

(No Model.)

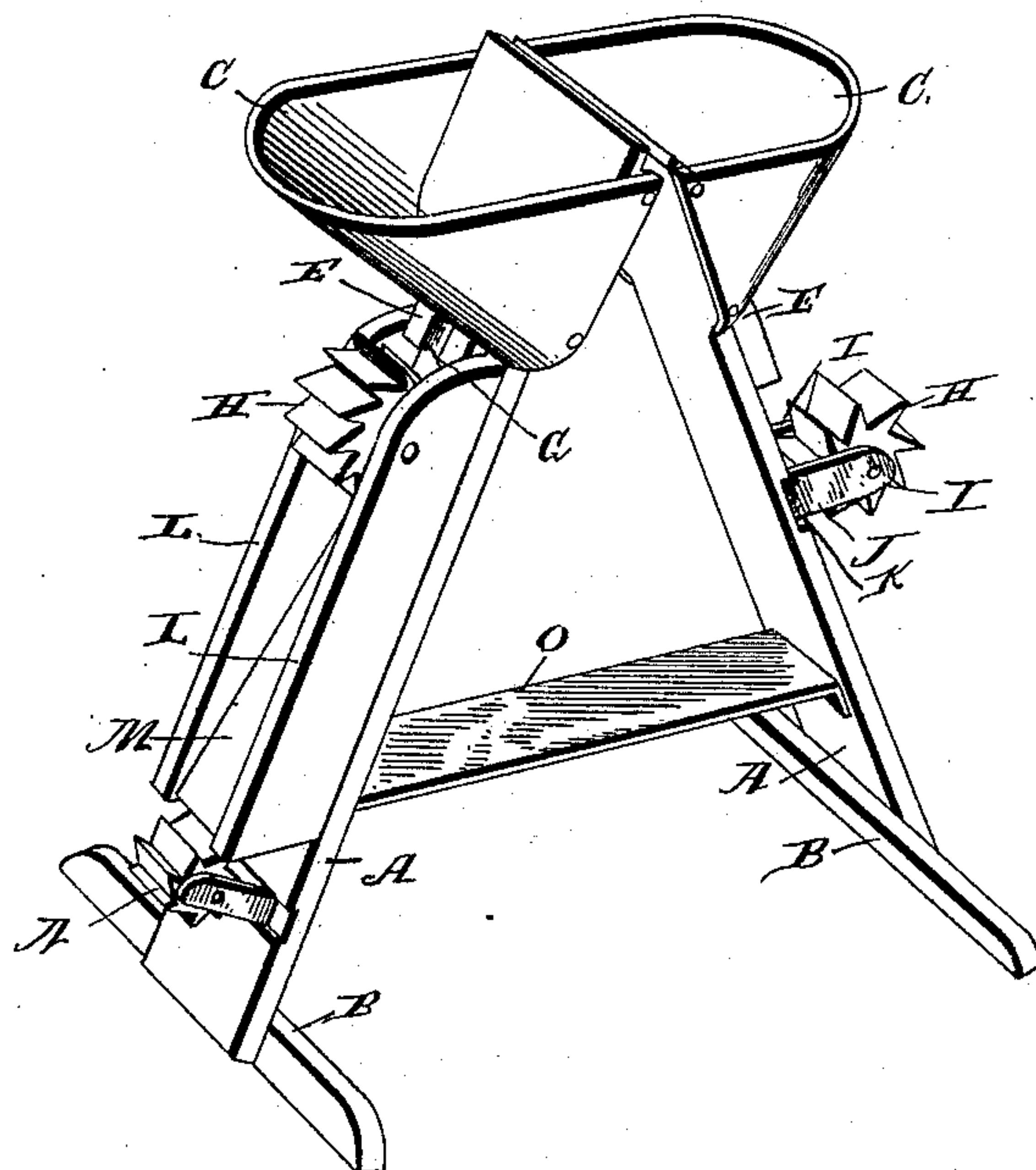
J. T. DEMAREST.

SAND MILL.

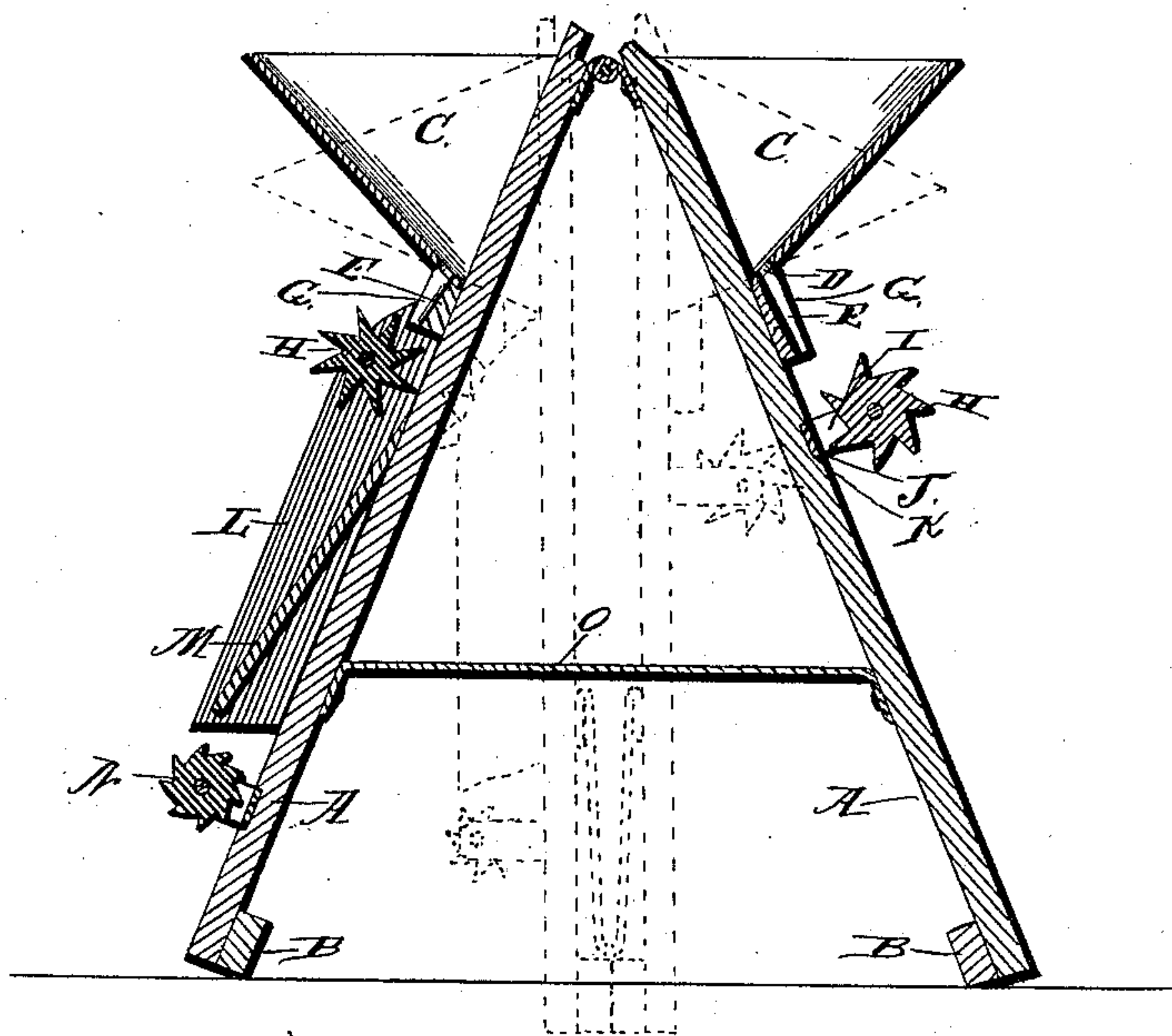
No. 387,497.

Patented Aug. 7, 1888.

*Fig. 1.*



*Fig. 2.*



Witnesses,

*Geo. Thayer*  
*Chas. Bishop,*

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# UNITED STATES PATENT OFFICE.

JAMES TURNER DEMAREST, OF ENGLEWOOD, NEW JERSEY.

## SAND-MILL.

SPECIFICATION forming part of Letters Patent No. 387,497, dated August 7, 1888.

Application filed March 26, 1888. Serial No. 268,474. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES TURNER DEMAREST, a citizen of the United States, residing at Englewood, in the county of Bergen and State of New Jersey, have invented a new and useful Improvement in Sand-Mills, of which the following is a specification.

My invention relates to improvements in toy sand-mills; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, which fully illustrate my invention, Figure 1 is a perspective view of my improved device, and Fig. 2 is a side elevation of the same, a part being broken away and shown in section.

Referring to the drawings by letter, A A designate two legs or standards hinged together at their upper ends and provided with the cross-bars or supports B at their lower ends. At the upper ends of the legs or standards I secure the hoppers C, having the openings D in their bottoms or lower ends. On the outer sides of the legs or standards I secure the guide plates or blocks E below and adjacent to the lower ends of the hoppers, which are provided with the longitudinal grooves G on their outer faces, the upper ends of said grooves registering with the openings D, as shown. Just below the guide-plates E, I arrange the ratchet or paddle wheels H. One of these wheels is journaled between the outstanding arms I of a U-shaped bracket, J, which is secured in a transverse groove, K, formed in the outer face of the leg or standard. The other wheel H is journaled between the upper ends of two parallel plates, L, secured longitudinally to the opposite leg or standard, and having a downwardly and outwardly inclined deflecting-plate, M, secured between them, the said parallel plates and deflecting-plate forming a chute, as will be readily understood. Below the chute thus formed I arrange a ratchet or paddle wheel, N, the teeth or blades of which are arranged reversely to the teeth or blades of the wheel H in the upper end of the chute.

O designates a brace-strap of flexible material secured to and between the legs or standards, to prevent spreading of the legs and the consequent dumping over of the device.

In use the device is set up in the position shown in the drawings and sand, coarse meal,

or a similar substance placed in the hoppers. The sand or meal escapes from the hoppers onto the paddle-wheels, and its weight causes said wheels to revolve at a rapid rate. On one side of the device the sand escapes from the paddle-wheel into a suitable receptacle placed to receive it, but on the other side it is directed through the chute onto the lower wheel before passing into the receptacle.

I am aware that toys have heretofore been provided in which a wheel was arranged below a suitable hopper and driven by sand escaping therefrom, and I make no broad claim thereto. The primary object of my present invention is to provide a device which will be especially adapted for use in the play-room or nursery.

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

1. A toy comprising the legs or standards hinged together at their upper ends and provided with transverse bars or feet at their lower ends, the hopper secured to the upper ends of the legs, and the wheels mounted thereon below the hoppers, as set forth.

2. The combination of the inclined standard, the hopper secured to the upper end of the same, the grooved guide-plate secured to the standard below and adjacent to the lower end of the hopper, the parallel plates secured to the standard below said guide-plate, the wheel journaled between the upper ends of said plates, the deflecting-plate secured between said parallel plates below the wheel, and the wheel mounted on the standard below and adjacent to the lower ends of the parallel plates and the deflecting-plate, substantially as specified.

3. A toy comprising the legs or standards hinged together at their upper ends and carrying the hoppers, and the wheels below the hoppers, and the feet at the lower ends of the legs, and the straps O, connecting the legs, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES TURNER DEMAREST.

Witnesses:

JAMES L. CHRISTIE, Jr.,

ALBERT J. BOGERT, Jr.