

A. C. MONFORT.  
TRACK SANDING DEVICE FOR RAILROADS.

(Application filed Mar. 6, 1902.)

(No Model.)

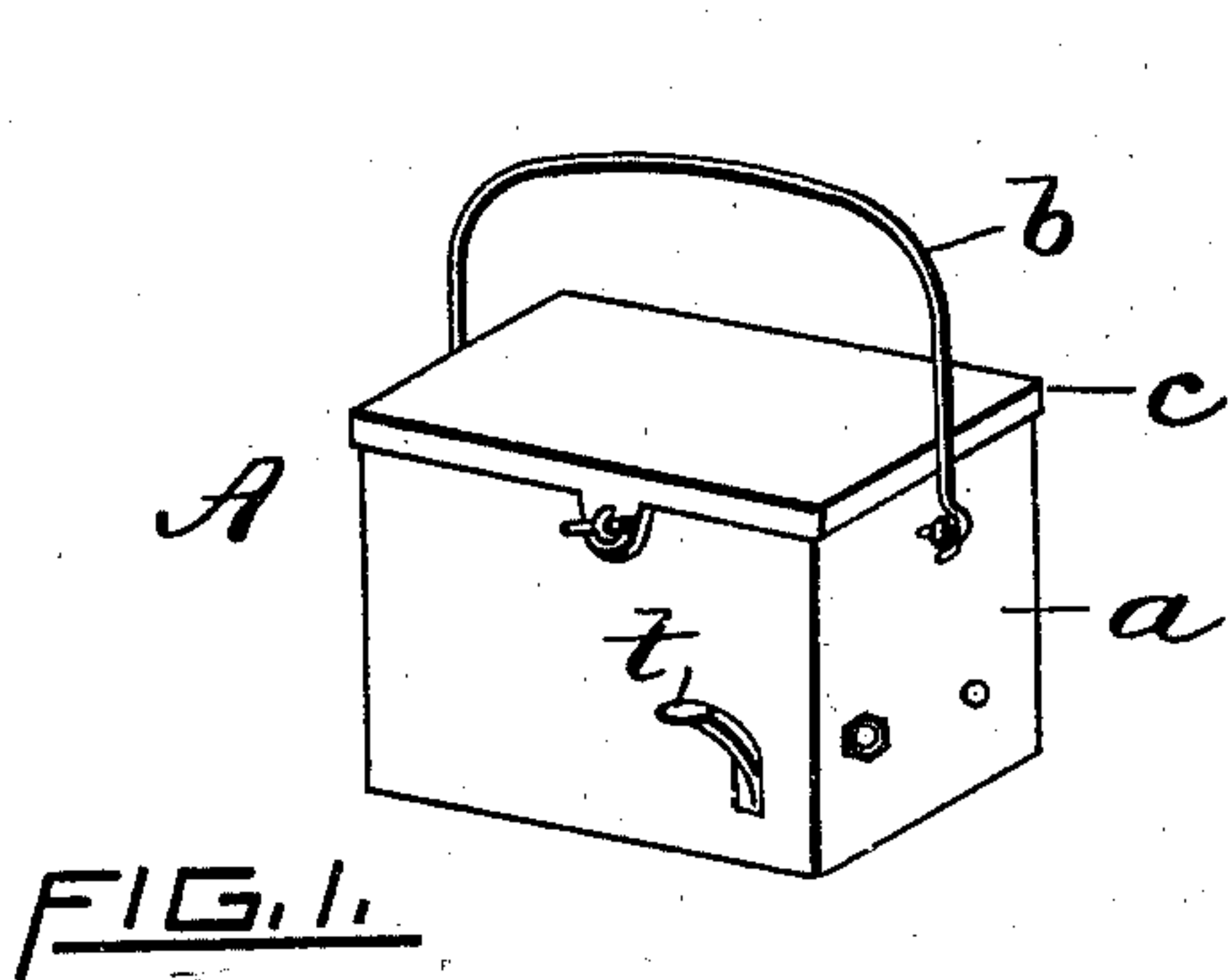


FIG. 1.

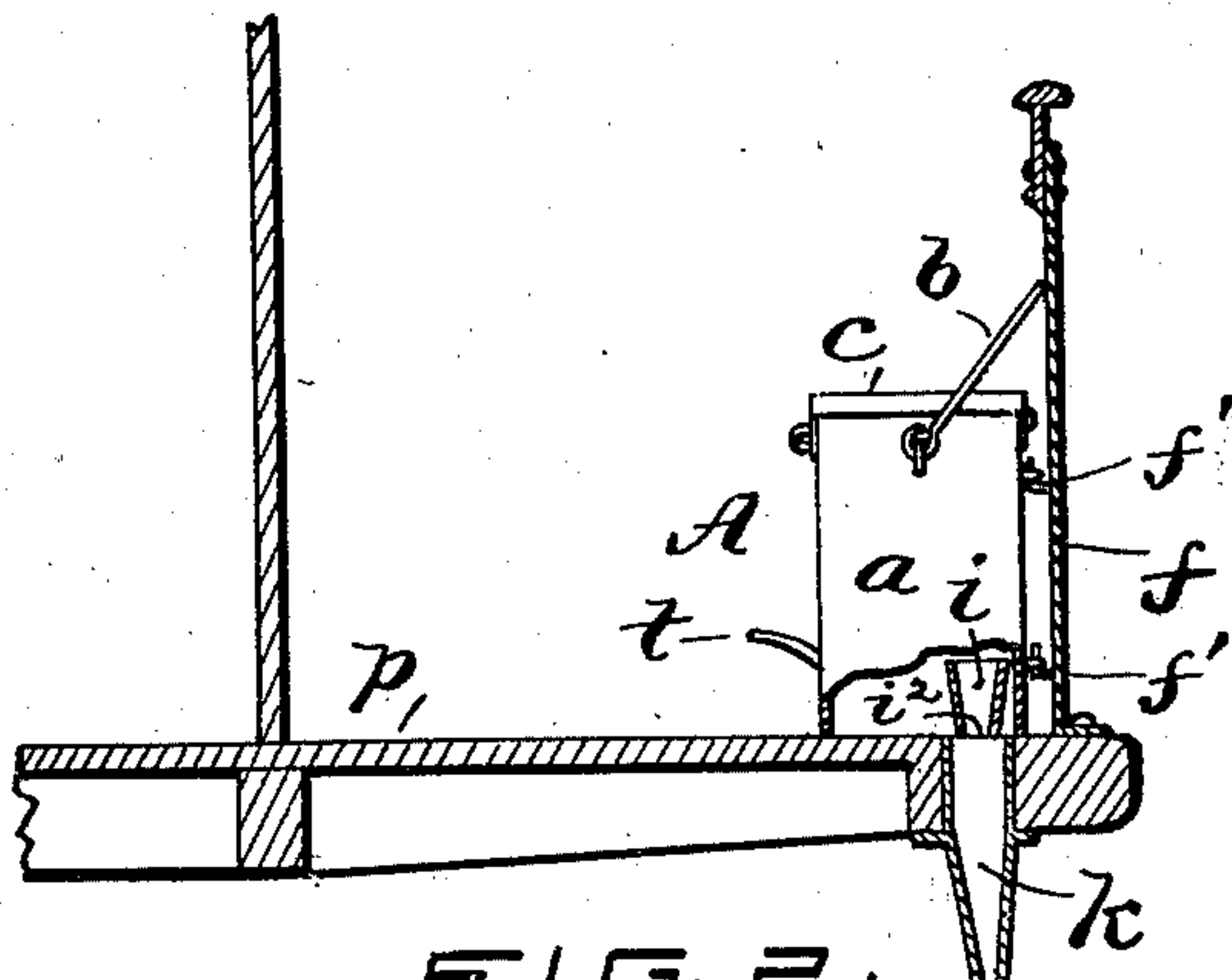


FIG. 2.

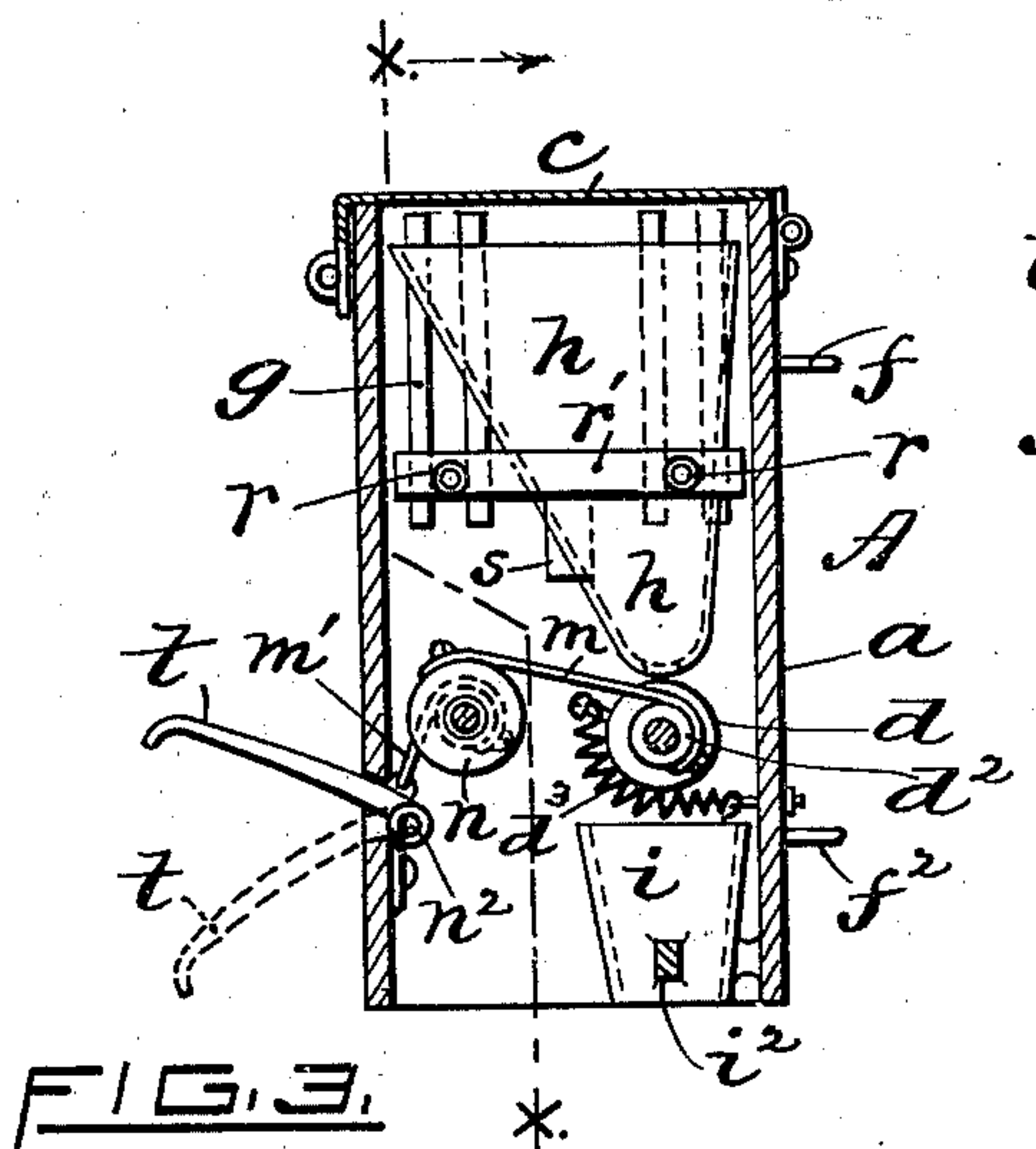


FIG. 3.

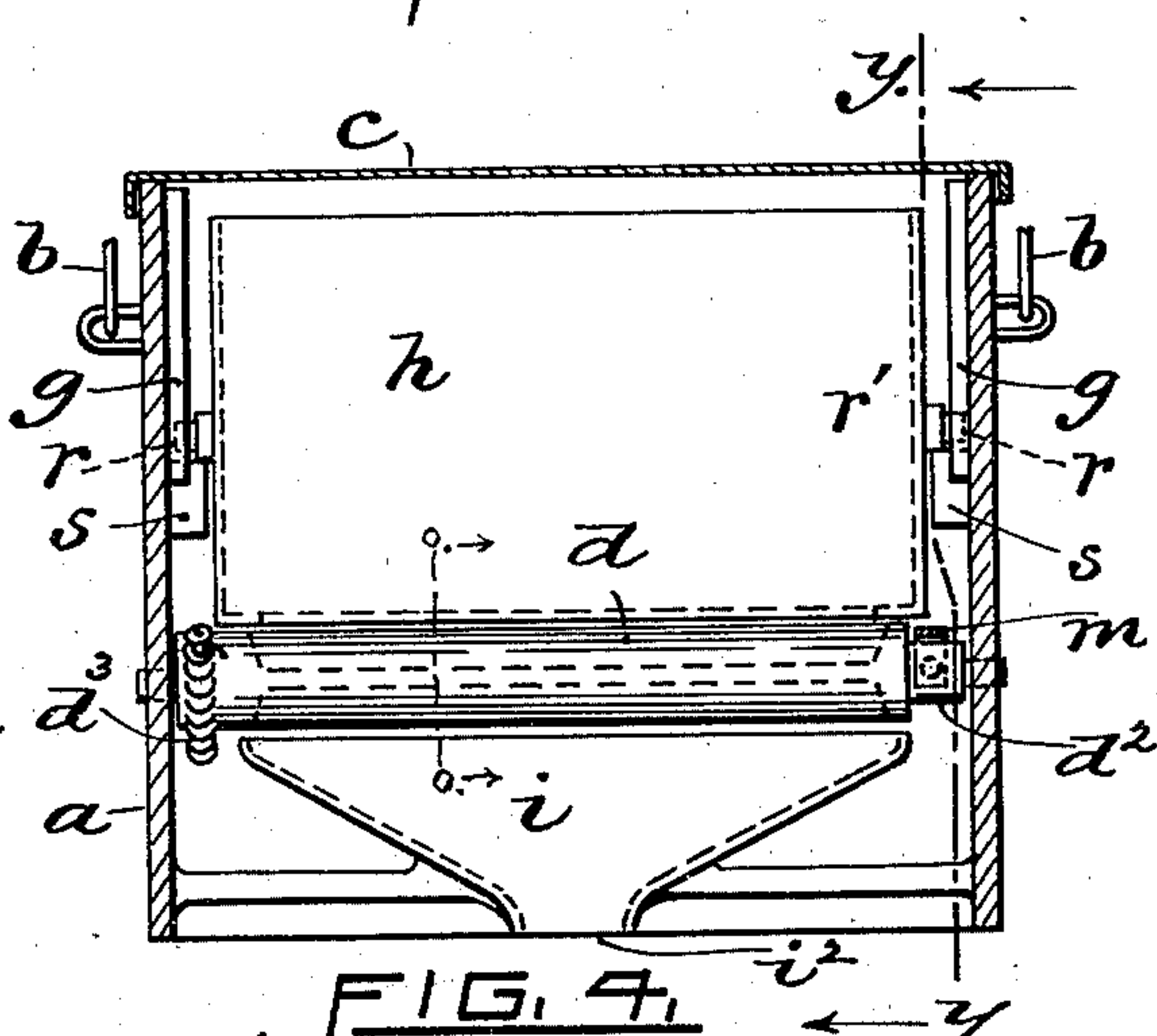


FIG. 4.

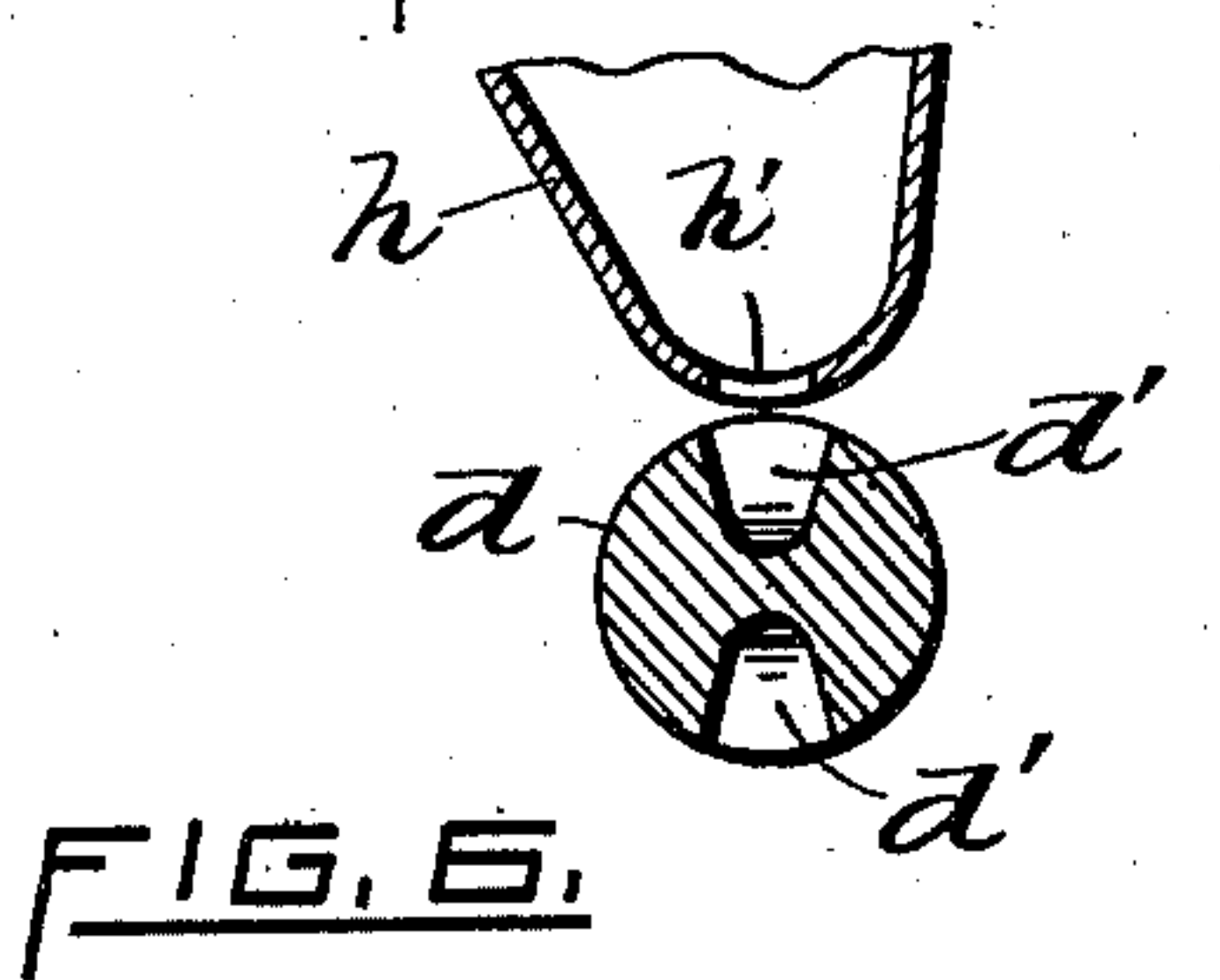


FIG. 5.

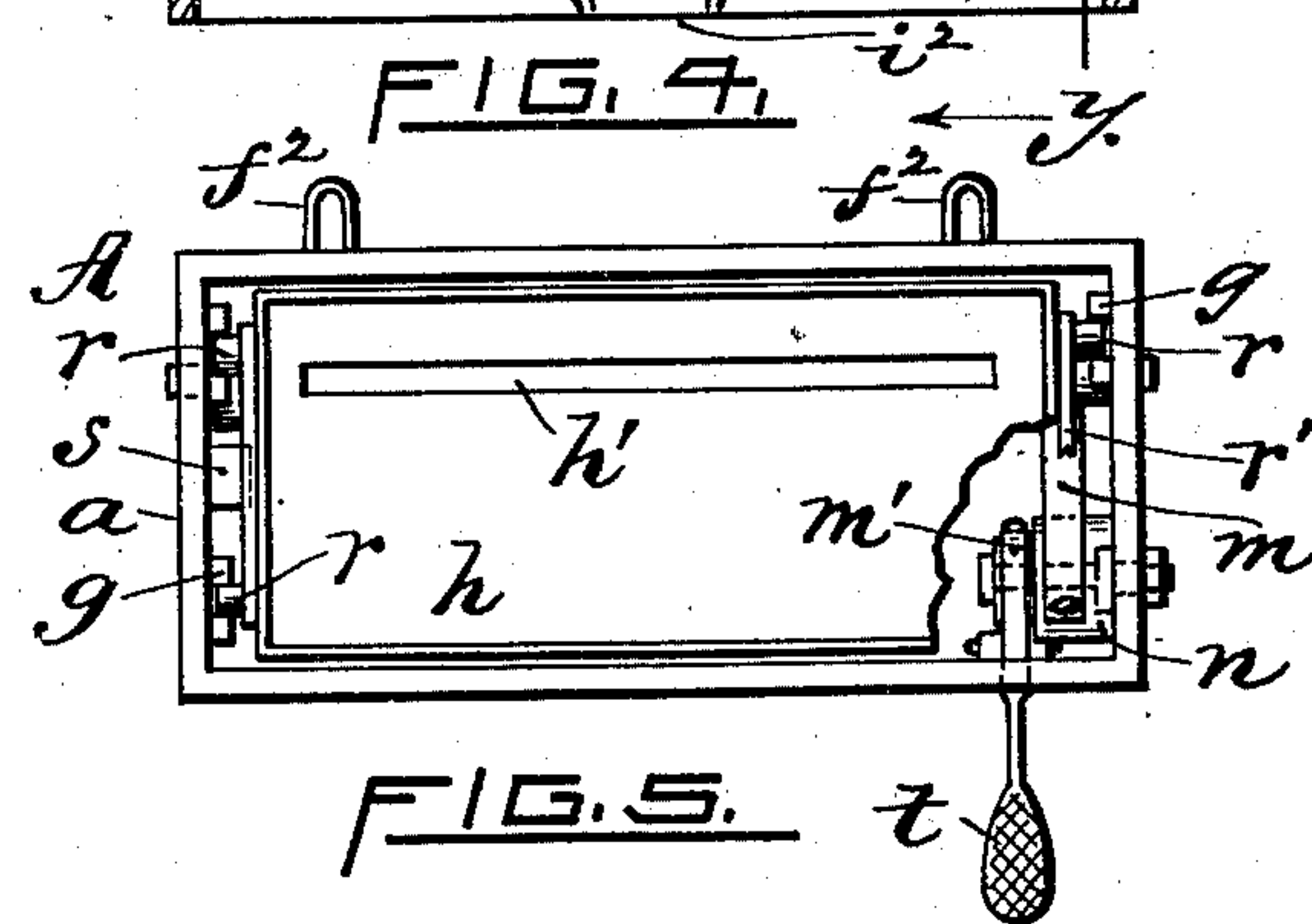


FIG. 6.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## TRACK-SANDING DEVICE FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 702,231, dated June 10, 1902.

Application filed March 6, 1902. Serial No. 96,935. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAM C. MONFORT, a citizen of the United States of America, and a resident of East Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Track-Sanding Devices for Railroads, of which the following is a specification.

My invention relates to improvements in track-sanding devices employed for distributing or placing sand or gravel on top of the track-rails of railroads, tramways, &c.; and it consists, essentially, of a portable or semi-portable apparatus adapted to be readily attached to the dashboard or other suitable part of a car and having a discharge-opening communicating with the sand-reservoir arranged to register with a tube or duct fixed to the car and leading downwardly to the track-rail.

The device embodies a vertically-movable apertured reservoir, a revoluble charging member provided with sand-receiving pockets mounted below and registering with the apertured part of the reservoir, a lever or other analogous means connected with the charging member adapted to be actuated by the foot of the motorman, and means for automatically returning the charging member to its normal position, all as will be more fully hereinafter set forth and claimed.

In the accompanying sheet of drawings, Figure 1 is a perspective view of my improved portable track-sanding device. Fig. 2 is a side elevation of the same in partial section, showing a manner of attaching it to the dashboard of a street-car. Fig. 3 is a transverse sectional view taken on line  $y y$  of Fig. 4. Fig. 4 is a longitudinal sectional view taken on line  $x x$  of Fig. 3. Fig. 5 is a plan view, the cover being removed; and Fig. 6 is an enlarged transverse sectional view taken on line  $o o$  of Fig. 4, showing the lower portion of the reservoir and the relation thereto of the charging-roll.

In the drawings, A designates my improved portable track-sanding device as a whole. The casing  $a$ , as drawn, has the form of a rectangular box, the same being provided with a hinged cover  $c$  and a swinging bail or handle  $b$ . To the back thereof are secured staples or eyes  $f^2$ , by means of which the device is adapted to be attached, say, to the dashboard  $f$  of a car,

hooks  $f'$  being fixed to the dashboard for the purpose. In some cases the platforms  $p$  of street-cars are provided at each end and at a point near the foot of the dashboard with an opening through which sand may be shoveled or poured onto the track-rails. Sometimes a tube  $k$  is employed to conduct the sand downwardly through said opening to the track. (See Fig. 2.)

The interior of my improved track-sanding apparatus A is provided with a vertically-movable reservoir or sand-holder  $h$ , having a slotted opening  $h'$  formed in its bottom wall, through which the sand is discharged. As drawn, an outer horizontal strip  $r'$  is secured to each end of the holder  $h$ , correspondingly-located fixed stops  $s$ , secured to the casing  $a$ , forming a support for the holder and also limiting its downward movement. At or near each end of the strips  $r'$  is mounted a loosely-turning guide-roll  $r$ . These rolls are adapted to bear against suitable guides  $g$ , secured to the adjacent inner ends of the casing  $a$ , as clearly shown. As thus constructed it will be apparent that the reservoir while capable of free vertical movement is at the same time prevented from moving laterally. The stops  $s$ , as just stated, form a support for the reservoir and maintain the latter in the normal relation to the revoluble measuring or charging member  $d$ , mounted below it. The said charging-roll  $d$  is preferably provided with two oppositely-arranged open chambers or pockets  $d'$ , adapted to register with the longitudinal discharge-opening  $h'$  in the reservoir's base. (See Fig. 6.) As drawn, one end of the member  $d$  is reduced in diameter and has secured thereto a flexible strap or connection  $m$ , which in turn is secured to the periphery of a short stud-roll  $n$ . The outer portion of this latter roll is also reduced in diameter and has a flexible connection  $m'$  secured thereto, its opposite end being attached to a treadle-lever  $t$ , fulcrumed at  $n^2$  to the front wall of the casing  $a$ . This lever extends through an opening formed in said wall and is adapted to be depressed by the foot of the motorman or car-driver. At the opposite end of roll  $d$  is secured a spring  $d^3$ , in turn fastened to the rear wall of the casing. Thus it will be seen that an extreme downward angular move-



ment of the lever *t*, or to the dotted-line position shown in Fig. 3, will rotate the charging-roll, say, one-half a revolution, the spring *d*<sup>3</sup> automatically returning the roll to its normal position upon removing pressure from the lever. Located immediately below and coextensive with said charging-roll is fixed a suitably-shaped funnel or chute *i*, its lower portion terminating in a round central opening *i*<sup>2</sup>, arranged to register with the said tube or opening *k*, formed in the platform *p*.

From the foregoing it is obvious that upon charging the reservoir *h* with sand and attaching the device to the dashboard or other suitable part of a car having a passage leading therefrom to the track-rails the apparatus is ready for service. Now upon depressing the lever *t* the roll *d* will be correspondingly rotated, thereby discharging the measure of sand filling the pocket *d'* into the chute *i*, from which latter it falls by gravity to the track-rail via the opening *k*. Upon releasing said lever the roll automatically returns to its normal position and the open pocket is again filled with sand from the reservoir, the operation being repeated as frequently as desired or necessary. While the sand is being discharged from the roll *d*, the plain surface of the latter serves to practically close the discharge-opening *h'*, thus preventing undue waste of sand.

In case large or very coarse pieces of gravel or stone should be present and projecting upwardly from the pocket *d'* at the instant the roll is actuated no serious result would follow, since the force exerted on the lever *t* will cause the reservoir to move upwardly, thereby yielding sufficiently to permit such enlarged pieces of gravel, &c., to freely pass into the discharging-chute *i*, the reservoir immediately returning to its normal position by gravity.

The device being portable may be conveniently and readily carried about or shifted from one end of the car to the other at the termination of each trip, if desired. No sand is wasted while being thus carried. The apparatus is simple in construction and operation and comparatively inexpensive, while being thoroughly efficient. Another advantage is that it can be easily and quickly operated

by the foot of the motorman while his hands are employed in manipulating the current and brake levers or handles.

I claim as my invention—

1. The improved sand-box or track-sanding device hereinbefore described, the same comprising a portable box or casing, adapted to be removably secured to the dashboard of a street-car, a removable sand-holding reservoir mounted within the casing, a spring-pressed revoluble charging member *d* having a measuring-recess therein registering with an opening formed in the bottom of said reservoir, an operating-lever *t* extending through the wall of the box, a connection arranged wholly within the box uniting said charging and lever members, *d* and *t*, and a chute through which the charges of sand are discharged from the apparatus.

2. The portable track-sanding apparatus A herein described, adapted to be attached to a street-car, the same consisting of a casing or box provided with a carrying bail or handle, a vertically-movable reservoir *h* for the sand mounted within the casing and having a discharge-outlet, suitable guides and stops for controlling the movements of the reservoir, a revoluble charging-roll provided with pockets adapted to register with the said discharge-outlet of the reservoir, and a treadle-lever connected with and adapted to rotate said roll upon depressing the lever, substantially as shown and described.

3. In a track-sanding device, a vertically-movable apertured reservoir *h* for containing the sand, fixed stops for limiting the downward movement of the reservoir, guide-rolls *r* or other analogous means attached to the reservoir, fixed guides or ways *g* having said rolls *r* fitted to slide therein, whereby the reservoir is prevented from moving except in a vertical direction, and means, substantially as shown and described, for discharging predetermined quantities or charges of sand from the reservoir.

Signed at Providence, Rhode Island, this 26th day of February, 1902.

ABRAM C. MONFORT.

Witnesses:

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WILLIAM A. SULLIVAN.