

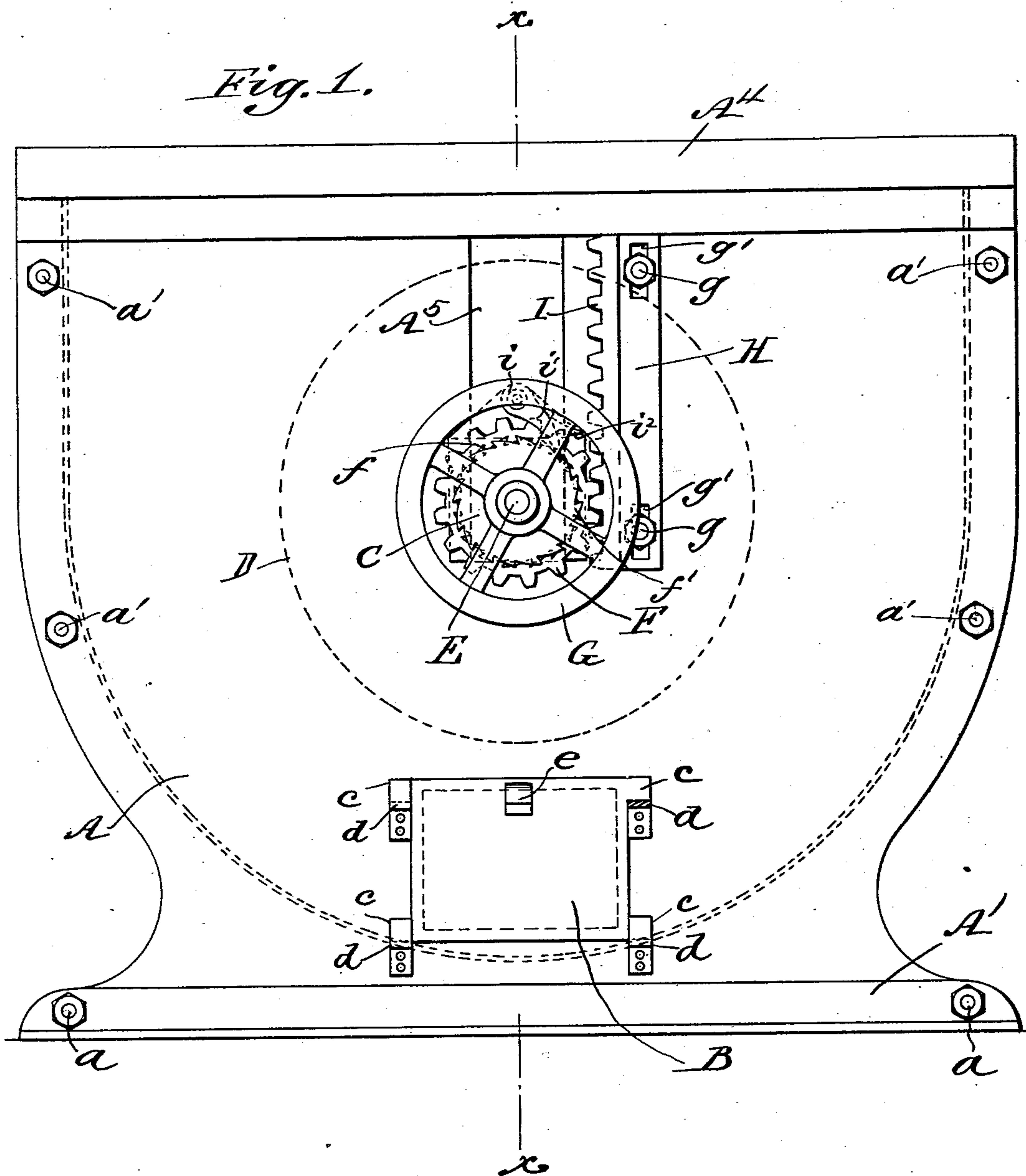
(No Model.)

2 Sheets—Sheet 1.

J. HANKIN.
ELEVATOR BOOT.

No. 563,171.

Patented June 30, 1896.



WITNESSES:
John D. Deemer
John C. Griffith

INVENTOR
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(No Model.)

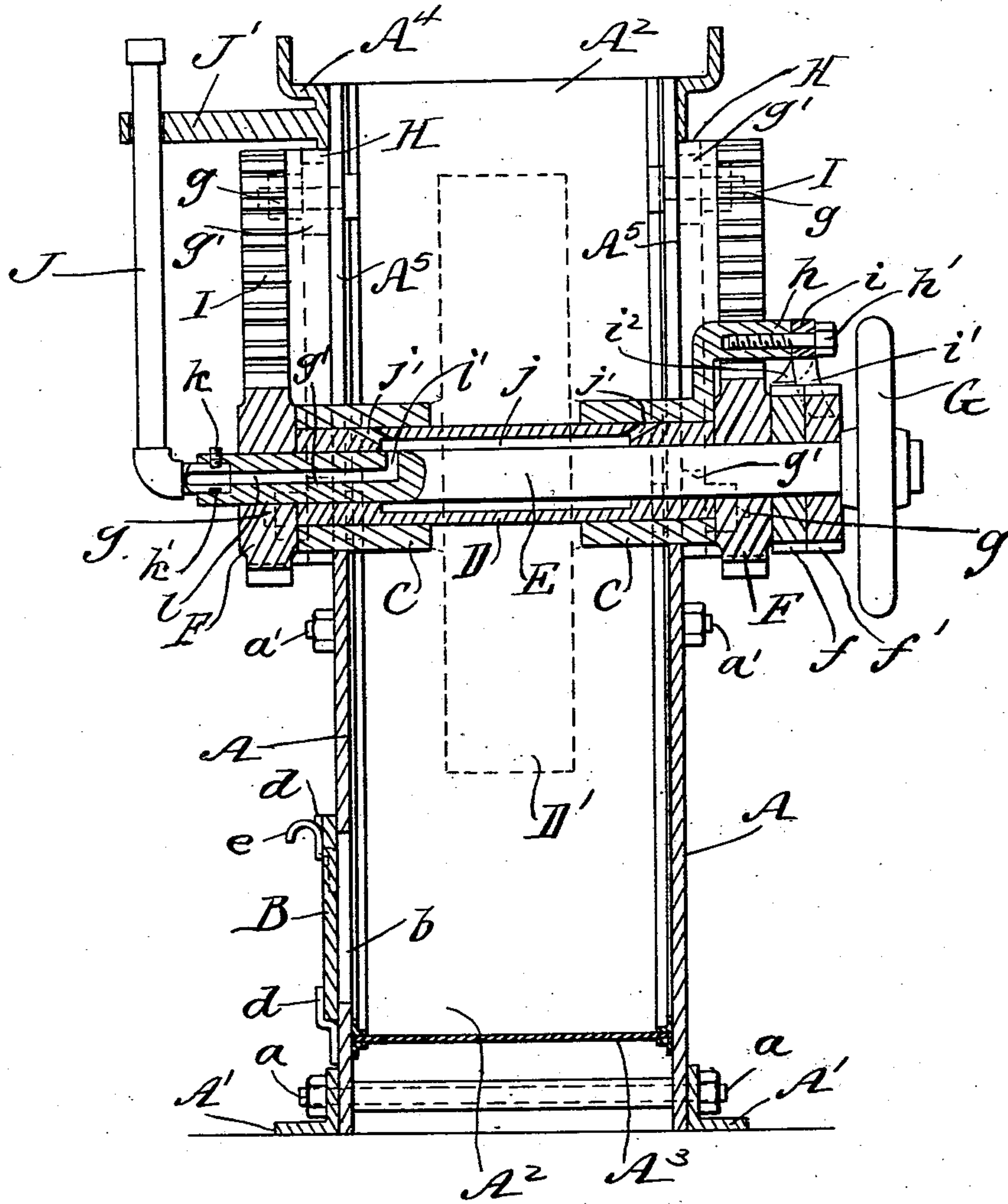
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Fig. 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN HANKIN, OF RUTHERFORD, NEW JERSEY.

ELEVATOR-BOOT.

SPECIFICATION forming part of Letters Patent No. 563,171, dated June 30, 1896.

Application filed January 9, 1895. Serial No. 534,356. (No model.)

To all whom it may concern:

Be it known that I, JOHN HANKIN, a citizen of the United States, and a resident of Rutherford, county of Bergen, and State of New Jersey, have invented certain new and useful Improvements in Elevator-Boots, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts in all the figures.

This invention relates to elevator-boots, or the box or receptacle in which the lower sprocket wheel or pulley is journaled, and has for its object to provide a simple, cheap, readily-constructed, and perfectly-operating device of this character, in which means are provided for vertically adjusting the bearings of said wheel; for efficiently and automatically lubricating the same, and for obtaining access thereto for cleaning and for other purposes.

The invention consists in the novel construction and arrangement of parts whereby the above-mentioned and other desirable results are attained, and hereinafter more fully described.

Referring to the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a central vertical section thereof upon the line $x x$.

In the practice of my invention I construct the boot of two sections or walls A, having base-flanges A', united by bolts a , inserted therethrough, said sections being connected at each end by the walls A², secured thereto by means of bolts a' . Near the bottom of the device is secured a transverse flooring or bottom A³, immediately above which, at one side, I form in the section A an opening b , which is closed by a door or lid B, provided with lugs c , projecting horizontally from each corner thereof and fitting within flanged shoulders d , which are secured to said section immediately beneath each of said lugs and project upwardly to receive the same therein, whereby the door is removed by raising the same through the agency of a handle e , formed upon the face thereof near its upper edge.

Projecting vertically downward from the top of each section A, beneath the usual head

A⁴, are slots A⁵, in which are inserted substantially square boxes C, normally resting at the bottom of said slots and projecting beyond the same at either side. Journaled in these boxes C and extending transversely through the boot is a tubular shaft D, upon which is mounted the sprocket, pulley, or other wheel D', which carries the conveyer-belt. Within this shaft is revolubly mounted a spindle E, having pinions F secured thereon at each end immediately beyond the boxes C and the shaft D. At the front of the device the spindle E has mounted upon the end thereof a hand-wheel G, between which and the forward pinion F, I secure upon said spindle ratchet-wheels ff' , the teeth of which range in opposite directions.

To each of the sections A, at one side of the slots A⁵, I secure angular plates H, ranging parallel with said slots and fastened by means of bolts g , extending through vertical slots g' therein, and having perpendicular racks I formed upon the edges thereof which face the slots A⁵, said racks being, by reason of the angular or sectionally L-shaped form of said plates H, projected a slight distance beyond said sections A and meshing with the pinions F. Projecting outwardly from the forward box C at the top is an arm h , having pivotally secured upon the end thereof, by means of a bolt h' , extending therethrough, a double pawl i , provided with two arms i' i'' , which are outwardly and inwardly turned, respectively, and engage the ratchet-wheels f' and f . In the drawings this pawl is shown as turned to the right, whereby the arm i' is in engagement with the ratchet-wheel f' , and the same may, when required, be reversed to release said pawl from engagement with said ratchet and permit the opposite arm i'' to drop upon the ratchet-wheel f .

In order to provide for lubricating the device, I cut out the tubular shaft D interiorly to form an oil-chamber j , which communicates by diagonal apertures j' with the interior of the boxes C. The oil is introduced into this recess j by a pipe J, mounted in a flange J', projecting from the rear of the head A⁴, said pipe J being curved or bent at the lower end where it is inserted within the spindle E, and secured therein by means of a screw k , extending through said spindle and entering an an-

nular groove k' in said pipe. The said end of the spindle is provided with a longitudinal central groove l , projected radially at the inner end to form a slot l' , communicating with
5 the oil-recess j .

The operation of the device will be readily understood from the foregoing description, taken in connection with the accompanying drawings. When it is desired to adjust the
10 shaft D to slacken or tighten the conveyer-belt, the wheel G is turned, in the former case to the right, thereby causing the pinions F to engage the respective racks H and elevate the boxes C, which slide in the slots A⁵; and when
15 the rotation of the wheel G is discontinued, as the arm i' of the pawl i engages the ratchet f , any reverse rotation of said pinions, and consequent dropping of the boxes, is thereby prevented, the spindle E being incapable of such
20 movement. When it is desired to tighten the conveyer-belt by depressing the boxes, the pawl is reversed to bring the arm i^2 into engagement with the ratchet-wheel f , and the wheel G rotated in the opposite direction, the
25 pinions F engaging the racks and forcing the boxes farther down in the slots A⁵, reverse motion of the wheel in this instance being prevented by said arm i^2 and the ratchet-wheel f . It is to be noted that regulation of the boxes
30 for a distance less than one tooth of the pinions or racks may be effected by adjusting the height of said racks through the agency of the bolts g , extending through the slots g' therein.

As the shaft D revolves, the oil within the
35 recess j is thrown by centrifugal force through the slots j' between said shaft and the boxes, and also lubricates the spindle E, said oil being fed automatically into said recess as required through the pipe J. And by the inser-
40 tion of the screw k into the annular groove k' in

the end of said pipe J the connection thereof with the spindle E is revoluble, and turning of the wheel G therefore does not affect said pipe.

Access to the bottom of the boot for ready
45 cleaning of the same, inspection, and repair of the parts is enabled by removing the door D.

The advantages resultant from the use of the invention will be manifest to all who are conversant with the general class of devices to
50 which the same appertains. I do not confine myself to the exact formation of parts or construction of details herein set forth and illustrated.

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

In an elevator-boot of the character described, the combination with the sections provided with grooves, and the boxes secured
60 therein of the tubular shaft provided with a central oil-chamber and the diagonal oil-ducts extending from the central chamber to the boxes, a spindle mounted within said shaft having a longitudinal and transverse opening
65 therein, a flange secured at one side of said boot, an L-shaped oil-supply pipe secured within said flange and a clamping-screw passing through the extension of the spindle and securing said oil-supply pipe within the same,
70 substantially as herein described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 7th day of January, 1895.

JOHN HANKIN.

Witnesses:

W. H. BOGUE, Jr.,
W. R. ARMSTRONG.