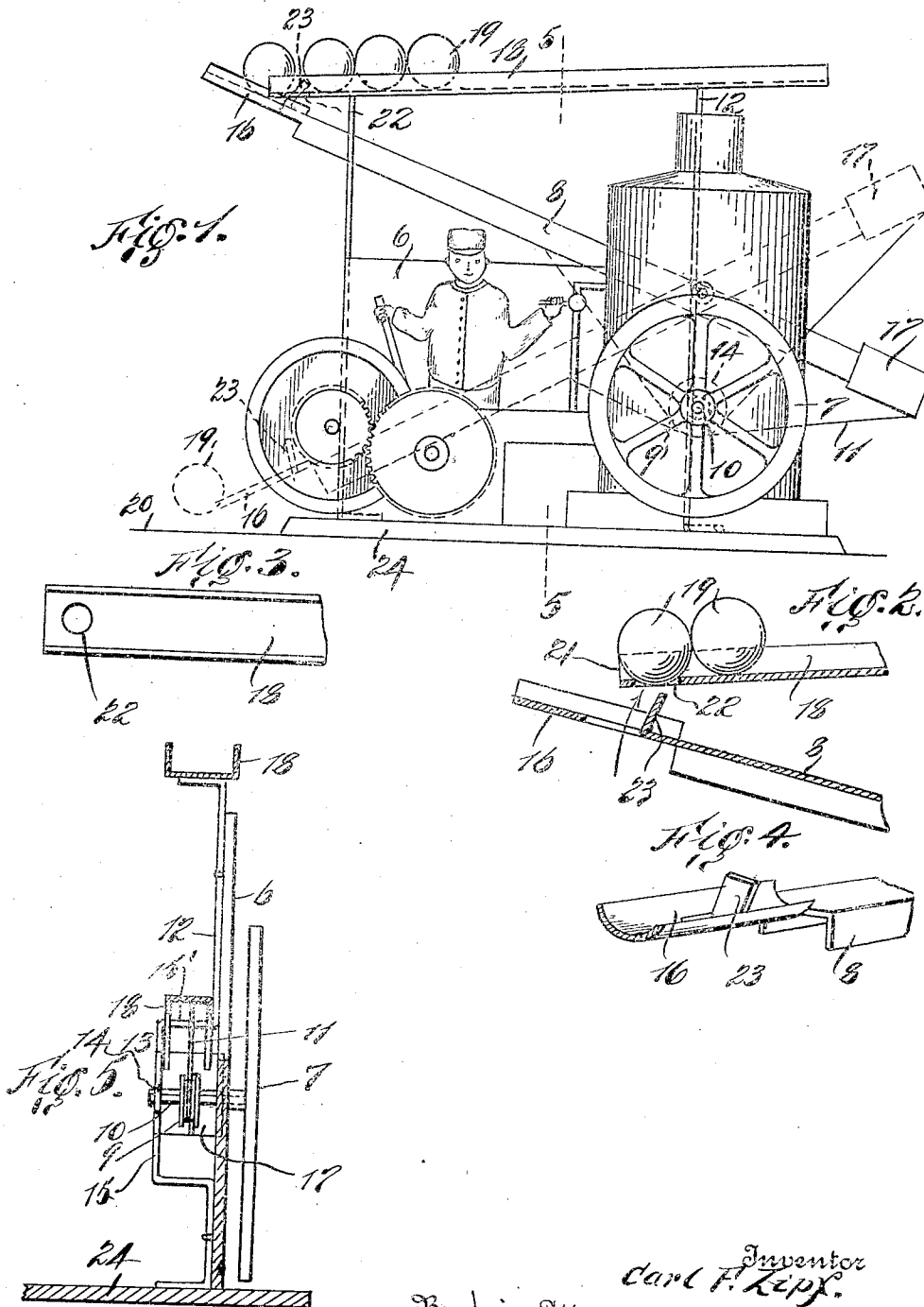


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TOY STEAM SHOVEL.
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1,351,981.

Patented Sept. 7, 1920.



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TOY STEAM-SHOVEL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL F. ZIPF, a citizen of the United States of America, residing at Johnstown, Cambria county, State of Pennsylvania, have invented certain new and useful Improvements in Toy Steam-Shovels, of which the following is a full, clear, and exact description.

This invention relates to improvements in mechanical toys arranged to simulate a steam shovel by reason of the fact that I employ in combination with a movable beam, arranged to move upwardly and downwardly radially, the representation of an engine and boiler together with a fly-wheel arranged to move in unison with the beam. To render the toy attractive and interesting, I have arranged it so that the beam will remove marbles one at a time, from a magazine and deposit same, one at a time upon a table or other support upon which the toy may be placed. The beam is arranged to automatically select one marble at a time, and no more, from the magazine. My improved toy is desirable, is cheaply manufactured, and unique in action, and will afford great amusement for children.

I will now proceed to describe my invention in detail, the novel features of which I will finally claim, reference being had to the accompanying drawing, wherein:—

Figure 1 is a side elevation of my invention;

Fig. 2 is an enlarged fragmentary sectional view, illustrating the delivery end of the magazine and the receiving end of the beam;

Fig. 3 is a fragmentary top plan view of the magazine;

Fig. 4 is a perspective view of the receiving end of the beam; and

Fig. 5 is a vertical sectional view, the section being taken on a line 5—5 in Fig. 1.

As herein embodied, my invention consists of the representation of an engine and boiler including a fly-wheel, gears, etc., and an engineer in charge. The above mentioned member of the toy will be a picture or lithograph cut out and will be pasted or otherwise applied to a relatively thin sheet of cardboard, metal, etc., indicated by 6 in Fig. 5. The fly wheel 7 will be movable, that is to say, rotatable, and during the operation of the toy, will partly rotate to the right and left alternately under the influence of a beam 8, which is connected to a

pulley 9, carried by the shaft 10 for the fly-wheel and the said beam. To connect the pulley 9 and beam 8, I employ a belt or cord 11, which at its ends is connected to the beam 8 and around the pulley 9 intermediate its ends. The support for the cardboard or metal backing for the picture or lithograph consists of a post 12 which is secured to the backing 6 in any desirable manner. Intermediate its ends the post 12 is bent to form a yoke 13 within which the pulley 9 is located. The shaft 10 at one end is supported by an eye 14 formed in the member 15 of the yoke 13. Intermediate its ends shaft 10 is supported by the backing 6. As can be seen in Fig. 5, the fly-wheel 7 is located exteriorly of the backing member 6. The beam 8 is pivotally supported by one of the end members of the yoke, in this instance end member 15'. The beam 8 is made in channel formation, one end of which is slightly dished as at 16, the other end being provided with a weight 17.

A further element of the toy consists of a channeled magazine 18 to retain spheres or marbles 19. The beam removes the spheres or marbles one by one and deposits same upon a table or other support. In this instance the marbles are illustrated as being deposited upon a table 20.

As can be seen, the magazine is slightly inclined in order that the spheres or marbles will tend to roll toward the delivery end 21 adjacent to which I locate an opening 22 to receive the marbles or rather to prevent same from rolling out of the magazine. When a marble is placed in the magazine it will roll toward the end 21 and finally settle in the opening 22 (see Fig. 2). From this position the marbles are removed, by the beam 8, one by one. To remove the marbles one by one, the beam 8, adjacent the dished end, is provided with a knockout finger 23, which is stamped out of the material of the dished end of the beam, as indicated in Fig. 2. The opening 22 is located in the path of movement of the finger 23 and as the beam approaches the end of its upward stroke the finger 23 will pass into the said opening 22. The end 21 of the magazine limits the upward stroke of the beam, the downward stroke being limited by the table or other support 20 for the toy. The weight 17 will be sufficient to raise the delivery end of the beam, while the weight of a sphere or marble will overbalance the

weight 17 and lower said beam at the delivery end.

Supposing the magazine to be filled with spheres or marbles 19, to start the device 5 a marble will be placed in the dished receiver 16, after which the beam will lower and when said beam reaches the end of its downward stroke, the marble will roll off. After the marble has rolled off, the weight 10 17 will raise the delivery end of the beam. As soon as finger 23 contacts with the marble resting in opening 22, said marble will be forced out of the opening by said finger, and the finger will lie between the first and second marbles at the delivery end of the magazine, as indicated in Fig. 1. As soon as the first marble has been forced out of the opening 22, it will roll onto the dished receiver 16 of the beam and said beam will lower. 20 This operation will continue until all of the marbles have been removed from the magazine. During the movement of the beam the fly wheel 7 will have imparted thereto a partial rotation to correspond with the movement of the beam; hence the beam will 25 appear as though actuated by power. The post 12 will be carried by a base-member 24 which will support the whole structure.

Having now described my invention, what 30 I claim and desire to secure by Letters Patent is:—

1. In a mechanical toy, an angularly disposed magazine to contain spherical elements and having an opening adjacent the 35 lower end thereof to engage the spheres to prevent same from rolling out of the magazine, a gravity operated beam to remove the spheres one by one from the magazine, and means carried by the gravity operated beam, 40 at the receiving end, to displace the spheres from the opening in the magazine, and cause

same to roll onto said beam when said gravity operated beam is brought into position to receive a sphere from said magazine.

2. In a mechanical toy, an angularly disposed magazine to contain spherical elements and having an opening adjacent one end thereof to engage said spherical elements to prevent same from rolling out of said magazine, a pivotally mounted gravity 50 operated beam adjacent the magazine arranged to remove the spherical elements from said magazine one by one, and a finger carried by said beam at the receiving end, arranged to enter said opening and displace 55 the sphere held thereby and cause same to roll onto the receiving end of the beam.

3. In a mechanical toy, a support formed intermediate its ends into a yoke, a backing member connected to the support, a pictorial representation of an engine carried by the backing member, a rotatable shaft supported at one end by said support at the yoke portion thereof, said shaft being supported intermediate its ends by said backing 65 member, a fly wheel carried by the shaft at the opposite end, a pulley carried by the shaft located within said yoke, a gravity operated beam pivotally supported intermediate its ends by one of the end members of said yoke, and a belt secured to the beam and engaging said pulley, all arranged so that the fly wheel will have imparted thereto rotary motion to correspond with 75 the direction of movement of the beam.

Signed at Johnstown, Pa., this 9th day of February, 1920.

CARL F. ZIPF.

Witnesses:

T. C. MILLER,
JOSE HETZLEIN.