

W. H. BENDER.
ADVERTISING NOVELTY.
APPLICATION FILED FEB. 25, 1904.

3 SHEETS—SHEET 1.

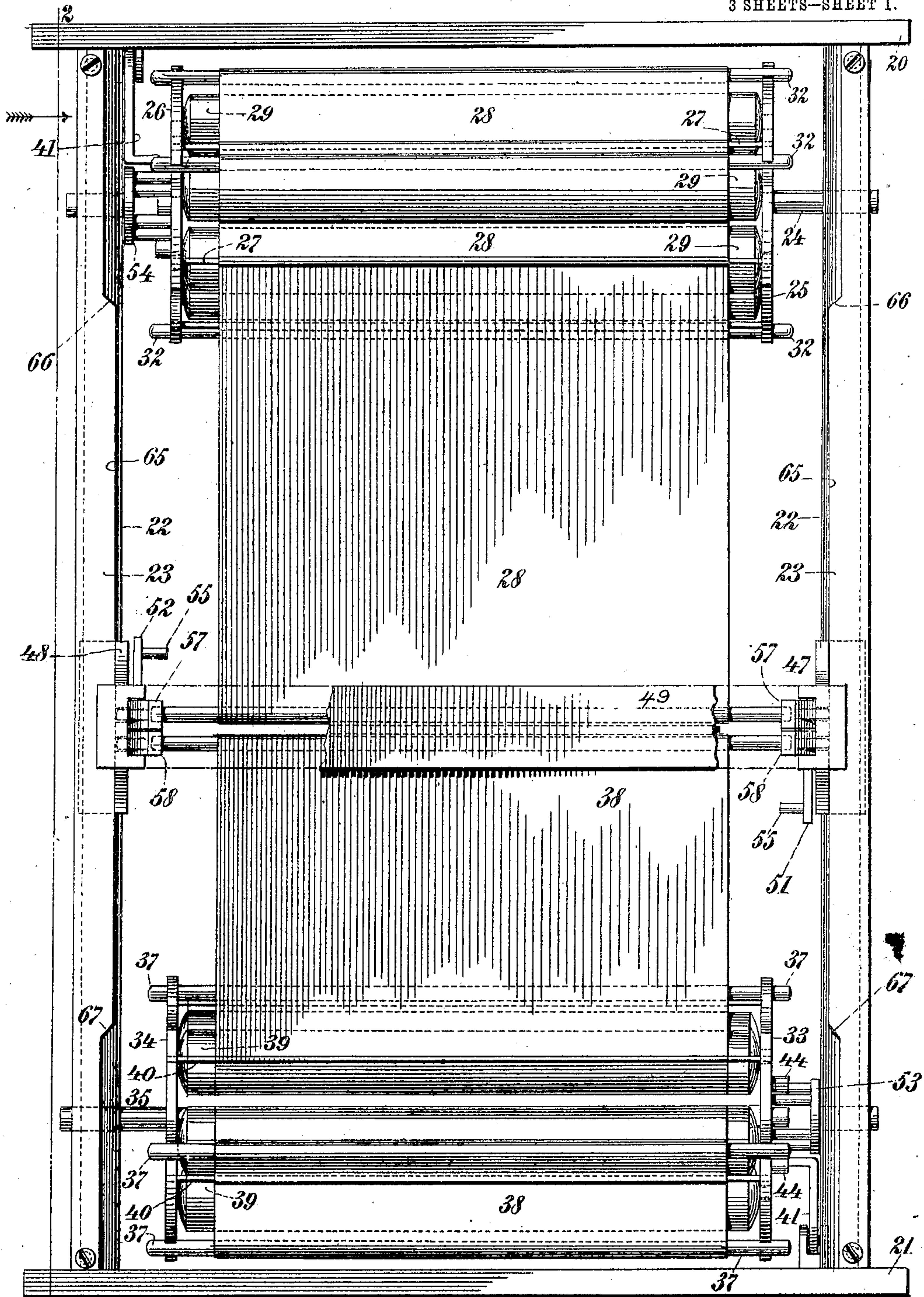


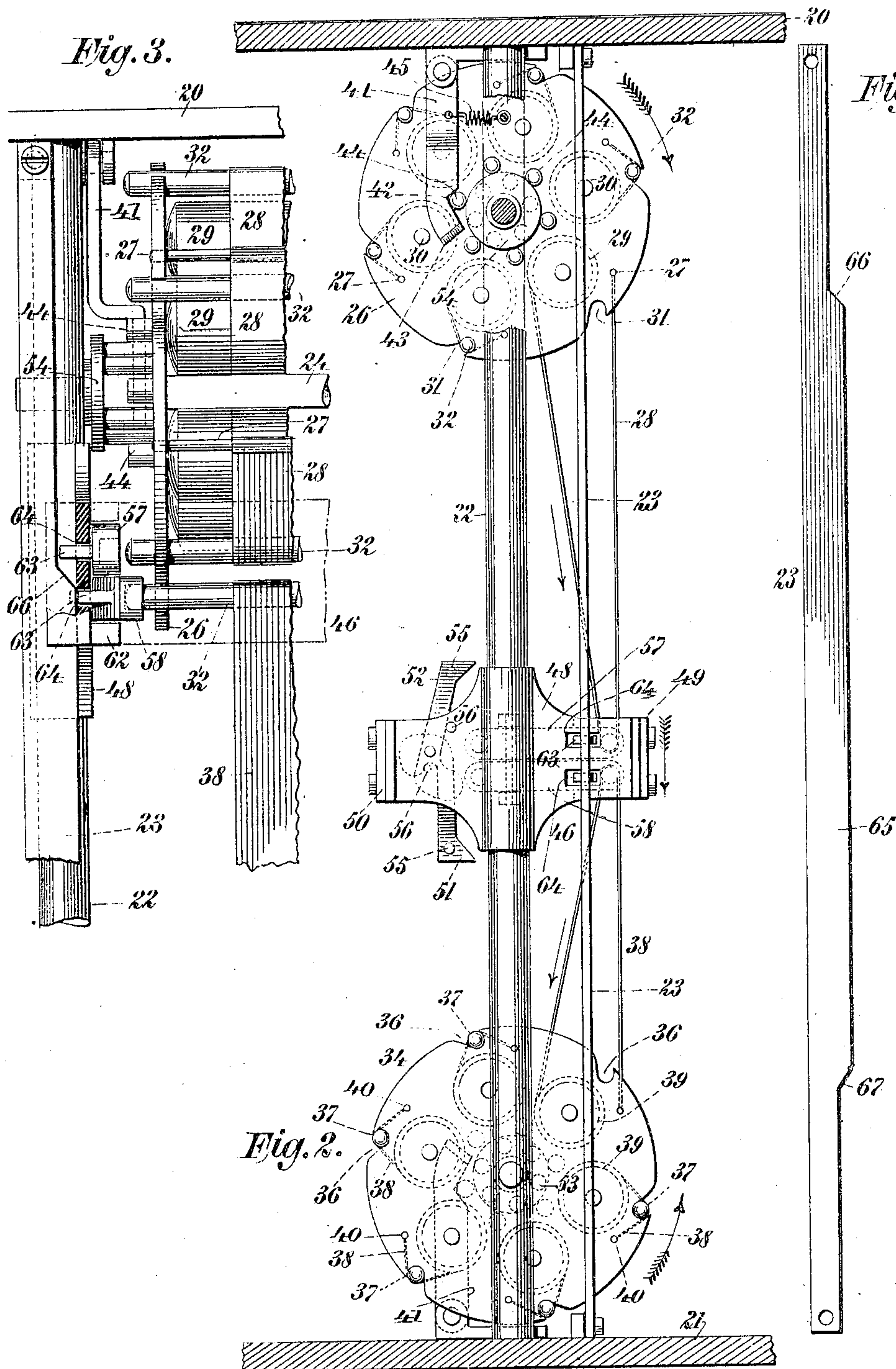
Fig. 1.

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3 SHEETS—SHEET 2.

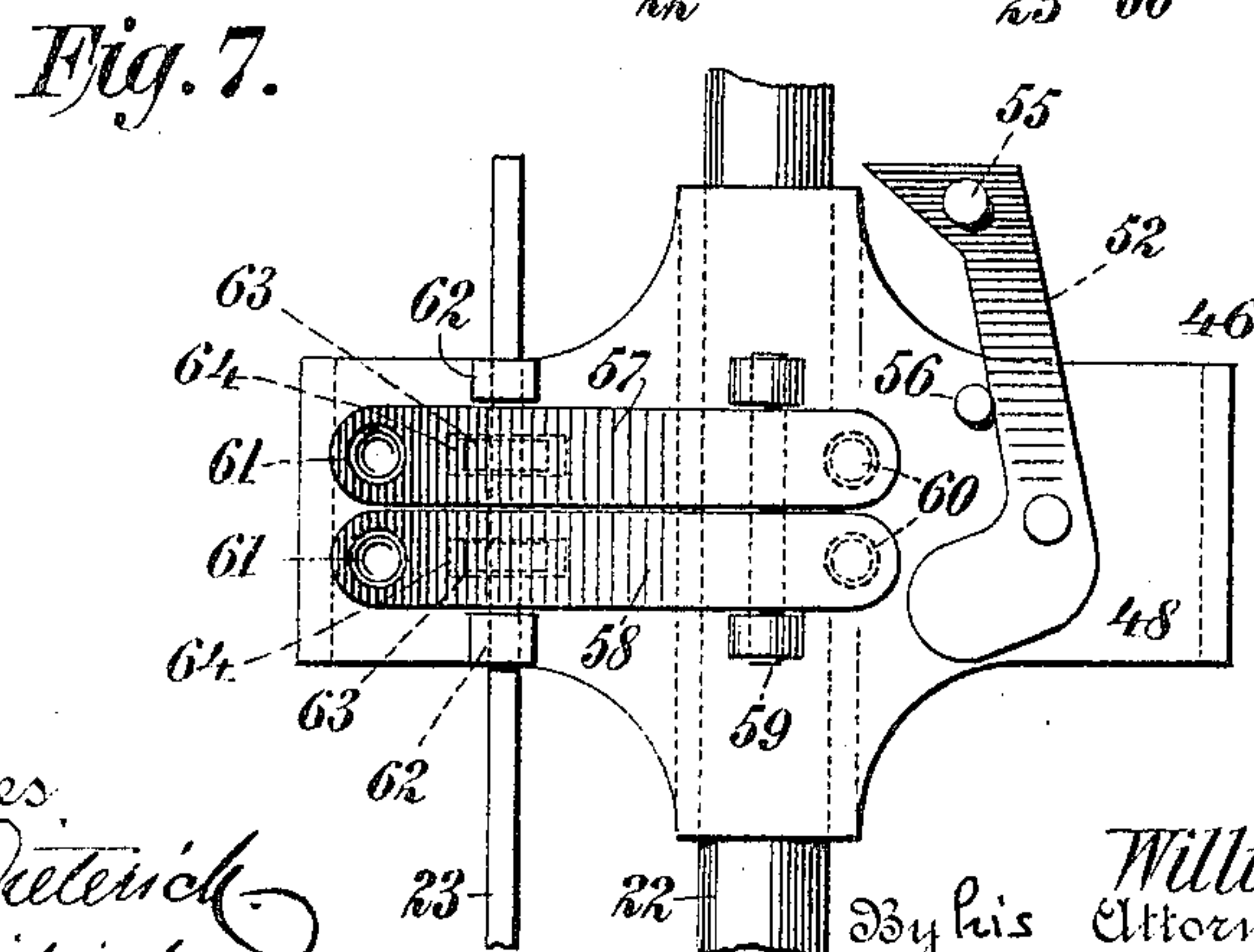
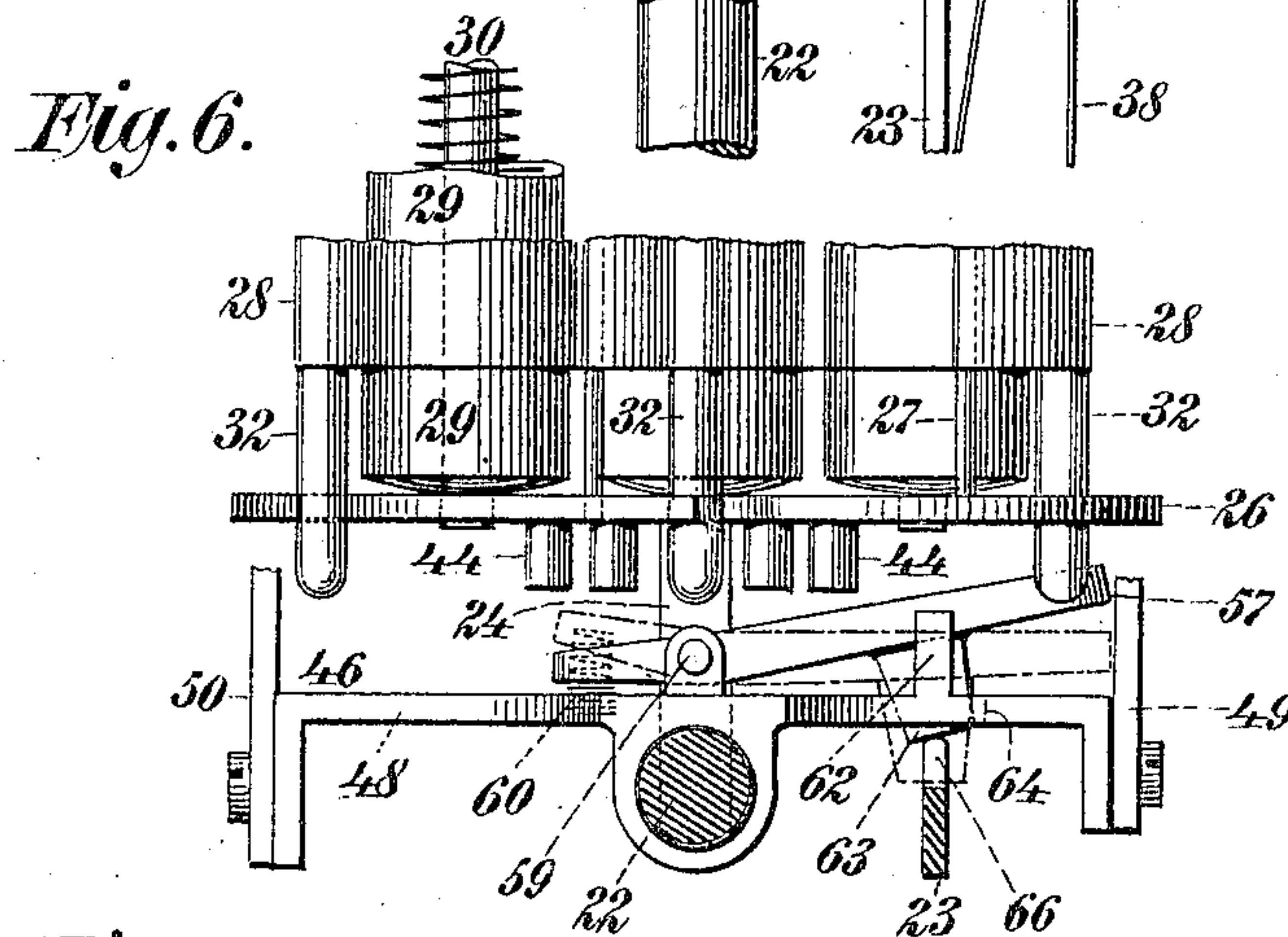
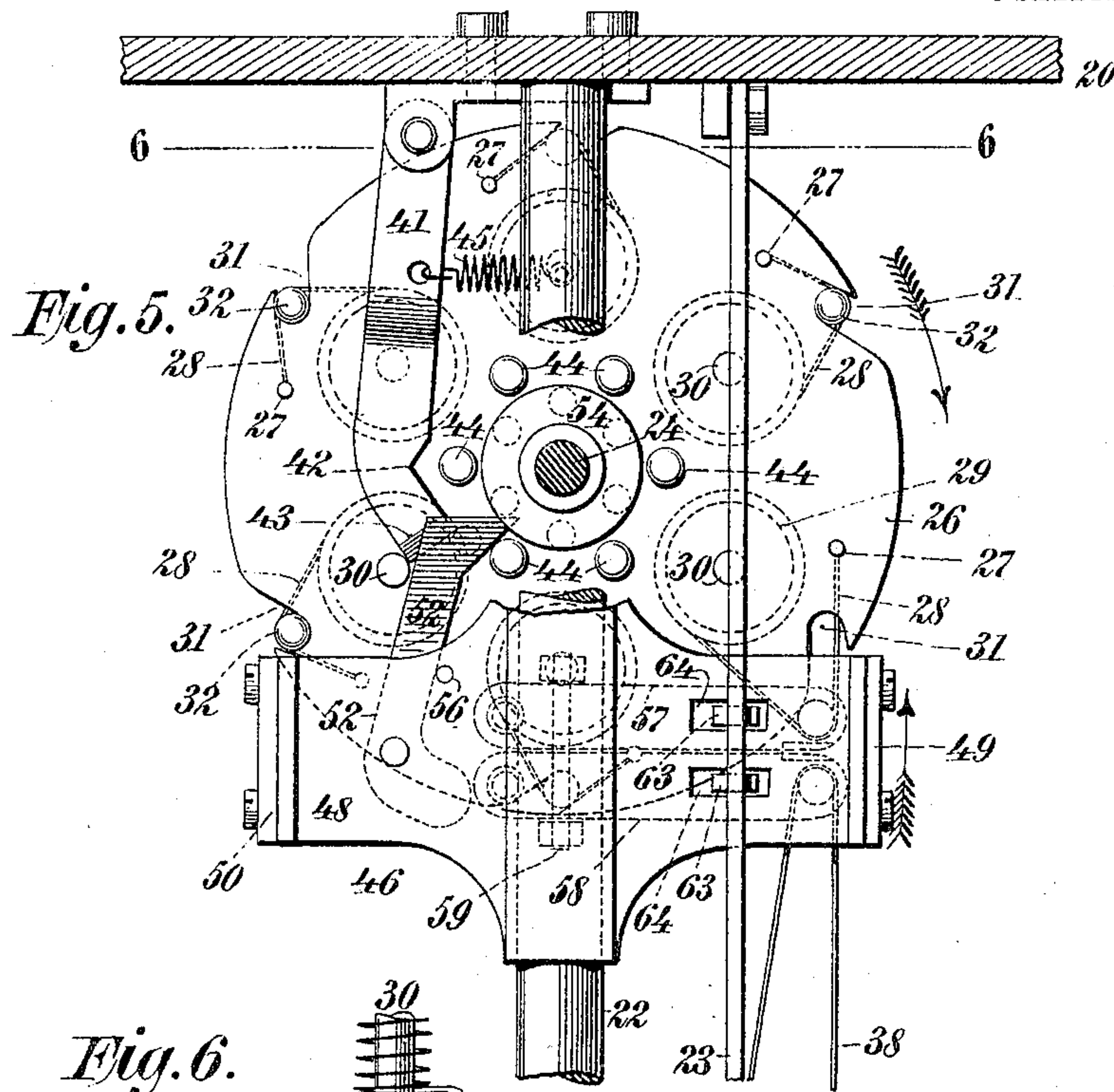


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3 SHEETS—SHEET 3.



Witnesses,
Gustave Dietrich
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UNITED STATES PATENT OFFICE.

WILLIAM HOWARD BENDER, OF BROOKLYN, NEW YORK.

ADVERTISING NOVELTY.

No. 804,372.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed February 25, 1904. Serial No. 195,154.

To all whom it may concern:

Be it known that I, WILLIAM HOWARD BENDER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Advertising Novelties, of which the following is a specification.

The invention relates to improvements in advertising novelties; and it consists in the novel features and combinations of parts hereinafter described, and particularly pointed out in the claims.

The object of the invention is to produce a machine or apparatus for the attractive display of advertising or other matter applied upon curtains to be unrolled across the front field of the machine, and in its preferred embodiment the said machine will comprise a general supporting-frame, movable carriers at the upper and lower ends of said frame, spring-rollers mounted in said carriers and having the display-curtains wound thereupon, (the outer ends of said curtains being fastened to the carriers adjacent to the said rollers,) draw-rods arranged on the curtains intermediate the rollers therefor and their outer fastened ends, a traveler adapted to be moved intermediate the groups of rolled curtains, clutches carried by said traveler for engaging when the traveler is at the lower end of its path the draw-rod of one of the curtains of the lower group and unwinding such curtain upwardly as the traveler moves to the upper end of its path, additional clutches carried by said traveler for engaging when the traveler reaches its upper position the draw-rod of one of the curtains of the upper group and unrolling said curtain downwardly as the traveler returns to its lower position to allow the curtain previously unrolled upwardly to become rewound upon its roller, and means connected with said traveler for actuating the respective roller-carriers when said traveler approaches the same to deliver an already-displayed curtain thereto to move the next curtain to be displayed to the clutches of the traveler, so that the same may be unrolled upon the succeeding movement of said traveler.

The present invention relates to the class of advertising novelties made the subject of Letters Patent of the United States No. 756,206, granted April 5, 1904, to William Howard Bender for improvements in advertising novelties, and in accordance with the present invention two novel features are presented, one being novel clutches carried by

the traveler and the other being the means provided for displaying the curtains without detaching either the curtain-roller or the outer end of the curtain from the carriers. One of the desirable features of the clutches carried by the traveler is that they cooperate with cam-rods to so firmly lock the rod or part carried by them for effecting the unrolling of the curtain that said part cannot possibly become loosened from said clutches by any jarring action, such as might take place if the apparatus were used on a car. The means presented in this application for moving the curtain-roller carriers so as to position the curtains for the clutches of the traveler correspond substantially with the means for accomplishing the same result shown in the aforesaid Letters Patent of William Howard Bender, and such means are not, therefore, specifically claimed herein.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation, partly broken away, of a display apparatus constructed in accordance with and embodying the invention, the traveler which moves between the upper and lower groups of curtains being shown in about a middle position between said groups and as traveling toward one of said groups for the purpose of delivering a curtain thereto and unrolling a curtain of the opposite group. Fig. 2 is a side elevation, partly broken away and partly in section, of same, the section being on the dotted line 2 2 of Fig. 1. Fig. 3 is an enlarged front elevation, partly in section, of the upper left-hand corner of the apparatus presented in Fig. 1. Fig. 4 is a detached front elevation of a cam-bar forming a detail of the machine and employed to cooperate with the clutches carried by the traveler. Fig. 5 is an enlarged side elevation, partly broken away and partly in section, of the upper left-hand end of the apparatus, and in this figure the traveler is shown in an upper position adjacent to the upper curtain-roller carrier. Fig. 6 is a horizontal section of same on the dotted line 6 6 of Fig. 5, and Fig. 7 is an enlarged detached elevation looking at the inner right-hand end of the traveler.

The general frame of the apparatus comprises a top plate 20, a base-plate 21, corresponding right and left hand standards 22 22, and corresponding right or left hand cam-

bars 23 23, the standards 22 affording guides for the traveler and bearings for the shafts of the upper and lower curtain-roller carriers, as hereinafter explained.

5 Immediately below the top plate 20 is mounted a rotary carrier for the upper group of spring curtain-rollers, said carrier comprising a shaft 24, mounted in apertures in the standards 22, the disk-plates 25 26 secured
10 on said shaft, and rods 27, to which the outer ends of the curtains 28 are fastened, said rods 27 being at their ends held in equally-spaced apertures in said plates 25 26 and said curtains 28 being normally wound upon the
15 spring-rollers 29 of ordinary construction, whose shafts 30 are held in apertures in said plates 25 26, as shown. The rollers 29 may turn upon their shafts, and the usual springs for the said rollers, which are hollow, are se-
20 cured at one end to the roller and at the other end to the shaft. The disk-plates 25 26 are formed at their peripheries with equally-spaced notches or recesses 31 to detachably hold draw-rods 32, there being one rod 32 for
25 each curtain 28 and the recesses 31 for each rod 32 being on a plane intermediate the curtain-roller 29 and the rod 27, to which the outer end of the curtain is fastened, whereby the draw-rod 32 while in its recess 31 is held
30 in a loop or bight formed in and adjacent to the outer end of the curtain, as clearly illustrated at the left-hand portion of Figs. 2 and 5. The tension of the spring curtain-rollers is relied upon, acting through the curtains,
35 to normally retain the draw-rods 32 within the recesses 31.

The curtains carried by the plates 25 26 constitute the upper group of curtains, and at the lower end of the general frame of the appara-
40 tus is provided a corresponding group of curtains, the carrier at the lower end of said frame comprising disk-plates 33 34 and shaft 35, the latter being mounted in apertures in the standards 22 and said plates 33 34 being provided on
45 their peripheries with recesses 36 for the lower set of draw-rods 37. The lower curtains are denoted by the numeral 38 and are upon spring-rollers 39, corresponding with the upper rollers 29, and have their outer ends fas-
50 tened to rods 40 correspondingly with the curtains 28 at the upper portion of the apparatus. The shafts of the lower set of curtain-rollers 39 are held in apertures in the plates 33 34.

The upper curtain-roller carrier corre-
55 sponds substantially with the lower curtain-roller carrier, and said upper carrier turns downwardly and toward the front of the apparatus, while the lower curtain-roller carrier turns upwardly and toward the front of the
60 apparatus, as indicated by the arrows in Fig. 2.

The upper and lower curtain-roller carriers are designed to have an intermittent rotary motion, and the means I provide for yield-
65 ingly locking the carriers at the end of each of

their movements comprise for each carrier the pivoted latch 41, having near its end a notch 42 and at its end an inclined lip 43, said notch 42 being adapted to engage the pins 44, secured to and projecting outwardly from the
70 plates 26 33, respectively, of the carriers. The latch 41 is given a normal spring-tension toward the pins 44 by means of a coiled spring 45. The latch 41, pins 44, and spring 45 are
75 substantially identical with like means provided for a like purpose in the apparatus made the subject of the aforesaid Letters Patent of William Howard Bender, and hence the said devices are not specifically claimed herein and
80 require no elaborate description.

The traveler (numbered as a whole 46) comprises end frames 47 48, vertically apertured to slide and be guided upon the standards 22, the said frames 47 48 being connected by
85 bars 49 50, so that they may move in unison.

The traveler 46 carries the means for imparting the intermittent movements to the upper and lower roller carriers, so as to position the curtain-rollers and draw-rods, and also the clutch or locking means for engaging the
90 draw-rods 32 37 and withdrawing them from the carriers, so as to effect the unrolling of the curtains 28 38 in the manner represented in Fig. 2. The means presented for positioning the curtains by imparting intermittent rotary
95 movements to the upper and lower carriers are substantially identical with the means for accomplishing the like purpose shown and described in detail in the aforesaid Letters Patent of William Howard Bender, and the said means
100 comprise pivoted dogs 51 52, carried by the traveler-frames 47 48, respectively, and lantern-wheels 53 54, secured to the carriers, respectively, the dog 51 extending downwardly and the dog 52 extending upwardly and said
105 dogs, respectively, having inwardly-extending pins 55 to engage the lips 43 of the latches 41 for the purpose of moving said latches outwardly on their pivots, Fig. 5, to permit the rotation of the carriers under the pressure of
110 said dogs against the said lantern-wheels, as described in the aforesaid Letters Patent of William Howard Bender. The dogs 51 52 are weighted and are aided in maintaining a substantially vertical position by means of
115 small stop-pins 56 of known character. The pins 55, carried by the dogs 51 52, ride against the lips 43 of the latches 41 to press said latches outwardly, Fig. 5, and said pins 55 when receding from the carriers ride upon
120 the opposite surfaces of said lips—that is, upon the upper surface of the upper lip 43 and the lower surface of the lip for the lower latch 41.

The traveler-frames 47 48 carry locking
125 clutch-bars 57 58, there being in the present instance two of these bars secured to each of said frames, the lower bars 58 to engage and withdraw the draw-rods 37 of the lower-roller carrier and the upper bars 57 to withdraw the
130

draw-rods 32 from the upper-curtain-roller carrier. The bars 57 58 correspond with each other, and, as more clearly shown in Figs. 5, 6, and 7, the said bars are secured upon vertical pivots 59, so that they may have a hinged movement when necessary. Behind the shorter arms of the bars 57 58 are provided coiled springs 60, which tend to move the outer and longer arms of said bars in a direction toward the inner faces of the frames 47 48, as indicated by the dotted lines in Fig. 6. At their outer ends the bars 57 58 are formed with recesses 61, Fig. 7, to pass upon the ends of the draw-rods 32 37, and the said bars 57 58 are sustained against vertical strains by means of inwardly-extending upper and lower lugs 62, integral with the frames 47 48, and by studs 63, which are confined within apertures 64, formed in said frames 47 48. The bars 57 58 cooperate with the vertical cam or locking-bars 23, which are substantially parallel with and to the front of the standards 22, where said bars 23 stand in line with the studs 63 of the bars 57 58, as clearly illustrated in Figs. 2, 5, and 6. When the bars 57 58 are in motion or at rest intermediate the upper and lower curtain-roller carriers, the inwardly-projecting portion (numbered 65 in Fig. 4) of the cam-bars 23 will maintain the outer or longer arms of the bars 57 58 at their inward position, (represented by solid lines in Fig. 6,) and when the bars 57 pass upwardly beyond the said surfaces 65 of the bars 23 they will under the action of the springs 60 ride over the upper inclined cam surfaces or shoulders 66 of the bars 23 and move outwardly to the position indicated by dotted lines in Fig. 6 and solid lines in Fig. 3, thus freeing themselves from the draw-rod 32 previously held by them and assuming a condition in which they can grasp the next draw-rod 32, positioned for them upon the succeeding descent of the traveler 46. The bars 57 do not release a rod 32 at a definite point and come to a stop there and at once descend from such point with another rod. The bars 57 release a rod 32 while on the shoulders 66 of the cam-bars 23, and the traveler 46 after the bars 57 release such rod 32 moves slightly farther upwardly to turn the carrier and cause the latter to bring another rod 32 downwardly to position in line with the shoulders 66, so that said rod may be taken by the bars 57 when the latter again ride on the shoulders 66 during the early part of the descent of the traveler 46. At the lower ends of the projecting surfaces 65 of the bars 23 are the outwardly-inclined cam or shoulder surfaces 67, which when the traveler is reaching its lower position permit the lower bars 58 to at their outer portions spring outwardly from the draw-rod 37 carried by them and to engage the succeeding draw-rod presented in position for them when said traveler 46 recedes upwardly from the lower-curtain-roller carrier. The projecting

portions of the bars 23 serve to lock the clutch-bars 57 58 into positive engagement with the draw-rods 32 37 and to prevent during the movement of the traveler any jarring of the draw-rods 32 37 from said bars 57 58, a positive locking device of this character being especially desirable when the apparatus is employed, for illustration, on a moving vehicle, such as a trolley-car.

In the employment of the apparatus the display-curtains being upon their rollers the traveler 46 will be moved upwardly until the upper locking-bars 57 pass upwardly above the inclined surfaces 66 of the cam-bars 23, the dog 52 during such movement imparting a limited rotary motion to the upper rotary roller-carrier to position a curtain and its draw-rod 32, and the traveler 46 will then be moved downwardly, and during the early portion of such movement the two upper locking-bars 57 will at their outer ends be moved inwardly by reason of their engagement with said surfaces 66 and carry their recesses 61 upon the ends of the draw-rod 32 then in position to be engaged by said bars 57. The continued downward movement of the traveler 46 with the upper locking-bars 57 engaging the ends of the draw-rod 32 will result in the curtain 28 being unwound, as indicated in Fig. 2, the matter on the curtain being displayed at the front of the machine. Upon the traveler 46 approaching its lower position the dog 51 carried thereby will position the lower curtain-roller carrier, and the lower locking-bars 58 will pass below the inclined surfaces 67 of the bars 23, so that their outer recessed ends may retire toward the inner surfaces of the frames 47 48. Upon the return upward movement of the traveler 46 the bars 58 will ride upon the inclined surfaces 67 of the bars 23 and have their outer ends forced inwardly thereby and their recesses 61 moved upon the ends of the draw-rod 37 then in position to be engaged by them, and thereupon during the continued upward movement of the traveler 46 the said bars 58 will carry the said draw-rod 37 with them and effect the unwinding of the curtain 38, displaying said curtain 38 across the front field of the apparatus, while at the same time the upper curtain 28 is being wound upon its roller and disappearing from view. In Fig. 2 I illustrate the traveler 46 as being on its descent, unrolling an upper curtain 28 and permitting a lower curtain 38 to become rewound upon its roller. Upon the traveler 46 reaching the lower-roller carrier the curtain-rod 37, held by the lower bars 58, will pass into its recess 36 and be released, and the lower dog 51 will immediately position the lower-curtain carrier to bring the next draw-rod thereof upwardly to be taken by the locking-bars 58 upon the succeeding ascent of the traveler 46. Upon the traveler 46 reaching its upper position the locking-bars 57 deliver the draw-rod 32 held by them to its recesses

31 of the carrier, and the dog 52 actuates the carrier to move the next succeeding draw-rod 32 downwardly into position to be taken by the upper locking-bars 57 upon the following descent of said traveler 46. Thus during the employment of the apparatus the traveler while in motion will be engaged in unwinding one of the curtains of one group and permitting the rewinding of a curtain of the other group.

In the form of the apparatus shown neither the curtain-roller nor the outer end of the curtain will leave the carrier, and while this is a desirable feature of the construction I do not limit all parts of my invention to such feature.

In any instance in which it may be desired to employ but one carrier for the curtains the traveler would only employ one set of locking-bars 57 or 58 and one positioning-pawl 51 or 52, the bars 58 and pawl 51 being omitted if there is no roller-carrier at the lower end of the apparatus and the bars 57 and pawl 52 being omitted if there is but one roller-carrier and that is located at the lower end of the general supporting-frame.

The traveler 46 may be moved by hand or may have applied to it the driving mechanism shown in the aforesaid Letters Patent of William Howard Bender or any other suitable mechanism for imparting movement to it.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A display apparatus comprising a general supporting-frame, and a traveler adapted to be moved intermediate the ends of said frame, combined with a spring-roller with a curtain thereon at the end of said frame, means adjacent to said roller for securing the outer end of the curtain, a draw-rod intermediate the said roller and the outer end of said curtain and engaging said curtain, and means carried by said traveler in engagement with the ends of said rod for causing the said rod to follow said traveler and thus effect the unrolling and rewinding of said curtain; substantially as set forth.

2. A display apparatus comprising a general supporting-frame, and a traveler adapted to be moved intermediate the ends of said frame, combined with a spring-roller with a curtain thereon at one end of said frame, means adjacent to said roller for securing the outer end of said curtain, a draw-rod intermediate the said roller and the outer end of said curtain and engaging said curtain, a spring-roller with a curtain thereon at the other end of said frame, means adjacent thereto for securing the outer end of said second curtain, a draw-rod intermediate said second roller and the outer end of its curtain and engaging said curtain, and means carried by said traveler in engagement with the ends of both of said draw-rods for causing the same to follow said traveler and thus effect the al-

ternate unrolling and rewinding of said curtains, one curtain being unrolled while the other is rewound; substantially as set forth.

3. A display apparatus comprising the general supporting-frame, a group of spring-rollers with curtains thereon at opposite ends of said frame, carriers for said rollers and to which the outer ends of said curtains are fastened, and a draw-rod for each of said curtains, said draw-rod for each curtain being in engagement with the same intermediate its roller and outer end, combined with a traveler adapted to be moved intermediate said groups of rollers, means carried by said traveler for automatically engaging the draw-rod of one curtain of one of said groups when said traveler is at one end of its path for causing the same to follow said traveler during its movement from said group to unroll the curtain, and means carried by said traveler for automatically engaging a draw-rod of one curtain of the other of said groups when said traveler is at the other end of its path for causing the same to follow said traveler during its movement from said group to unroll the curtain; substantially as set forth.

4. A display apparatus comprising the general supporting-frame, a group of spring-rollers with curtains thereon at opposite ends of said frame, carriers for said rollers and to which the outer ends of said curtains are fastened, and a draw-rod for each of said curtains, said draw-rod for each curtain being in engagement with the same intermediate its roller and outer end, combined with a traveler adapted to be moved intermediate said groups of rollers, means carried by said traveler for automatically engaging the draw-rod of one curtain of one of said groups when said traveler is at one end of its path for causing the same to follow said traveler during its movement from said group to unroll the curtain, means carried by said traveler for automatically engaging a draw-rod of one curtain of the other of said groups when said traveler is at the other end of its path for causing the same to follow said traveler during its movement from said group to unroll the curtain, and means for actuating said carriers to successively position said curtains and bring said draw-rods to position to be taken one after another by the traveler mechanism when the traveler reaches the ends of its path; substantially as set forth.

5. A display apparatus comprising the general supporting-frame, a group of spring-rollers with curtains thereon at one end of said frame, carriers for said rollers and to which the outer ends of said curtains are fastened, and a draw-rod for each of said curtains, said draw-rod for each curtain being in engagement with the same intermediate its roller and outer end, and said carriers having recesses to normally position said rods, combined with a traveler adapted to be moved toward

and from said group, means carried by said traveler for automatically engaging the draw-rod of one of said curtains when said traveler is at one end of its path for causing the same to follow it during its travel from said group to unroll the curtain, and means for actuating said carrier to successively position said curtains and bring said draw-rods to position to be taken one after another by the traveler mechanism when the traveler reaches said group; substantially as set forth.

6. A display apparatus comprising a general supporting-frame, a group of spring-rollers with curtains thereon at one end of said frame, and carriers for said rollers, said curtains each having a rod connected therewith, and at its ends projecting beyond the same, combined with a traveler adapted to be moved intermediate the ends of said frame for unrolling and permitting the rewinding of said curtains, one after another, as it moves from and toward said group, pivoted clutch-bars carried by said traveler for engaging the ends of a curtain-rod for compelling said rod to follow the traveler and effect the unrolling of the curtain, cams for locking said bars and rod in positive engagement with each other during the movement of the traveler to unroll and permit the rewinding of the curtain, means for releasing said bars from said rod when the traveler returns to said group, and means for actuating said carrier to successively position said rods to be taken one after another by said bars; substantially as set forth.

7. A display apparatus comprising a general supporting-frame, a group of spring-rollers with curtains thereon at one end of said frame, and carriers for said rollers, said curtains each having a rod connected therewith and at its ends projecting beyond the same, combined with a traveler adapted to be moved intermediate the ends of said frame for unrolling and permitting the rewinding of said curtains, one after another, as it moves from and toward said group, clutch-bars carried by said traveler for engaging the ends of a curtain-rod to compel said rod to follow the traveler and effect the unrolling of the curtain, the cam-bars 23 for moving said clutch-bars into engagement with the curtain-rods and maintaining such engagement during the movement of the traveler to unroll and permit the rewinding of the curtains, means for releasing said clutch-bars from the curtain-rods when the curtains have been rewound, and means for actuating said carrier to successively position said rods to be taken one af-

ter another by said bars; substantially as set forth.

8. A display apparatus comprising a general supporting-frame, a group of spring-rollers with curtains thereon at one end of said frame, and carriers for said rollers, said curtains each having a rod connected therewith and at its ends projecting beyond the same, combined with a traveler adapted to be moved intermediate the ends of said frame for unrolling and permitting the rewinding of said curtains, one after another, as it moves from and toward said group, clutch-bars carried by said traveler for engaging the ends of a curtain-rod to compel said rod to follow the traveler and effect the unrolling of the curtain, the cam-bars 23 for moving said clutch-bars into engagement with the curtain-rods and maintaining such engagement during the movement of the traveler to unroll and permit the rewinding of the curtains, springs for releasing said clutch-bars from the curtain-rods when the curtains have been rewound, and means for actuating said carrier to successively position said rods to be taken one after another by said bars; substantially as set forth.

9. A display apparatus comprising a general supporting-frame, a group of spring-rollers with curtains thereon at one end of said frame, and carriers for said rollers, said curtains each having a rod connected therewith and at its ends projecting beyond the same, combined with a traveler adapted to be moved intermediate the ends of said frame for unrolling and permitting the rewinding of said curtains, one after another, as it moves from and toward said group, the pivoted clutch-bars 57 carried by said traveler for engaging the ends of a curtain-rod to compel said rod to follow the traveler and effect the unrolling of the curtain, the cam-bars 23 for cooperating with said clutch-bars and having projecting portions 65 and inclined shoulders 66, means for releasing said clutch-bars from the curtain-rods when the curtains have been rewound, and means for actuating said carrier to successively position said rods to be taken one after another by said bars; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 24th day of February, A. D. 1904.

WILLIAM HOWARD BENDER.

Witnesses:

ARTHUR MARION,
CHARLES C. GILL.