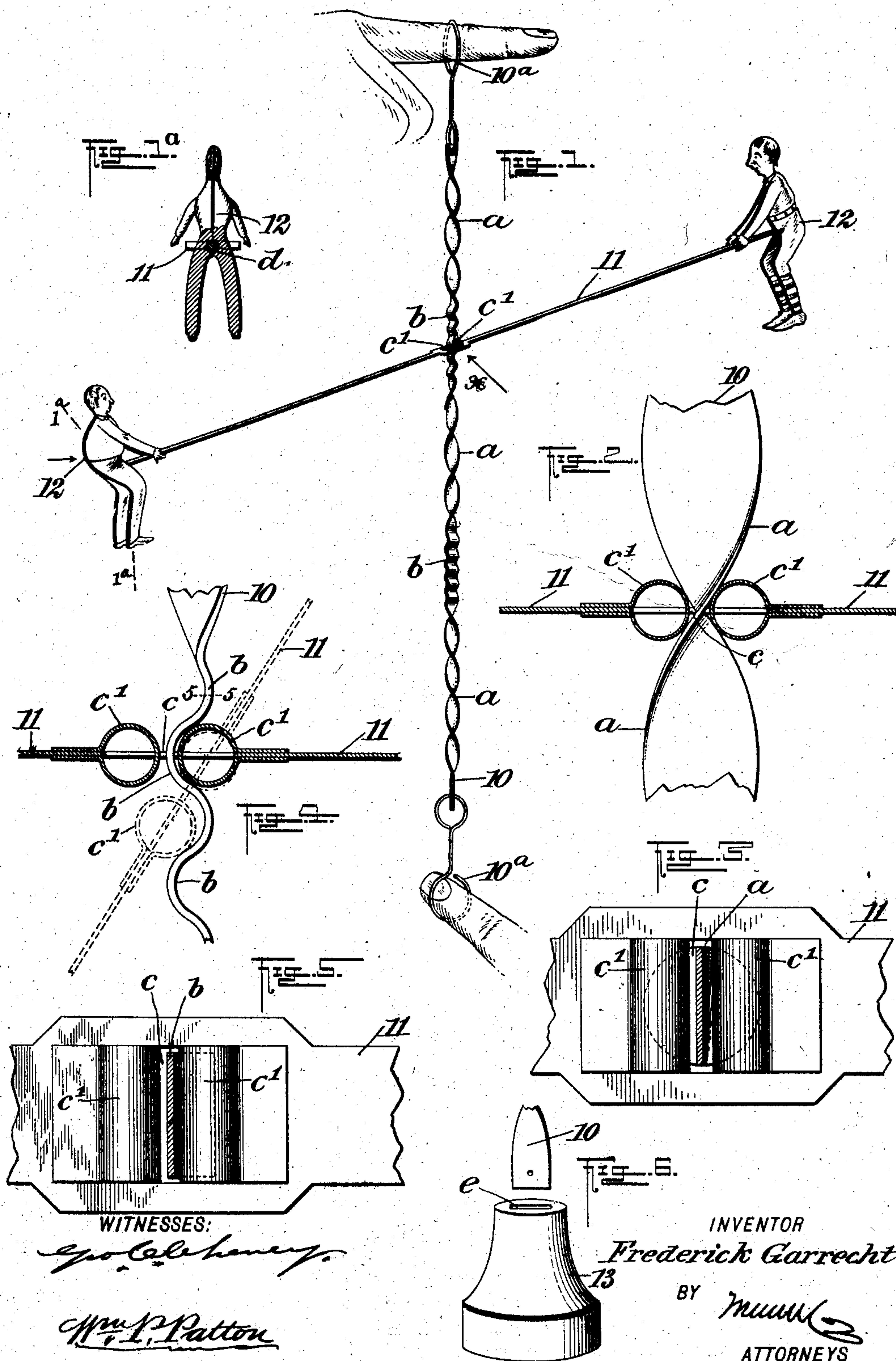


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F. GARRECHT.
TOY.

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UNITED STATES PATENT OFFICE.

FREDERICK GARRECHT, OF IDAHO CITY, IDAHO.

TOY.

SPECIFICATION forming part of Letters Patent No. 791,769, dated June 6, 1905.

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To all whom it may concern:

Be it known that I, FREDERICK GARRECHT, a citizen of the United States, and a resident of Idaho City, in the county of Boise and State of Idaho, have invented a new and Improved Toy, of which the following is a full, clear, and exact description.

This invention relates to a class of toys wherein an object is loosely held on a support and receives a rocking movement on said support from the joint action of gravity and the peculiar form of the support, and has for its object to provide a toy of the character indicated having novel details of construction which are very simple, inexpensive, and quite amusing, two grotesque figures receiving intermediate twirling and rocking movements as they descend from an elevation.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved toy in operation. Fig. 1^a is an enlarged partly-sectional detail view substantially on the line 1^a 1^a in Fig. 1. Fig. 2 is an enlarged partly-sectional detail view showing the tilting bar and motor-bar at one point of their engagement. Fig. 3 is a plan view of details shown in Fig. 2. Fig. 4 is an enlarged partly-sectional side view of parts of the toy, showing the engagement of the tilting bar with the motor-bar at a point indicated by arrow *a* in Fig. 1. Fig. 5 is a partly-sectional plan view substantially on the line 5 5 in Fig. 4, and Fig. 6 is a side view of a pedestal-block that may be employed for supporting the motor-bar in an upright position.

The motor-bar 10, which is of novel construction, is formed, preferably, of a strip of metal having parallel edges and proper thickness to insure its stability in service. A novel feature consists in the formation of alternating spirally-twisted members *a* and transverse flutes or corrugations *b* throughout the length of the motor-bar 10. Any suitable number

of the alternating spiral members and fluted members may be employed. Usually three spiral members *a* are formed on the bar 10—one spiral member at each end of the bar and one at its longitudinal center—and preferably the spiral twist of the bar at its central portion is in an opposite direction from that given to the spiral formations *a* at and near the ends of the motor-bar. The twisted members *a* may be of any available degree of coarseness or pitch preferred and have any suitable length. At the inner terminations of the end spirals *a* and central spiral *a* said twists merge gradually into the first corrugation or transverse flute *b*, so that the transition is not abrupt, this construction being clearly shown in Fig. 1.

At each end of the motor-bar 10 a ring 10^a may be loosely secured, the use of which will be hereinafter explained.

A tilting bar 11, preferably formed of a straight strip of metal having proper length, is provided that at its center of length is formed with a transverse slot *c*. The transverse sides of the slot *c* are produced by the tubular members *c'*, that are secured in an elongation of the slot *c*, as indicated in Figs. 1 to 5, inclusive, so that said sides of the central slot *c* are, in fact, two cylinders equal with each other in diameter and length. The space or width of the slot *c* is such as to permit the loose insertion of the motor-bar 10 therethrough and permit the free spiral traverse of the tilting bar on either of the spiral formations *a* when engaged therewith and the motor-bar is up-right.

Upon each end of the tilting bar 11 a grotesque figure 12 is loosely mounted. These figures, that may be altered in design from that shown, as represented are imitations of clowns and appear to be seated upon opposite ends of the bar. For the proper operation of the toy the figures 12 must be of equal weight and are pivoted near their middle portions upon pivot-pins, such as *d*, (shown for one figure in the view 1^a), and it is furthermore essential that the preponderance of weight be represented by the legs of the figures, so that they will always hang pendent or below the tilting bar.

As shown clearly in Fig. 4, the transverse

flutes *b* are in the form of segments of equal circles, wherein the tubular members of the slot *c* will fit loosely, which will permit the tilting bar to have a considerable range of rocking movement when the motor-bar 10 is held vertical and the tilting bar is in engagement with either of the fluted members *b*.

In operating the toy if it is provided with the rings 10^a, connected with the ends of the motor-bar 10, as shown in Fig. 1, the tilting bar 11 is mounted upon the motor-bar, while one end of the same is devoid of a ring, that may subsequently be connected with the flat perforated end of the bar from which the ring has been removed. Assuming that the tilting bar 11 is at one end of the motor-bar, the latter is held upright by hand either by holding the upper ring alone or engaging a finger on each hand with a respective ring. The tilting bar being of equal weight at each side of the motor-bar, it will assume a level position and by its gravity will descend the upper spiral formation *a*, the corkscrew twist of said formation giving a rotary and spiral motion to the descending bar 11, the relative position of the tilting bar being indicated in Figs. 2 and 3. When the tilting bar 11 has reached the lower end of the uppermost spirally-twisted member *a* in a level condition, the transverse slot *c* will be engaged by the uppermost connecting member on the undulating or transversely-fluted section *b* of the motor-bar. The tilting bar will now have one tubular member *c'* at the side of the transverse slot *c* therein engaged with the uppermost concavity in the fluted member *b*. As the transverse slot *c* permits a slight play of the motor-bar therein, the contact of the tubular member *c'* on one side of the engaged corrugation will temporarily arrest the tilting bar, and the gravity of the bar and figure thereon at the side of the slot that is free causes said end portion of the tilting bar to rock downward and the slightly-shorter end portion upward, as is indicated by dotted lines in Fig. 4, the space or unoccupied portion of the slot *c*, which gives slightly-increased length and weight to the descending bar member, being shown in Figs. 4 and 5. It will be evident that after the tilting bar has rocked into an inclined position the extent of such a rocking movement will be determined by the contact of the lowermost tubular member *c'* with the transverse flute or corrugation *b* next below the one occupied by the uppermost tubular member, this engagement being clearly shown by dotted lines in Fig. 4. When the tilting bar has assumed the maximum degree of inclination that has been explained, the seating of the lower tubular member *c'* on the transverse flute or corrugation first below the one in which the upper tubular member is located will afford a momentary support to the tilting bar, which will adapt the upper tubular member *c'* and the bar member that projects therefrom to rock downward and the

lower member of the tilting bar to rock upward, thus giving an opposite inclination to said tilting bar.

It will be seen that the operation which has been described, which effects the rocking movement of the tilting bar first in one direction and then in an opposite direction, will in a like manner be successively repeated until the tilting bar has in a seesaw manner descended the corrugated or fluted portion of the motor-bar that is above the central spiral member thereof. The tilting bar 11 by its gravity will now drop upon the uppermost turn of the central spiral member *a* and assume a level position, the gradual twist of said turn or spiral curve causing an initial spiral and descending movement of the tilting bar 11, which will be continued until the lower series of flutes *b* is reached, and it will be noticed that as the trend of the spiral twist given the middle spiral member of the motor-bar is in a direction opposite from that had by the upper and lower spiral members the direction of rotation will be correspondingly changed. The traverse downward of the tilting bar 11 on the second or lower fluted member of the motor-bar 10 is substantially the same as that already described for the upper fluted member thereof, and when the lower end of the fluted member last traversed is reached by the tilting bar 11 it will assume a level position, due to the engagement of each tubular member *c'* with opposed surfaces on the spiral formation it now engages with and down which the tilting bar will descend in a spiral track. It will be seen that the figures 12 will be swung in a spiral path rapidly when the tilting bar 11 descends either of the twisted formations *a* and will suddenly be rocked up and down when moving down the corrugated formation *b*, thus giving an appearance of comic distress and helplessness to the grotesque clowns that is very amusing. After the tilting bar has fully descended the motor-bar 10 the latter may be turned endwise, so as to transfer the tilting bar to an upper position, whereupon the twirling and seesawing movement of the tilting bar 11 and figures 12 thereon will be repeated, and the same may be continued indefinitely by the periodic changing of the motor-bar, so as to dispose its ends alternately uppermost. As the figures 12 are respectively pivoted on the ends of the tilting bar, so that they will have greater weight in their legs, it will be evident that upon reversing the ends of the motor-bar while the tilting bar is in position thereon the figures 12 will at once assume proper positions on the tilting bar by reason of their turning a half-revolution effected by their legs assuming a pendent position.

In Fig. 6 a base-block 13 is shown having a socket *e* in its upper end, said socket being shaped to neatly receive the ends of the motor-bar 10. When the base-block is used, the

rings 10^a are dispensed with and the straight ends of the motor-bar thus adapted for insertion in the socket *e*, which engagement alternately of the ends of the motor-bar will maintain the motor-bar erect for a descent of the tilting bar, as already described, the reversal in position of the motor-bar effecting a continuation of the mechanical movement of the tilting bar and the figures thereon for any length of time desired.

It is to be noted that the provision of the tubular members *c'* for the transverse slot *c* in the tilting bar 11 and the slightly-increased width given to the slot *c* are important novel features that adapt the toy to operate positively either when the tilting bar traverses the spiral or the fluted portions of the motor-bar.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a flat motor-bar, having a spiral formation and a fluted formation, arranged in sequence, of a centrally-slotted tilting bar mounted on the motor-bar, and adapted to descend by gravity over said spiral and fluted formations to cause said tilting bar to twirl and rock as it descends upon said motor-bar.

2. The combination with a flat motor-bar having a plurality of spiral formations and fluted formations thereon, arranged alternately, of a centrally-slotted tilting bar mounted loosely at its slot upon the motor-bar, to descend thereupon by gravity on said spiral and fluted formations to cause said tilting bar to twirl and rock alternately as it descends upon the motor-bar.

3. The combination of a motor-bar having a plurality of spiral sections throughout its length, spaced apart and twisted in different directions, and fluted sections connecting the spiral sections, a centrally-slotted tilting bar mounted upon the motor-bar and adapted to descend thereupon by gravity, the tilting bar by successive engagement with the spiral formations and the fluted formations, alternately twirling, rocking and twirling, the twirling being sometimes in one direction and sometimes in the other, as by gravity the tilting bar is caused to descend the motor-bar.

4. The combination with a motor-bar having alternate spiral formations and fluted formations thereon, the spiral formations being successively twisted first in one direction and then in the other and means for supporting the motor-bar upright, of a tilting bar having a transverse central slot therein through which the motor-bar passes, and a figure held to rock on each end of the tilting bar, the tilting bar and figures receiving alternate twirling and rocking movements as the tilting bar slides down over the spiral and fluted formations.

5. In a toy of the character described, a tilting bar having a central transverse slot therein, the sides of the slot being portions of cylindrical members mounted transversely on

the tilting bar parallel with each other, and a motor-bar having a plurality of spiral sections and fluted sections, the fluted sections being composed of a series of curved sections, the curvature of said sections being approximately equal to the curvature of the cylindrical members of the tilting bar.

6. In a toy of the character described, the motor-bar formed of flat material having parallel side edges, and a plurality of alternating spiral formations spaced from each other and fluted formations between the spiral formations adapted to give alternating twirling movements with intervening rocking movements to a tilting bar having a transverse slot adapted to engage said motor-bar to adapt the tilting bar to move downwardly upon the motor-bar.

7. In a device of the character described a tilting bar having a central opening therein and parallel cylindrical members mounted transversely in said opening and spaced from each other to form an intervening slot, and a motor-bar passing through said slot and having fluted formations composed of curved sections of a radius equal to the radius of said cylindrical sections of the tilting bar.

8. In a toy of the character described, a tilting bar having a central transverse slot therein, the sides of the slot being portions of cylindrical members mounted transversely on the tilting bar parallel with each other, the diameter of said cylindrical members being large in comparison to the width of the slot between them, and a motor-bar having a plurality of spiral sections and fluted sections, the fluted sections being composed of a series of curved sections, the curvature of said sections being approximately equal to the curvature of the cylindrical members of the tilting bar, and the width of the slot between said cylindrical members being less than the radius of said members and said curved sections.

9. In a toy of the character described, a motor-bar formed of flat material and having a plurality of alternating spiral formations spaced from each other and fluted formations between the spiral formations, said fluted formations extending transversely in different directions.

10. In a toy of the character described, a motor-bar formed of flat material, and having a plurality of alternating spiral and fluted formations, the spiral formations being successively twisted in opposite directions and the fluted formations being successively disposed to face approximately at right angles to each other.

11. In a toy of the character described, a motor-bar formed of flat material and provided with a plurality of spiral sections connected together, a tilting bar having a transverse slot whereby it is adapted to loosely engage said motor-bar to move downwardly thereupon,

said spiral sections of the motor-bar being alternately twisted in opposite directions to impart alternating twirling movements to said tilting bar as it moves downwardly on the motor-bar, whereby to retard the descent of the tilting bar.

12. In a toy of the character described, a flat motor-bar provided with a plurality of sections of spiral formation connected together by sections of a different formation, and a tilting bar having a transverse slot adapted to loosely engage said motor-bar to adapt the tilting bar to move downwardly upon the motor-bar and

to be twirled as it passes over the spiral sections, and to have its movement varied as it descends over the intervening sections whereby to prevent an accelerating twirling movement of the tilting bar and thereby retard its descent upon the motor-bar.

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

FREDERICK GARRECHT.

Witnesses:

CHAS. E. JONES,

JOHN E. RIORDAN.