E. SABINA.

MECHANICAL TOY.

APPLICATION FILED FEB. 19, 1918.

1,302,857.

Patented May 6, 1919.

FIG.1.

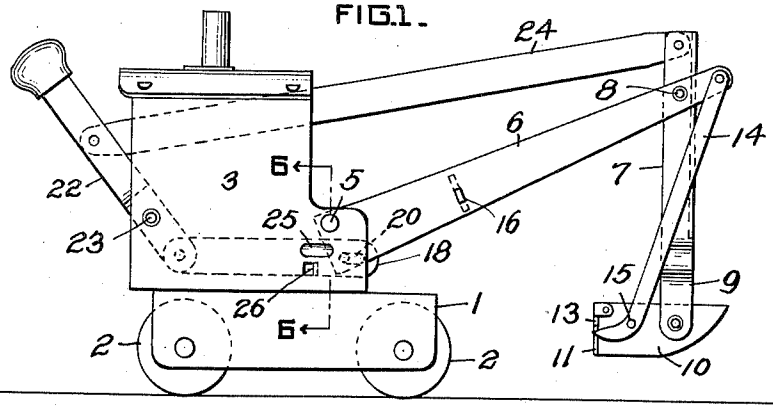



FIG.2.

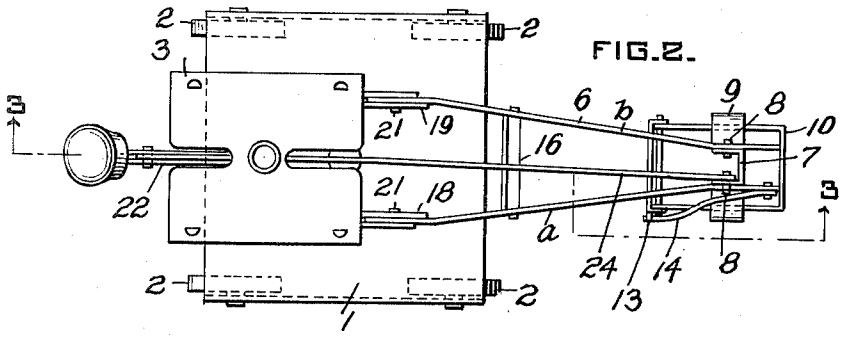



FIG.6.

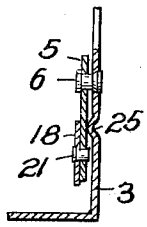



FIG.3.

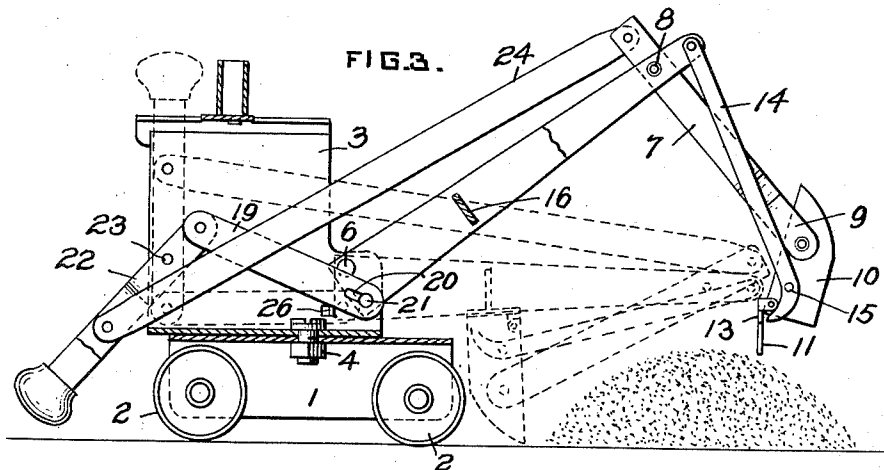



FIG.4.

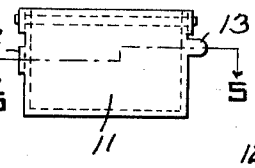
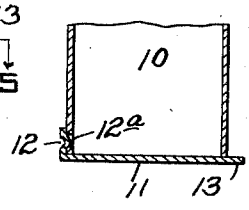



FIG.5.




WITNESSES

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# UNITED STATES PATENT OFFICE.

EMERICH SABINA, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO E. SABINA COMPANY, INC., OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## MECHANICAL TOY.

1,302,857. Specification of Letters Patent. Patented May 6, 1919.

Application filed February 19, 1918. Serial No. 218,036.

*To all whom it may concern:*

Be it known that I, EMERICH SABINA, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Mechanical Toys, of which the following is a specification.

The prime object of my invention is to provide a new and improved mechanical toy, and more particularly a toy shovel of the power shovel type.

In the accompanying drawings which illustrate an application of my invention,

Figure 1 is a side elevational view of a toy shovel constructed in accordance with my invention;

Fig. 2 is a top plan view;

Fig. 3, a part side elevation and a part sectional view, the section being taken on line 3—3 of Fig. 2, said figure showing in full lines the position of the parts during the dumping operation and in dotted lines, the position of the parts just prior to filling the bucket;

Fig. 4 is a detail end view of the bucket, particularly showing the swinging gate thereof;

Fig. 5, a detail section taken on line 5—5 of Fig. 4; and

Fig. 6, a vertical sectional detail view showing a portion of the forward end of the housing and the manner of connecting the boom thereto, together with a portion of the boom actuating mechanism.

Referring to the drawings, 1 designates a movable platform or base mounted on wheels 2, and 3 a housing rotatably mounted on the platform or base, said housing being secured to the platform by means of a bolt and nut device 4.

Projecting outwardly from the housing and pivotally secured thereto by means of pins or headed rivets 5 is a boom 6. The boom, as illustrated, comprises two spaced apart members *a* and *b* each pivotally secured to opposite sides of the housing and adapted at their forward ends to carry a bucket supporting element 7.

Bucket supporting element 7, as shown, has its upper end disposed between the outer ends of the boom and pivotally secured thereto by pins 8. Element 7 extends downwardly from the boom and has its lower end 9 forked, between the forked portions of which the bucket 10 is suspended. Bucket 10 is provided with a pivotally mounted tail-gate 11 and said gate has a locking lug 12 adapted, when the bucket is lowered to a position for receiving material, to engage a slight depression $12^a$ in the outer surface of one side of the bucket, thereby positively locking the tail-gate in closed position.

The opposite side of the tail-gate is provided with a lug 13 adapted to make engagement with the curved end of a bar 14, the latter being pivotally secured to a side of the bucket at 15, and having its upper end pivotally connected to a member of the boom structure. The function of this curved bar is to strike the lug 13 for the purpose of opening the tail piece at the proper time for dumping the load.

About midway of the length of the two elements *a* and *b* constituting the boom, I provide a cross member 16, said cross member being so disposed that after the bucket is dumped and is being carried back to filling position, the tail piece will be swung against said cross member 16, thereby causing the tail piece to be brought tightly against the bucket and the locking lug 12 to operate.

The actuating means for the boom which provides the upward and downward movement of the same, includes two longitudinally extending bars 18 and 19 each having its forward end slotted, as at 20, the slots thereof being adapted to receive a headed pin 21 carried on and projecting inwardly from the respective members *a* and *b* of the boom. The rear ends of said members 18 and 19 are each connected with a pivotally mounted operating lever 22. Said lever, as illustrated and as preferred, comprises a forked inner end portion having the forks thereof pivotally secured to opposite sides of the housing, as at 23; each of the inner ends of the members 18 and 19 are connected to the forked ends of said lever.

The actuating means for the bucket supporting element 7 includes a bar or rod 24 having its forward end secured to the pivotally mounted bucket supporting element, and its rear end connected with the operating lever 22.

From the above, it should be noted that while the boom actuating means and the

actuating means for the bucket supporting element are independent, they are both controlled or operated by the common lever, said actuating means, however, are designed to be moved simultaneously to impart the desired coöperating movements to the bucket supporting element and to the boom.

Located near the forward end of each side of the housing and adapted to coact with the respective elements *a* and *b* of the boom, I provide a friction bearing 25, the function of which is to prevent a too rapid movement of the boom elements by frictionally engaging the boom members during their movements. Located adjacent to the said brake means, I provide stops 26 adapted to limit the downward movement of the boom.

It will be understood that the operation of filling the bucket and dumping the same may be effected by a movement of the common operating lever 22 from the position shown in dotted lines in Fig. 3 to the position shown in full lines in the same figure, and that during this movement of the operating lever, the bucket will be carried forward and filled, raised and dumped.

What I claim is:—

1. In a toy shovel, the combination with a pivotally supported boom, a bucket, a bucket supporting element having pivotal connection with the boom, means including a common operating lever and connections joining the boom and bucket supporting element with the lever for raising and lowering said elements to effect a loading and dumping operation during a continuous movement of the operating lever.

2. In a toy shovel, the combination with a pivotally supported boom, a bucket, a bucket supporting element having pivotal connection with the boom, a common operating lever for moving the boom and bucket supporting element, and independent means connecting the boom and bucket supporting element with the operating lever.

3. In a toy shovel, the combination with a pivotally supported boom, a bucket, a bucket supporting element having pivotal connection with the boom, a common operating lever for moving the boom and bucket supporting elements, said lever having a forked portion, means connecting the bucket supporting element and the lever, and means connecting the forked portion and the boom.

4. In a toy shovel, the combination of a housing, a boom pivotally secured thereto, friction brake means on the housing coacting with the boom, a bucket, a bucket supporting element having a pivotal connection with the boom, actuating mechanism for the boom and bucket supporting element, and common operating means connecting the actuating mechanism.

5. In a toy shovel, a movable boom, a bucket, a movable tail gate for the bucket, a bucket supporting element having a movable connection with the boom, means for locking the tail gate to the bucket including a lug on the gate and a coöperating depression in the bucket, and means carried by the boom for opening the tail gate including an arm projecting downwardly from the boom.

6. In a toy shovel, a movable boom, a bucket, a bucket supporting element having pivotal connection with the boom, an operating lever, and an actuating rod connecting the operating lever and the bucket supporting element.

7. In a toy shovel, a movable boom, a bucket pivotally connected with the boom, an operating lever, means connecting the operating lever and boom, and means connecting the operating lever and bucket.

8. In a toy shovel, a movable boom including spaced apart members, a cross member carried by the boom, a bucket, a movable tail gate for the bucket, a bucket supporting element having a movable connection with the boom, said cross member arranged to make contact with the tail gate for closing same, means for locking the tail gate to the bucket, and means carried by the boom for opening the tail gate.

In testimony whereof, I affix my signature in presence of two witnesses.

EMERICH SABINA.

Witnesses:
J. M. GEOGHEGAN,
LOIS WINEMAN.