

No. 656,627.

Patented Aug. 28, 1900.

J. A. CHAPMAN.

TOY.

(Application filed Nov. 7, 1899.)

(No Model.)

Fig. 1

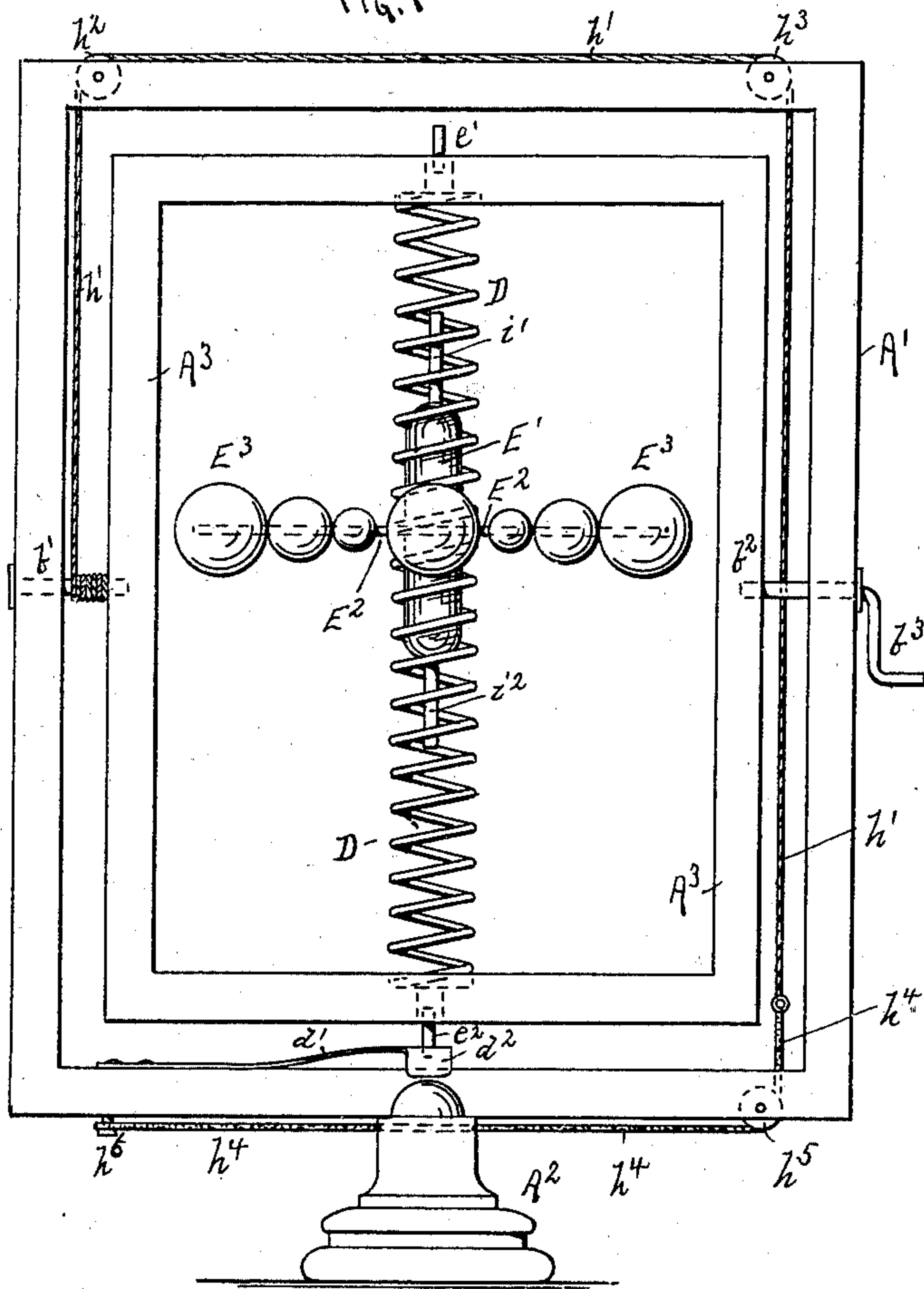


Fig. 2

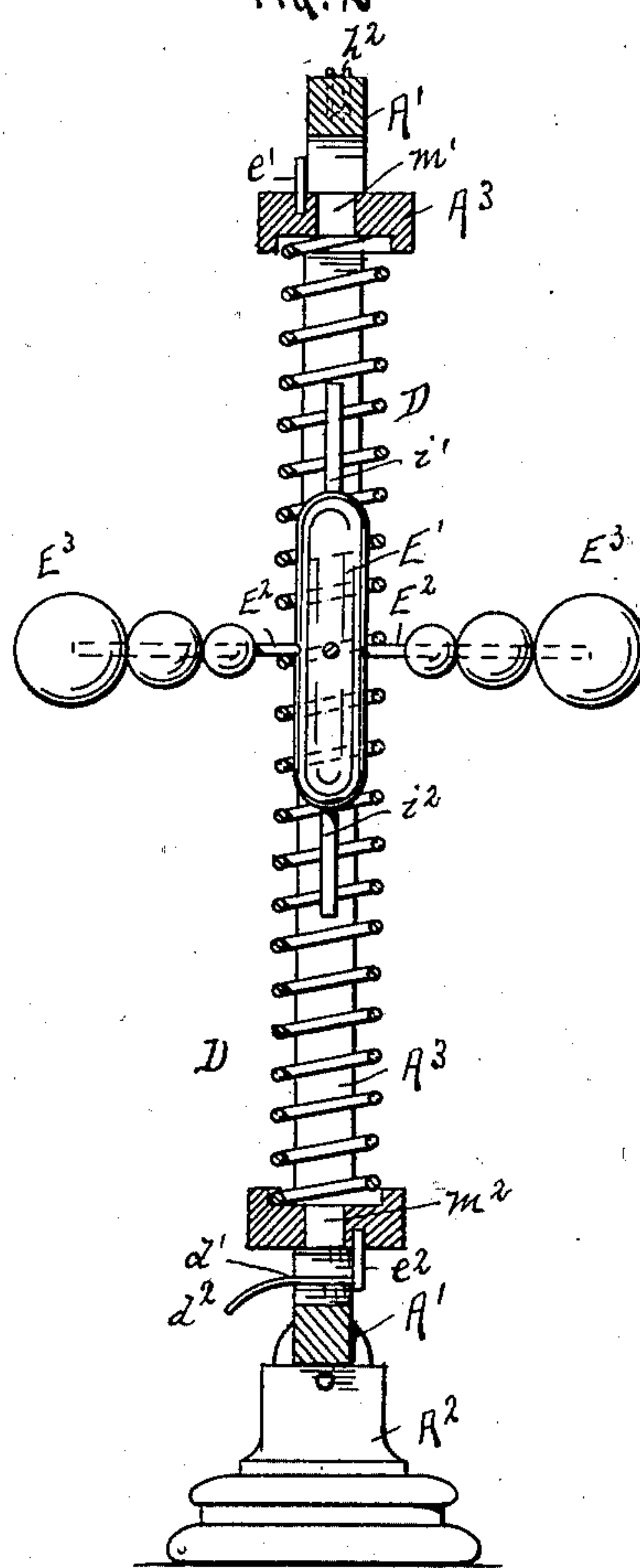


Fig. 3

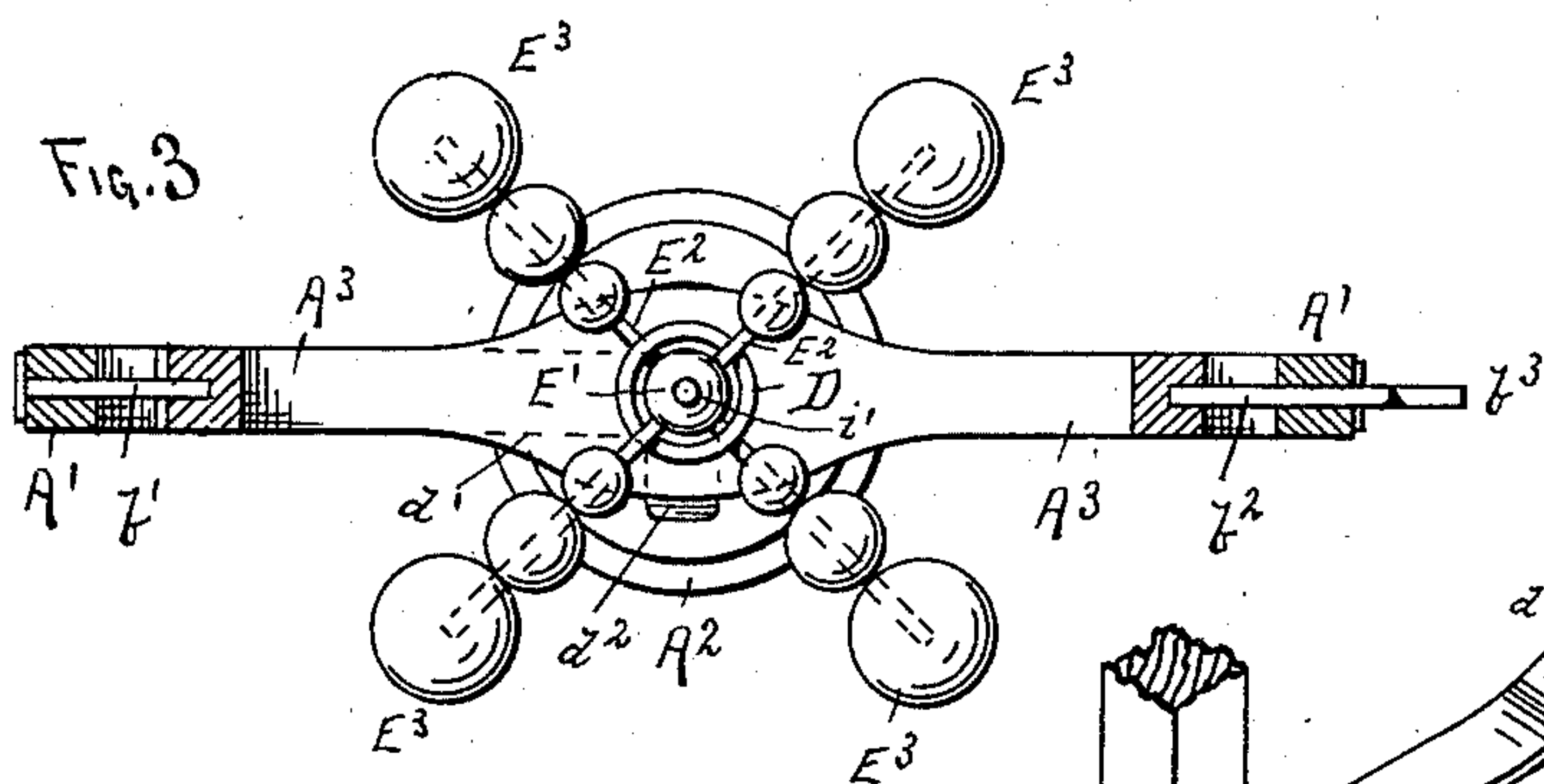
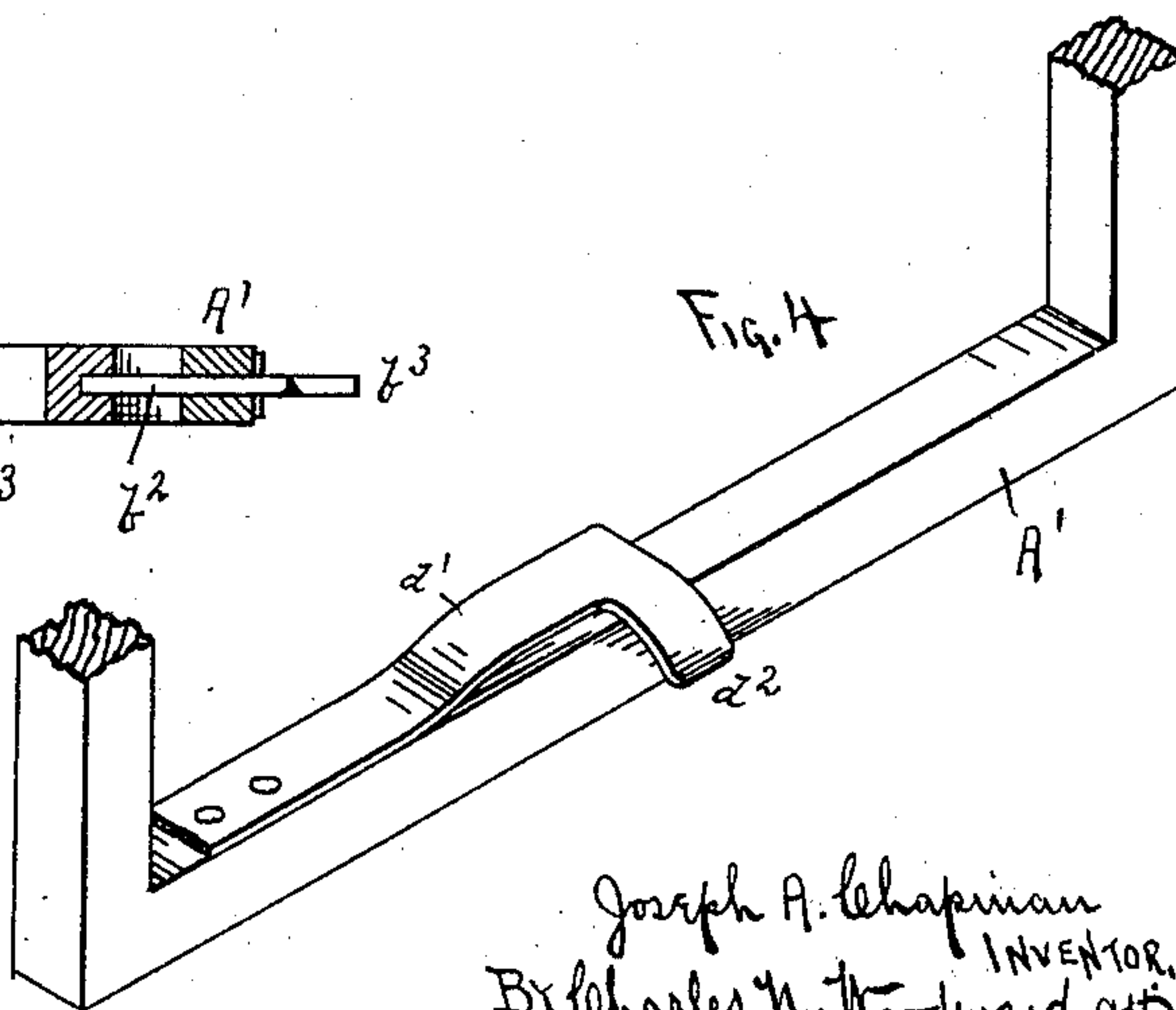


Fig. 4



WITNESSES.

Frank W. W. W.
Arthur Olin

Joseph A. Chapman
INVENTOR.
By Charles N. Woodward atty

UNITED STATES PATENT OFFICE.

JOSEPH A. CHAPMAN, OF BAY CITY, WISCONSIN.

TOY.

SPECIFICATION forming part of Letters Patent No. 656,627, dated August 28, 1900.

Application filed November 7, 1899. Serial No. 736,139. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. CHAPMAN, a citizen of the United States, residing at Bay City, in the county of Pierce and State of Wisconsin, have invented certain new and useful Improvements in Toys, of which the following is a specification.

This invention relates to toys; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a front elevation of the toy complete. Fig. 2 is a sectional side elevation, and Fig. 3 is a plan view in cross-section. Fig. 4 is a perspective view of the lower part of the outer frame, illustrating the arrangement of the trip-engaging spring.

A' is the outer open frame, supported in a vertical position upon a base A² and, with the inner frame A³, pivoted centrally therein by pivots or pins b' b², one of these pins being preferably formed into a handle b³, as shown. The inner frame A³ is thus adapted to be revolved within the outer frame A' upon the pivots b' b².

d' is a spring-plate attached to the lower member of the frame A' and provided with a downwardly-sloping projection d², and e' e² are pins projecting outward from the upper and lower members of the inner frame A³ and adapted to engage the rear edge of the spring-plate d', as shown. A cord h' is attached to the pivot b' and wound around the pivot a number of times, and thence passed upward over a pulley h² in the upper member of the frame A', and thence over and around another pulley h³, and thence down to an elastic cord h⁴, the latter passing, preferably, around a pulley h⁵, and thence to the other edge of the frame A', to which it is secured, as by a pin h⁶. Being thus arranged, the elastic cord h⁴ constantly exerts its force to hold the frame A³ in its vertical position within the frame A', with the lowermost of the pins e' or e² behind the spring-plate d', as shown in Figs. 1 and 2, and will be retained in that position until the spring d' is released.

Attached by its ends against the inner surfaces of the end members of the inner frame A³ is a coiled wire D, and fitting loosely within this coiled wire is a traveler E', the traveler

adapted to be moved freely up and down within the coiled wire. Connected to this traveler E' are a number of lateral arms E², upon which balls E³ are secured, as shown.

Projecting from the ends of the traveler E' are pins i' i², adapted to project through holes m' m² in the center of the end members of the inner frame A³ and press against the spring-plate d' and release it from the pin e' or e², as the case may be.

Being thus constructed, the action is as follows: The frame A³, with the traveler E' at the upper end of the wire coil D, is set, as shown in Fig. 1, with the cord h' wound around the pivot b', and the elastic cord h⁴ consequently stretched to its greatest extent. The weight of the balls E³ added to the weight of the traveler E' will cause the cross-arms E² to run down around the coils of the wire D, and thus revolve the traveler and its attached balls rapidly as they run down the coil, and, finally, cause the lowermost pin i' or i² to pass through the hole m' or m² and depress the spring d' and release pin e' or e², thus permitting the reactionary force of the elastic cord h' to revolve the pivot b' and its attached frame A³ one-half a revolution or until the opposite pin e' or e² engages the spring d' behind it, as in Fig. 1. This half-revolution of the frame A³ will bring the traveler E' and its attached balls to the upper end of the coil D again, ready to again run down the coil and again release the spring and again permit the elastic cord to exert its force to turn the frame A³ again, and so on, so long as there is any force left in the elastic cord. When the cord h' is "run down," it may again be wound upon the pivot b' by simply turning the frame A³ backward by the handle b³, the pins e' e² in that operation simply passing over the incline d² and depressing the spring, as will be readily understood.

By this simple mechanism a toy is produced which will operate automatically so long as any of the "turns" of the cord h' remain around the pivot b'.

The balls E³ may be of various colors or figures, or other devices than balls may be employed to produce the necessary weight to cause the device to operate properly.

Having thus described my invention, what I claim as new is—

1. In a toy, an outer frame supported in a vertical position, an inner frame pivoted within said outer frame and adapted to revolve vertically therein, a wire coil secured by its ends vertically within said inner frame, a traveler within said coil and provided with weighted arms projecting outward through said coil, whereby said traveler in moving downward within said coil will be revolved by the action of said projecting arms, means for revolving said inner frame within said outer frame, means for holding said inner frame vertically within said outer frame, and means whereby the vertical movement of said traveler will release the holding means of said inner frame, substantially as shown and described.

2. In a toy, an outer frame supported in a vertical position, an inner frame pivoted within said outer frame and adapted to revolve vertically therein, a wire coil secured by its

ends vertically within said inner frame, a traveler within said coil and provided with weighted arms projecting outward through said coil, whereby said traveler in moving downward within said coil will be revolved by the action of said projecting arms, said traveler having pins projecting from its ends, pins projecting from the end members of said inner frame, a yielding stop having inclined projection and attached to said outer frame in the path of the pins on said inner frame, a spring connected to one of the pivots of said inner frame and adapted to rotate said frame, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH A. CHAPMAN.

In presence of—

C. N. WOODWARD,
ERIC NORTON.