

No. 876,432.

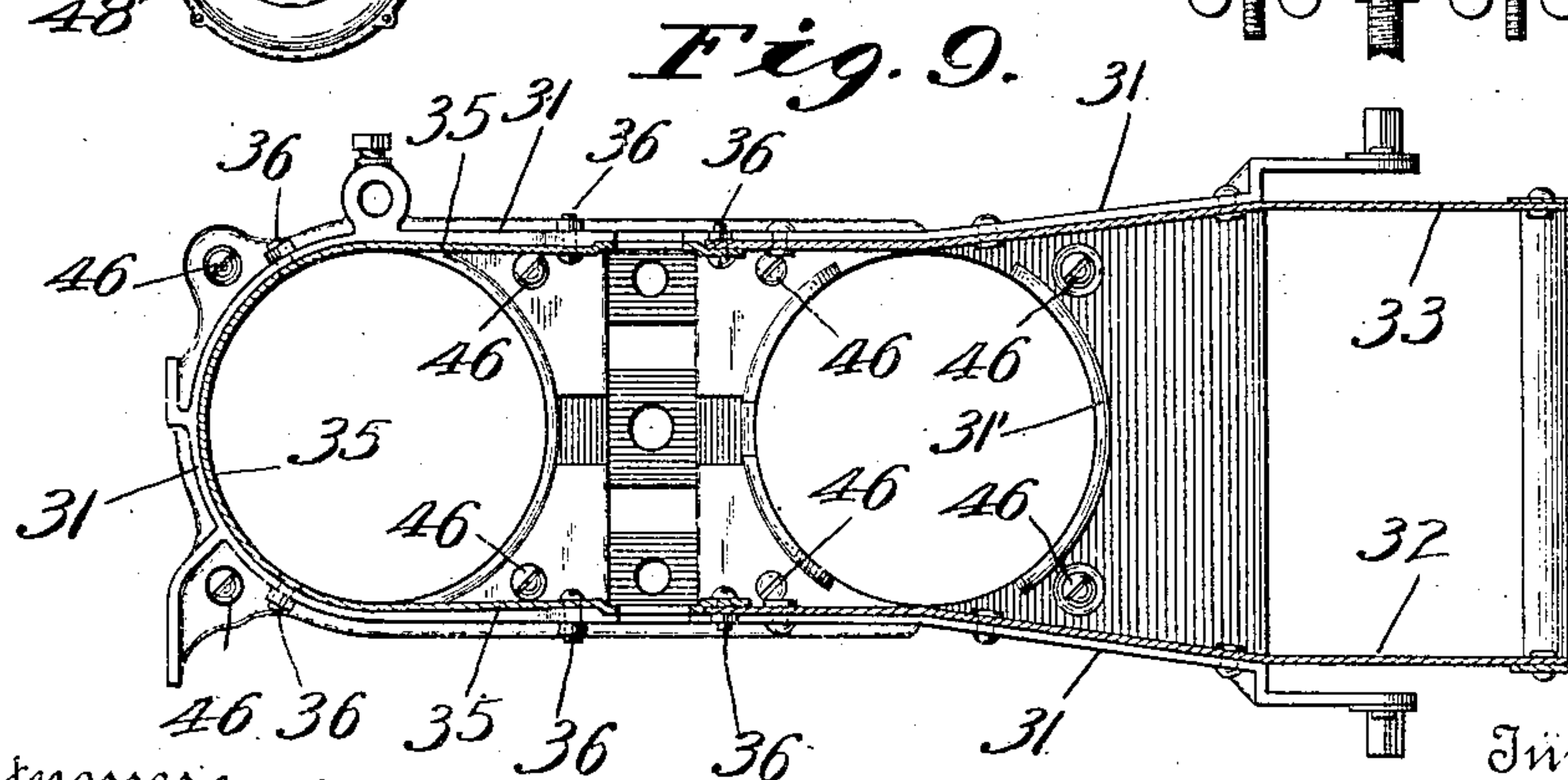
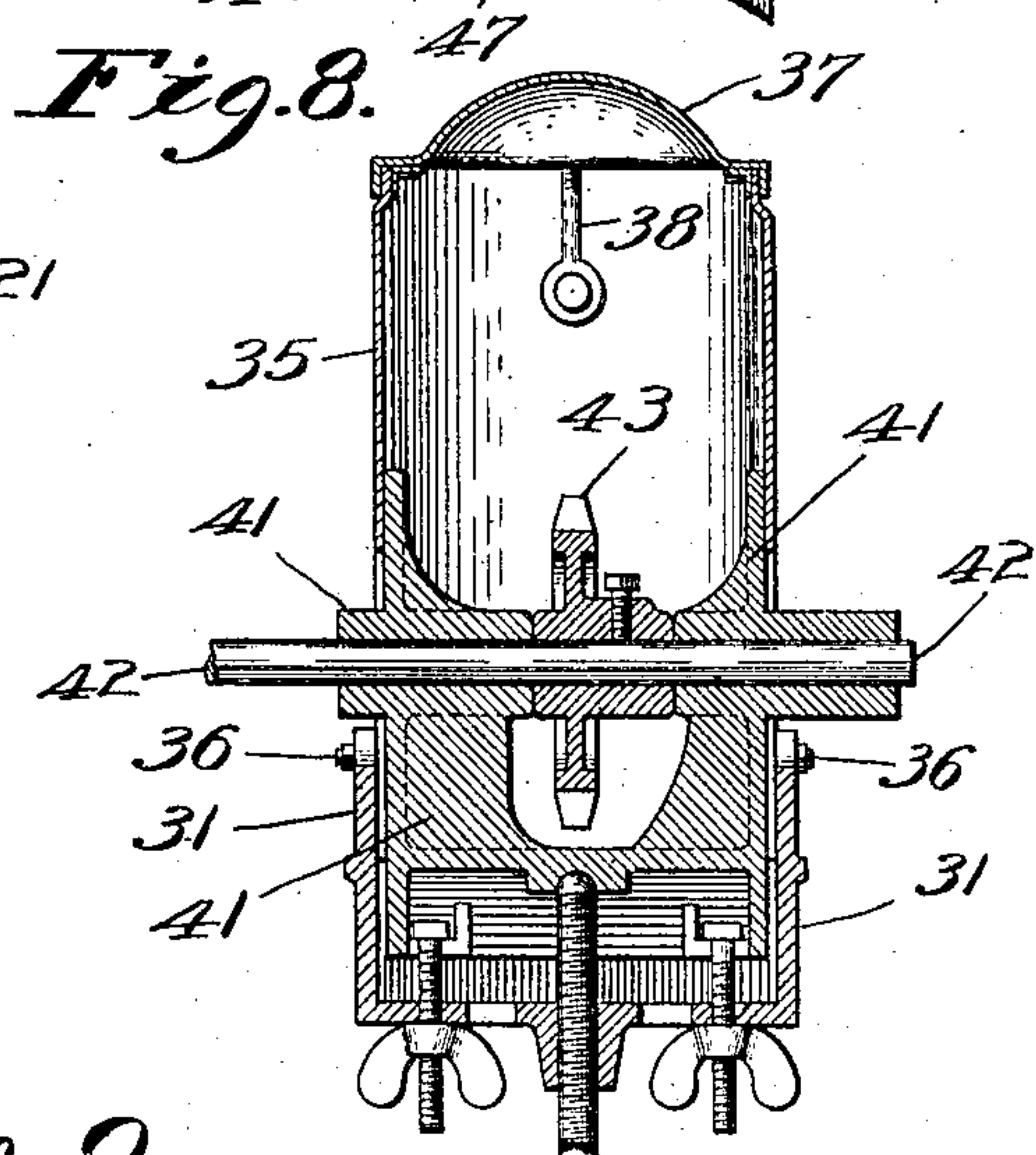
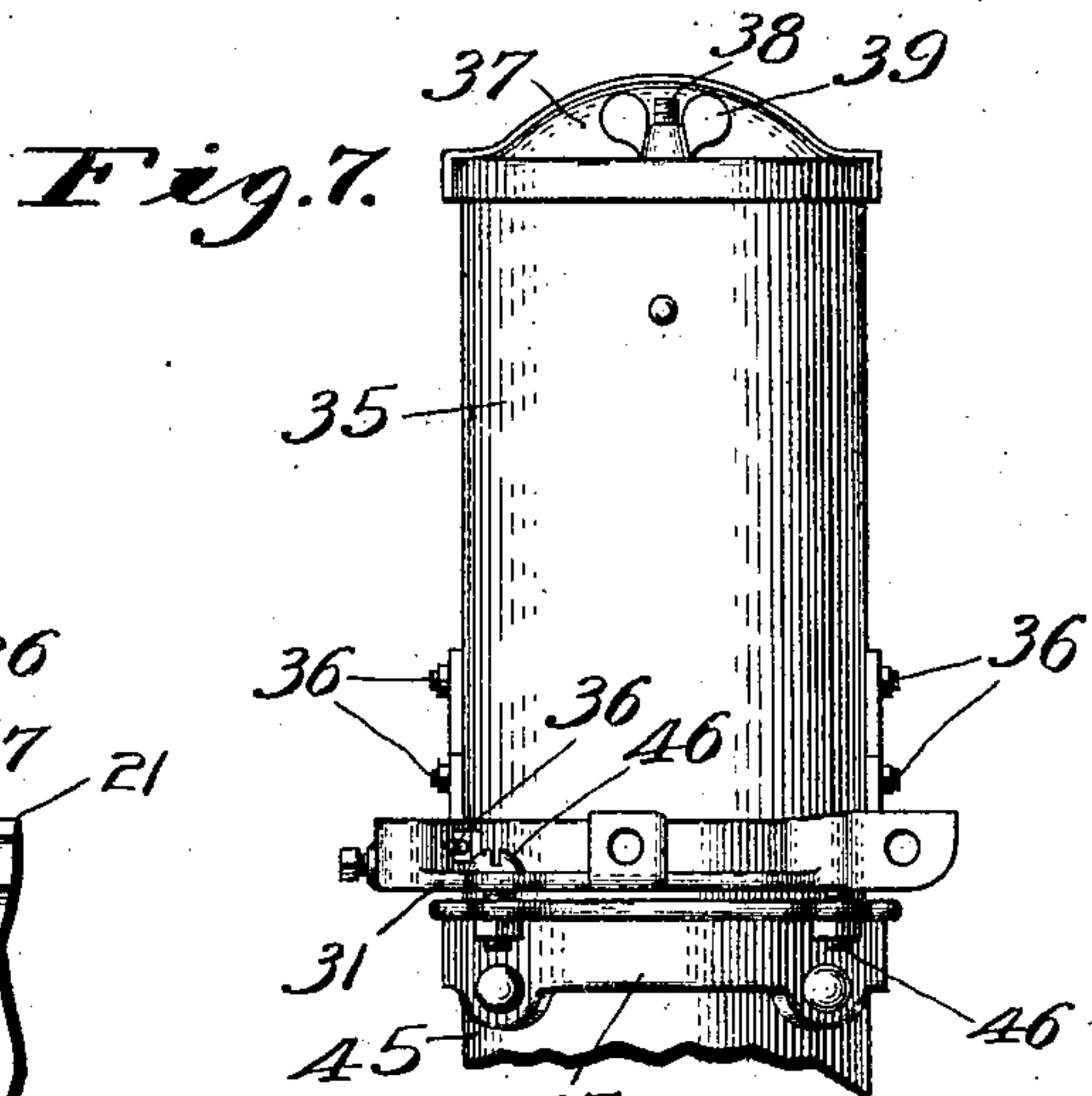
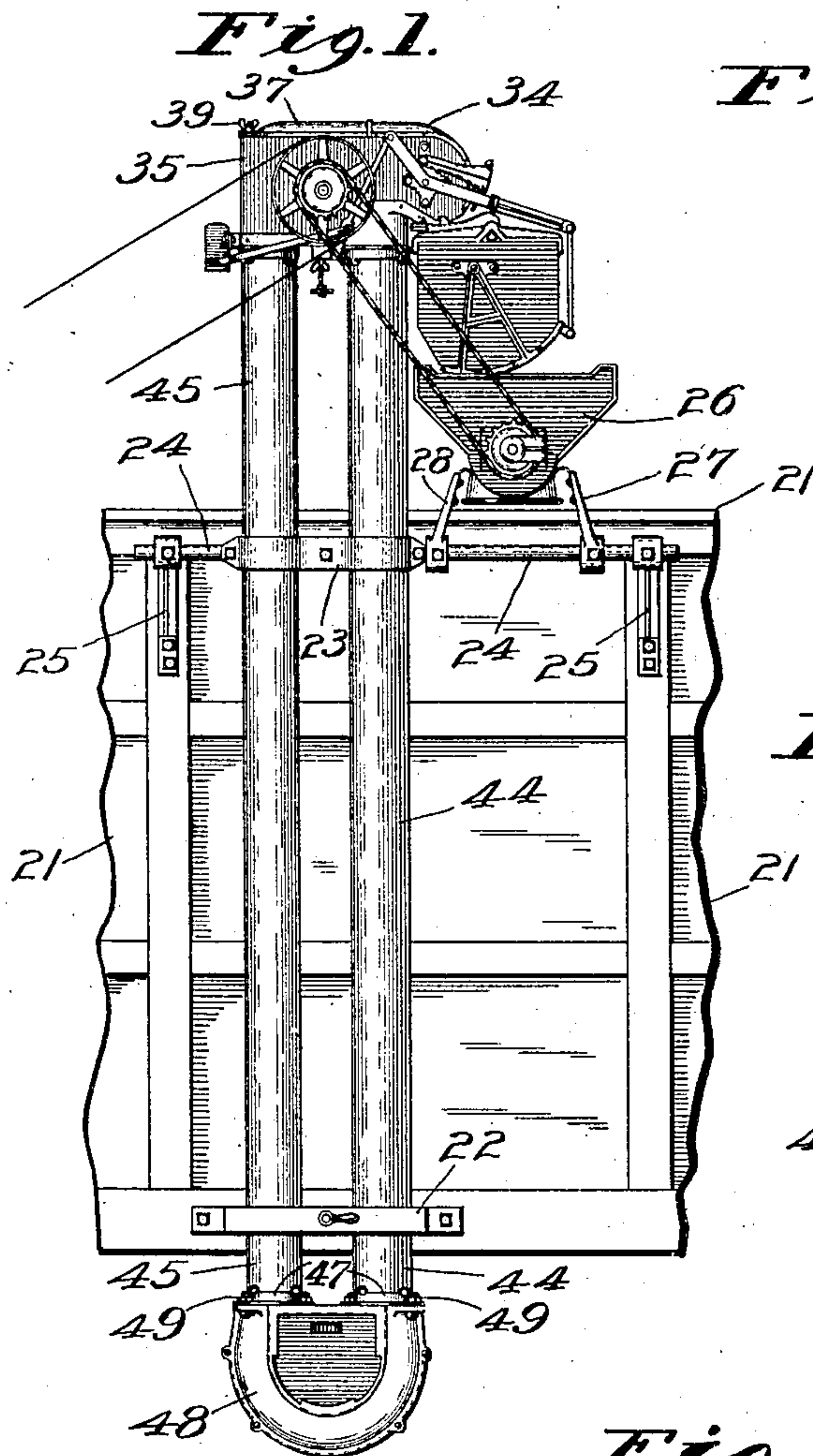
PATENTED JAN. 14, 1908.

C. BRADFORD & G. L. CHATFIELD.

ELEVATOR.

APPLICATION FILED APR. 9, 1907.

2 SHEETS—SHEET 1.



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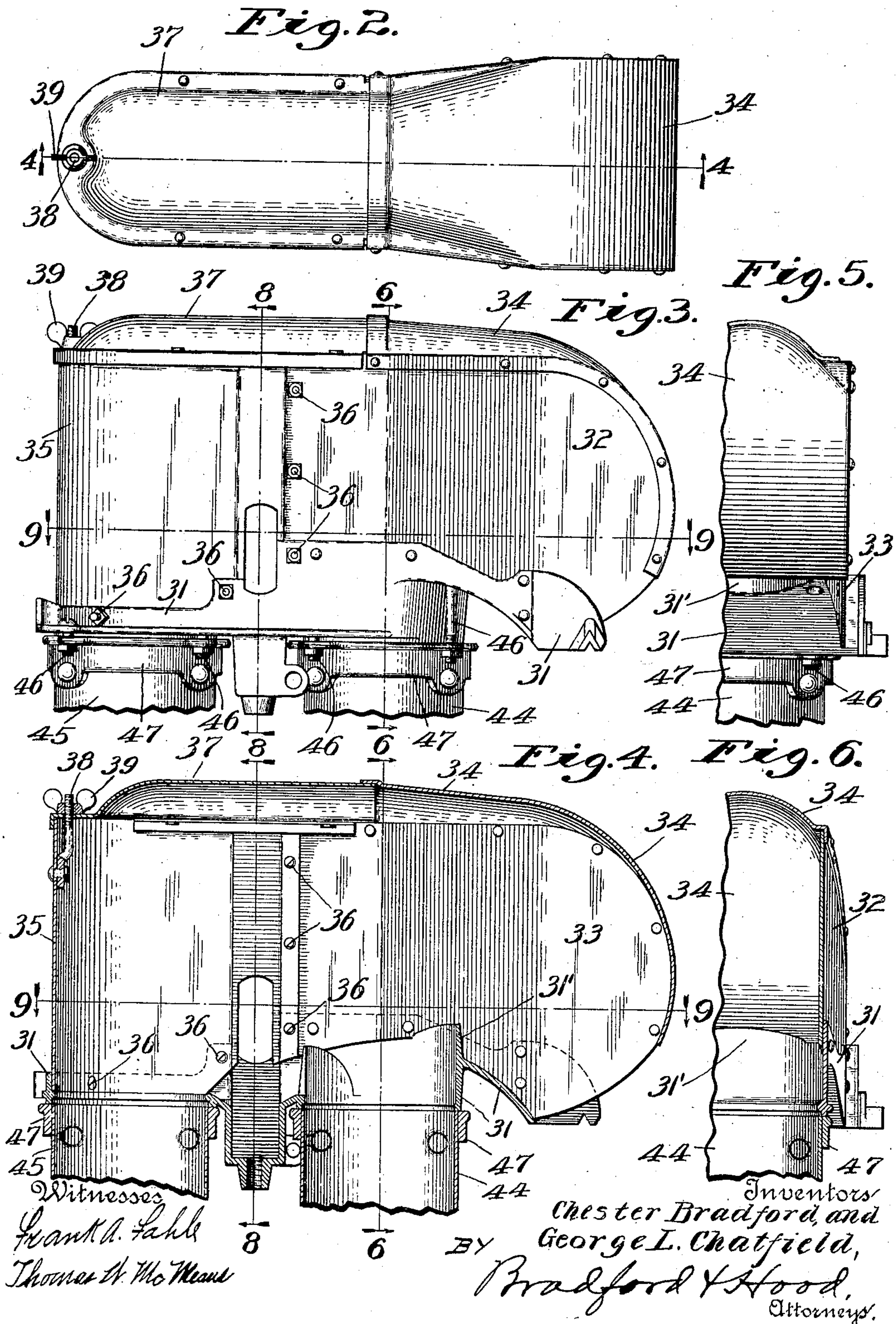
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

CHESTER BRADFORD AND GEORGE L. CHATFIELD, OF INDIANAPOLIS, INDIANA; SAID CHATFIELD ASSIGNOR TO SAID BRADFORD.

ELEVATOR.

No. 876,432.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed April 9, 1907. Serial No. 367,202.

To all whom it may concern:

Be it known that we, CHESTER BRADFORD and GEORGE L. CHATFIELD, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Elevators, of which the following is a specification.

Our present invention relates especially to the upper portion or head of an elevator of the endless carrier type; and it is shown as embodied in that particular class of devices for elevating grain (as it is threshed) from the delivery spout of a threshing machine or separator to a weigher, conveyer, or the like.

Said invention consists of various improvements in the construction and arrangement of parts, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a machine of the character in question as it appears when mounted upon the side of a threshing machine or separator ready for use; Fig. 2 a top or plan view of the head of the elevator separately; Fig. 3 a side elevation of such a head, and fragmentary upper end portions of the elevator legs or tubes upon which the same is mounted; Fig. 4 a longitudinal vertical section of the same at the point indicated by the dotted line 4 4 in Fig. 2; Fig. 5, a front elevation; Fig. 6 a transverse vertical sectional view at the point indicated by the dotted line 6 6 in Figs. 3 and 4; Fig. 7 a rear elevation; Fig. 8 a transverse vertical sectional view at the points indicated by the dotted line 8 8 in Figs. 3 and 4, and Fig. 9 a horizontal sectional view as seen when looking downwardly from the point indicated by the dotted line 9 9 in Figs. 3 and 4.

In order to fully illustrate our invention and its use, we have shown in Fig. 1 a complete machine mounted on a fragment of a separator 21. The elevator is shown as secured thereto by suitable attaching devices, as 22 and 23, the latter of which hangs upon a rod or bar 24 carried by brackets 25 on the separator 21. The cross-conveyer 26 (which will not be further described herein, as the same forms the subject-matter of other patents and applications) is also shown as mounted upon this same rod or bar 24 by means of suitable supports 27 and 28.

Our present invention relates only to so much of the machine as is illustrated in the remaining figures of the drawing. The elevator head is composed of a base 31, which is usually a casting, two sheet-metal cheek-pieces 32 and 33 which are preferably rigidly attached to said base 31, as by riveting, a top and front portion 34, which is preferably rigidly attached to the cheek pieces 32 and 33, as by riveting, and a rear body portion 35, which is preferably detachably attached to the base 31 and the cheek pieces 32, as by bolts 36, and a removable cap portion 37, the forward end of which engages with the rear portion of the part 34, as by being inserted below its adjacent edge, while its other end is detachably secured, as by a bolt 38 and a nut 39. The edge of this cap 37 is turned down and forms a flange which houses over the upper edge of the part 35. Flange members are also secured to the inside of said cap, parallel with the side flange portions, as best shown in Figs. 8 and 4, and these outer and inner flanges constitute the walls of the groove which receive and hold the upper edges of the part 35 on the rear ends of the cheeks 32, strongly preventing said edges from being forced inwardly by any ordinary external blows or pressures. As the cap 37 is very conveniently removable, quick access can be had to the interior of the head; and, as the part 35 is also removable, the whole head mechanism can be easily reached and removed, whenever that becomes necessary or desirable, as in the case of renewal or repair. While the sides of the head are formed of three parts 32, 33 and 35, said head sides may, of course, although less conveniently, be formed of a single piece if desired.

At the forward end of the head, in front of the front elevator leg 44, the base 31 diverges, in both directions, as best shown in Fig. 9, until it reaches the extreme front end, at the point where the discharging-mouth is. It also, as best shown in Fig. 4, sweeps downwardly, thus giving the front material-holding chamber an inclined floor. At the rear of this chamber, alongside the upper terminal of the front elevator leg, is a wall 31'; in front of which the material is held while it is awaiting discharge. This wall appreciably increases the holding capacity of said chamber, and also assists in preventing the material which has been elevated from being carried back down said front elevator leg.

Within the base 31 and the wall portion 35 of the head, we form suitable ways (terminating in a chamber in said base) to receive and guide the bearing-structure 41 which is mounted within this head to carry the shaft 42 for the upper sprocket-wheel 43 of the elevator; which bearing-structure, shaft, and the means for adjusting the same, are of substantially the same character as the corresponding parts shown and described in Letters Patent No. 782,642, to which reference is hereby made for a more complete disclosure of these features. The head, as a whole, (when assembled) is secured to the legs 44 and 45 of the elevator by means of bolts 46 which engage with suitable ears on the main casting 31 of said head, and corresponding ears or flanges 47 secured to the adjacent ends of said elevator legs. Thus, by removing said bolts 46, the whole head may be easily and quickly removed from and attached to said elevator legs. As the boot 48 of the elevator is attached to said elevator legs by corresponding bolts 49 and ears or flanges 47, we are able to make a machine of any desired height by connecting elevator legs or tubes of the desired length to a standard head and boot—such heads and boots being kept in stock, and being all uniform. This is of considerable advantage to the users of such machines; as in case the owner of such a machine desires to attach it to a separator of different make or size he has only to procure these legs or tubes of the desired length, when he is able to use all the remaining parts of the machine without change, and to quickly and easily assemble and disassemble the structure.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is,—

1. The combination, in an elevator head, of a base, a sheet metal body piece, a rigidly attached cap portion, a removable cap portion, and a releasable clamping device, said last named cap portion engaging with the rigidly attached cap portion at one end and being held by the releasable clamping device at the other end.

2. The combination, in an elevator head, of the base, a sheet metal body portion, a rigidly attached cap portion, and a removable cap portion, said removable cap portion having a down-turned external flange and an internal flange, said flanges embracing the upper edge of the body piece when the parts are assembled.

3. The combination, in an elevator head, of a base, a sheet metal body piece forming the sides of the head and secured by its lower edges to said base and provided with openings in the sides through which the shaft bearings extend and wherein said shaft bearings are adjustable, a rigidly attached

cap piece secured to the upper edges of said body piece at the snout or discharging end and forming with the ends of said body piece and a corresponding end of the base the discharge opening or snout, and a removable cap piece covering the remaining portion of the top of the head.

4. The combination, in an elevator, of a head built separately from the elevator legs, elevator legs provided with bolt receiving projections, bolts extending parallel with the elevator legs by which said head is removably secured thereto, a boot built separately from the elevator legs, and bolts by which said boot is removably secured thereto.

5. The combination, in an elevator head, of a base, side-portions or cheeks rigidly attached thereto, a front cap-portion rigidly attached to said cheeks, a back head-portion detachably connected to the base and the cheeks, and a rear cap-portion detachably associated with the front cap-portion the cheeks and rear head-portion.

6. The combination, in an elevator head, of a base portion having a chamber adapted to contain a bearing-structure, sheet metal portions connected to said base portion and forming the remainder of said head, the sheet metal portion which is immediately above the chamber in the base-structure having channels formed therein constituting ways for said bearing-structure wherein the same is adapted to travel while being adjusted, and said bearing-structure.

7. The combination, in an elevator head, of a base portion having a chamber adapted to contain a bearing-structure, sheet metal portions connected to said base portion and forming the remainder of said head, the sheet metal portion which is immediately above the chamber in the base-structure having channels formed therein constituting ways for said bearing-structure wherein the same is adapted to travel while being adjusted and containing slots in the lower portions of said ways through which the ends of the shaft carried by said bearing-structure may project, and said bearing-structure and shaft.

8. An elevator head embodying a material-containing chamber in front of the front elevator leg between said leg and the discharge mouth, said chamber having an upwardly projecting wall at its rear side next the top of the front elevator leg whereby the capacity of said chamber is increased.

In witness whereof, we have hereunto set our hands and seals at Indianapolis, Indiana, this fifth day of April, A. D. one thousand nine hundred and seven.

CHESTER BRADFORD. [L. s.]

GEORGE L. CHATFIELD. [L. s.]

Witnesses:

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