

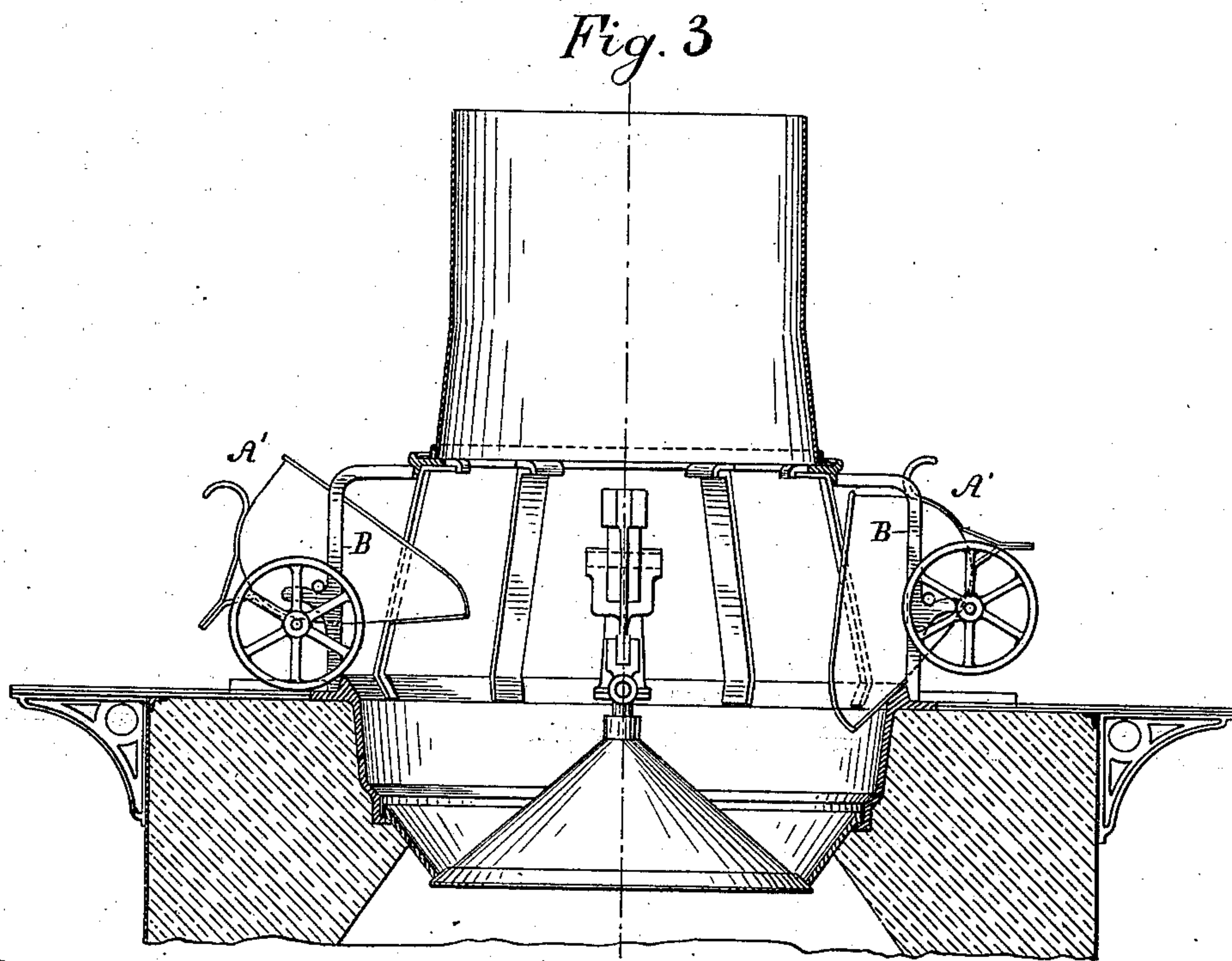
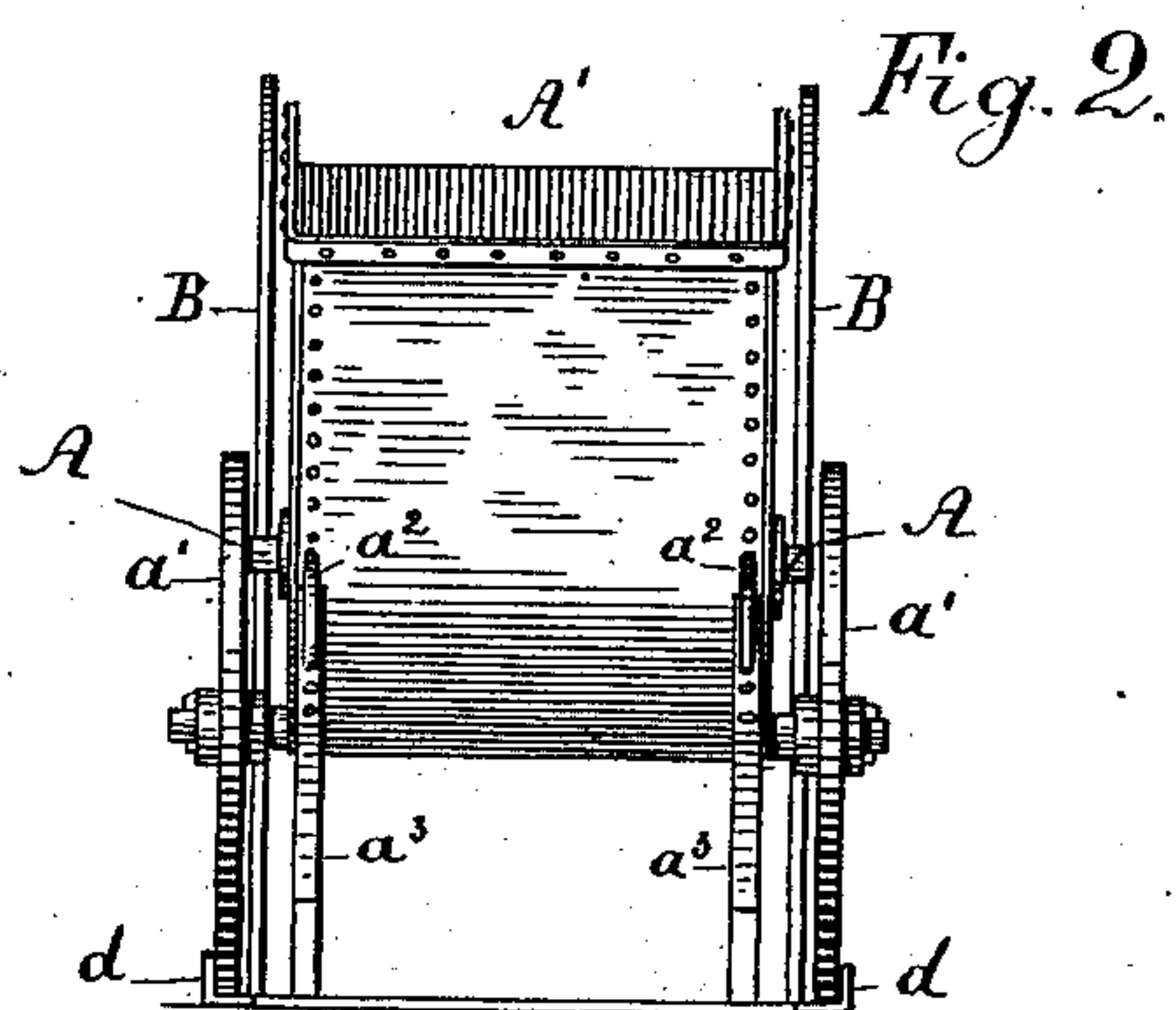
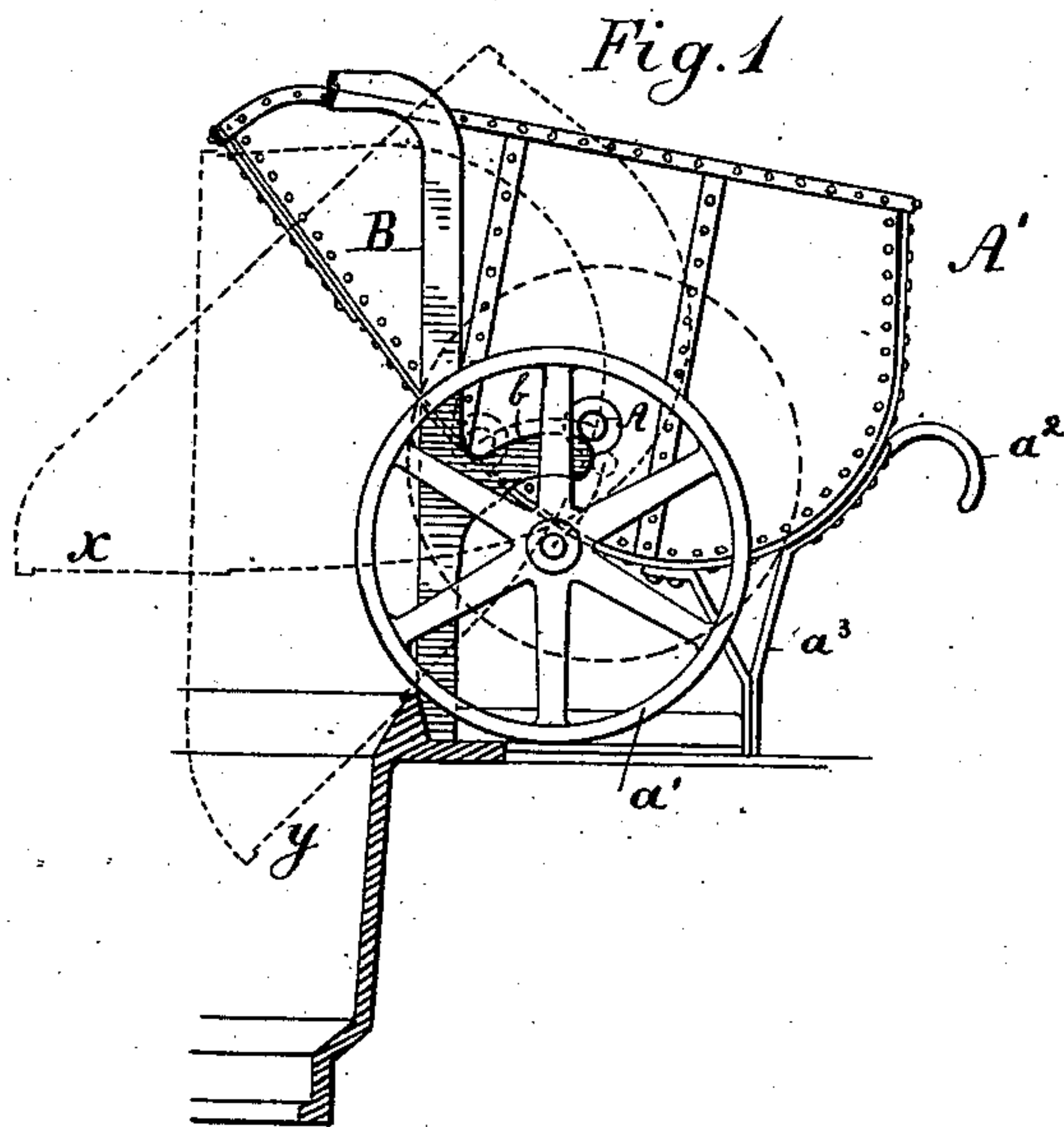
(No Model.)

J. A. DYBLIE.

BARROW.

No. 299,527.

Patented June 3, 1884.



Witnesses:  
J. Loom.  
J. O. Morris.

Inventor:  
Julius A. Dyblie  
By Bruce Fisher  
His Attorneys.



# UNITED STATES PATENT OFFICE.

JULIUS AARS DYBLIE, OF CUMMINGS, ILLINOIS.

## BARROW.

SPECIFICATION forming part of Letters Patent No. 299,527, dated June 3, 1884.

Application filed May 19, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS A. DYBLIE, a subject of the King of Norway, residing at Cummings, in the county of Cook (formerly at Joliet, in the county of Will) and State of Illinois, have invented certain new and useful Improvements in Coke and Ore Barrows, of which the following is hereby declared to be a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 shows the improved barrow and tip-stand co-operating therewith in side elevation. Fig. 2 is a rear elevation of the same, and Fig. 3 is a view of the furnace-head with tip-stands mounted about the gallery in position to support the barrows while being tilted.

My invention consists of a barrow of improved construction, and in the combination therewith of tip-stands conveniently arranged to temporarily support the barrow as on centers, so that said barrow by turning thereon may be quickly and completely emptied, thus relieving the nose and other parts of the barrow from the severe wear and tear to which these are subject when the barrow is dumped by resting on the nose as a pivot.

In charging blast-furnaces with fuel, ore, and flux, or in other like relations where a barrow is employed and is emptied of its contents by tilting about the nose, the heavy charges soon break down the barrow and destroy its usefulness. Besides, it is difficult to completely empty the barrow, if its position is restricted as at the throat or head of a smelting-furnace. To obviate these difficulties, I provide an ordinary barrow, A', having the usual supporting-wheels,  $a'$ , handles  $a^2$ , and legs  $a^3$ , with a set of supplemental pivot-pins or trunnions, A, which may carry small rolls to diminish wear and friction. Said trunnions A are mounted on each side of the body of the barrow in line preferably nearly corresponding to that of the center of gravity of the barrow when loaded.

At one or more convenient points about the gallery of the furnace-head upright tip-stands B are erected, between which stands the barrow may pass in act of discharging its contents. The tip-stands have projecting lips b formed thereon, to serve as bearings for the

trunnions A of the barrow. When the loaded barrow reaches the rim of the furnace-throat, the wheels  $a'$  strike against the raised abutment and come to a stand-still. The barrow may thereupon be turned forward about its usual axle-bearings in the wheels, so as to bring the supplemental trunnions A into the seats b of the tip-stands, the momentum acquired by the barrow, as it is wheeled to position, being almost sufficient of itself to carry the body of the barrow forward and effect the seating of the trunnions as desired. The entire barrow and its contents are now sustained temporarily about the trunnions A, in position shown by dotted lines  $x$ , Fig. 1, so that the weight of the load tends to tip the barrow, thus discharging its contents, as shown at  $y$ , Fig. 1. Immediately thereafter the empty barrow returns again to about position  $x$ , and may be wheeled away, the operation having subjected the nose and other parts to little or none of the destructive shock and strain heretofore encountered, and requiring but little exertion of strength on the part of the laborer to accomplish. It is obvious, moreover, that being elevated by the supplemental trunnions, the barrow is more quickly emptied and its discharge is less impeded by the banking of the materials above the hopper than where no such expedient is employed.

Angle-irons D bolted to the floor of the gallery serve, if desired, to guide the wheels of the barrow into proper position relative to the tip-stands.

It is obvious that this same construction of barrow and tip-stands, in combination, may be employed for other purposes than in charging smelting-furnaces—as, for example, in unloading coal, dirt, ore, grain, or the like into pockets, bins, &c.

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

1. A barrow having the usual supporting-wheels and a set of supplemental trunnions, about which the entire barrow, with its wheels, may temporarily turn, substantially as described.

2. The combination, with the barrow having the usual supporting-wheels and a set of supplemental trunnions, of the tip-stands

adapted to receive and support said trunnions and to allow the barrow to turn thereon, substantially as described.

3. The combination, with the barrow A',  
5 having supporting-wheels  $a'$  and supplemental trunnions A, of the tip-stands B, having lips  $b$ , substantially as described.

4. The combination, with the barrow A',

having supporting-wheels  $a'$  and supplemental trunnions A, of the tip-stands B, having lips  $b$  and the guides D, substantially as described.

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Witnesses:

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