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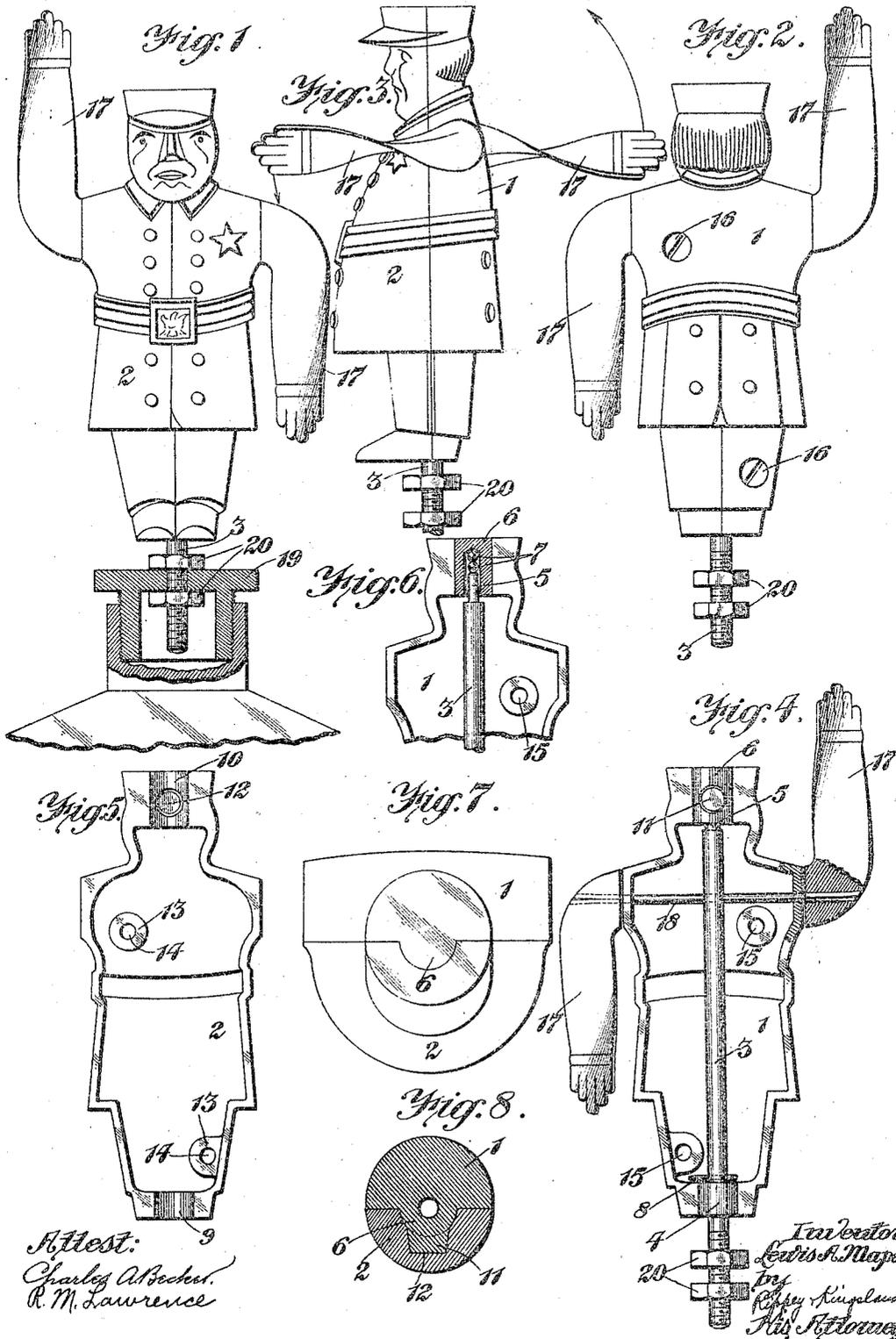
L. A. MAPEL.

AIR OPERATED FIGURE.

APPLICATION FILED JUNE 19, 1915.

1,155,074.

Patented Sept. 28, 1915.



Attest:
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UNITED STATES PATENT OFFICE.

LEWIS A. MAPEL, OF ST. LOUIS, MISSOURI.

AIR-OPERATED FIGURE.

1,155,074.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed June 19, 1915. Serial No. 35,142.

To all whom it may concern:

Be it known that I, LEWIS A. MAPEL, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have
 5 invented a new and useful Air-Operated Figure, of which the following is a specification.

This invention relates to air operated figures.

10 The invention has particular reference to that class of devices which include a figure arranged to rotate on a vertical axis and which supports a number of pivoted arms
 15 or vanes which are capable of movement with respect to the figure supporting them and which automatically and as an incident to rapid movement of the figure through the air assume horizontal positions and cause
 20 the supporting figure to revolve as a result of the action of the air against the arms or vanes.

An object of the invention is to provide a movable figure adapted to be mounted on an automobile or other vehicle and including
 25 a figure revolvably mounted on a vertical axis and provided with pivoted arms arranged so that as a result of the travel of the vehicle the pivoted arms will assume horizontal positions and cause the vertical
 30 figure to rotate on its axis.

Other objects will appear from the following detail description, reference being made to the accompanying drawing in which—

35 Figure 1 is a front elevation of a figure embodying the principles of my present invention. Fig. 2 is a rear elevation of the figure. Fig. 3 is a side elevation showing the arms in horizontal position, which is the
 40 position of the arms when the figure is transported rapidly through the air and which as a result of the action of the air impart a rotary movement to the figure. Fig. 4 is a view of one part of the figure
 45 illustrating the mounting of the axis and the supporting pivot for the arms. Fig. 5 is a similar view of the cooperating member. Fig. 6 is a sectional view illustrating the bearing of the vertical axis upon which the
 50 figure revolves. Fig. 7 is a plan view of the figure with the pivoted arms detached. Fig. 8 is a sectional view through a portion of the figure illustrating the interlocking union.

In the particular embodiment shown the
 55 figure is in the form of an effigy of a police officer, though it will be understood that

any other preferred figure may be utilized. In the form illustrated the figure includes a rear portion 1, and a front portion 2, both of which are preferably hollow so as to dis-
 60 pense with any unnecessary weight. The front and rear portions may be castings provided with bearings for the vertical axis by which the figure is supported, and with a support or supports for the pivoted arms.
 65 In the form shown the vertical axis 3 is journaled in a bearing 4 at the lower extremity of the rear portion 1, and is provided with a reduced portion 5 which extends into a bearing 6 at the upper end of
 70 said rear portion. In order to reduce to a minimum the frictional resistance I place ball bearing members 7 within the bearing 6 so that the end of the reduced portion 5 of the vertical axis or shaft will have bearing
 75 against said ball members, as illustrated in Fig. 6. The shaft 3 is retained in place by a removable pin 8 passing through a hole in the shaft 3 above the bearing 4.

The front portion 2 is provided with a
 80 groove 9 at its lower end to receive the bearing 4, and is also provided with a groove 10 at its upper end to receive the bearing 6. Obviously the bearings 4 and 6 seated within the grooves 9 and 10 will prevent lateral
 85 dislocation or displacement of the front and rear portions of the figure when they are fitted together. The bearing 6 is provided with a projecting portion 11 adapted to engage within a recess 12 in the front portion
 90 2 of the figure and prevent vertical dislocation or displacement of either of the parts of which the figure is composed. The front portion 2 is provided with a number of bosses 13 having threaded holes 14 therein
 95 which register with the holes 15 through the rear portion 1 when said front and rear portions are placed together in proper position. The holes 15 receive screws 16 which engage in the threaded holes 14 and thereby sepa-
 100 rably fasten the front and rear portions of the figure together, the arms 17 are secured upon a rod 18 which has bearing in the rear portion 1 of the figure. The arms are preferably secured to the same rod, so that there
 105 can be no relative displacement or change of position of either of said arms with respect to the other. It is preferable that said arms extend in opposite directions from the supporting rod 18, so that when one of said
 110 arms extends upwardly the other extends in a downward direction as will be readily

understood by reference to the drawing. Both of the arms are substantially in spiral form so that when the figure is moved rapidly through the air the arms will present their spiral surfaces against which the air contacts effectively to cause the arms to assume horizontal positions as illustrated in Fig. 3, and further to revolve the figure upon the vertical shaft 3. When the figure is stationary the arms automatically and normally assume vertical positions due to a slight inequality in the weight of the arms.

In Fig. 1 the figure is illustrated as secured to a support 19, comprising the radiator cap of an automobile. The figure is mounted by extending the lower end of the shaft 3 through a hole in the radiator cap and binding the shaft rigidly in position by means of clamping nuts 20 threaded on the shaft and clamped against the upper and lower surface of the cap.

When the vehicle is stationary the figure normally assumes a position similar to that illustrated in Figs. 1 and 2 in which the arms 17 are vertically disposed. When the vehicle is traveling the air causes the spirally formed arms 17 to assume horizontal positions, as illustrated in Fig. 3. The air contacting with the spirally disposed surfaces of the arms 17 sometimes causes the figure to revolve upon the vertical shaft 3. Sometimes, however, the arms may themselves revolve in vertical planes instead of the figure being revolved in a horizontal plane. This will occur when for any cause the figure is prevented from revolving on the vertical supporting shaft 3.

From the foregoing it will be understood that I have produced a device capable of rotation in a horizontal plane and provided with a number of actuating arms or vanes pivotally secured thereto and capable of rotation in vertical planes; and that said arms will be caused to assume horizontal positions

when the figure is moved through the air, with the result that the figure itself will be revolved in a horizontal plane.

It will be understood that the figure may be in any desired form and that there may be various other modifications in the construction and arrangement of the device without departure from the principles and scope of the invention.

What I claim and desire to secure by Letters Patent of the United States is:

1. A device of the character described, comprising a vertical shaft, a body mounted on said vertical shaft and capable of being rotated thereon in a horizontal plane, and connected spiral arms of unequal weight pivoted upon said body and normally standing in general upright position and which are capable of being rotated in vertical planes and of imparting a horizontal rotary movement to said body when said body is moved through the air.

2. A device of the character described comprising a body, and connected spiral arms of unequal weight pivoted upon said body and normally standing in general upright position and which are capable of swinging movements in vertical planes.

3. A device of the character described, comprising a body portion, a vertical shaft revolubly supporting said body portion, a horizontal rod journaled in said body portion, two spiral arms attached to said rod and extending in opposite directions therefrom, and means for securing said first-named rod to a support.

In witness whereof, I have signed this specification in the presence of two subscribing witnesses.

LEWIS A. MAPEL.

Witnesses:

JOHN D. RIPPEY,
R. M. LAWRENCE.