Jan. 16, 1951 J. A. MORIN 2,538,162

MECHANICAL FIGURE

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Fig. 1.

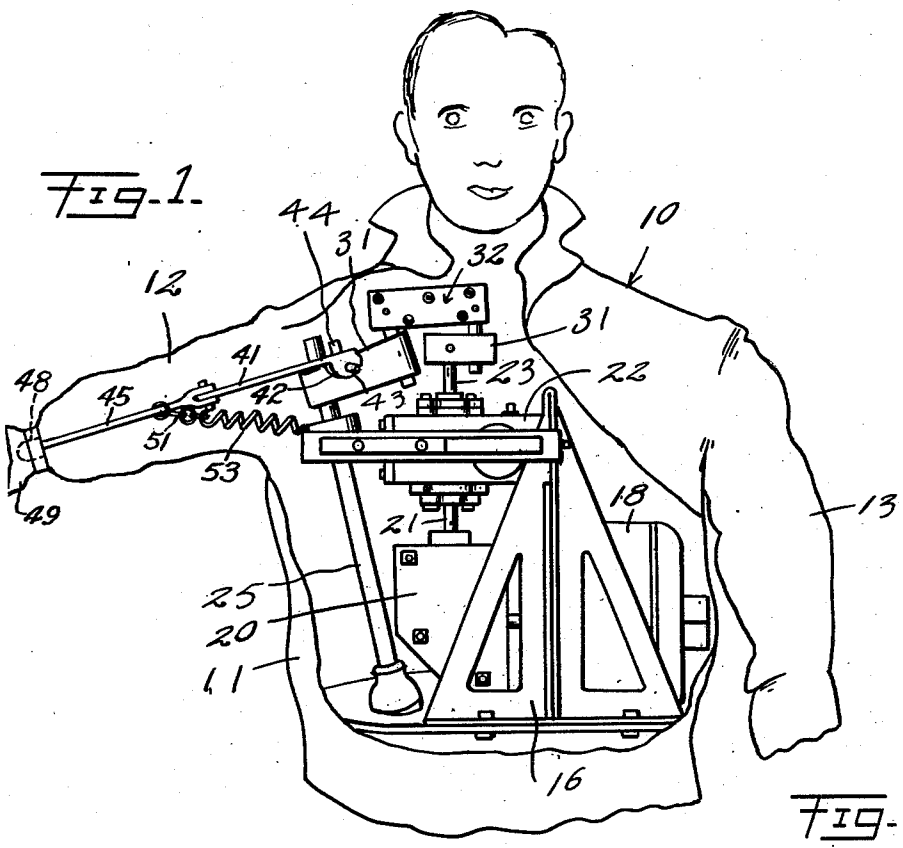
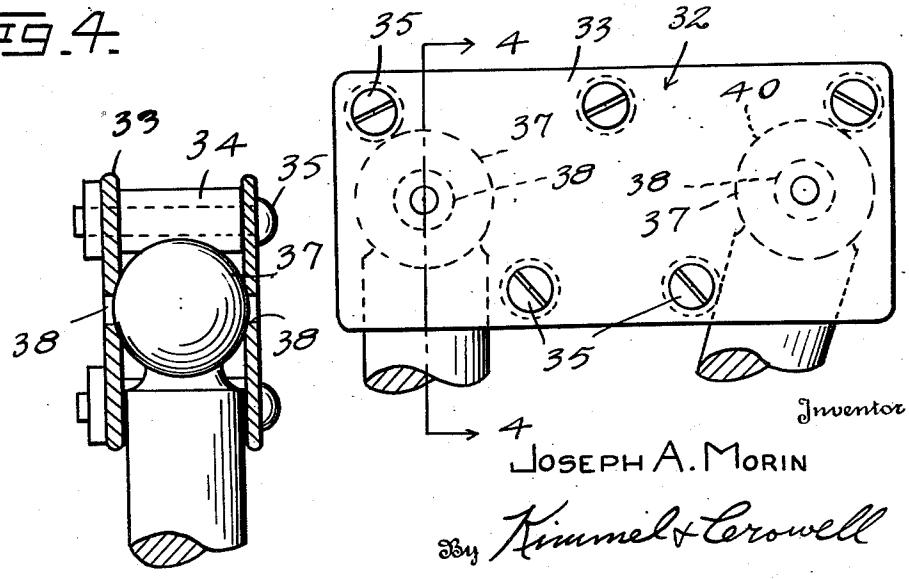


Fig. 3.

Fig. 4.



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MECHANICAL FIGURE

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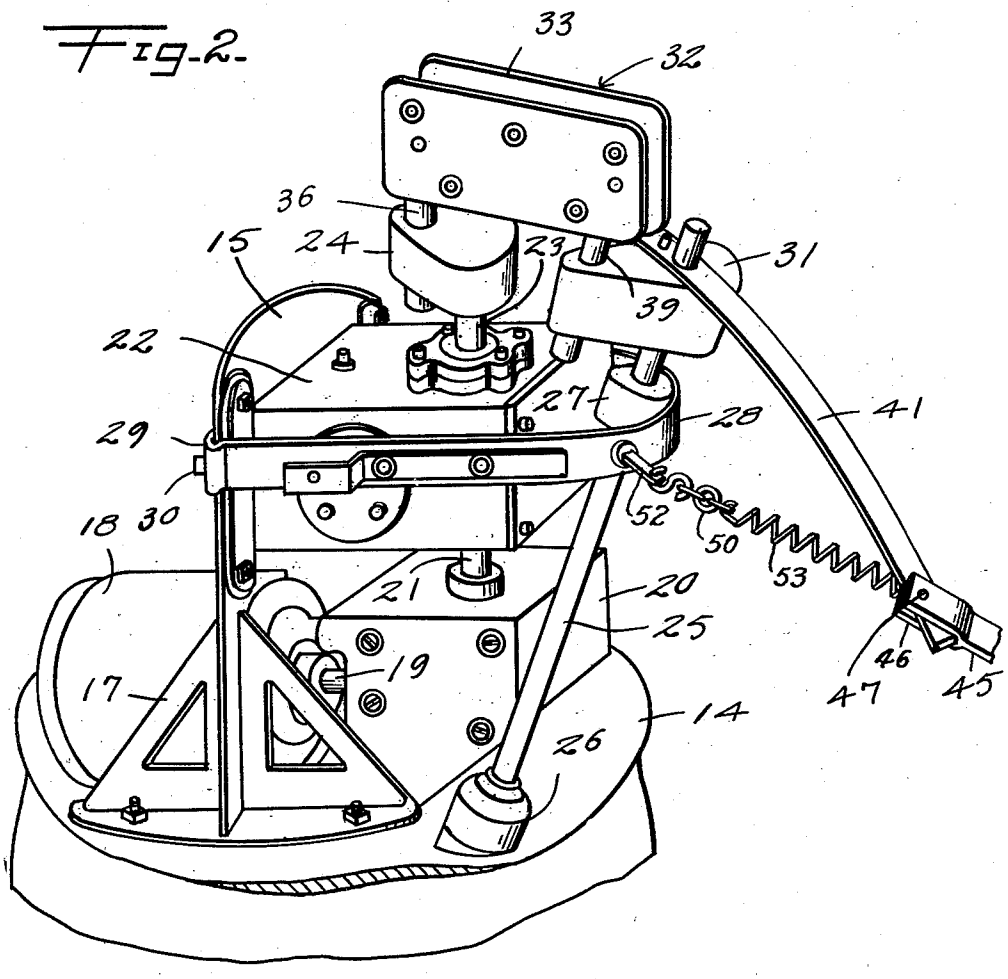
Fig-2.



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UNITED STATES PATENT OFFICE

2,538,162

MECHANICAL FIGURE

Joseph Albert Morin, Jersey City, N. J.

Application September 24, 1947, Serial No. 775,791

2 Claims. (Cl. 46—119)

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This invention relates to animated figures.

An object of this invention is to provide a mechanical figure wherein at least one arm is constantly actuated to swing at a predetermined speed for attracting and directing passing motorists to a roadside inn or other establishment.

Another object of this invention is to provide an improved mechanism by means of which one arm of a figure may be operated in a manner to simulate the natural movement of a human arm.

A further object of this invention is to provide an animated figure of adult size which is adapted to be mounted outdoors with the body of the figure stationary and one arm swingable across the front of the figure and the swinging arm bending at the elbow during the swinging thereof.

To the foregoing objects, and others which may hereinafter more fully appear, the invention consists of the novel construction, combination and arrangement of parts, as will be more specifically referred to and illustrated in the accompanying drawings, but it is to be understood that changes, variations, and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a fragmentary front elevation of a figure, partly broken away, constructed according to an embodiment of this invention.

Figure 2 is a rear elevation of the operating mechanism of the device.

Figure 3 is a fragmentary side elevation of the operating connection between the driving means and the movable arm embodied in the device.

Figure 4 is a sectional view taken on the line 4—4 of Figure 3.

Referring to the drawings, the numeral 10 designates generally a figure embodying a body or torso 11 with a pair of arms 12 and 13. The torso 11 is of hollow construction and in the present instance the arm 13 is stationary, whereas the arm 12 is movable as will be hereinafter described.

In order to provide for movement or animation of the arm 12, I have provided an operating mechanism which includes a base 14 adapted to be fixedly secured in the lower portion of the torso 11. The base 14 has mounted on the upper side thereof an upright frame plate 15 which is braced by means of pairs of substantially triangular bracing members 16 and 17.

A motor 18 is mounted on the upper side of the base 14 and includes a shaft 19 which is connected with a transmission 20 also secured on

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the upper side of the base 14. A vertical shaft 21 extends from the transmission 20 and is connected with a speed reducing mechanism 22 secured to the frame plate 15 above the transmission 20.

A driven shaft 23 extends from the upper side of the speed reducer 22 and has secured thereto a crank member 24. An inclined crank shaft 25 has its lower end journalled or rockably mounted as indicated at 26 on the upper side of the base 14 and the shaft 25 extends through a bearing 27 which is fixedly carried by the bight of a U-shaped supporting strap or bar 28.

The strap or bar 28 is formed with hook-shaped rear ends 29 engaging the opposite vertical edges of the frame plate 15 and secured in vertical adjusted position relative to the frame plate 15 by means of set screws 30.

The crank shaft 25 has secured adjacent the upper end thereof a crank member 31 and a pitman 32 is operatively connected between the two crank members 24 and 31. The pitman 32 is formed of a pair of spaced apart parallel plates 33 which are held in spaced apart relation by means of spacers 34 through which securing bolts 35 engage.

A crank pin 36 is fixedly secured to the crank member 24 and is provided at its upper end with a ball 37 which engages confronting ball sockets 38 formed on the inner sides of the pitman plates 33. The crank member 31 has secured thereto a crank pin 39 which is also formed at its upper end with a ball 40 engaging in confronting ball sockets similar to sockets 38 formed on the inner sides of the pitman plates 33.

An elongated bar 41 is fixed at its inner end to the crank member 31 being formed with a downwardly bent inner end 42 which is secured as at 43 to one side of the crank member 31. A second securing member 44 extends through the upper side of the bar 41 and is threaded into the upper side of the crank member 31. A pivoted outer bar 45 which is formed at its inner end with a fork 46 is pivotally mounted as at 47 on the outer end of the inner bar 41. The bar 41 forms the upper arm of the figure and the bar 45 forms the lower or outer arm member of the figure.

The bar 41 is adapted to be suitably covered with sufficient material so as to simulate the upper portion and the configuration of a normal arm. The lower bar 45 is also adapted to be covered with padding or the like to conform to the configuration of the lower arm of a figure. The bar 45 at its outer end is formed with a stud or

tapered pin 48 about which a hand 49 is adapted to engage. The outer bar 45 is spring-pressed to swing inwardly by means of a flexible connection 50 which is connected between the bar 40 and the bar supporting member 28.

The flexible connection 50 is shown as being in the form of a chain which is secured at its outer end as at 51 to the bar 45 and is secured as at 52 to the supporting member 28 at a point located to the rear of the bearing 27 supporting the shaft 25. A spring 53 is interposed between the ends of the flexible member 50 and is of such tension that when the bar 41 is swung toward the front of the figure 10 the spring 53 will be tensioned to cause the outer bar 45 to swing inwardly relative to the upper bar 41.

When the upper bar 41 is swung outwardly and rearwardly the tension on the spring 53 is decreased and the weight of the bar 45 with the padding and other elements secured thereto will swing the bar 45 outwardly to substantially straighten out the arm.

In the use and operation of this device, the figure 10 is set up at a convenient location in an upright position. The motor 18 is connected to a source of electric supply and the speed reducer 28 is designed to reduce the speed of the driven shaft 23 to a point where the bars 41 and 45 will swing in a slow manner simulating the movement of a person. This device can be used for attracting the attention of passing motorists to a gas station, inn, or other establishment and in view of the simplicity of the device, it can be operated at small cost and for an indefinite period of time.

I claim:

1. An animated figure comprising a body, a frame in said body, at least one swingable arm carried by said body, said arm including upper and lower elongated members, means pivotally securing said members together, a crank rockably carried by said frame, means fixedly securing said upper member to said crank, a second crank rotatably carried by said frame, means for rotating said second crank, an operative connection between said cranks whereby said first crank will be oscillated upon rotation of said second crank, a flexible connection between said frame rearwardly of said first crank and said lower member, and a spring interposed in said flexible connection whereby said lower member will be biased to assume an acute angle relative to said upper member, said spring being of such tension that upon outward and rearward swinging of said arm said lower member will gravitatingly swing to substantially a straight angle relative to said upper member.

2. An animated figure comprising a body, a frame in said body, an outwardly inclined shaft journalled in said frame, means for rocking said shaft, a swingable arm including upper and lower elongated members, means pivotally securing said members together, mean fixedly mounting said upper member to the top of said shaft, spring means having one end connected to said lower member and the other end thereof connected to said frame rearwardly of said shaft whereby when said shaft is rocked forwardly said spring means will be tensioned to urge said lower member into bent relationship relative to said upper member, and when said shaft is rocked rearwardly the tension of said spring means is reduced to allow the weight of said lower member to urge it into straight relationship relative to said upper member.

JOSEPH ALBERT MORIN.

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