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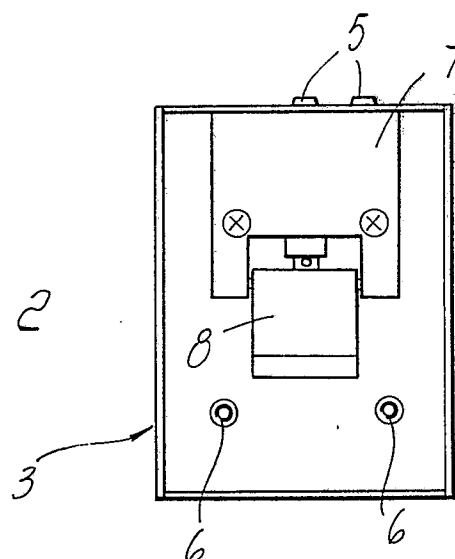
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54 Improved compact pneumatic pedal assembly.

57 The pedal assembly comprises a small casing (1), a small-stroke pedal element (2) and a valve body (3;4) either of the 3-or 5-way type, so assembled as to provide a very compact device.

Fig. 2



Description**IMPROVED COMPACT PNEUMATIC PEDAL ASSEMBLY****BACKGROUND OF THE INVENTION**

The present invention relates to an improved pneumatic pedal assembly.

As is known pedal driving assemblies are frequently used for small size or micro motors, for example for the dentistry field and goldsmith's art as well as in washing machines.

The valves used for controlling servovalves are however of comparatively great size (from 1/8" to 1/4") or they are paired or pair coupled, that is one pneumatic valve associated with an electric valve.

Moreover in prior apparatus of the above mentioned type, a pedal usually controls a remote control switch in turn controlling the driving coil of a servocontrol operating either a cylinder or the other.

SUMMARY OF THE INVENTION

The present invention sets out to overcome the above mentioned drawbacks, by providing a pedal control assembly bypassing the electric aspect or elements of a control of the above mentioned type and which operates on servocontrol coils or solenoids by pneumatically operating on said servo-control.

Within the scope of the above aim, a main object of the present invention is to provide such a pedal assembly which comprises exclusively pneumatic component thereby reducing to a minimum the making cost and maintenance and repairing requirements.

Another object of the invention is to provide such a control pedal assembly specifically designed for washing machines.

According to one aspect of the present invention, the above aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by an improved control pedal assembly, characterized in that said control pedal assembly comprises a small size casing, a reduced stroke pedal element and a valve body, of the 3- or 5 way type, so assembled as to provide a very compact device.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the invention will become more apparent hereinafter from the following description of a preferred embodiment thereof, which is illustrated, by way of an indicative but not limitative example, in the figures of the accompanying drawing, where:

figure 1 is a schematic view illustrating a control pedal assembly with the casing mounted on the pedal element and valve body;

figures 2 and 3 are cross-sectional views showing a control pedal assembly including a normally closed 3-way valve body and a 5-way

valve body with M5 fitting respectively;

figures 4 and 5 are front views respectively illustrating a control pedal assembly with a 3-way valve body and protected m5 fitting and a quick coupled 5-way valve body.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the figures of the accompanying drawings, the control pedal assembly according to the present invention comprises a reduced size casing, indicated at the reference number 1, a pedal element 2 and either a 3-way or a 5-way valve body.

In the illustrated embodiment 3 of the 3-way valve body, either of the normally opened or normally closed type, and in the embodiment indicated at 4 of 5-way valve, there is included a quick type of fitting, indicated at 5, or a M5 type of fitting indicated at 5'.

The control pedal assembly according to the present invention is specifically provided for actuating a pneumatic servo-control in which the operating fluid, for example filtered and lubricated air, efficiently operates through the overall required temperature and pressure range, depending on the preset passage diameter and cross-section.

The casing 1 is preferably made of a black galvanized sheet metal, passivated against corrosion, and in the bottom of said casing there are formed threaded holes 6 for receiving screws for connecting the control pedal assembly to the machine to be controlled.

According to a preferred embodiment, the valve body 7 is made of anodized aluminium, whereas the spool member 8 is made of processed brass, the gaskets 9 being of conventional type.

It should be apparent that the subject control pedal assembly can be provided of 10 protection according to accident standards.

While the invention has been disclosed and illustrated with reference to a preferred embodiment thereof, it should be apparent that the disclosed embodiment is susceptible to several modifications and variations all of which will come within the spirit and scope of the appended claims.

Claims

1- An improved control pedal assembly, characterized in that said assembly comprises a small casing, a small stroke pedal element and a valve body, either of the 3- or 5-way type, so assembled as to provide a very compact device.

2- A control pedal assembly according to claim 1, characterized in that said assembly further includes a quick fitting.

3- A control pedal assembly according to claim 1, characterized in that said assembly further includes a M5 type of fitting.

4- A control pedal assembly according to one

or more of the preceding claims, characterized in that said assembly is a pneumatic assembly the operating fluid of which, consisting of filtered and lubricated air, efficiently operates through the overall temperature and pressure range, depending on the preset passage diameter and cross section of said valve body.

5- A control pedal assembly, according to one or more of the preceding claims, characterized

in that said valve body is made of anodized aluminium, said valve body including processed brass spool member and conventional gaskets.

6- A control pedal assembly, according to one or more of the preceding claims, characterized in that said casing is made of a black sheet material, passivated against corrosion, said casing including a bottom therein threaded seats are formed.

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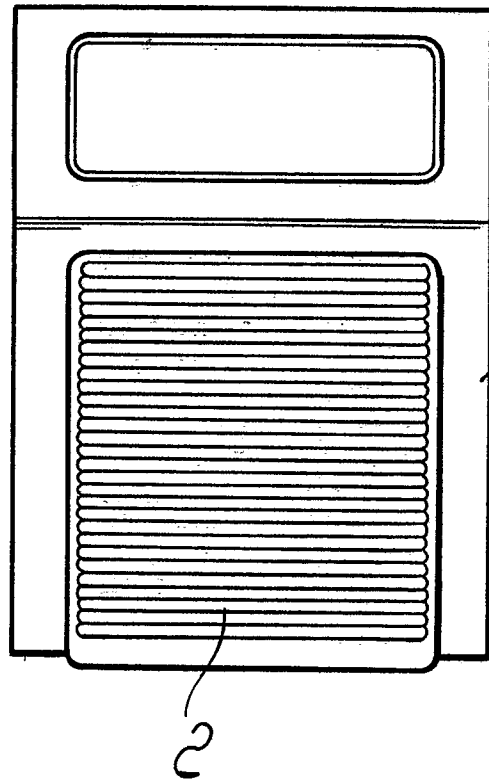


Fig. 1

Fig. 2

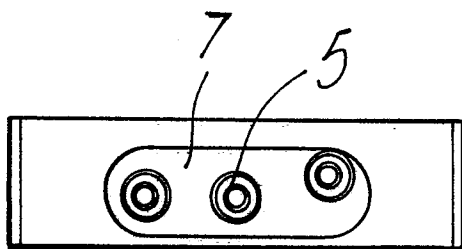
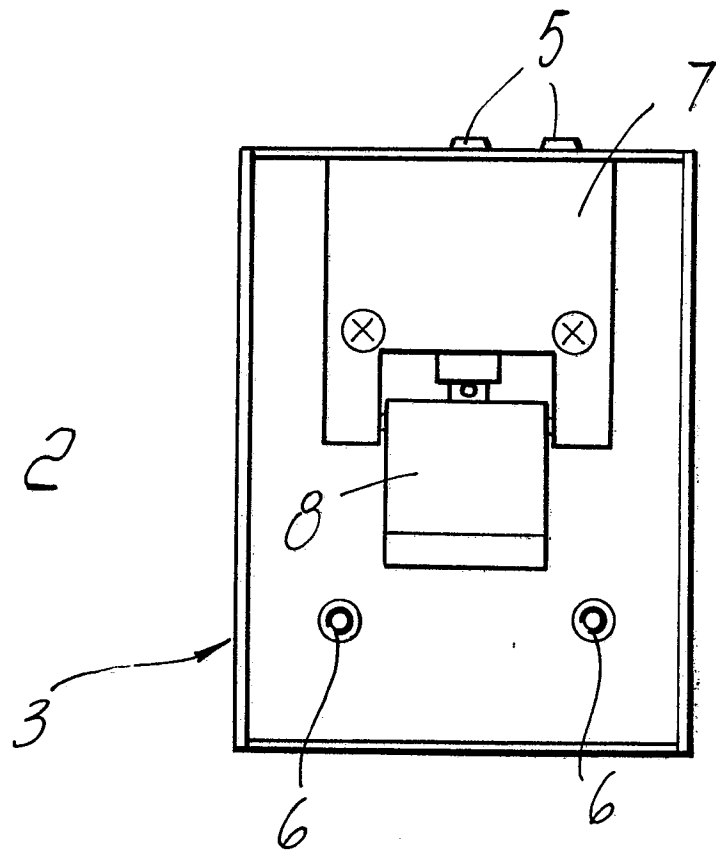


Fig. 5

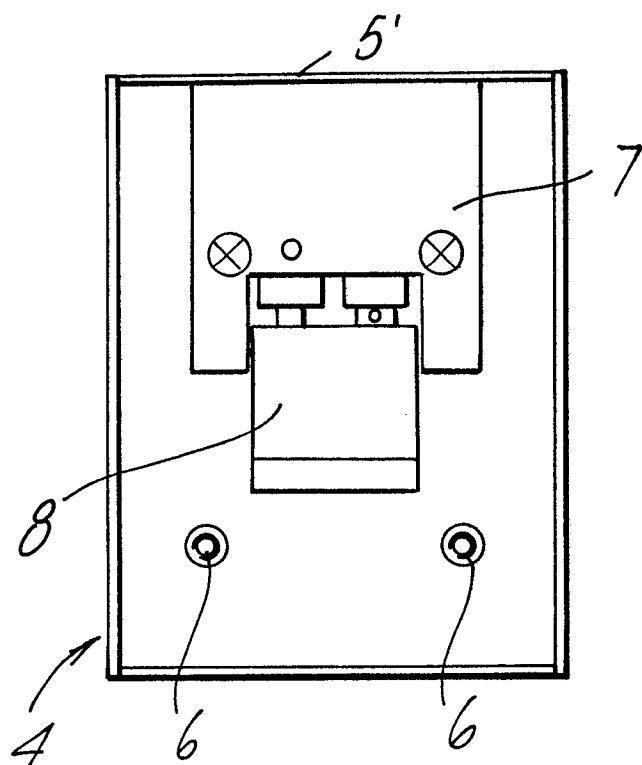


Fig. 3

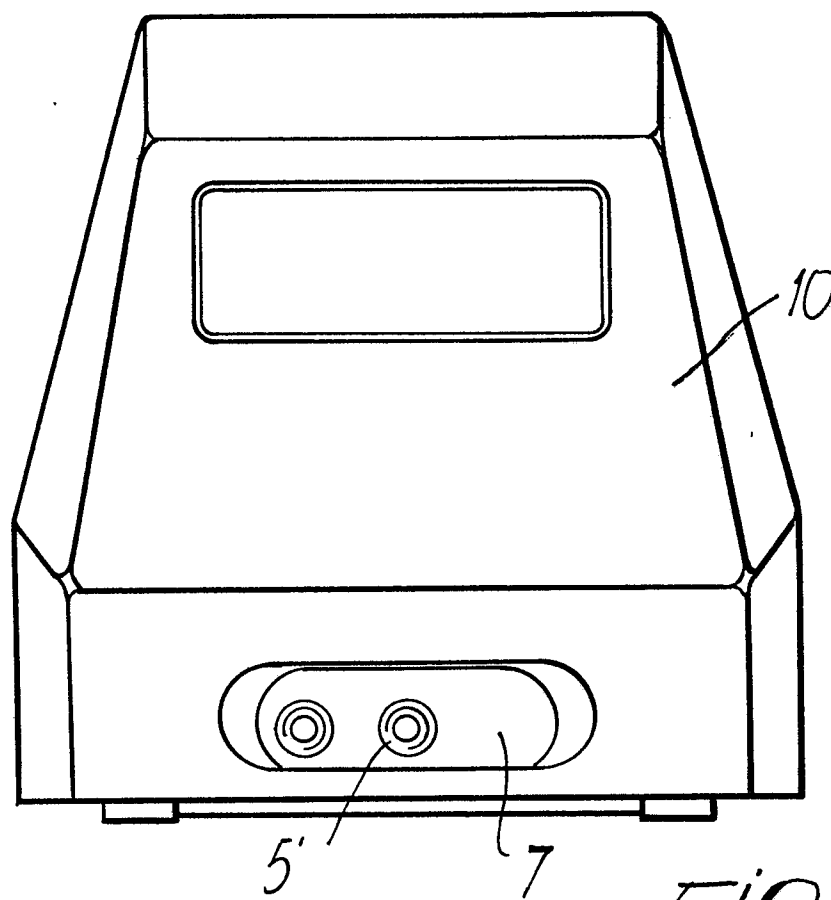


Fig. 4



DOCUMENTS CONSIDERED TO BE RELEVANT			EP 89830282.3
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
A	<u>US - A - 4 612 954</u> (LISSAU) * Totality * ---	1	G 05 G 1/14 F 16 K 31/62 A 61 C 1/04
A	<u>DD - A1 - 226 348</u> (AKADEMIE DER WISSENSCHAFTEN DER DDR) * Totality * ---	1	
A	<u>DE - A1 - 3 129 355</u> (KABUSHIKI KAISHA MORITA SEISAKUSHO) * Totality * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			G 05 G 1/00 F 16 K 31/00 A 61 C 1/00 D 06 F 33/00 F 02 D 11/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 10-10-1989	Examiner ROUSSARIAN
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			