No. 659,555. Patented Oct. 9, 1900.

M. SHUSTER.

TOY.

(Application filed Mar. 15, 1900.)

(No Model.) 3 Sheets—Sheet 1.

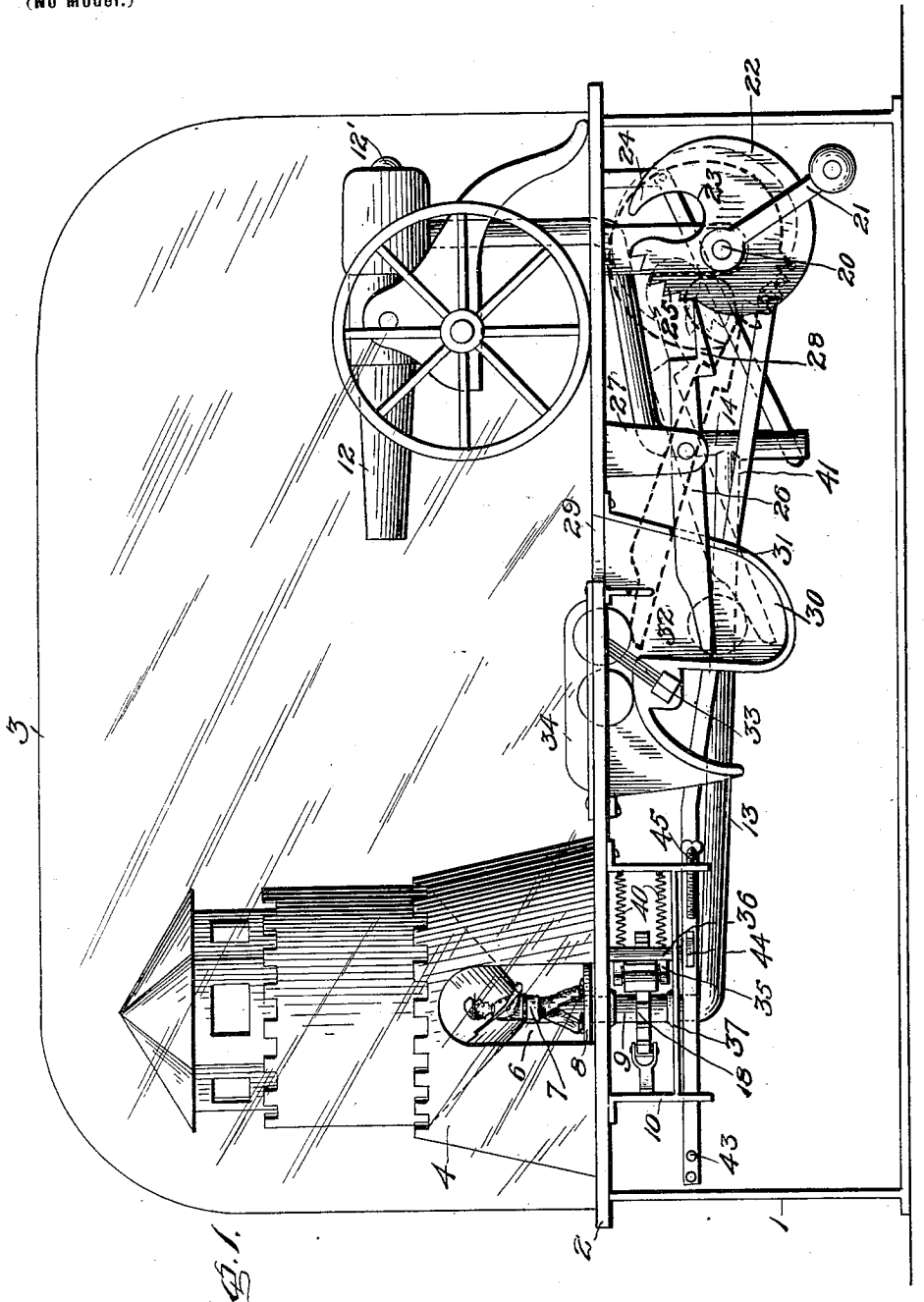

Fig. 1.

Witnesses

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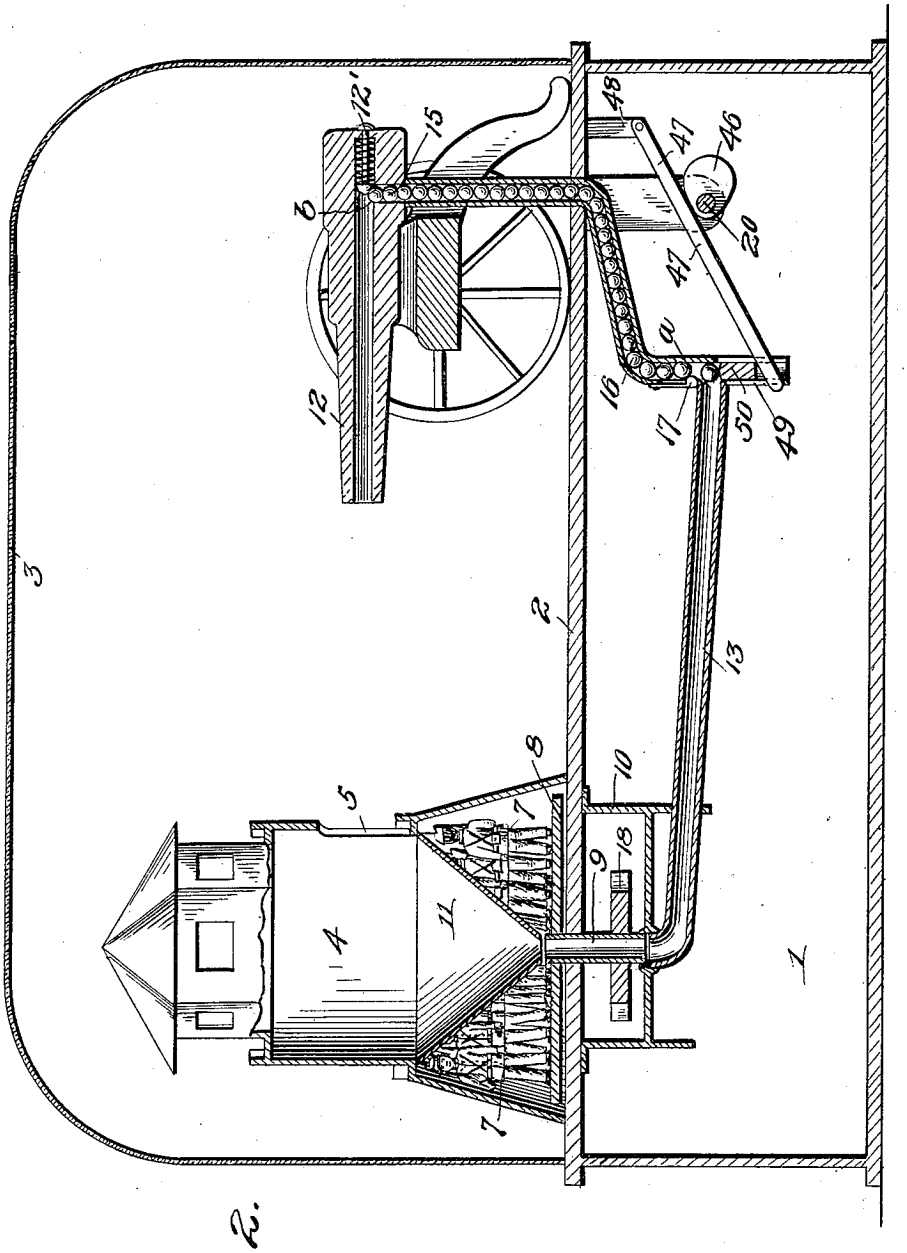

Fig. 2.

Witnesses

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Fig. 3.

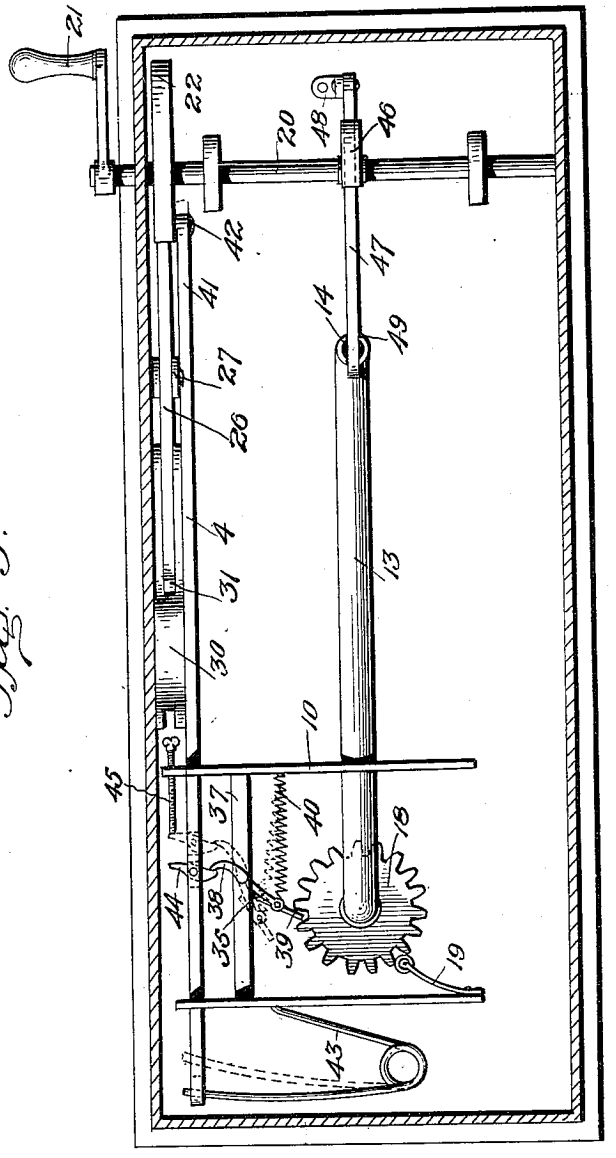
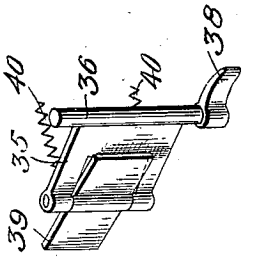


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

MARTIN SHUSTER, OF GREAT FALLS, MONTANA, ASSIGNOR OF THREE-FIFTHS TO W. A. KELLER AND W. A. WIEGAND, OF SAME PLACE.

TOY.

SPECIFICATION forming part of Letters Patent No. 659,555, dated October 9, 1900.

Application filed March 15, 1900. Serial No. 8,783. (No model.)

To all whom it may concern:

Be it known that I, MARTIN SHUSTER, a subject of the Emperor of Austria-Hungary, residing at Great Falls, in the county of Cascade and State of Montana, have invented certain new and useful Improvements in Toys; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to toys.

The object of the invention is to provide a toy which shall be simple of construction, durable in use, and comparatively inexpensive of production and which will afford amusement to both young and old.

With this object in view the invention consists in certain features of construction and combination of parts, which will be hereinafter set forth.

In the accompanying drawings, Figure 1 is a side elevation of my improved toy with the side of the box removed to show the parts inclosed within said box. Fig. 2 is a vertical sectional view. Fig. 3 is a bottom plan view, and Fig. 4 is a detail perspective view of the knocker-dog and its pivoted frame.

In the drawings the same reference characters indicate the same parts of the invention.

1 denotes the box or casing, having a floor 2, upon which is supported and secured thereto a transparent cover or dome 3. Secured to the floor 2 is a casing 4 to represent a fortified tower, which is provided with an aperture 5, into which the charges are adapted to be thrown or projected, and with a vision-opening 6, through which may be observed the movement of objects 7, representing soldiers. These objects 7 are arranged in circular form and are secured to a disk 8, having a hollow axis 9, journaled in the floor 2, and a frame 10, secured to and depending from the lower side of said floor.

11 denotes a funnel-shaped hopper secured to said casing 4 and communicating with the hollow axis 9.

12 denotes a charge-projector in the form of a cannon, having at its breech end a spring-actuated plunger 12′.

13 denotes an inclined tube leading from and communicating with the hollow axis 9, and 14 denotes an upwardly-extending tube communicating with the tube 13 and extending upwardly and communicating with the bore of the cannon or projector through an aperture 15, immediately in advance of the tapering head of the spring-actuated plunger.

16 denotes charges arranged within the tube 14 and of a sufficient number to fill the tube from the point *a* to the point *b* of the aperture 15. A spring-dog 17 has its toe projecting through a slot in the tube 14 and is adapted to support all of said charges but the lowermost one.

18 denotes a toothed wheel secured to the axis 9, the spaces between the teeth of which correspond in number to the objects 7 on the disk 8.

19 denotes a brake which is adapted to stop said wheel so that one of the objects 7 will appear directly in front of the vision-opening 6.

20 denotes an operating-shaft having a crank or handle 21, by means of which it may be rotated.

22 denotes a cam fixed to said shaft and provided in its periphery with a slot 23 and formed with a toe 24 and teeth 25.

26 denotes a lever pivoted to a bracket 27 and having its toe 28 in engagement with one of the teeth 25 and its other end immediately below a disk-slot 29, so that when a disk is dropped in said slot it will strike said lever and raise its toe from engagement with one of the teeth of the cam-lever. This slot 29 has arranged below it a pocket 30, through a slot 31 of which the lever projects. The pocket has also a throat 32, through which in the actuation of the machine the disk is adapted to be moved and held by springs 33 under a transparent cover 34, so that the disk may be inspected.

35 denotes a knocker-dog frame pivoted to a cross-rod, having a vertical axis 36 pivoted in a cross-bar 37 of the frame 10, having at its lower end a toe 38. To the free end of this frame is pivoted a knocker-dog 39, which has a swinging movement in said frame, but cannot make a complete revolution upon its axis. This dog is adapted to engage the teeth of the wheel 18 and rotate said wheel.

40 denotes a spring connected to the knocker-dog frame and to the depending frame 10, as shown in Fig. 3, and exerts its energy to move the knocker-dog frame toward the charge-projector.

41 denotes a trip-rod pivoted to a wrist-pin 42, secured to the cam-lever 22, and having its forward end mounted to reciprocate the frame 10.

43 denotes a spring connected to the depending frame 10 and to the free end of the trip-rod and exerting its energy to move said rod operatively.

44 denotes a pivoted trip dog carried by said rod and adapted to engage the trip-toe 38 and the knocker-dog frame, and as the rod is moved in the direction of the arrow shown in Fig. 3 it will move the knocker-dog frame and its dog to the position shown in dotted lines in said figure.

45 denotes an adjustable stop supported by the depending frame 10 and located in the path of movement of the trip-dog 44, and when the trip-rod is moved in the direction of the arrow the said trip-dog 44 engages the toe 38 of the dog-supporting frame and rocks said frame, with its dog, to the position shown in dotted lines in Fig. 3, and when the trip-dog 44 contacts with the stop 45 the trip-dog 44 is rocked and disengages itself from the toe 38 of the knocker-dog frame, thus permitting the spring 40 to exert its energy and suddenly draw the knocker-dog frame, with its dog, into engagement with the teeth of the wheel 18, thus imparting to the wheel a rotary movement and causing the disk 8 to be rotated, displaying through the aperture 6 in the casing the objects 7. As the momentum of the disk decreases it will be finally stopped by the brake 19 coming in contact with one of the objects on the disk at the opening 6. When the rod 41 is returned to its normal position by the spring 43, the knocker-dog 39 will slide over the teeth and will return to the position shown in full lines in Fig. 3 and be in readiness for the second operation.

46 denotes a cam fixed to the shaft 20, and 47 denotes a lever one end of which is pivoted to a bracket 48, projecting from the bottom of the floor 2, and the other end of which projects through a slot 49, arranged in the lower end of the tube 14, below the connection of the tube 13 with said tube 14.

50 denotes a sliding block arranged in the lower end of the tube 14 at a point below the point of connection of the tube 13 with the tube 14 and is adapted to successively elevate the charges 16.

The operation of the invention is as follows: A disk being inserted into the slot 29 falls upon the lock-lever 26 and disengages its toe 28 from one of the teeth 25 of the cam 22. The handle 21 is now grasped and rotated in the direction of the arrow shown in Fig. 1. This movement actuates the cam 46, which elevates the lower end of the lever 47 and forces the block 50 upward in the tube 14. One of the charges being supported by said block is forced past the spring dog or catch 17 and in passing said dog or catch forces all of the charges upward within the tube 14 and the uppermost one into the bore of the charge-projector 12. In forcing the uppermost charge into the bore the spring-actuated plunger 12' is moved rearward against the action of its spring, and thus compresses said spring. When the charge is wholly within the bore, said spring exerts its energy and forces the charge through the bore of the projector into the casing 4 through its aperture 5. During the movement of the shaft 20 to elevate the uppermost charge into the bore of the projector the trip-rod 41 has been moving in the direction of the arrow shown in Fig. 3, and at the instant the charge is projected into the casing 4 from the projector 12 the trip-dog 44 has come in contact with the stop 45 and will release the toe 38 of the knocker-dog frame 35, thus permitting the knocker-dog to be retracted by the spring 40. In its retraction it strikes the wheel 18 and rotates the same, thus causing the disk 8 to rapidly revolve and display the objects 7, supported thereon, through the opening 6 in the tower. In completing the rotation of the shaft 20 the toe 24 of the cam engages the toe 28 of the lock-lever, which has been tilted to the position shown in light dotted lines in Fig. 1, and depresses said toe until the lever assumes the position shown in heavy dotted lines in Fig. 1, in which position it has elevated the disk up under the transparent cover 34, so that it may be inspected. As the cam 22 is further rotated its toe 24 disengages from the lock-lever 26 and allows said lever to drop to the position shown in full lines in Fig. 2. The hand of the operator may now be removed from the crank 21, and the spring 43 will restore the trip-rod 41 and the parts to which it is connected to their normal positions, when the operation may be again repeated.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my improved toy will be readily apparent without requiring an extended explanation. It will be seen that the device is simple of construction, that said construction permits of its manufacture at small cost, and that it is exceedingly well adapted for the purpose for which it is designed.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a toy the combination with a charge-projector comprising a body formed with a bore and a reciprocatory plunger located in said bore, of a receptacle in which the charge

is adapted to be projected, a tube establishing communication between the charge-projector and the receptacle, and means for forcing a charge within the tube into the bore of the projector in advance of the plunger, substantially as set forth.

2. In a toy the combination with a charge-projector comprising a body formed with a bore and a reciprocatory plunger located in said bore, of a receptacle into which the charge is adapted to be projected, a tube into which the charge after being projected into said receptacle is adapted to fall said tube leading back to the charge-projector, a spring catch or dog arranged within said tube, a block arranged under the lowermost charge within said tube, and means for elevating the block to force the uppermost charge contained within the tube into the charge-projector in advance of the plunger, substantially as set forth.

3. In a toy the combination with a charge-projector, of a receptacle into which the charge is adapted to be projected, a disk mounted within said receptacle, objects supported upon said disk and adapted to be moved past an opening in the receptacle, and means for simultaneously projecting a charge and rotating said disk, substantially as set forth.

4. In a toy the combination with a charge-projector, of a receptacle into which the charge is adapted to be projected, a funnel arranged within the receptacle, a disk journaled in the receptacle and supporting objects thereon which are adapted to move past an opening in the receptacle, a tube for conveying the charge from said receptacle back to the projector, means for forcing the charge into the projector, and means for rotating said disk, substantially as set forth.

5. In a toy the combination with a charge-projector, of a casing into which the charge is adapted to be hurled, said casing being provided with a funnel, a disk journaled in said casing and having a hollow axis, a toothed wheel fixed to said axis, an inclined tube leading from said axis to a second tube which latter tube leads to the charge-projector, means for elevating the charges in the second tube, a reciprocating spring-actuated trip-bar having a trip-dog, a spring-actuated knocker-dog frame, a knocker-dog pivoted to said frame, and a trip-toe secured to the knocker-dog frame and adapted to be engaged by the trip-dog, substantially as set forth.

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

MARTIN SHUSTER.

Witnesses:
E. STUCKHONER,
SAM STEPHENSON.