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FLOOR MAT FOR STABILIZING FOOT PEDAL BOX

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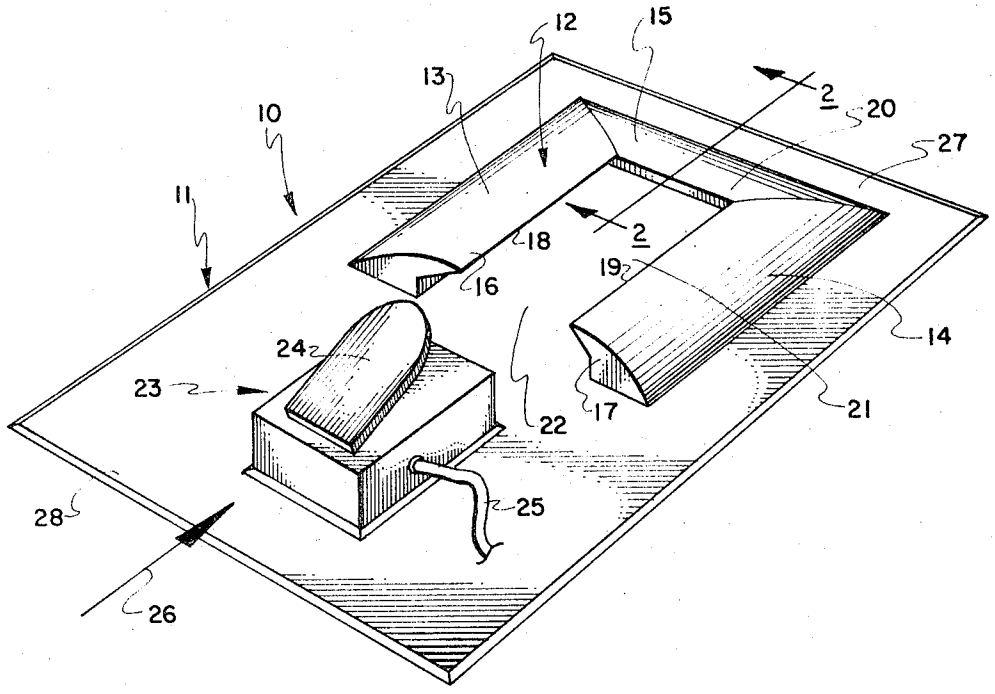


FIG. 1

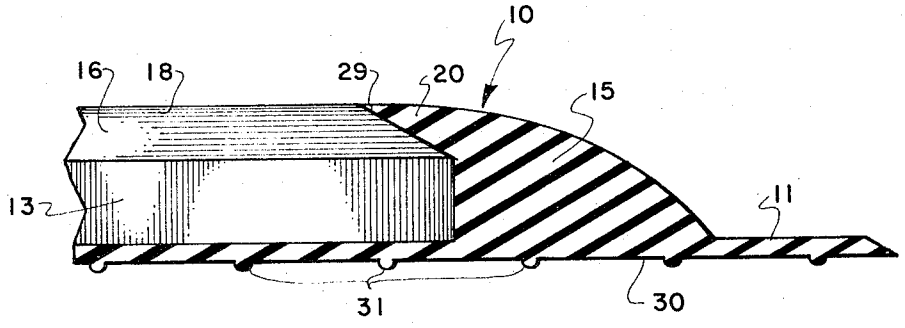


FIG. 2

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FLOOR MAT FOR STABILIZING FOOT PEDAL BOX

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ABSTRACT OF THE DISCLOSURE

A floor mat incorporates a retention slot defined by a pair of parallel stop walls and a barrier wall that intersects the stop walls. The stop walls limit side movement tendencies of a foot pedal control box, such as that used to operate a sewing machine, while the barrier wall limits forward motion tendencies of the box so that the box can be accurately and stably held at a desired location.

This invention relates to a floor mat and more specifically to a floor mat arranged to receive a foot pedal control box and prevent it from becoming displaced.

BACKGROUND OF THE INVENTION

Most conventional electrically powered sewing machines are operated by a foot pedal control box positioned beneath the sewing machine table at a location convenient for the particular operator.

It becomes annoying to the operator when the control box slips away from the desired convenient location to an inconvenient location out of range of the operator's foot. Being compelled to stoop and stretch for the displaced control box in order to restore it to the convenient location is time consuming and exposes the operator to the risk of becoming bumped or strained. The control box can become displaced either by jiggling due to the vibratory forces generated during sewing or can be accidentally kicked or jarred away by the operator or another person.

Ordinarily, either no accessory is employed to arrest control box movement tendencies or else expensive and complex accessories are employed such as that disclosed in U.S. Pat. 1,801,067 to Bodine.

BRIEF SUMMARY OF THE INVENTION

The present invention contemplates a compact inexpensive floor mat positionable beneath a work table or desk to prevent a foot pedal control box retained by the mat from being unintentionally displaced from a desired convenient location. The mat prevents the foot pedal control box from becoming displaced either by creeping due to vibratory forces or being inadvertently shoved or kicked by the person operating the foot pedal control box. The foot pedal control box may be of the ordinary conventional construction used in conjunction with sewing machines, dictation transcription equipment, or the like.

The mat is characterized by a flexible plate that mounts a pair of parallel and laterally spaced stop walls. The stop walls together with a barrier wall that interconnects the stop walls constitutes a continuous wall of horseshoe shape that defines a retention slot.

The stop walls of the retention slot limit side motion of a foot pedal control box positioned in the retention slot while the barrier wall, in a similar manner, limits forward motion tendencies of the control box.

A pair of lips are preferably connected to the top portions of the stop walls and extend inwardly towards one another to overhang sections of the retention slot. The lips extend along substantially the entire lengths of the stop walls and their innermost edges are substantially

parallel to establish flush frictional engagement with the opposing sides of the control box. The bottom surface of the flexible plate may include a plurality of gripping ribs to prevent the plate from slipping as a person's foot is bearing down upon the foot pedal box to operate the box in the usual manner.

BRIEF DESCRIPTION OF THE DRAWINGS

The numerous benefits and unique aspects of the present invention will be fully understood when the following detailed description is studied in conjunction with the drawings, in which

FIG. 1 is a perspective view of a foot mat constructed in accordance with the present invention, showing a conventional foot pedal control box positioned on the mat prior to being inserted into the retention slot; and,

FIG. 2 is a sectional view taken along line 2—2 of FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, FIG. 1 shows a floor mat **10** preferably fabricated as an integral unit from flexible material such as rubber. Floor mat **10** includes a flexible plate **11** having a top surface upon which a U-shaped, raised structure or ridge **12** is attached. Ridge **12** includes a pair of parallel and laterally spaced stop walls **13** and **14** interconnected by a barrier or head wall **15** aligned perpendicular to stop walls **13** and **14**.

A pair of flexible lips **16** and **17** are connected to the top portions of stop walls **13** and **14** respectively. Lips **16** and **17** extend inwardly towards one another and terminate at innermost edges **18** and **19** that are aligned substantially parallel with one another. Barrier wall **15** also includes a flexible lip **20**.

Stop walls **13** and **14**, barrier wall **15**, together with the top surface of plate **11** define a retention slot **21**. The forward end of retention slot **21** is blocked by barrier wall **15** and its rearward end **22** is open to facilitate quick entrance into retention slot **21** of a conventional sewing machine foot pedal control box **23**.

Foot pedal control box **23** has a common spring biased and depressible foot pedal **24** and an electrical power line **25**. As is well known, a seamstress can attend to a stitching job with two free hands while manipulating control box **23** with a foot. As shall be fully explained when box **23** is shoved in a direction indicated by directional arrow **26** and becomes inserted in retention slot **21**, stop walls **13** and **14** and barrier wall **15** coact to limit its motion tendencies and stabilize it at the desired optimum location most convenient for the seamstress. Flexible lips **16** and **17** can be bunched or compressed against opposing walls of relatively wide control boxes so that retention slot **21** can accommodate boxes of varying sizes.

The forward end **27** of plate **11** terminates near the outer periphery of barrier wall **15**. The rearward end **28** of plate **11** extends rearwardly beyond the rearward or open end **22** of retention slot **21** so that when a person is operating box **23** her heel will bear down against plate **11** and prevent floor mat **10** from slipping forwardly.

Referring to FIG. 2, barrier lip **20** has an innermost edge **29** that terminates in abutting relationship with the innermost edges of the stop walls. To further prevent mat **10** from moving forwardly the bottom surface **30** of plate **11** includes a plurality of gripping elements **31**. The gripping elements may be transversely aligned ribs, as shown, or alternatively may be integrally formed suction cups or the like.

In addition to controlling and stabilizing undesirable motions of foot pedal control boxes associated with the

operation of sewing machines, floor mat **10** may also be employed to suppress motions of foot pedal control boxes associated with dictation transcription equipment, dental or medical equipment or any other devices where a person wishes to start, stop, or, regulate operation of the equipment by manipulation of his foot while simultaneously leaving his hands free for other purposes.

OPERATION

Keeping the above construction in mind it can be understood how previously described disadvantages of conventional techniques for stabilizing foot pedal control boxes are overcome or substantially eliminated by the present invention.

When floor mat **10** is to be employed to stabilize movements of a foot pedal control box associated with a sewing machine then it is laid at a convenient location on the floor beneath the sewing machine. Mat **10** is adjusted until the U-shaped ridge **12** assumes the most optimum convenient location for the particular foot intended by the seamstress to be used to manipulate foot pedal box **23**. Foot pedal box **23** is then shoved either with a hand or foot in direction **26** until it is slid fully into retention slot **21** with its forward edge preferably abutting barrier wall **15**.

With foot pedal box **23** thus oriented its tendencies to creep or crawl away from the ideal location when foot pedal **24** is depressed are suppressed. The motion tendencies of pedal box **23** to jiggle and shift laterally are limited by the inner edges of stop walls **13** and **14** and its tendency to move forwardly is blocked by barrier wall **15**. Since the front wall of pedal box **23** is preferably shoved against barrier lip **20** the resulting frictional engagement will also minimize tendencies of box **23** to pivot upwardly out of position when foot pedal **24** is being depressed.

The forward end **28** of flexible plate **11** is extended rearwardly from the retention slot open end **22** by a sufficient distance so that the seamstress's heel will bear downwardly upon the material of flexible plate **11** to bind floor mat **10** securely against the floor. Otherwise, on slippery floors for example, the entire floor mat **10** might tend to travel forwardly in reaction to the vibrations generated by pedal box **23**. To further prevent this type of undesirable motion the bottom surface **30** of flexible plate **11**, as shown in FIG. 2, is formed with a series of spaced and laterally extending gripping elements **31**.

From the foregoing it will be evident that the present invention has provided a floor mat for stabilizing a foot pedal box in which all of the various advantages are fully realized.

What is claimed is:

1. An integral floor mat for a sewing machine foot pedal box comprising:

(a) a rubber flexible plate with a top surface and a bottom surface;

(b) a pair of parallel and laterally spaced stop walls connected to the plate top surface;

(c) a barrier wall perpendicular to and interconnecting the stop walls;

(d) a retention slot defined by the stop walls, barrier wall and plate top surface;

(e) a sewing machine foot pedal box retained by the retention slot which operates to limit the side and forward motion tendencies of the foot pedal box;

(f) plural gripping elements formed on the plate bottom surface;

(g) a pair of flexible lips connected to the top portions of the stop walls extending inwardly to overhang portions of the retention slot, the lips extending along substantially the entire lengths of the stop walls with their innermost edges aligned substantially parallel to engage opposing sides of the foot pedal box to further suppress side motion tendencies of the foot pedal box;

(h) a barrier lip extending inwardly to overhang a portion of the retention slot for minimizing tendency of the foot pedal box to pivot upwardly out of position when being manipulated by a person; and

(i) an extension portion of the plate that terminates at a location spaced from the retention slot open end so that a person's heel will bear downwardly on the floor mat to securely bind it against the floor.

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