

No. 702,058.

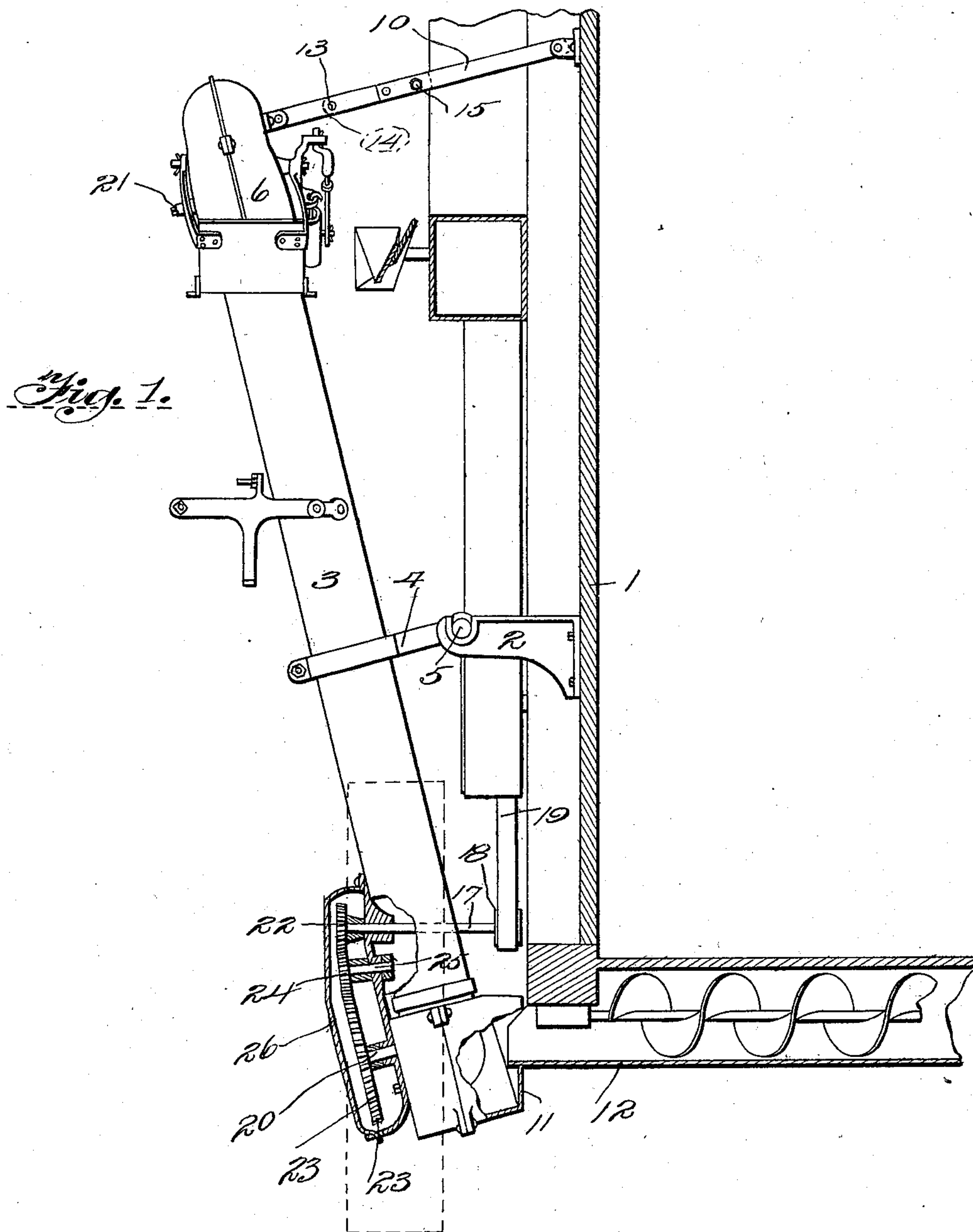
Patented June 10, 1902.

S. B. HART.
GRAIN ELEVATOR FOR SEPARATORS.

(Application filed Nov. 9, 1901.)

(No Model.)

5 Sheets—Sheet 1.



Witnesses:
J. B. Weir
Chas. D. Perry

Inventor:
S. B. Hart
By John W. Kelly
Atty.

No. 702,058.

Patented June 10, 1902.

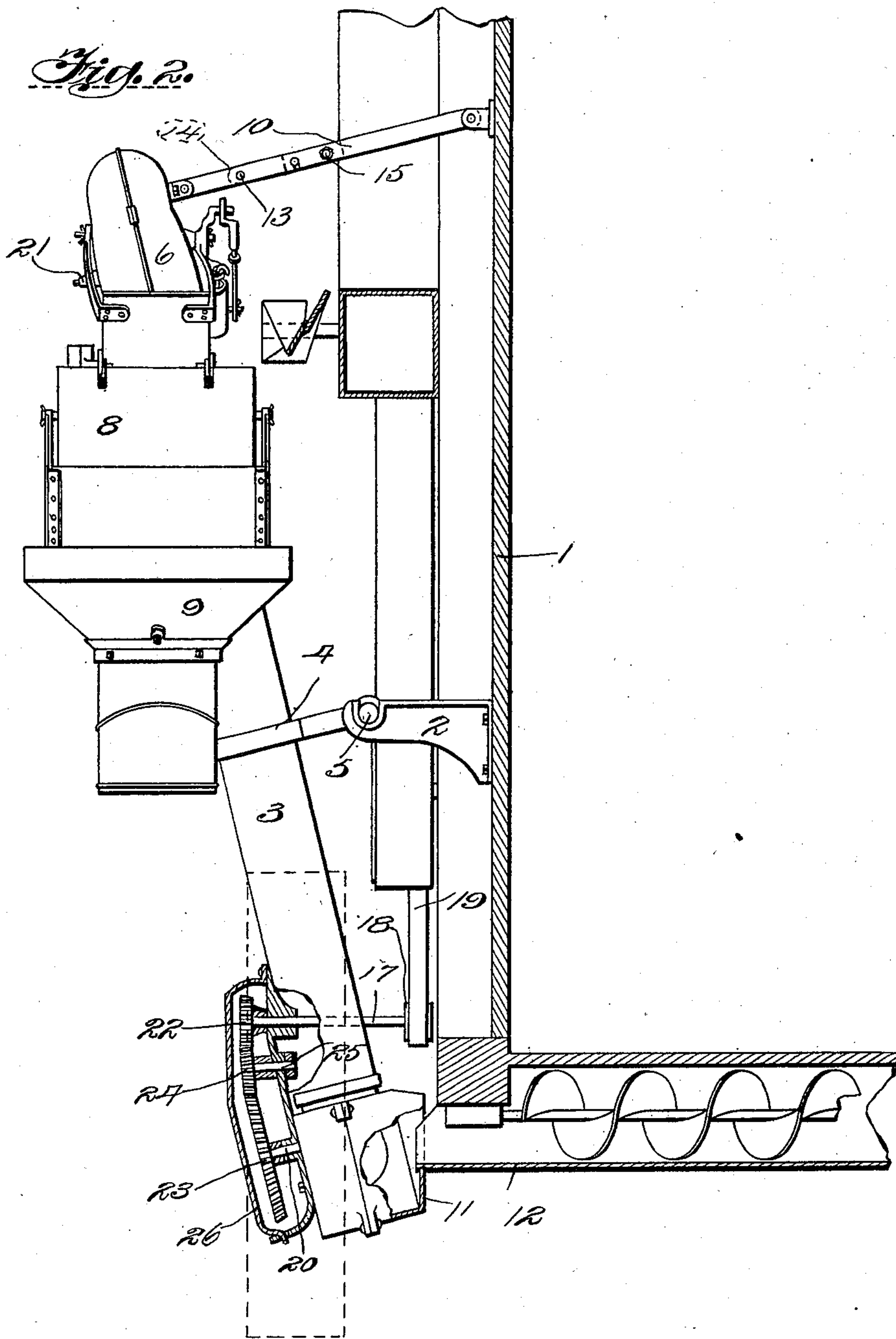
S. B. HART.

GRAIN ELEVATOR FOR SEPARATORS.

(Application filed Nov. 9, 1901.)

(No Model.)

5 Sheets—Sheet 2.



Witnesses:
J. B. Weir
Ed. Perry

Inventor:
Stacy B. Hart
By John W. Keil, Atty.

No. 702,058.

Patented June 10, 1902.

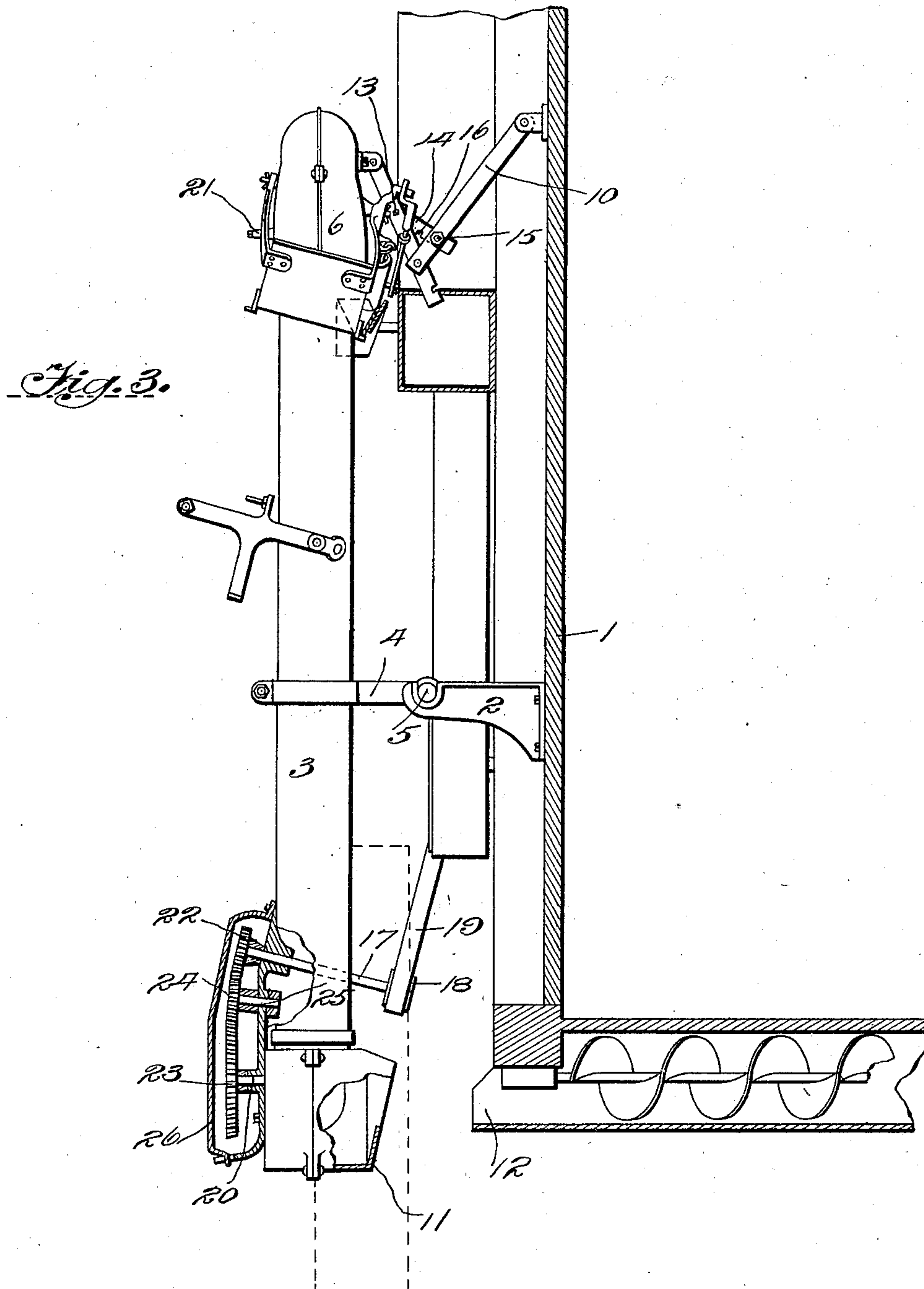
S. B. HART.

GRAIN ELEVATOR FOR SEPARATORS.

(Application filed Nov. 9, 1901.)

(No Model.)

5 Sheets—Sheet 3.



Witnesses: _____

J. B. Weir

Geo. D. Perry

Inventor:

Stacy B. Kohl-

By John W. Kellogg, Atty.

No. 702,058.

Patented June 10, 1902.

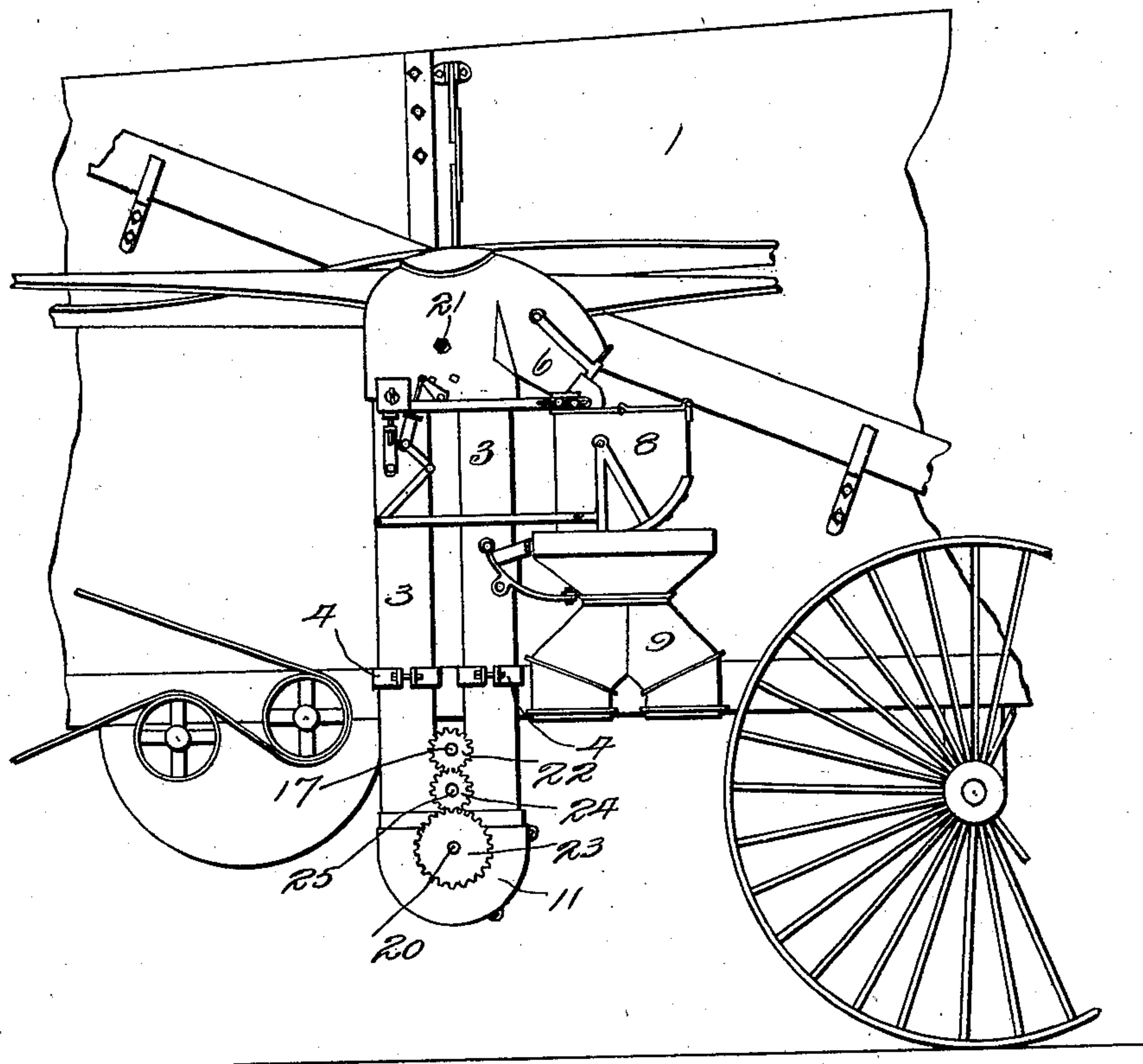
S. B. HART.
GRAIN ELEVATOR FOR SEPARATORS.

(Application filed Nov. 9, 1901.)

(No Model.)

5 Sheets—Sheet 4

Fig. 4.



Witnesses:

J. B. Weir
Wm. D. Perry

Inventor:

Stacy B. Hart
By John H. Hill Atty.

No. 702,058.

Patented June 10, 1902.

S. B. HART.

GRAIN ELEVATOR FOR SEPARATORS.

(Application filed Nov. 9, 1901.)

(No Model.)

5 Sheets—Sheet 5.

Fig. 5.

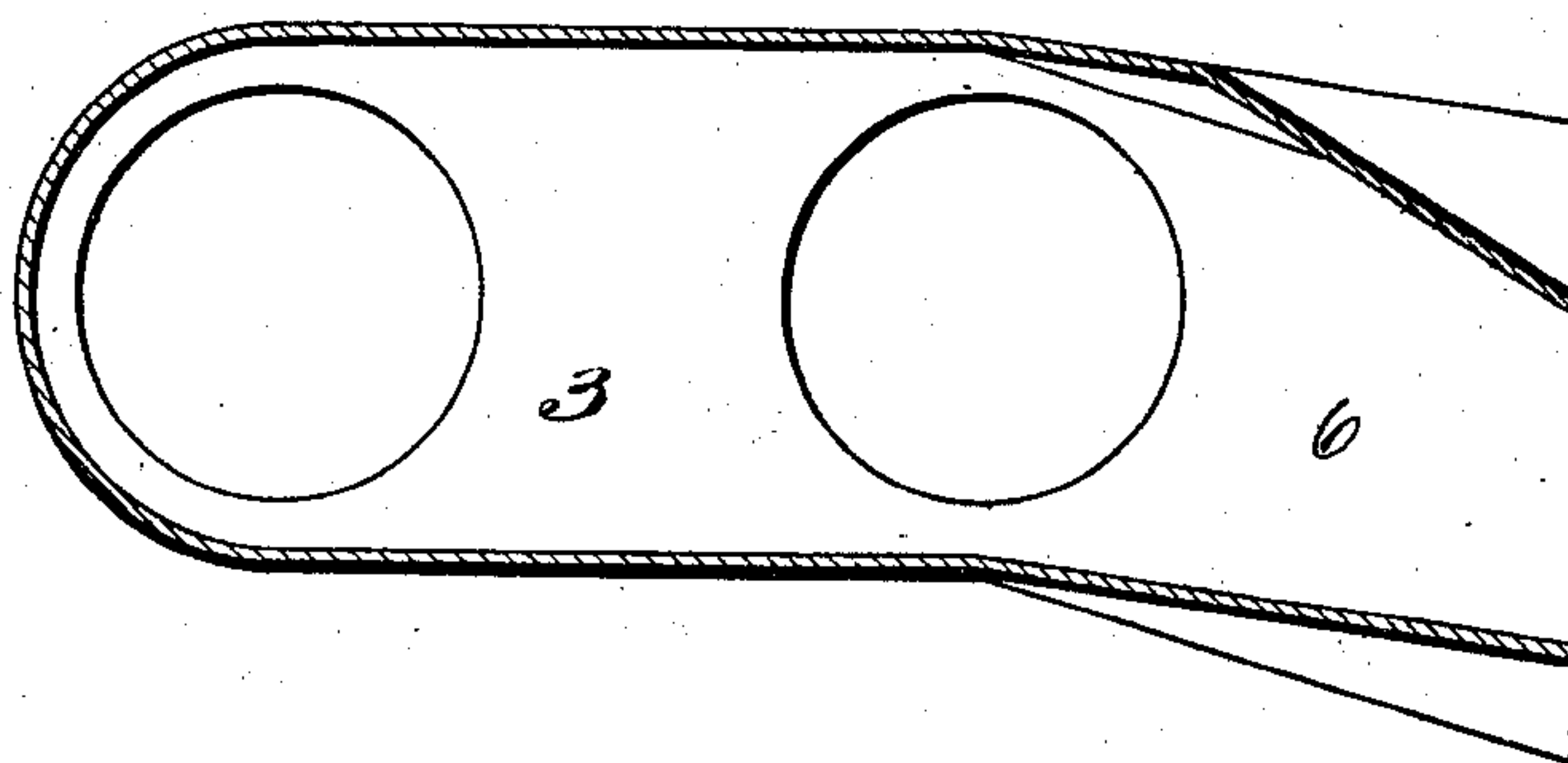


Fig. 7.

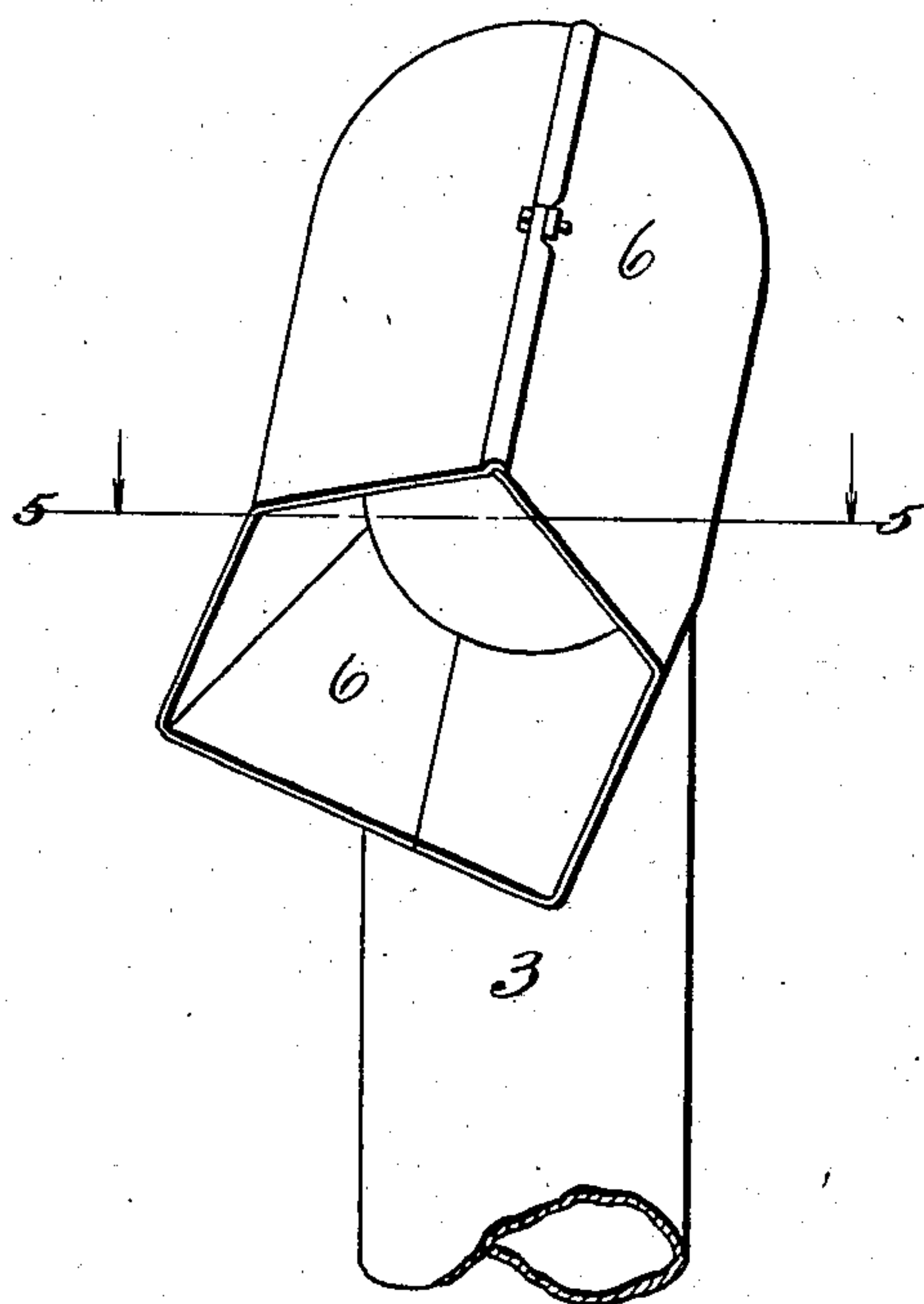
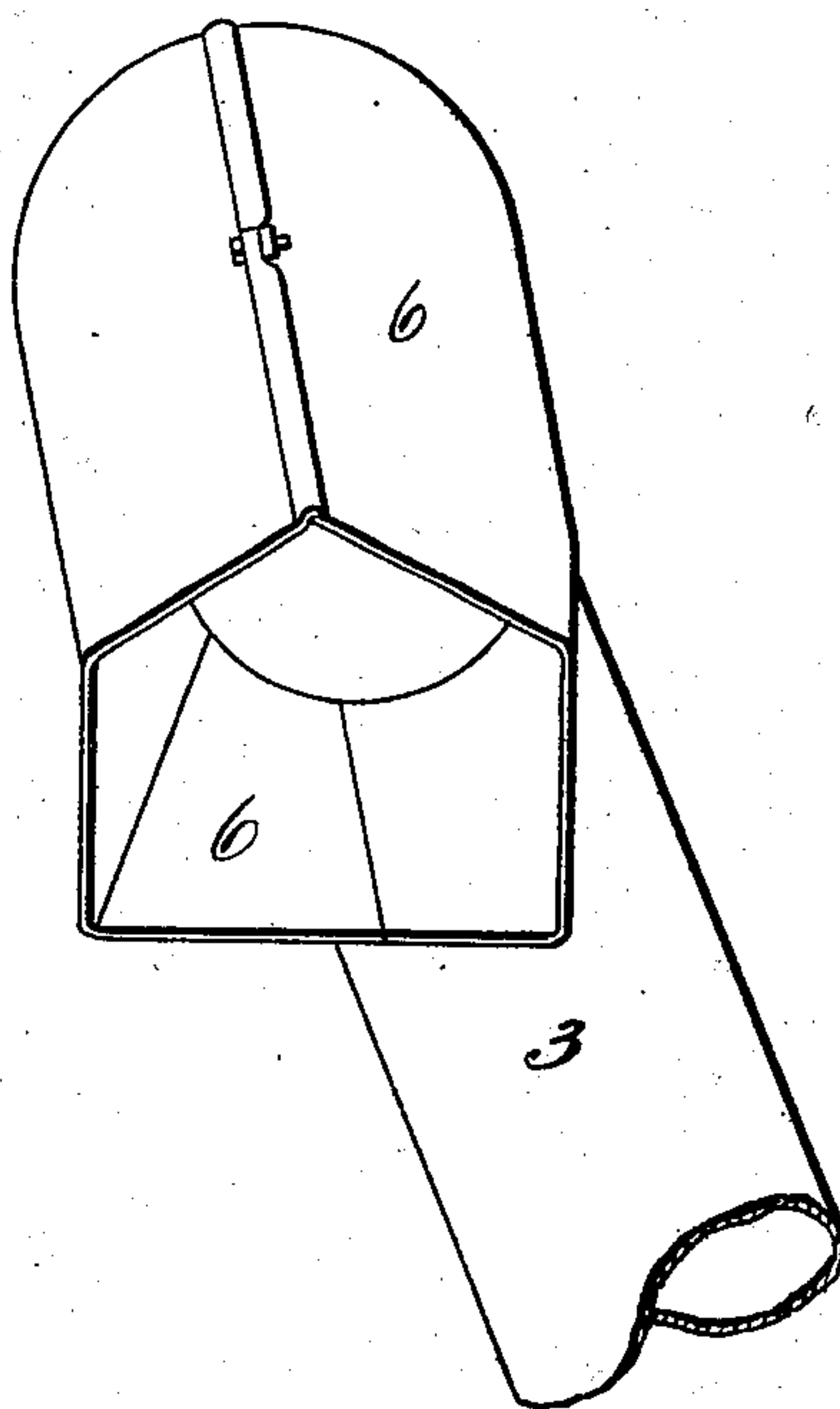


Fig. 6.



Witnesses:

J. B. Weir
G. D. Perry

Inventor:

Stacy B. Hart,
By John W. Kelly, Atty.

UNITED STATES PATENT OFFICE.

STACY B. HART, OF PEORIA, ILLINOIS.

GRAIN-ELEVATOR FOR SEPARATORS.

SPECIFICATION forming part of Letters Patent No. 702,058, dated June 10, 1902.

Application filed November 9, 1901. Serial No. 81,663. (No model.)

To all whom it may concern:

Be it known that I, STACY B. HART, a citizen of the United States of America, residing at Peoria, county of Peoria, and State of Illinois, have invented certain new and useful Improvements in Grain-Elevators for Separators and the Like, of which the following is a description.

The object of my invention is to produce a simple and effective elevator for grain-separators which may be readily folded against the side of the separator when transporting from one place to another.

To this end my invention consists in the novel construction, arrangement, and combination of parts shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is a front elevation of a separator provided with my improved elevator with parts broken away to show the construction. Fig. 2 is a similar view showing the elevator equipped with a weighing and bagging device. Fig. 3 is a similar view to Fig. 1, showing the elevator hooked up against the side of the separator for transportation. Fig. 4 is a partial side elevation of a separator equipped with my improvement with gear-guard removed. Fig. 5 is a transverse section in line 5 5 of Fig. 7. Fig. 6 is a front view of the top part of the elevator-tube in the preferred form, showing the tube inclined and the discharge-spout in a vertical position as in use; and Fig. 7 is a similar view showing the tube in a vertical position and the discharge-spout inclined.

In the drawings, 1 is the side of the structure to which the elevator is attached—as, for example, a grain-separator.

2 is a bracket secured to the side of the structure adapted to support the elevator.

3 is the elevator-tube, supported by a double sleeve or band 4 or equivalent means firmly secured to a shaft or rod 5, adapted to be pivotally supported by the bracket 2. The tube is provided with a discharge-spout 6, preferably constructed to support a weighing or other equivalent device. In order to secure proper results, the weighing device must be supported in a horizontal or level plane, as otherwise the results will be inaccurate. This

may be secured in any preferred manner. As shown in Figs. 1, 2, and 3, the desired object is secured by finishing the end of the discharge-spout 6 on a horizontal plane when the tube 3 is placed at its normal inclination. I prefer in such construction to enlarge the end of the discharge-spout, as shown, extending the same in a direction away from the supporting structure, as shown at Fig. 7. This aids in securing a substantial and firm support for the weighing or measuring device 8 and maintaining the same in a level position. It also aids in securing a free and unimpeded discharge.

9 is a bagger, which may be of any preferred construction.

The device may be equipped with any of the well-known forms of weighing or measuring devices, the mechanism of which need not be here described.

10 is a jointed bar extending from near the upper end of the elevator to the supporting structure. The length of the arm when extended, as shown in Figs. 1 and 2, is sufficient to give the elevator the proper inclination to permit the boot 11 to be positioned beneath the conveyer-spout 12 of the separator. When it is desired to transport the separator, the arm 10 is bent on its pivot 13, the bar 14, pivotally secured to one member of the arm, engaging a pin 15 on the other to maintain the parts in position. The bar 14 may be provided with a plurality of transverse slots 16, adapted to engage the pin 15, so as to provide a limited field of adjusting the position of the elevator, Fig. 3. It will be apparent that in moving the separator from place to place the elevator is compactly maintained in position close to the side of the separator, so as not to come in contact with obstacles met on the road—such, for example, as narrow gates and passages on the road, doorways, &c. On the other hand, when in operation the elevator is maintained in a position such distance from the side of the separator as will not interfere with the unimpeded operation of the belts and mechanism located on the side of the separator.

A shaft 17 is provided with a pulley 18, which is rotated by a belt 19, preferably driven by a pulley on the usual fan-shaft (not shown) or other suitable driven shaft. The shaft 17

should be horizontal, as shown in Figs. 1 and 2, when the device is in operative position. The driving-shaft 20 for the elevator ought also to be parallel to the complementary shaft 21, near the top of the elevator. To provide for this construction, the shafts 17 and 20 are provided with geared pinions 22 and 23, respectively, an intermediate gear-wheel 24, mounted on a stub-shaft 25, meshing with both to rotate the shaft 20 in the proper direction, the several gear-wheels being properly beveled to secure the change in the planes of their shafts, as described.

In the preferred form the discharge-spout 6 is extended at an angle from the elevator-tube, as shown in Figs. 5, 6, and 7—that is, when the tube 3 is inclined the discharge-spout more nearly approaches a vertical line, as clearly shown in Fig. 6. By this means the weighing or measuring mechanism is maintained upon a substantially vertical support, tending to insure more accurate and satisfactory results. I do not wish, however, to be understood as limiting myself to such form, as the form shown in Figs. 1, 2, and 3, in which the end of the discharge-spout is cut off on a horizontal plane when the elevator is inclined, will operate successfully. A suitable guard 26 protects the gears 22 23 24. A chain provided with suitable buckets or equivalent means affords means for elevating the grain.

It is obvious that after having thus described my improvement immaterial modifications may be made without departing from the spirit of my invention. Hence I do not wish to limit myself to the exact construction shown.

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

1. In a grain-elevator, an elevator-tube constructed to be supported upon the side of a separator or the like with its top inclined outward therefrom, in combination with a discharge-spout secured to the tube, arranged to discharge the grain in a direction parallel to the supporting-machine, and having its discharge end formed at an angle to the tube, so that when the tube is inclined the discharge end of the spout will be in a horizontal plane.

2. In a grain-elevator, an elevator-tube provided with a discharge-spout, twisted to extend at an angle thereto, substantially as described.

3. A grain-elevator, comprising an elevator-tube constructed to be supported upon the side of a separator or the like, with its top inclined outward therefrom, and to deliver the grain in a direction parallel to the supporting-machine, said tube being provided with a discharge-spout having its discharge end formed at an angle to the tube to terminate on a horizontal plane when the tube is inclined, in combination with means for elevating the grain in said tube and delivering it to the spout.

4. A grain-elevator, comprising a tube con-

structed to be supported upon the side of a separator or the like in an inclined position, and to elevate and deliver the grain in a direction parallel to the supporting-machine, said tube being provided with a discharge-spout constructed to extend vertically when the tube is inclined, in combination with means for elevating the grain in the tube and discharging the same through the spout.

5. A grain-elevator, comprising a tube constructed to elevate and deliver the grain in a direction parallel to the supporting-machine, and means for supporting said tube upon the side of a separator or the like at an inclination thereto, in combination with a discharge-spout secured to the tube and having its free end formed to extend in a horizontal plane when the tube is inclined, and elevating means arranged in the tube.

6. In a grain-elevator, an elevator-tube provided with a discharge-spout having its end twisted to extend at an angle to the tube, in combination with means for adjusting the inclination of said tube and retaining the same in said adjusted position, substantially as described.

7. In a grain-elevator, an elevator-tube provided with a discharge-spout, the discharge end of said spout being extended in the general direction of the tube but twisted at an angle to said tube, in combination with means for pivotally supporting the said tube, and means for adjusting the inclination of the same and retaining the tube at such inclination, substantially as described.

8. In a grain-elevator, an elevator-tube provided with a discharge-spout constructed to discharge the grain in a direction parallel to the supporting-machine, but at an angle to the inclination of the tube, in combination with means for pivotally supporting said tube upon the side of a separator or the like at an inclination means for adjusting the inclination of said tube and retaining the same in position, and means for elevating the grain in said tube and discharging the same into said spout, substantially as described.

9. A grain-elevator, comprising a tube 3, provided with supporting straps or collars 4, secured to shaft 5, a bracket 2, adapted to be secured to the supporting-frame and to pivotally support the said shaft 5, in combination with a power driving-shaft 17 provided with gear-wheel 22, the elevator driving-shaft 20, provided with gear-wheel 23, and an intermediate pinion inserted between said gear-wheels, and an adjusting-bar at the top of the tube adapted to regulate the inclination of the same, substantially as described.

10. A grain-elevator, comprising a tube 3, provided with supporting straps or collars 4, secured to a shaft 5, and a bracket 2, adapted to be secured to a supporting-frame and to pivotally support the said shaft 5, in combination with a power driving-shaft 17, provided with gear-wheel 22, the elevator driving-shaft 20 provided with a gear-wheel 23,

an intermediate pinion inserted between the said gear-wheels and means for adjusting the inclination of the tube 3 and maintaining the same in position, substantially as described.

5 11. An elevator-tube for separators and the like, constructed to deliver the grain in a direction substantially parallel to the support-

ing-machine, and having its discharge end twisted to extend at an angle to the tube.

STACY B. HART.

Witnesses:

D. S. LEE,

J. E. DE VRIES.