

No. 778,331.

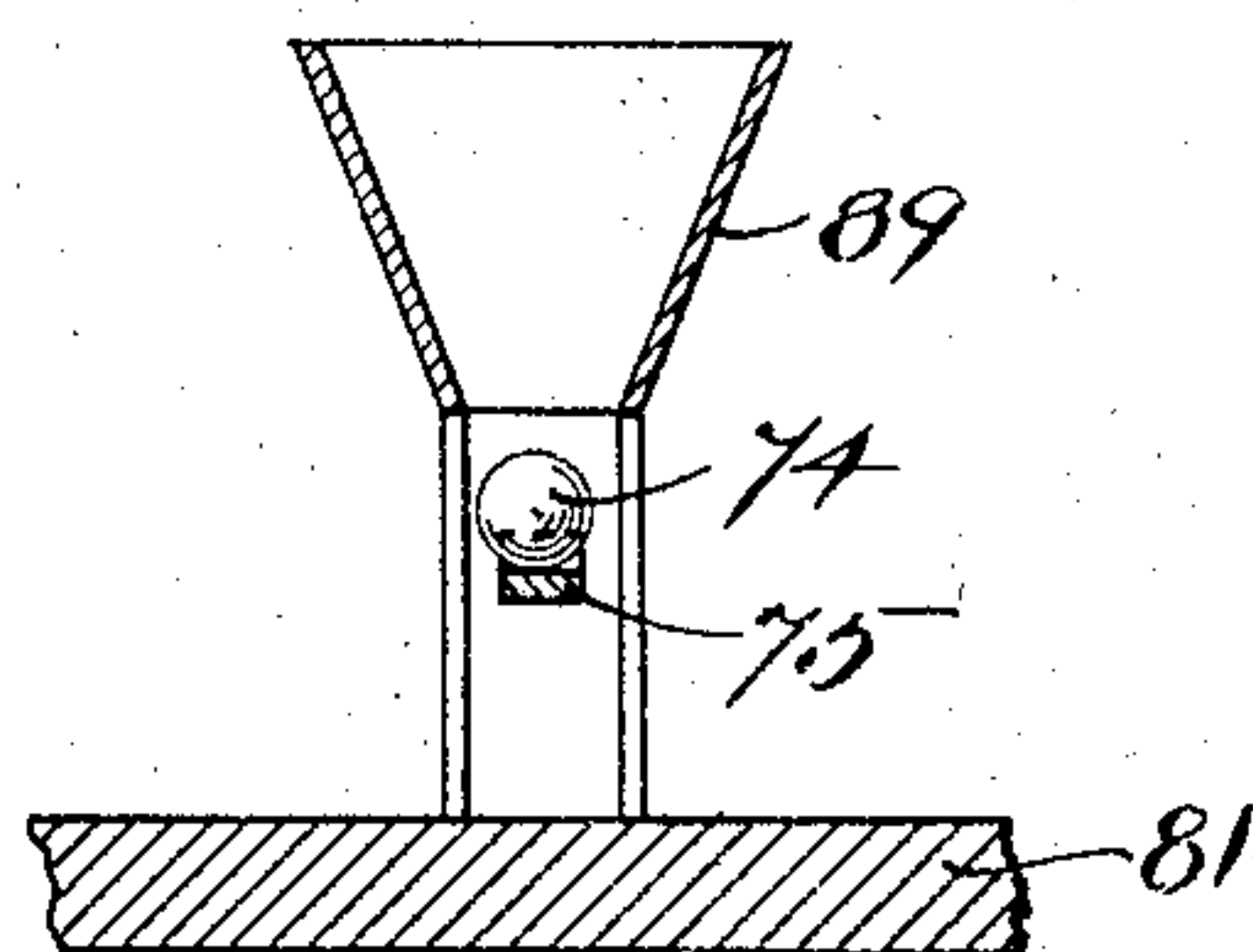
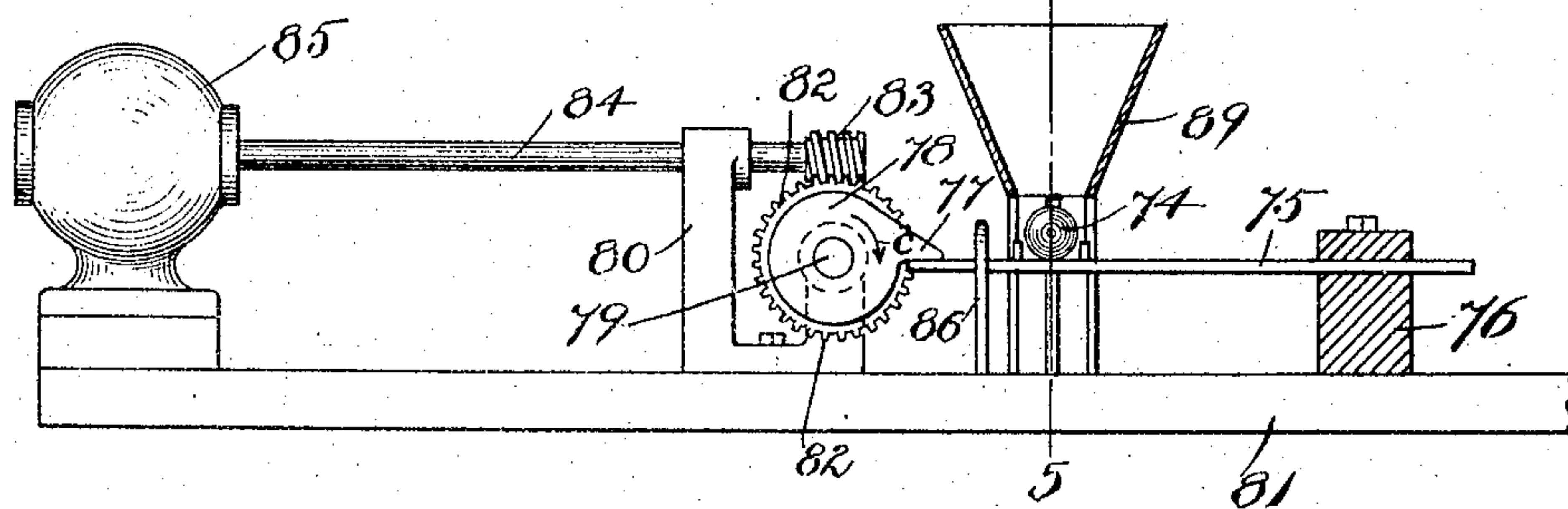
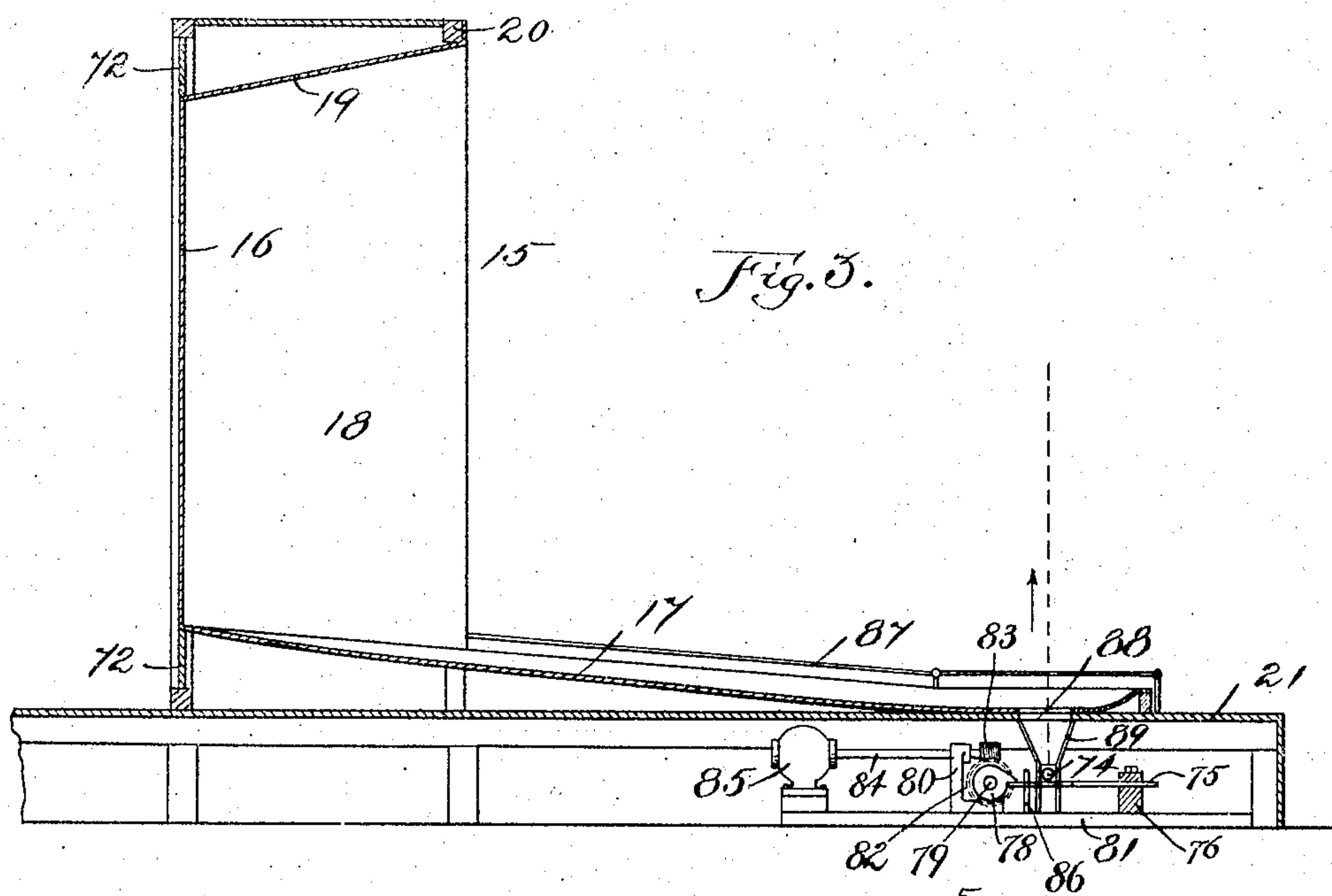
PATENTED DEC. 27, 1904.

E. F. PORTER.

BASE BALL BATTING AND REGISTERING DEVICE.

APPLICATION FILED OCT. 1, 1902. RENEWED NOV. 10, 1904.

4 SHEETS—SHEET 2.



Witnesses:

Louis A. Jones.

Franklin E. Low.

Fig. 5.

Inventor:

Edwin F. Porter

By his Attorney,

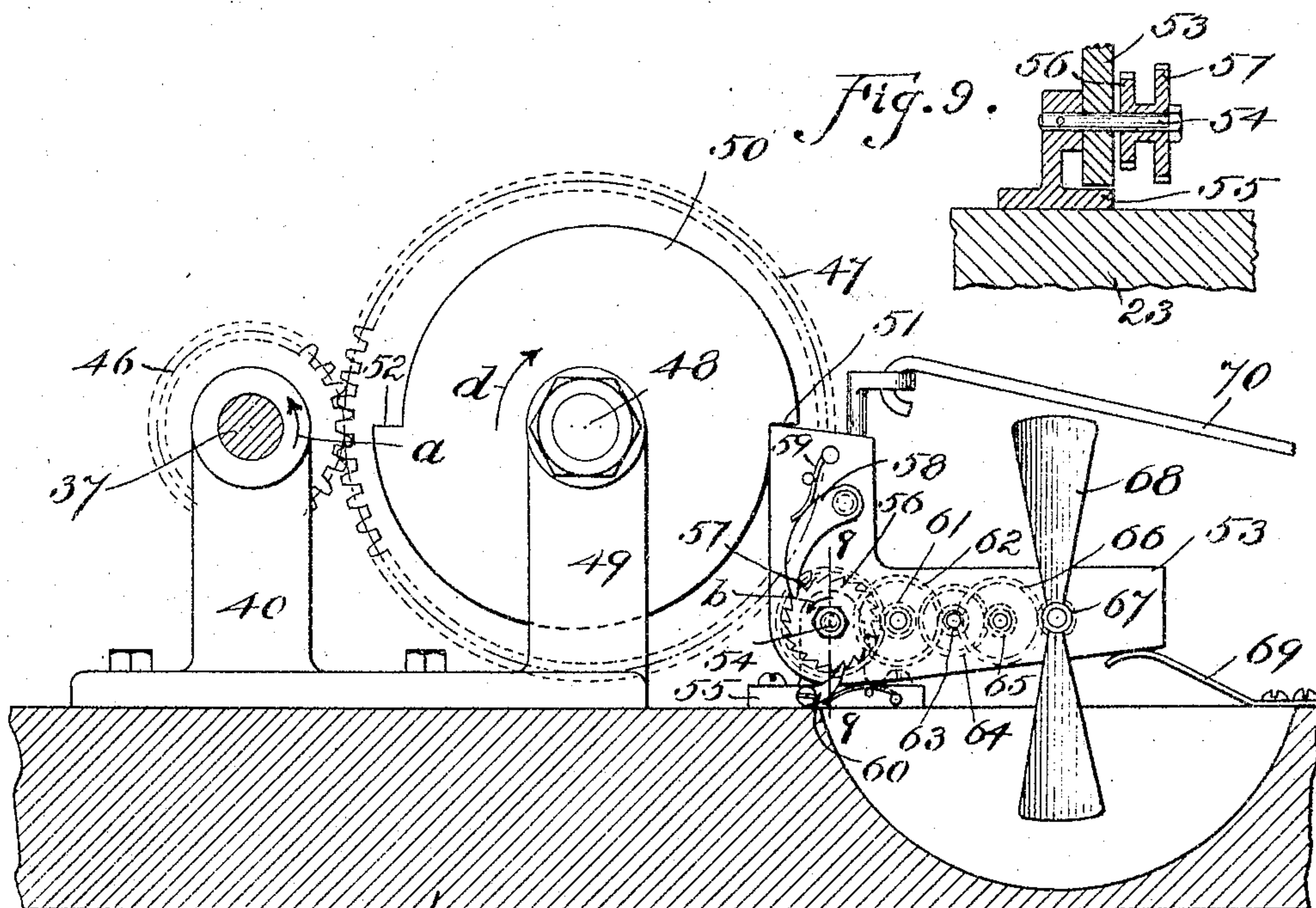
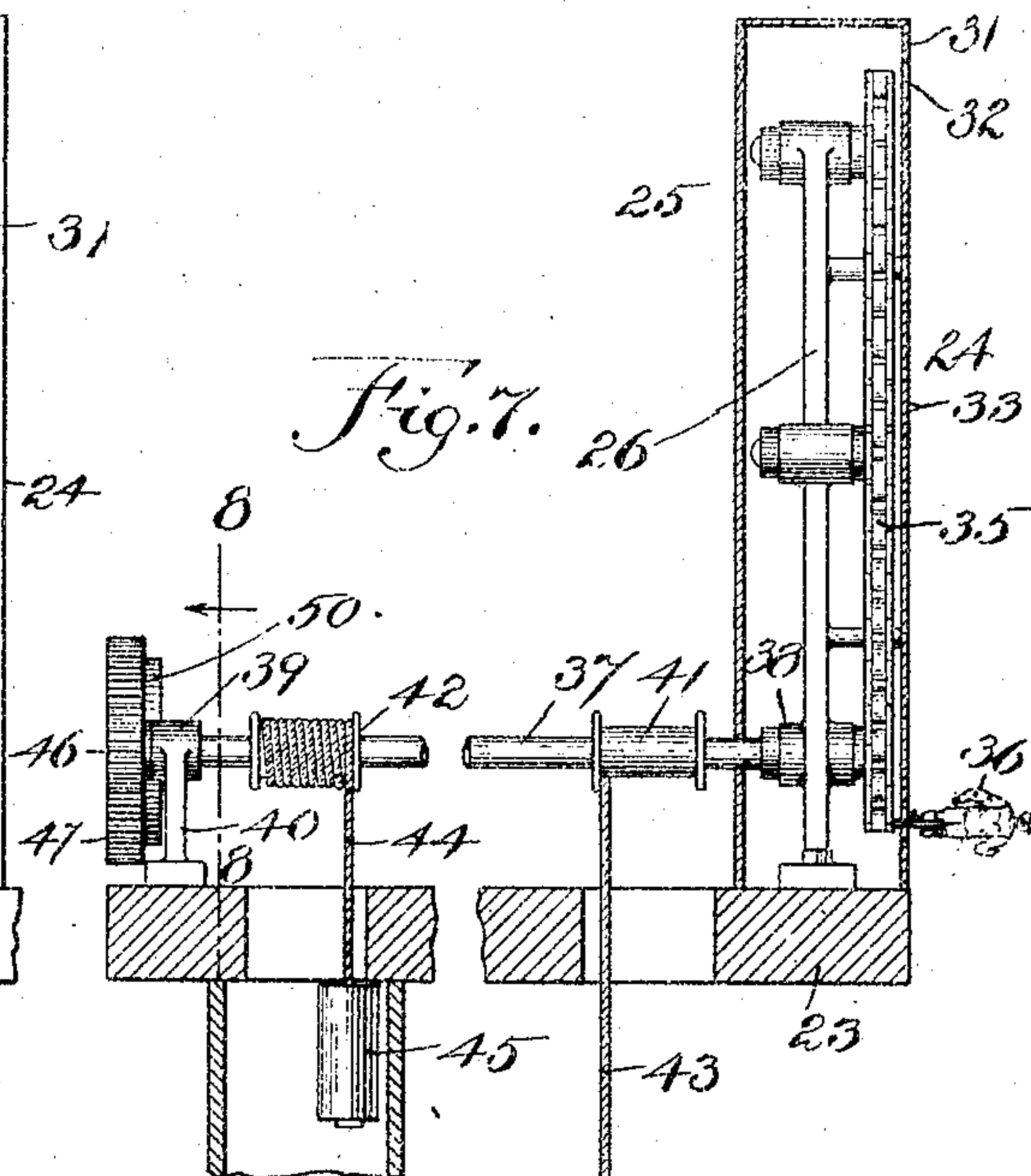
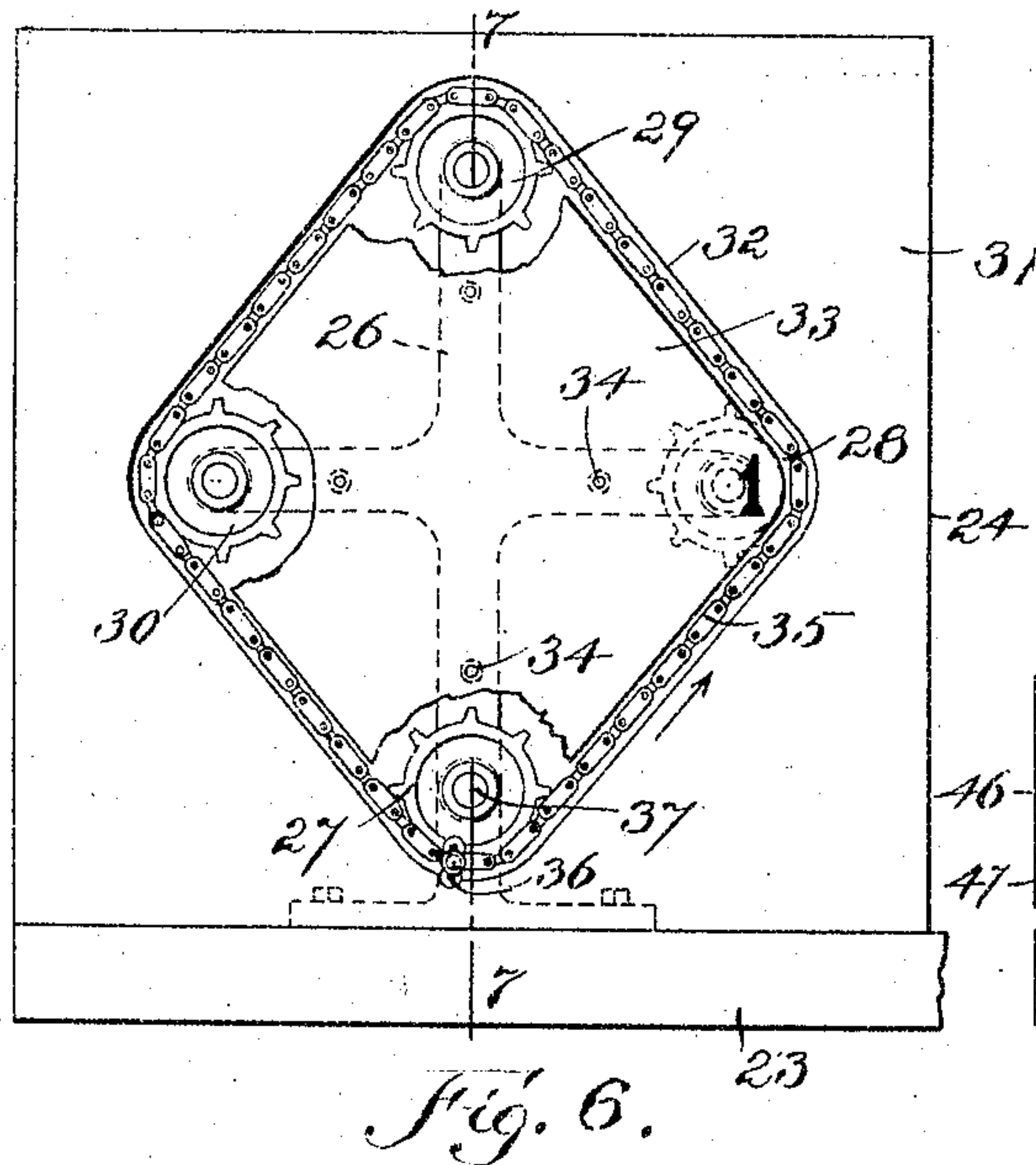
By this Attorney *Charles S. Gooding*

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4 SHEETS—SHEET 3.



Witnesses:

Louis A. Jones.
Franklin E. Low.

Fig. 8.

Inventor:
Edwin F. Porter
by his Attorney,

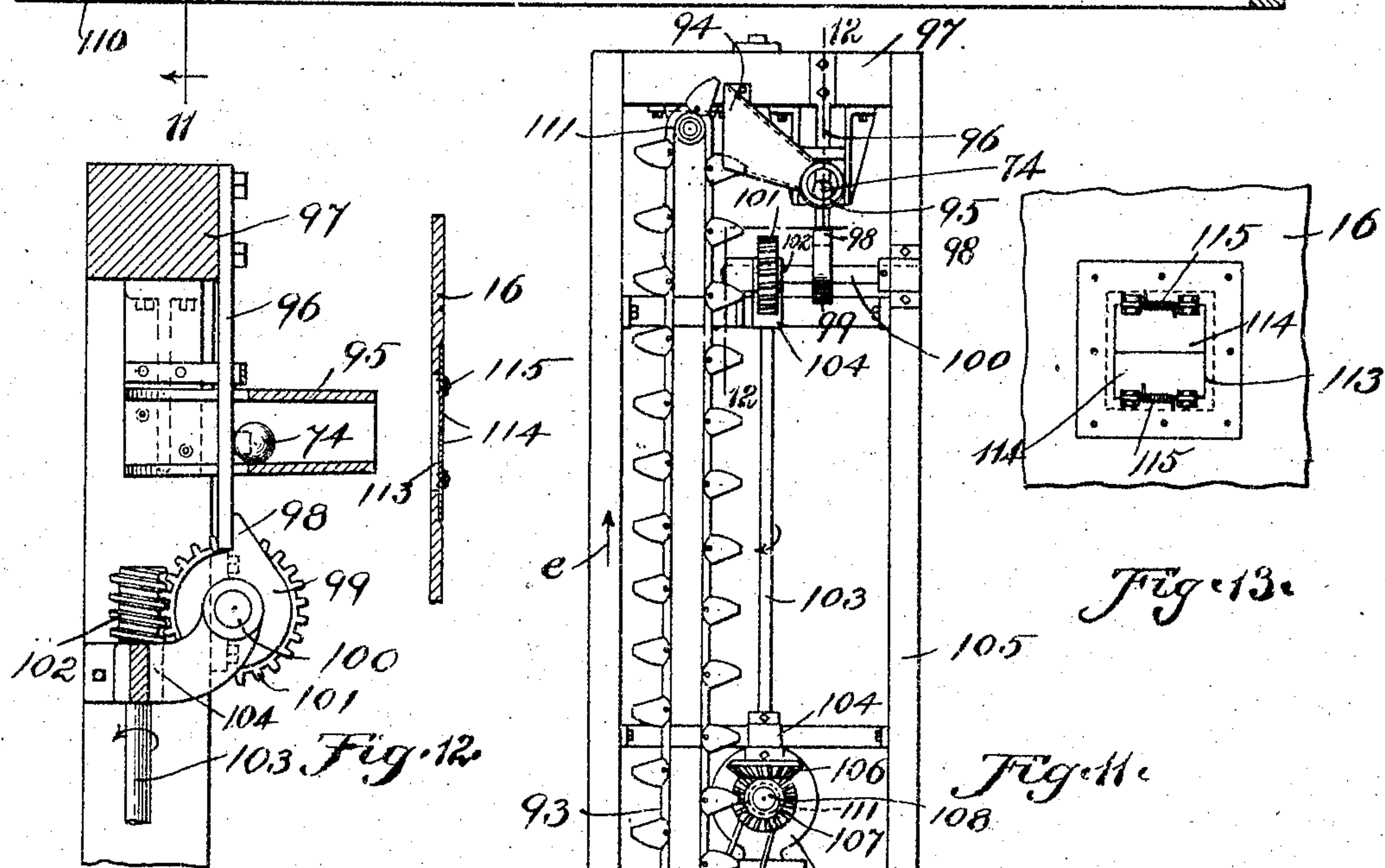
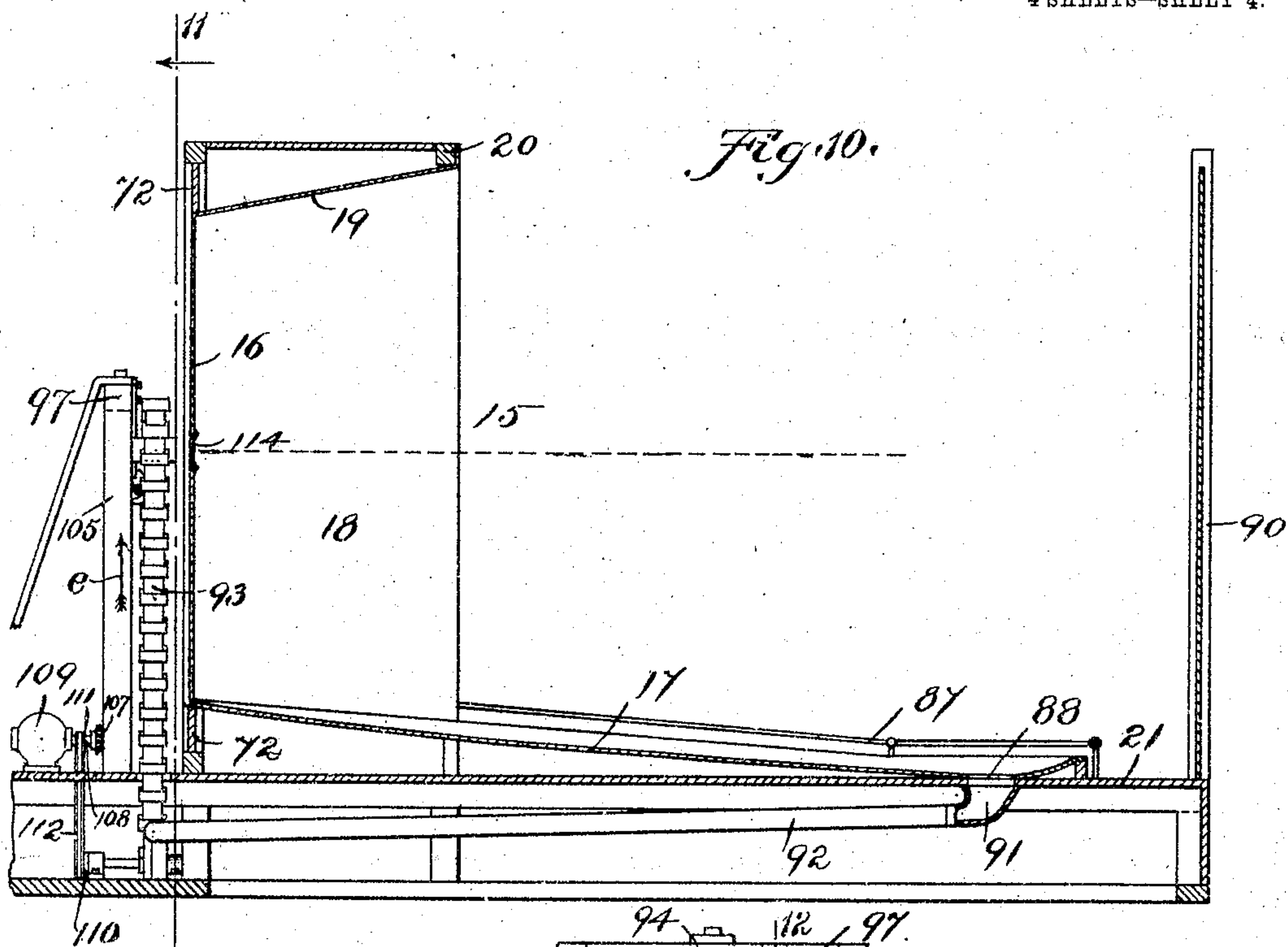
Charles J. Gooding.

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BASE BALL BATTING AND REGISTERING DEVICE.

APPLICATION FILED OCT. 1, 1902. RENEWED NOV. 10, 1904.

4 SHEETS—SHEET 4.



Witnesses:
 Louis A. Jones.
 Franklin C. Low.

Inventor:
 Edwin F. Porter.

by his Attorney,
 Charles J. Goring.

UNITED STATES PATENT OFFICE.

EDWIN F. PORTER, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE TWENTIETH CENTURY AMUSEMENT COMPANY, A CORPORATION OF MASSACHUSETTS.

BASE-BALL BATTING AND REGISTERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 778,331, dated December 27, 1904.

Application filed October 1, 1902. Renewed November 10, 1904. Serial No. 232,136.

To all whom it may concern:

Be it known that I, EDWIN F. PORTER, a subject of King Edward VII, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Base-Ball Batting and Registering Devices, (Case A,) of which the following is a specification.

This invention relates to an amusement device in which a ball, such as is generally used in the game of base-ball, is pitched, as hereinafter described, and the player striking said ball with a bat causes the same to impact against a target, and through mechanism connected with said target a dummy figure, preferably representing the figure of a man, is caused to travel around the four bases of a base-ball diamond, said diamond being represented by lines upon the face of an indicator-plate. According to the strength or impact of the ball against the target, the figure will travel to a greater or less extent around the diamond, moving, for instance, from the home plate to the first base, to the second base, to the third base, or making a home run, as the case may be. The element of skill enters largely into the game, as the ball, being pitched as aforesaid, is constantly changing its position, and thus renders it difficult for the player to strike it. Again, if the ball is not struck in such a manner as to drive it directly at the center of the target the distance to which the dummy figure will move will vary according to the distance from the center of the target at which the ball strikes said target. A chamber having a top, an inclined floor, and side walls, preferably of canvas, is provided in front of the target, and if a ball fails to strike the target it will strike one of the side walls of the chamber, constituting in the game a "foul."

The invention consists in a device of the character described of a target of flexible sheet material fast to and supported upon a stationary frame, an indicator, mechanism connecting said indicator and target, and mechanism to pitch a ball for the purpose specified.

The invention, again, consists in the instrumentalities hereinbefore set forth, in combi-

nation with a chamber located in front of the target and having a floor inclined downwardly away from said target and means for pitching a ball in the air.

The invention further consists, in a device of the character described, of an indicator-plate, a dummy, mechanism to move said dummy over the surface of said indicator-plate, a movable target, and mechanism operatively connecting said target and dummy mechanism.

The invention finally consists in the combination and arrangement of parts set forth in the following specification, and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a perspective view of my improved base-ball batting and registering device. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical longitudinal section taken on line 3 3 of Fig. 2 looking toward the left in said figure. Fig. 4 is an enlarged side elevation, partly in section, of the ball-pitching mechanism viewed in the same direction as in Fig. 3. Fig. 5 is a vertical section of a portion of the ball-pitching mechanism, taken on line 5 5 of Fig. 4, the ball being shown in elevation. Fig. 6 is an enlarged detail elevation of the indicator and indicator-plate partly broken away to disclose the mechanism. Fig. 7 is a vertical section, partly in elevation, taken on line 7 7 of Fig. 6 looking toward the right in said figure. Fig. 8 is an enlarged sectional elevation, taken on line 8 8 of Fig. 7 looking toward the left in said figure, illustrating the mechanism for operating the indicator. Fig. 9 is a detail section taken on line 9 9 of Fig. 8. Fig. 10 is a vertical longitudinal section similar to Fig. 3, illustrating a modified form of base-ball batting and registering device, illustrating mechanism whereby the ball may be delivered to the batter in a horizontal instead of a vertical line, as in the mechanism illustrated in the figures hereinbefore described. Fig. 11 is a section, taken on line 11 11 of Fig. 10 looking toward the left in said figure, of a portion of the mechanism illustrated in said Fig. 10. Fig. 12 is an enlarged

detail vertical section taken on line 12 12 of Fig. 11 looking toward the right in said figure. Fig. 13 is a detail of the swing-doors through which the ball is admitted when delivered in a horizontal line, said guides being shown attached to a portion of the movable target.

In the drawings, 15 is a chamber open at the front and provided at the rear with a flexible or movable wall 16, constituting a target. Said wall may be constructed of canvas or any material which when struck by a ball will yield.

17 is a floor also formed of canvas and inclined downwardly from the rear toward the front of the chamber and away from the movable target 16.

18 18 are side walls extending upwardly from the floor 17, also preferably formed of canvas, and 19 is the ceiling, also formed of canvas and connecting the side and rear walls. The canvas walls 18 18 and the ceiling 19 are fastened to and supported by a framework 20, said framework being supported upon a platform 21, the top of which may be reached by ascending suitable stairs 22.

To the left-hand side of the chamber 15 is fastened a shelf 23, and upon said shelf is an indicator 24. The indicator 24 consists of a casing 25, within the interior of which is located a frame 26, securely fastened to the shelf 23. Said frame has journaled thereon four sprocket-gears 27, 28, 29, and 30. The front wall 31 of the casing 25 is provided with a diamond-shaped opening 32 extending there-through, and in said opening is located a diamond-shaped indicator-plate 33. The indicator-plate 33 is fastened by rivets 34 to the frame 26. Upon the front face of the indicator-plate 33 are numerals "1," "2," "3," and "4," indicating the four bases of a base-ball diamond, said numerals being located one at each corner of the diamond and one numeral being placed immediately over each of the sprocket-gears 27, 28, 29, and 30. A sprocket-carrier chain 35 extends around the four sprocket-gears 27, 28, 29, and 30 and has fastened to one of the links thereof a dummy figure 36, preferably representing the figure of a man. The sprocket-gears 28, 29, and 30 are adjacent to the first, second, and third bases and are idlers. The sprocket-gear 27 is adjacent to the home base and is fastened to a rotary shaft 37, journaled to rotate in a bearing 38 in the frame 26 and in a bearing 39, formed in a bracket 40, fast to the shelf 23.

The shaft 37 has two drums 41 and 42 fast thereto. The drum 41 has a cord 43 fastened thereto and is provided with a handle 116, whereby the shaft 37 is rotated in the opposite direction to the arrow *a*, Fig. 8. The drum 42 has a cord 44 fast thereto, said cord being provided with a weight 45. The cord 44 is wound upon the drum 42 in such a manner as to cause the shaft 37 to rotate in the

direction of the arrow *a*, Fig. 8, when the weight 45 descends. When the weight 45 is brought to the position shown in Fig. 7 by pulling downwardly upon the cord 43, said weight constitutes a stop which abuts against the under side of the shelf 23 and locks the dummy figure 36 at the home plate, as shown in said Fig. 7.

To the rear end of the shaft 37, Figs. 7 and 8, is fastened a pinion-gear 46, which meshes into a gear 47, journaled to rotate upon a stud 48, fast to a standard 49 upon the bracket 40. To one face of the gear 47 is fastened a rotary stop 50, having a cam-shaped periphery provided with two stop-shoulders 51 52. The stop-shoulders 51 and 52 are arranged to engage a stop-lever 53, pivoted to a stud 54, fast to a bracket 55, Figs. 8 and 9. Upon the stud 54 is journaled a ratchet 56 and gear 57, fast to each other. The ratchet 56 is rotated in the direction of the arrow *b*, Fig. 8, by a pawl 58, pivoted to the stop-lever 53 and held in engagement with said ratchet 56 by a spring 59. The ratchet 56 and the gear 57 are prevented from rotating in a direction opposite to the arrow *b*, Fig. 8, by a stop-pawl 60 engaging said ratchet and pivoted to the bracket 55. The gear 57 meshes into a pinion 61, journaled to rotate upon the lever 53 and connected by a train of gears 62, 63, 64, 65, and 66 to a pinion-gear 67, fast to a retarding-fan 68, all of said gears and said fan being journaled to rotate upon the lever 53.

The lever 53 is held in engagement with the periphery of the rotary stop 50 by a spring 69, fast to the shelf 23. To the vertical arm of the stop-lever 53 is attached a rod 70, which is connected to one of the vertical sides of the target 16. Said rod is rendered adjustable lengthwise thereof by means of a turnbuckle 71, Fig. 2. The target 16, as hereinbefore set forth, is formed of canvas and is connected from three sides by ropes 72 to the framework 20. The fourth and vertical side 73 of said target is left unsupported except for its connection by the rod 70 to the stop-lever 53.

The mechanism by which the base-ball 74 is pitched vertically into the air is illustrated in Figs. 3, 4, and 5 and consists of a spring pitching-arm 75, located beneath the floor 17 and fast at one end to a post 76. The free end of the pitching-arm 75 is engaged by a projection 77 upon a cam 78, fast to a rotary shaft 79, journaled in a frame 80, fast to a base 81. The shaft 79 has a worm-gear 82 fast thereto, said worm-gear 82 being rotated by a worm 83, fast to a horizontal shaft 84, said shaft being journaled to rotate in the frame 80 and having a rotary motion imparted thereto by the electric motor 85. The upward motion of the free end of the arm 75 when released by the cam 78 is limited by a stop 86.

The floor 17 extends downwardly, as hereinbefore set forth, from the movable target 16 toward the front of the platform 21 and is pref-

erably formed of canvas, which is not drawn taut, but is allowed to bag downwardly somewhat in the center, thus guiding the ball from the rear and sides of the chamber 15 toward the front of the platform. A railing 87, extending around a portion of the sides of the floor 17, prevents the ball from rolling off of the platform and serves as a guide to direct the ball toward a hole 88, provided near the front of the floor 17 and extending downwardly through the top of the platform 21. Beneath said hole a funnel-shaped guide 89 is provided which guides the ball 74 from the platform downwardly to the spring pitching-arm 75, as shown in Fig. 4.

The general operation of the mechanism hereinbefore specifically described is as follows: Assuming the ball 74 to be in the position shown in Fig. 4, resting upon the top of the spring pitching-arm 75, and the cam 78 rotating in the direction of the arrow *c*, the projection 77 abuts against the free end of the pitching-arm 75 and bends said arm downwardly until by the rotation of the cam 78 the arm is freed and allowed to spring back into contact with the stop 86. The ball 74 is thus given an impetus upward in a substantially vertical line, as indicated by dotted lines, Fig. 3. The player stands upon the platform 21 with a bat in his hand in readiness to hit the ball as it is propelled upwardly. If the ball is struck with sufficient force and accuracy, it will be driven by the bat against the movable target 16 at the back of the chamber 15, and according to the strength of the blow and the directness with which said ball is driven against the target said target will be driven backwardly to a greater or less extent, pulling the rod 70 toward the right, Fig. 8, and disconnecting the stop-lever 53 from the stop-shoulder 51 upon the rotary stop 50. Said rotary stop 50 will then be rotated in the direction of the arrow *d* by the gear 47, pinion 46, and shaft 37, said shaft 37 being rotated in the direction of the arrow *a* by the descent of the weight 45. The lever 53 is rocked upon the stud 54 to a greater or less extent by the pull of the rod 70, as hereinbefore set forth, against the action of the spring 69, and as said lever is rocked the pawl 58 will pass around the periphery of the ratchet 56 to a greater or less extent to engage a new tooth thereon. Upon the return movement of the stop-lever 53, caused by the reaction of the spring 69, the pawl 58 will rotate the ratchet 56, and through the gear 57 and train of gears 61 to 67, inclusive, a rapid rotation will be imparted to the retarding-fan 68. It will be obvious that this rotary motion of the fan 68 will govern the length of time which it takes the spring 59 to force the lever 53 backwardly into contact with the periphery of the rotary stop 50. If the base-ball is hit by the batter with great force against the target 16, the lever 53 will be disconnected from the stop 50

and will take a longer time to return into engagement with said stop than would be the case if a light blow were struck by the batter. In the former case the rotary stop 50 might be rotated by the descent of the weight 45 a sufficient number of times to carry the dummy figure 36 from the home plate around the three bases and back to home. In the latter case where a light blow is struck by the batter the stop-lever 53 would come into contact with the periphery of the stop 50 in time to catch the stop-shoulder 52, and in this case the dummy figure would only travel from the home plate to the first base. It will be understood that the best effect will be obtained by the ball striking the target 16 at or near the center in addition to the strength of the blow hereinbefore referred to. The dummy figure is returned to zero by pulling downwardly upon the handle 116 and rope 43, as hereinbefore described.

In Figs. 10 to 13 a modification of my improved base-hall batting and registering mechanism is illustrated, wherein the ball is delivered to the batter in a horizontal line, as indicated by dotted lines, Fig. 10, instead of in a vertical line, as hereinbefore described. The mechanism for actuating the indicator is the same in the modified form as in that hereinbefore described, and the chamber, as well as the floor thereof, is also the same. A vertical screen 90 is provided to stop the ball in case the batter does not hit it as it is delivered to him. The ball is guided by a funnel 91, from the floor 17 downwardly through a pipe 92 beneath the floor 17 to the back of the chamber 15, where said ball is delivered to a carrier-chain 93 and by said carrier-chain is elevated in the direction of the arrow *e*, Figs. 10 and 11, and dumped into a hopper 94, which conveys the ball into a horizontal pipe 95, located in the rear of the target 16 and at the center thereof. A spring pitching-arm 96, fast to a support 97, extends downwardly from said support to engage a projection 98 upon a cam 99, fast to a shaft 100, said shaft 100 being rotated by a worm-gear 101, which meshes into a worm 102, fast to a vertical shaft 103, journaled to rotate in bearings 104 upon a framework 105. The vertical shaft 103 has fast to the lower end thereof a bevel-gear 106, which meshes into a bevel-gear 107, fast to a shaft 108, said shaft 108 being rotated by an electric motor 109 and pulley 111 fast thereto. The carrier-chain 93 is driven by pulleys 110 and 111, a rotary motion being imparted to the pulley 110 by a belt 112, driven by the shaft 108.

The operation of the modified mechanism hereinbefore described by means of which the ball is delivered in a horizontal line to the batter is as follows: The ball rolls down the inclined floor 17, passes through the hole 88, and is conducted by the funnel 91 and pipe 92 to one of the pockets of the carrier-chain 93.

Thence passing upwardly, it is delivered to the hopper 94 and rolls down said hopper into the horizontal receiving-pipe 95, whence it is conducted by a blow of the spring pitching-arm 96 through a hole 113 in the target 16. The hole 113 is closed by a pair of swing-doors 114, said swing-doors being hinged to the target 16 and closed after the ball has passed between them by spiral springs 115.

It will be understood that in the mechanism illustrated in Figs. 1 to 9, inclusive, the ball is pitched vertically, and in the form of mechanism illustrated in Figs. 10 to 13, inclusive, the ball is pitched to the batter in a substantially horizontal line. The batter in both forms stands upon the platform 21 and strikes at the ball as it is pitched with an ordinary base-ball bat, the object being to hit the ball so that it will strike the target 16 as near the center as possible and with the greatest force possible, the maximum effect being obtained by this result, as it will be seen that the greater the force and the more direct the blow upon the target the greater will be the distance traveled by the dummy figure around the diamond indicator-plate 33.

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

1. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said indicator and target, and mechanism to pitch a ball for the purpose specified.

2. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said indicator and target, and a floor inclined downwardly from said flexible target for the purpose specified.

3. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said target and indicator, a floor inclined downwardly from said flexible target, and mechanism by means of which a ball may be pitched for the purpose specified.

4. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said target and indicator, and a chamber comprising a floor inclined downwardly from said target, and walls extending upwardly from said floor.

5. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said target and indicator, a chamber comprising a floor inclined downwardly from said target and walls extending up-

wardly from said floor, and mechanism by means of which a ball may be pitched for the purpose specified.

6. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said target and indicator, and a chamber comprising a floor inclined downwardly from said target, walls extending upwardly from said floor, and a ceiling extending thereacross between said walls.

7. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism connecting said target and indicator, a chamber having a downwardly-inclined floor adjacent to and in front of said target, said floor provided with an opening, and mechanism to pitch a ball through said opening for the purpose specified.

8. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism connecting said indicator and target, a chamber having a downwardly-inclined floor adjacent to and in front of said target, said floor provided with an opening, mechanism to pitch a ball through said opening, and guides fast to said floor and converging toward each other to guide said ball toward said opening.

9. In a device of the character described, a stationary frame, an indicator-plate, a dummy, mechanism to move said dummy over the surface of said indicator-plate, a target of flexible sheet material fastened to and supported upon said frame, and mechanism operatively connecting said target and dummy mechanism.

10. In a device of the character described, an indicator-plate provided with marks indicating the four bases of a base-ball diamond, a sprocket-gear journaled upon said indicator-plate at one of said bases, an idler journaled upon said indicator at each of the other of said bases, an endless chain extending around said sprocket-gear and idlers, and a dummy fast to said chain.

11. In a device of the character described, an indicator-plate provided with marks indicating the four bases of a base-ball diamond, a sprocket-gear journaled upon said indicator-plate at one of said bases, an idler journaled upon said indicator-plate at each of the other of said bases, an endless chain engaging said sprocket-gear and idlers, and a dummy fast to said chain; in combination with a movable target, and mechanism connecting said target and sprocket-gear, whereby said gear is rotated and said chain is carried around said idlers for the purpose specified.

12. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said

frame, an indicator, mechanism operatively connecting said target and indicator, and means to set said indicator at zero.

13. In a device of the character described, 5
a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said target and indicator, a pitching-arm, and mechanism to operate said arm 10
to impart motion to a ball.

14. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively 15
connecting said indicator and target, a spring pitching-arm, a stop therefor, and mechanism to operate said arm to impart motion to a ball.

15. In a device of the character described, a stationary frame, a target of flexible sheet 20
material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said indicator and target, a pitching-arm, mechanism to operate said arm, and means to guide a ball to said arm.

25 16. In a device of the character described, a stationary frame, a target of flexible sheet material fastened to and supported upon said frame, an indicator, mechanism operatively connecting said indicator and target, a spring 30
ball-pitching arm, a stop therefor, a cam operatively connected to move said arm in one direction, and means to guide a ball to said arm.

17. In a device of the character described, 35
a target of flexible sheet material, an indicator, and a start and stop mechanism opera-

tively connecting said indicator and target, and means to impart motion to said start and stop mechanism.

18. In a device of the character described, 40
a target of flexible sheet material, an indicator, a rotary stop operatively connected to said indicator, and a stop-lever connected to said target and engaging said rotary stop, and means to impart motion to said start and stop 45
mechanism.

19. In a device of the character described, a target of flexible sheet material, an indicator, a rotary stop operatively connected to said indicator, a stop-lever connected to said 50
target, a spring holding said stop-lever in engagement with said rotary stop, and a retarding mechanism supported upon said stop-lever and operating to hold said stop-lever out of engagement with said rotary stop, and 55
means to impart motion to said start and stop mechanism.

20. In a device of the character described, a target of flexible sheet material, an indicator, mechanism operatively connecting said 60
target and indicator, and a chamber comprising a floor inclined downwardly from said target and side walls extending upwardly from said floor, said target constituting the 65
rear wall of said chamber.

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

EDWIN F. PORTER.

Witnesses:

CHARLES S. GOODING,
ANNIE J. DAILEY.