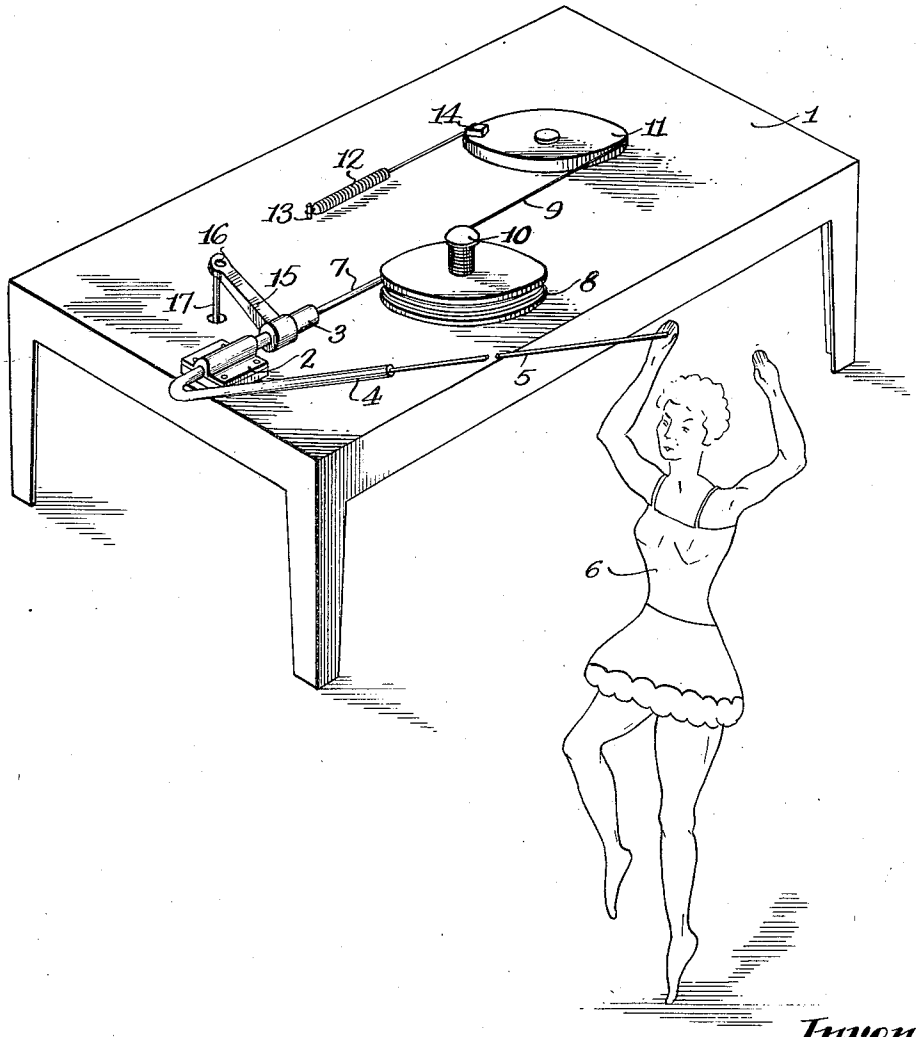
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METHOD FOR PRODUCING CONCOMITANT MOVEMENTS AND SOUNDS

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METHOD FOR PRODUCING CONCOMITANT MOVEMENTS AND SOUNDS

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This invention relates to a mechanical movement or control device of the type which is capable of controlling electrical sonorous apparatus and other devices which may be used with the same and caused to operate in a manner corresponding to the movements thereof.

The main object of my invention is to have a control device which is capable of performing two distinct and different types of movement simultaneously, each being subject to independent operation and adapted to control an individual phase of operation of any apparatus intended to be controlled thereby.

Another object is to provide an improved apparatus for transforming the visual effects produced by the displacements or evolutions of a moving object into audible sensations varying in synchronism with this visual effect and according to the present invention there is arranged in the field of displacements or evolutions of the moving object at least two sets of devices which are affected in a continuous manner by the displacements or evolutions, said devices transmitting the effects they receive from the moving object to two media acting on a sound producer in a manner adapted to vary at least two of the three qualities of sound; pitch, intensity and timbre, each of these media corresponding to a nature of the displacement, for example a displacement in the horizontal plane and a displacement in the vertical plane.

Other objects and the advantages of my invention will appear more fully hereinafter as this specification proceeds.

In the accompanying drawing forming part hereof, the figure is a perspective view of an apparatus embodying the control device made according to the invention in a practical form. The device is illustrated by way of example in the form of an apparatus capable of actuation by a movable object, for example a dancer who moves on a horizontal plane but whose evolutions also move the parts of the body in a vertical plane.

Hence, in the practice of my invention a support 1 which may form the casing of an apparatus to be controlled, such as a radio electric sound producing device having inductance coil, or any other apparatus intended to be controlled by the present control device. Upon this support or casing is mounted a bearing 2 in which a pipe 3 is capable of swivelling in a plane generally corresponding to the plane of the upper surface of support 1, said pipe having an outer end 4 which is bent at an angle of about 90° with respect to the first portion 3 of said pipe. From the outer end 4 of the mentioned pipe a cord or wire or even airplane wire extends a sufficient distance to be held in the hand by a moving body which in this case may be taken to be a dancer indicated at 6, while the inner portion 7 of the same cord or wire which passes slidably through the pipe is reeled up on a reel or pulley 10 which tends to wind up the cord by having an independent cord 9 wound upon an upper smaller step or pulley 10, said cord 9 passing over a rearwardly disposed pulley 11 and being connected to an elastic cord or tension spring 12 secure at 13 to the support or casing 1. If desired, a plate or block of magnetic material such as tempered steel or alloy may be fixed at 14 to pulley 11 in proximity to an inductance coil not shown of a radio electric apparatus within the casing if such apparatus is intended to be influenced or operated by the invention. Otherwise, the shaft of pulley 8 may well extend into the casing and can be used to operate a control member of whatever apparatus may be housed within the casing.

Upon the inner end 3 of the pipe is secured a lever or arm 15 which naturally swings about the axis of the pipe within bearing 2 when the outer bent end 4 of the same pipe is raised or lowered by the distance or other operator raising or lowering the hand holding the end of cord 5. At the end 16 of the arm 15 is attached a cord or wire 17 which is adapted to operate some other portion or member of the apparatus in casing 1 than that operated by reel or pulley 8 or influenced by the magnetic plate 14 so that obviously two different kinds of control are present. In this connection, it is particularly to be noted that when the arm holding the end of cord 5 is pulled by sidewise movements, this cord is pulled out from or returned through the pipe so as to rotate the pulley 8 to a limited degree in either direction independently of the swivelling of pipe 3 by the rise or fall of the outbent end 4 thereof. Thus, the lever 15 rises and falls independently of the partial rotation of pulley 8.

As illustrated, the dancer holds the cord 5 and is able to pull the cord out against the action of tension spring 12 which normally tends to wind the inner end 7 of the cord upon pulley 8 and if the rotation of this pulley, as well as pulley 11 should control a sonorous device capable of producing a sound which has the pitch thereof raised by pulling cord 5 or lowered by releasing the same back into the pipe, it is quite obvious that movements in the horizontal plane will con-

trol the pitch so that melodies and themes can be produced. On the other hand, the arm 15 which is actually a crank if operated by raising or lowering the hand, so that the outer end 4 of the pipe is thereby swung vertically with consequent vertical movement of the connection 17, which may for example be connected to a volume control, it is manifest that not only is the pitch controlled but the volume of the sound simultaneously under control.

It is understood that sound producing apparatus of electrical type has merely been mentioned as an example without specific illustration, merely to indicate one of a wide variety of uses possible to the present invention, and such apparatus naturally does not form the heart of the invention but rather mechanical controlling members forming the present control device specifically enumerated and referred to on the drawing.

Having now fully described my invention, I claim:

1. A control device comprising a support, a bearing fixed on said support, a tubular member having one end rotatably extending through said bearing with a lever serving as a crank secured upon said end, there being connecting means upon the end of said lever in order to transmit movements of said lever to apparatus intended to be controlled upon partial rotation of said tubular member, an outer end upon said tubular member disposed at an angle with respect to the first mentioned end and serving as an exterior lever for rotating the same in said bearing, a cord member passing through said tubular member and extending out through the outer end thereof so as to be capable of being drawn out or allowed to return by a moving body to which the end of said cord may be attached, a rotatable reel upon said support for receiving the inner end of the cord from the first mentioned end of the tubular member and to which said inner end of the cord is secured, means connected to said reel tending to rotate the same so as to wind up said cord thereon, and further means connected to the reel so as to be moved thereby and transmit control movements from the same in accordance with the pull or release impulses imparted to the outer end of the cord independently of the swiveling of the tubular member in its bearing and the movements of said first mentioned lever.

2. A control device according to claim 1, wherein the means connected to the reel and the further means connected to the same so as to be moved thereby comprise a resilient member connected at one end to the support, and additional reeling portion upon said reel, a cord means attached to said additional reeling portion at one end and at the other end attached to said resilient member, and a second rotatable reel mounted upon said support about which said cord means passes from the resilient member to the additional reeling means upon the first reel.

3. A control device according to claim 1, wherein the means connected to the reel and the further means connected to the same so as to be moved thereby comprise a resilient member connected at one end to the support, and additional reeling portion upon said reel, a cord means attached to said additional reeling portion at one end and at the other end attached to said resilient member, a second rotatable reel mounted upon said support about which said cord means passes from the resilient member to the additional reeling means upon the first reel, and wherein the second rotatable reel carries a magnetic member fixed eccentrically upon the same for influencing electrical circuits and other means capable of being located in the said support.

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