** in the upper side of the base member. A key-like depression **50** extends across the width of the base section **36** on its lower side on both sides of the hole **46** and is adapted to mate with a similar groove **52** formed in the upper surface of the base member. The groove retains the member **30** in operating position and allows it to be reversed so that the section **40** extends toward the rear of the base by loosening the screw **44** and rotating the base, for use in certain situations which will be described subsequently.

A horn member **60** forms part of the device and takes the form of an elongated member having a curved cross-section and an outwardly tapered configuration, generally resembling a shoe horn. The horn **60** may be formed of wood or plastic and it tapers from a maximum width near its top edge to a minimum width at its lower edge. The concave portion of the horn is supported to face the forward end of the base. The horn is attached at its lower end to a hinged member **62** which is connected by a block **64** to a slide member **66**. The slide member is preferably formed of a low friction plastic such as nylon and moves in an elongated groove **68** formed in the top of the forward section of the base member. The slide **66** is retained in the groove by a pair of plates **70** which are fixed in steps **72** formed in the upper side of the base member **10** along the groove **68**. The plate **70** projects over the top of the groove **68** allowing a free center channel in which the block **64** moves. The block **64** and the horn member may be manually slid forward and backward in the groove.

The device is useful for removing the foot of the wearer, indicated at **80**, from a pant **82** which includes a stirruped bottom **84** operative to surround the foot at the instep. When used with a normal stirrup pant the horn **60** is first extended upwardly along the ankle of the wearer inside the pant. This is done by inserting the upper edge of the horn **60** just within the lower edge of the pant and bringing the foot downwardly so that the horn slips up into the pant. During this time the other foot is maintaining the base in a steady condition by pressing on the plate **22**. The foot is then moved forwardly carrying the horn **60** and the slide **66** toward the forward end of the groove **68** until the forward edge of the extending member **40** is adjacent to the rear end of the stirrup. The section **40** is then inserted between the wearer's foot and the stirrup and the foot is moved rearward. This urges the stirrup forward at the same time the heel is lifted to bring it up into the pant leg **82**. The horn **60** assists in sliding the heel into the rear end of the pant. During this motion the horn **60** may pivot rearwardly on its hinge and may also slide rearwardly to the back of the groove **68**. Once the stirrup **84** is free of the foot it is relatively easy to remove the pants without excessively stretching them so that they will lose shape.

Certain forms of pants do not use a true stirrup but use a modified one in which the heel is completely closed. Of course, such stirrups must be removed from the foot by pulling them over the heel. When using the device with such a pant the screw **44** is loosened and the extending section **40** is rotated around 180 degrees until the projection **50** again fits into the groove **48**. The screw **44** is then tightened fastening the plate in place. Then the horn is rotated about its hinge until it is in a horizontal position out of the way. The wearer then inserts the reversed plate **40** into the front end of the stirrup and moves his foot forwardly to ease the stirrup off of the foot.

Having thus described my invention, I claim:

1. A device of the type described for removing stirruped pants comprising: an elongated flat base member having front and rear sections and top and bottom surfaces, means on said bottom surface to support said front section spaced from a supporting surface such as a floor, said rear section having an area sufficient to support a user's foot so as to retain said front section with respect to the supporting surface, a stirrup engaging member having a base section, a horizontal section, and an intermediate connecting section therebetween, said base section secured to said front section at the top surface thereof with the horizontal section extending substantially forwardly beyond and spaced above a forward edge of said front section, said horizontal section being adapted for insertion between an inner side of a stirrup and a foot of a wearer, an elongated forwardly concave horn member projecting vertically upwardly from said flat base member between said rear section and said base section, and means pivotably and slidably supporting said horn member relative to said flat base member.

2. The device of claim **1** wherein the means pivotably supporting the horn member comprises a hinge connecting said horn member and said flat base member together.

3. The device of claim **2** wherein means slidably supporting the horn member comprises an elongated groove formed longitudinally in said top surface of said front section rearwardly of said based section, oppositely disposed steps formed in said front section bordering opposite sides of said elongated groove, a pair of spaced plates within said oppositely disposed steps with the spacing between said spaced plates forming an opening into said groove, a block member secured at one end to said hinge and extending into said groove through said opening, said block member having a slide member secured at the other end thereof and having a width greater than the spacing of said opening.

4. The device of claim **1** wherein said stirrup-engaging member and said front section includes means to secure said horizontal section in a rearwardly extending direction opposite to said forwardly extending direction and spaced directly above said front section.

5. A device of the type described for removing stirruped pants comprising: an elongated flat base member having front and rear sections and top and bottom surfaces, means on said bottom surface to support said front section spaced from a supporting surface such as a floor, said rear section having an area sufficient to support a user's foot so as to retain said front section with respect to the supporting surface, a stirrup-engaging member having a base section, a horizontal section, and an intermediate connecting section secured to said front section at the top surface thereof with the horizontal section extending substantially forwardly beyond and spaced above a forward edge of said front section, said horizontal section being adapted for insertion between an inner side of a stirrup and a foot of a wearer, an elongated forwardly concave horn member projecting vertically upwardly from

said flat base member between said rear section and said base section.

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