V. L. HELM.

ADVERTISING MACHINE.

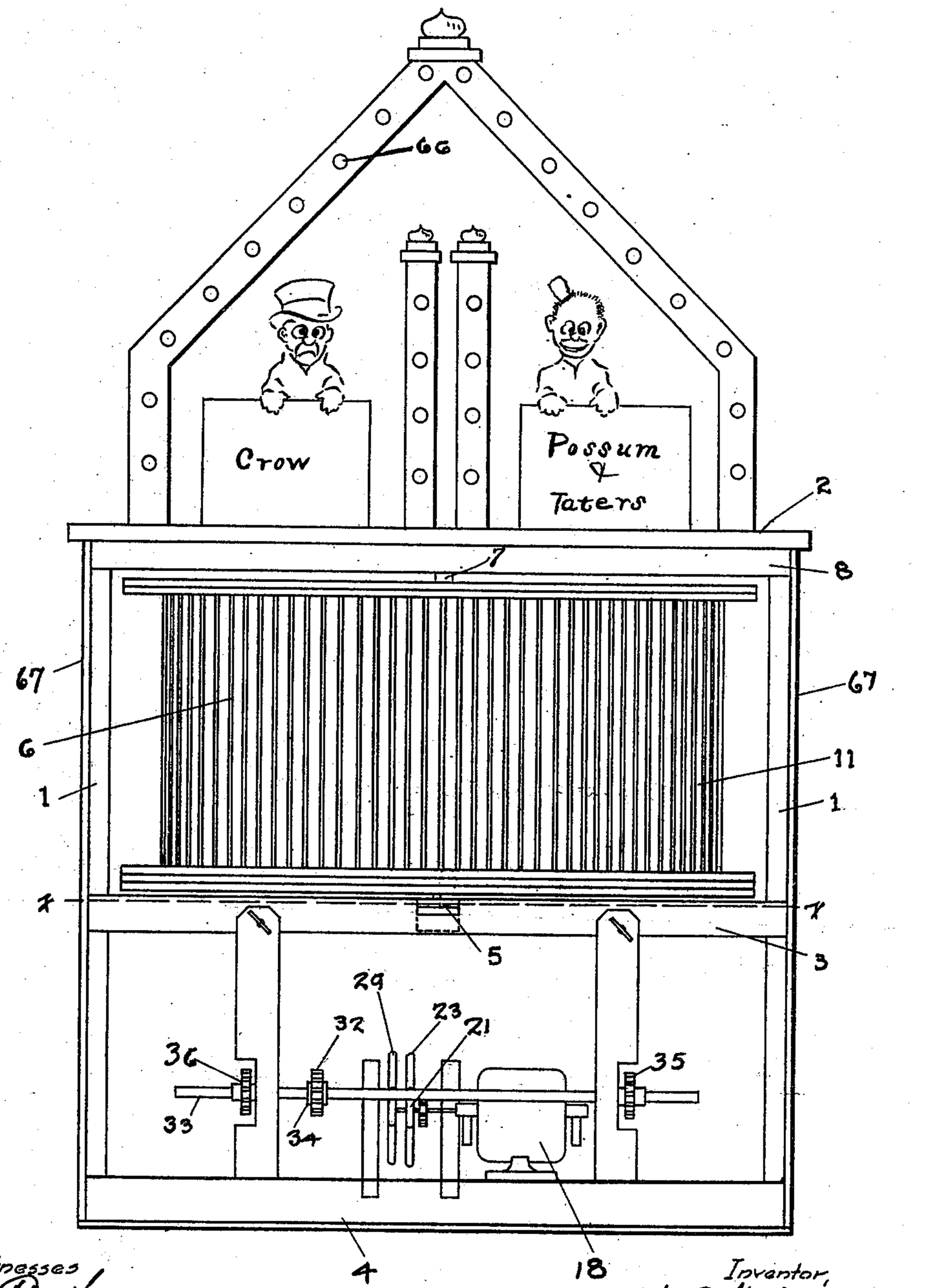
APPLICATION FILED NOV. 15, 1909.

989,969.

Patented Apr. 18, 1911.

4 SHEETS—SHEET 1.

Fig. 1




Witnesses
Ruth
W. S. Douglass

Inventor,
V. L. Helm,
By
A. L. Jackson,
Attorney

V. L. HELM.

ADVERTISING MACHINE.

APPLICATION FILED NOV. 15, 1909.

989,969.

Patented Apr. 18, 1911.

4 SHEETS—SHEET 2.

Fig. 7

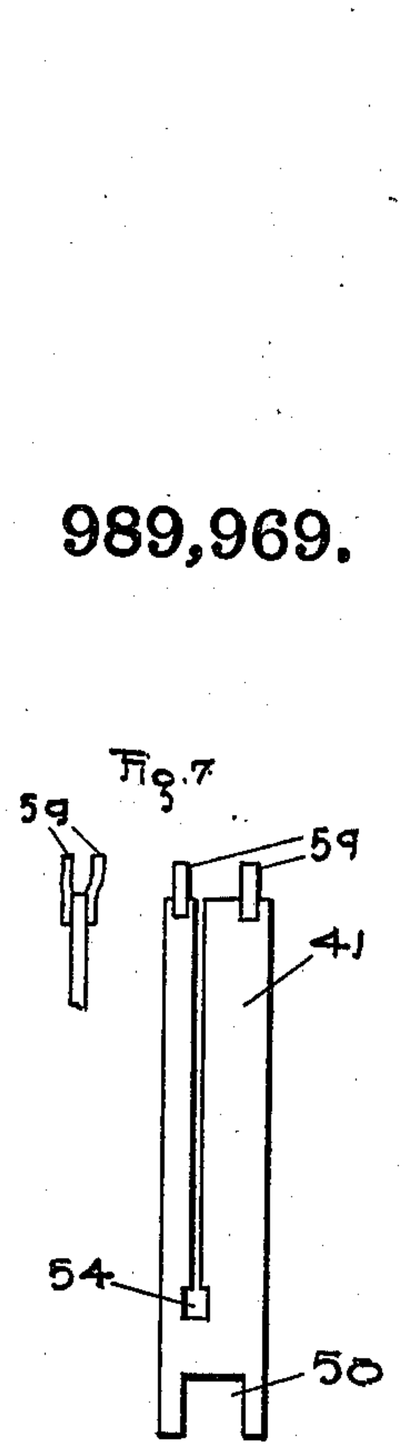



Fig. 8

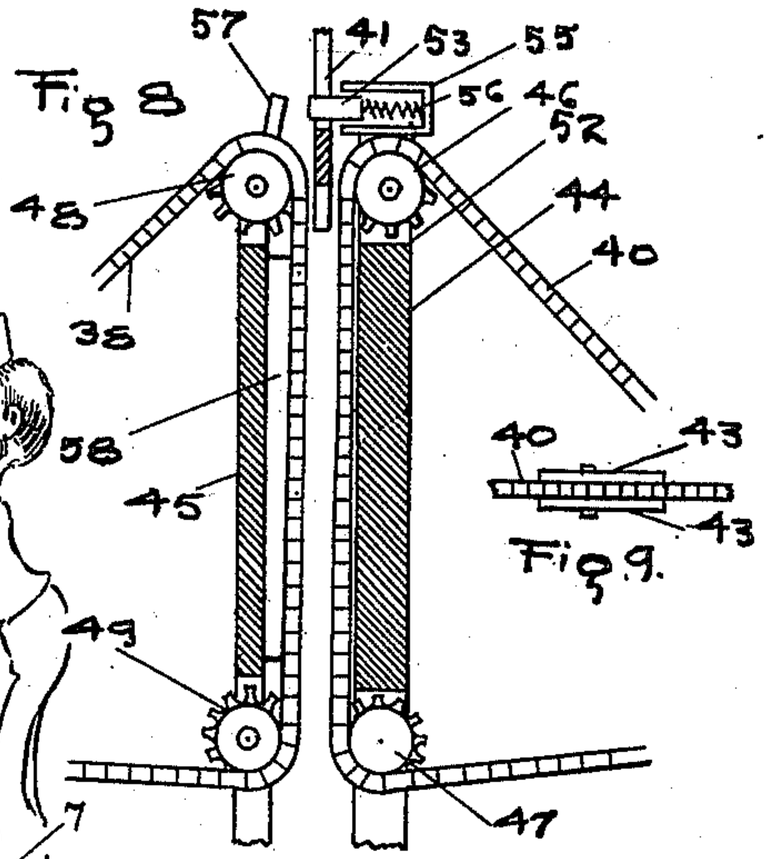



Fig. 2

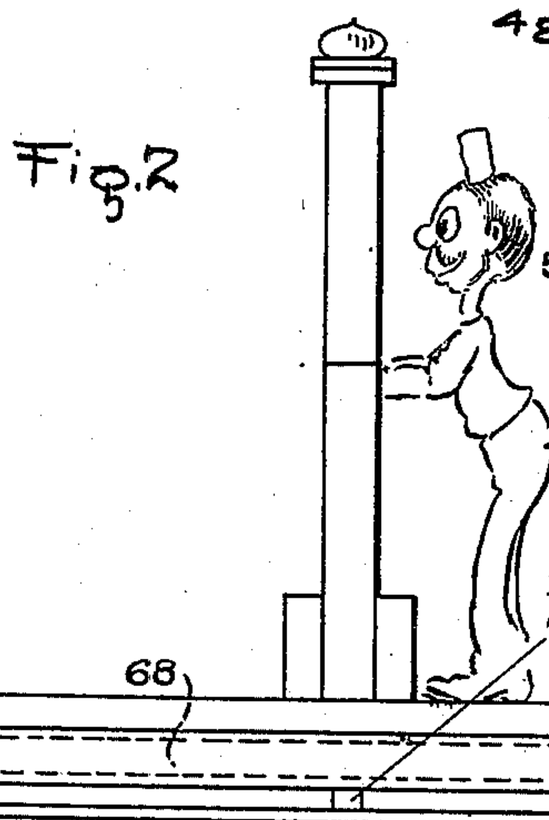


Fig. 9.



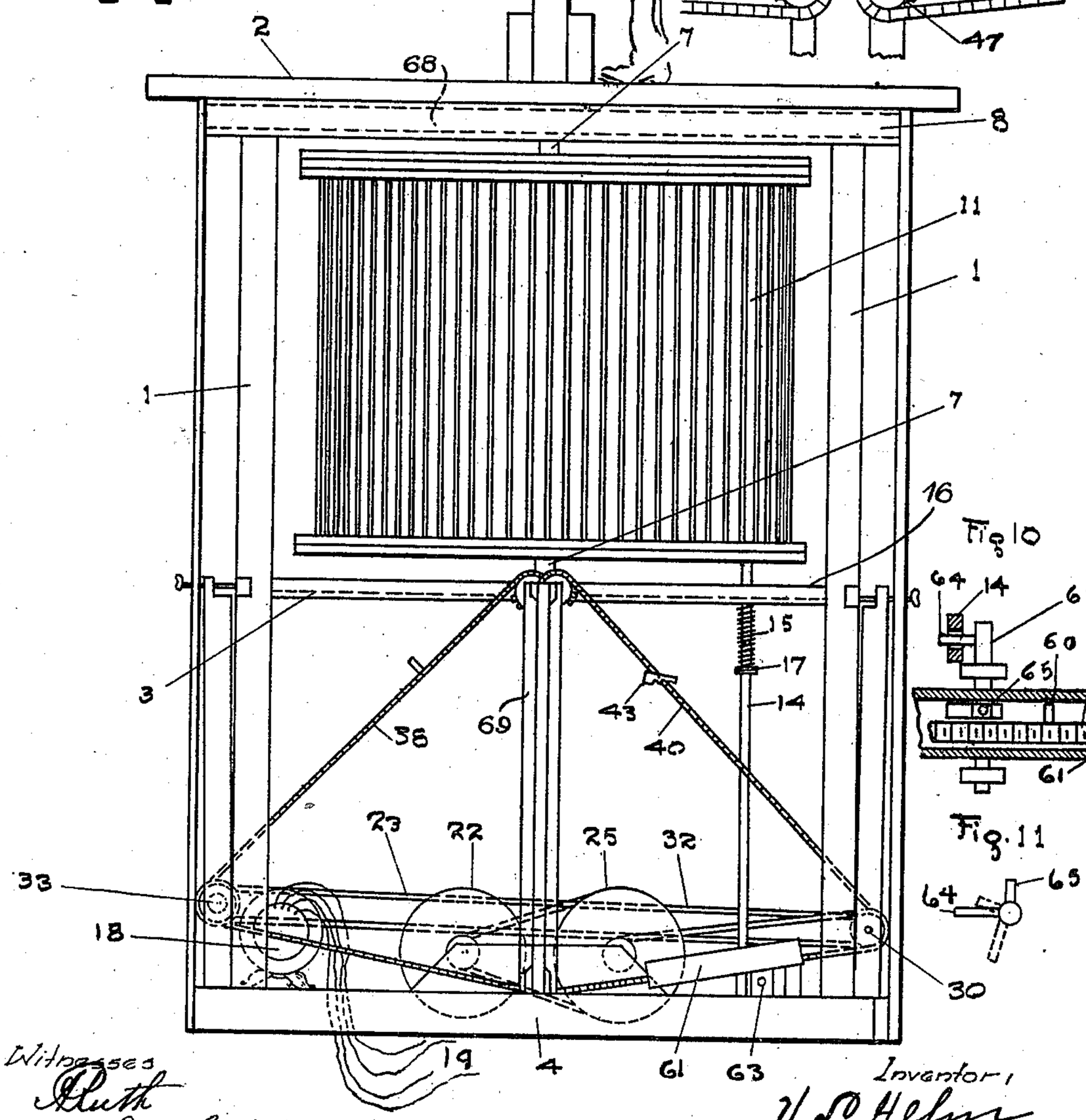




Fig. 10




Fig. 11




Witnesses
Ruth
W. S. Douglass

Inventor,
V. L. Helm,
By
A. L. Jackson,
Attorney

V. L. HELM.

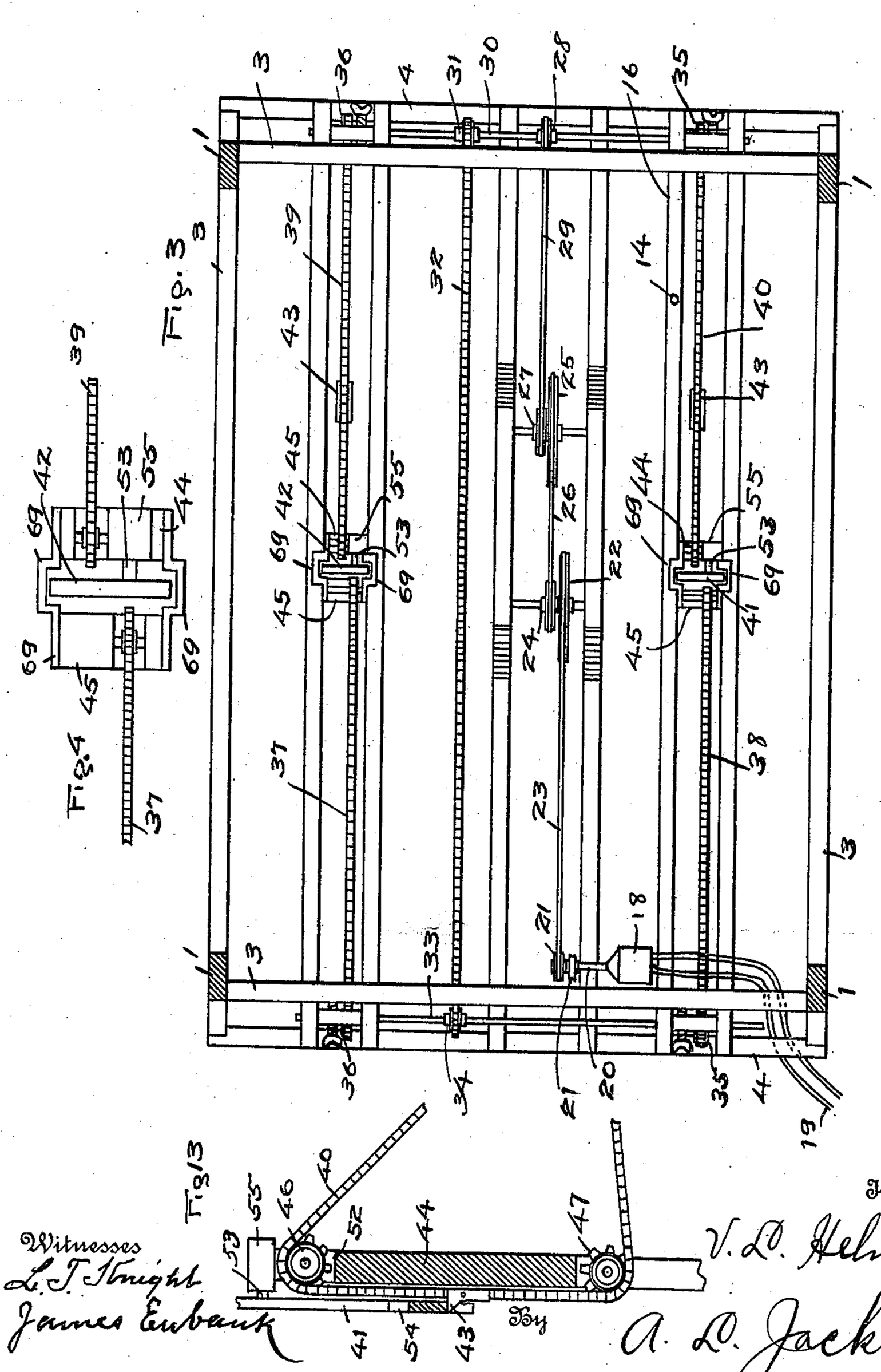
ADVERTISING MACHINE.

APPLICATION FILED NOV. 15, 1909.

989,969.

Patented Apr. 18, 1911.

4 SHEETS—SHEET 3.



V. L. HELM.

ADVERTISING MACHINE.

APPLICATION FILED NOV. 15, 1909.

989,969.

Patented Apr. 18, 1911.

4 SHEETS—SHEET 4.

Fig. 5

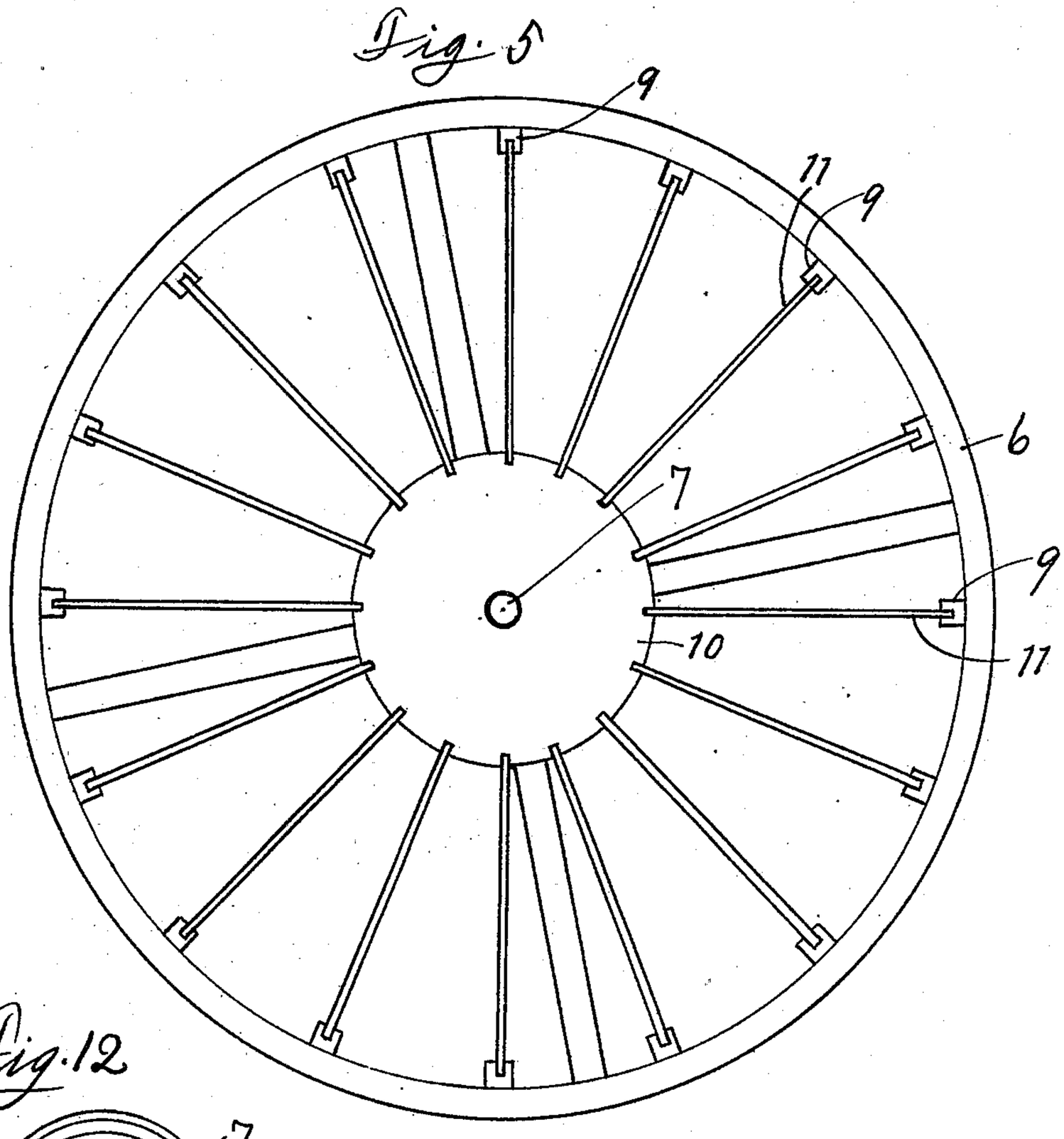
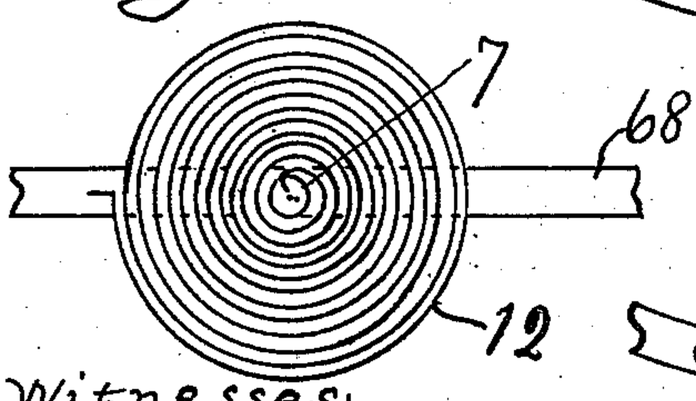



Fig. 12




Witnesses:—

W. S. Douglass.

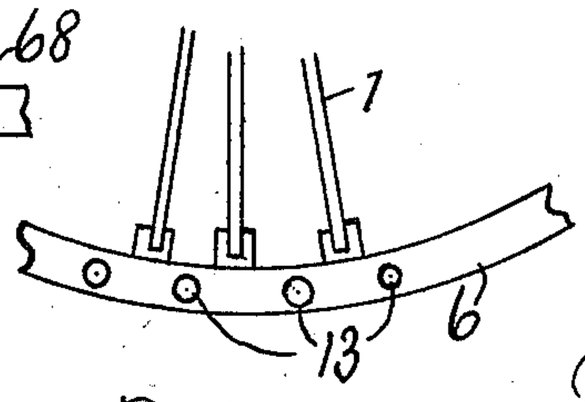



Fig. 6

Inventor,

V. L. Helm,

By A. L. Jackson,

Attorney.

# UNITED STATES PATENT OFFICE.

VIRGIL L. HELM, OF FORT WORTH, TEXAS, ASSIGNOR TO J. H. REGAL, OF FORT WORTH, TEXAS.

## ADVERTISING-MACHINE.

989,969. Specification of Letters Patent. Patented Apr. 18, 1911.

Application filed November 15, 1909. Serial No. 528,232.

*To all whom it may concern:*

Be it known that I, VIRGIL L. HELM, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and Improved Advertising-Machine, of which the following is a specification.

This invention relates to advertising machines, and more particularly to machines which display cards or plates containing advertising matter, either printed or pictorial, and the object is to provide a machine which will automatically display advertising cards or plates for predetermined periods of time and that will continue displaying a series of cards automatically until the motor power stops.

Other objects and advantages will be fully explained in the following description, and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings, which form a part of this application and specification.

Figure 1 is a front elevation of the complete machine. Fig. 2 is a side elevation of the same, and Fig. 3 is a horizontal or plan view below the line *x*—*x* of Fig. 1. Fig. 4 is a plan view of one of the lifting slides and the mechanism for lifting the slide. Fig. 5 is a plan view of the vertically disposed drum which carries the advertising plates or cards. Fig. 6 is a broken, inverted view of the advertising drum, showing the series of holes or perforations in the rim for regulating the time during which the plates are held exposed in view. Fig. 7 is a detail view of the card or plate lifting slide, being a side elevation, and also a broken edge view. Fig. 8 is a detail view, partly in section, of the lifting slide and the mechanism for lifting the slide and also for lowering the slide. Fig. 9 is a detail plan view of one of the sprocket chains, which carries the lifting trips. Fig. 10 is a detail view, being a horizontal section of a guide box for one of the sprocket chains, showing also the releasing mechanism which permits the plate carrying drum to rotate on its axis. Fig. 11 is an end view of the rocker-shaft by which the tripping rod is drawn from the said drum. Fig. 12 is a detail view, showing the manner of mounting the coil spring for driving the plate carrying drum. Fig. 13 is a detail view, illustrating the manner of elevating the lifting slides.

Similar characters of reference are used to indicate the same parts throughout the several views.

This machine is provided with an upright frame composed of posts 1 which are connected by suitable cross beams 2, 3 and 4. A center bearing beam 5 is attached to the cross beams 3. A rotating drum 6 is provided with a spindle 7 which has a socket in the bearing beam 5 and in the frame piece 8 at the top. The drum has grooved upright bars 9 attached to the inside of the rim and the drum has a central cylindrical portion 10 in which there are vertical grooves corresponding to the vertical grooves in the uprights 9. There may be any number of these grooves and a corresponding number of the grooved uprights 9. The advertising plates or cards 11 are vertically disposed in the two sets of grooves above mentioned. The drum is driven by a spiral spring 12 which is attached to the spindle 7 of the drum and to a frame piece 68. This spring is similar to the main spring of a watch or clock and is wound up whenever the drum has rotated sufficiently to release all the tension of the spring. This spring drives the drum. This drum moves periodically and the moving of the drum is determined by a series of holes 13 in the bottom of the rim or cylinder 6 and a spring actuated rod 14. A spring 15 is attached to a frame piece 16 and to the rod 14 by means of a collar 17 thereon. The tendency of the spring 15 is to hold the rod in one of the perforations 13 in the bottom rim of the drum. Means are provided for withdrawing the rod 14 from the perforations 13 periodically. Such means will be fully explained hereinafter.

The machine is provided with a motor 18 which may be supplied with power from any suitable source by wires 19 which lead to a supply source of electricity. The motor 18 drives a shaft 20 which shaft 20 drives a pulley 21. The pulley 21 drives a larger pulley 22 by means of a belt 23. The pulley 22 drives a small pulley 24 and the pulley 24 drives a large pulley 25 by means of a belt 26. The pulley 25 drives a small pulley 27 and the pulley 27 drives a small pulley 28 by means of a belt 29. The pulley 28 drives a shaft 30. The shaft 30 drives a sprocket wheel 31 and this sprocket wheel 31 drives sprocket chain 32. This sprocket chain 32 drives a sprocket wheel 34 on shaft 33 at the other side of the machine. The power is thus transmitted from one side of the machine by the motor 18 and the series of pulleys above described to the other side of the machine and then transferred back to the initial side by the sprocket chain 32. The object of the motor and the series of pulleys and the sprocket chain 32 is to drive the shafts 30 and 33 constantly. Sprocket wheels 35 and 36 are mounted on the shaft 33 and sprocket chains 37 and 38 are driven by the sprocket wheels 35 and 36 respectively. Sprocket chains 39 and 40 are driven by the shaft 30. The machine is provided with lifting slides 41 and 42, which are moved vertically and held in vertical alinement by guides 69. The chains 39 and 40 are provided with pivoted lifting trips 43. Upright frames composed of posts 44 and 45 are mounted vertically in the machine and sprocket wheels 46 and 47 are journaled in uprights 44 and sprocket wheels 48 and 49 are journaled in the upright 45. The chain 40 runs over the sprocket wheels 46 and 47 (which wheels are mere idlers or guide sprockets) and the portion of the chain 40 between the uprights 44 and 45 is moving upwardly. The chain 38 runs over idle sprocket wheels 48 and 49 and the portion of the chain 38 between the uprights 44 and 45 is moving downwardly. The portion of chain 40 between the uprights 44 and 45 runs against the upright 44 so that the pivoted trips 43 are held in vertical alinement with the upright 44, and thus the trips 43 provide lifting devices for the slide 41. As the trips 43 pass from under the sprocket wheel 47 they engage the slide 41 in the notch or groove 50 at the lower edge of the slide and thus force the slide upward. This carries the slide on up to the top of the upright 44 and as soon as the lower ends of the trips 43 pass above the shoulder 52 of the upright 44 the pivoted trips 43 will tilt and thus release the slide 41. At the same time, as soon as the trips 43 release the slides 41 spring bolts 53 drop in the perforations 54 in the slides. These spring bolts are mounted in boxes 55 which are attached to the tops of uprights 44.

A spring 56 forces the bolt 53 in the perforations 54 of the slide. This will hold the slide upward or elevated until the bolts 53 are shoved out of the perforations 54. The other sprocket chain 38 has a projecting lug 57 which is timed to release the slide 41 from the bolt 53. As the chain 38 passes over the sprocket wheel 48 the lug 57 will shove the bolt 53 out of the slide 41 and thus allow the slide to descend. The slide would descend by gravity, but the lug 57 will insure a positive descent of the slide 41. The descending portion of the chain 38 moves against a block 58, but the chain will yield or bend after passing the lower end of the block 58 and thus allow the lug 57 to be withdrawn from the perforation 54 of the slide 51. Thus a positive lift is provided for the slide 41 and a positive means for lowering the slide 41 is provided. The two chains will thus alternately raise the slide 41 and lower the same at regular intervals. These slides 41 have lug 59 at their upper ends which engage the plates 11.

Attention is called to the fact that slides 41 and 42 are mounted on opposite sides of the machine so that two plates 11 will be raised at the same time, thus providing two displays at the same time. The drum 6 would turn continually until the motor spring had expended its tension, but means are provided for checking the rotation of the drum long enough for the display of two slides. This is accomplished by the rod 14. Means are provided for withdrawing the rod 14 from the perforations 13 in the bottom part of the drum periodically. The sprocket chain 40 has a laterally projecting lug 60. This chain 40 runs through a guide box 61 so that the chain must run at certain position as it goes through the box 61. A rocker-shaft 63 has a lug 64 which projects loosely through the lower end of the rod 14, and this rocker-shaft 63 has another projecting lug 65 which normally stands vertically disposed. This rocker-shaft 63 is journaled close to the box 61 and the lug 65 projects upwardly through the bottom of the box, the box having a slot therein for the operation of this lug 65. As the chain 40 moves along the lug 60 will strike the lug 65 of the rocker-shaft and turn the same approximately forty-five degrees. This turning of the rocker-shaft 63 will draw the same downwardly and thus release the drum 6 so that the drum will turn, but the lug 60 will immediately release the lug 65; consequently the spring 15 will draw the rod 14 up against the bottom of the drum 6 so that the rod 14 will engage the next perfo-

ration 13 that moves around to the rod 14. The display cards are thus exposed to view systematically and in series.

In order to attract attention two clownish or comic figures representing two men are arranged on the top of the machine with their hands projecting in the paths of the display cards. As the display cards are forced upwardly they engage the hands of these comic figures and shove the comic figures to upright positions. As soon as the display cards or plates start downward the comic figures fall by gravity with the descent of the cards or display plates, and thus the machine has the appearance of two comic figures reaching down and drawing up the display cards or plates and shoving them back down into the drum. The machine may be decorated in any suitable manner with electric lights 66 or with any other suitable decorating means. The operating mechanism and the drum 6 may be entirely concealed from view by side casings 67 so that nothing but the display cards will be noticed in the operation of the machine.

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

1. An advertising machine having a vertically disposed rotating drum, display cards loosely mounted therein, means for rotating said drum, means operating through an end of the drum at opposite sides thereof for lifting said cards vertically through the opposite end of said drum, and means for checking the rotation of said drum temporarily while said cards are being elevated.

2. An advertising machine having a vertically disposed rotating drum provided with vertical ways therein, display cards loosely mounted therein, means for simultaneously elevating and lowering cards on opposite sides of said drum periodically, and means for checking the rotation of said drum while said cards are being elevated and lowered.

3. An advertising machine having a vertically disposed rotating drum provided with vertical ways therein, display cards mounted loosely therein, slides below opposite sides of said drum for engaging two of said cards at a time to raise the same periodically, means for elevating and lowering said slides, and means for checking the rotation of said drum while said slides are being elevated and lowered.

4. An advertising machine having a rotating drum provided with perforations in the lower end thereof, display cards mounted loosely in said drum, means for elevating and lowering said cards, a spring-actuated rod adapted to engage one of said perforations at a time for checking the rotation of said drum temporarily, and means for withdrawing said rod from said perforation.

5. An advertising machine having a rotating drum, display cards mounted loosely in said drum, slides for elevating one or more of said cards, driven sprocket chains carrying trips for lifting said slides, driven sprocket chains carrying lugs for lowering said slides, and means for checking the rotation of said drum temporarily and periodically.

6. An advertising machine having a vertically disposed rotating drum, display cards mounted loosely in said drum, slides operating through opposite sides of said drum for elevating one or more of said cards, driven sprocket chains carrying trips to lift said slides, means for guiding said trips while lifting said cards, driven sprocket chains carrying lugs to lower said slides, and means for checking the rotation of said drum temporarily and periodically.

7. An advertising machine having a rotating drum, display cards mounted loosely in said drum, said drum having perforations in the lower end thereof, means for elevating and lowering said cards, a spring-actuated rod adapted to engage one of the perforations in said drum at a time to check the rotation thereof temporarily, and a driven sprocket chain carrying a lug for withdrawing said rod from said perforation.

8. An advertising machine having a rotating drum, display cards mounted loosely therein, slides for elevating one or more of said cards, means for elevating said slides, means for locking said slides elevated, and means for unlocking said slides and lowering the same.

9. An advertising machine having a rotating drum, display cards mounted loosely therein, slides for elevating one or more of said cards, driven sprocket chains carrying trips for lifting said slides, spring-actuated bolts for locking said slides elevated, and driven sprocket chains carrying lugs adapted to unlock said slides and lower the same.

10. An advertising machine having a rotating drum, display cards mounted loosely therein, slides for elevating one or more of said cards, driven sprocket chains carrying trips for elevating said slides, means for locking said slides elevated, driven sprocket chains carrying lugs adapted to unlock said slides and lower the same, a motor, and gearing operatively connected with said motor and said chains for driving said chains.

11. An advertising machine having a rotating drum, display cards mounted loosely therein, means for elevating and lowering said cards, said drum having a series of perforations in the lower end thereof, a spring-actuated rod adapted to enter one of

said perforations at a time to check the rotation of said drum temporarily and periodically, a driven sprocket chain carrying a lug for withdrawing said rod from the perforation periodically, and a guide holding said sprocket chain in position while said lug is withdrawing said rod from said perforation.

In testimony whereof, I set my hand in the presence of two witnesses, this 29th day of October 1909.

VIRGIL L. HELM.

Witnesses:
A. L. JACKSON,
MAX WESSEL.