

March 20, 1928.

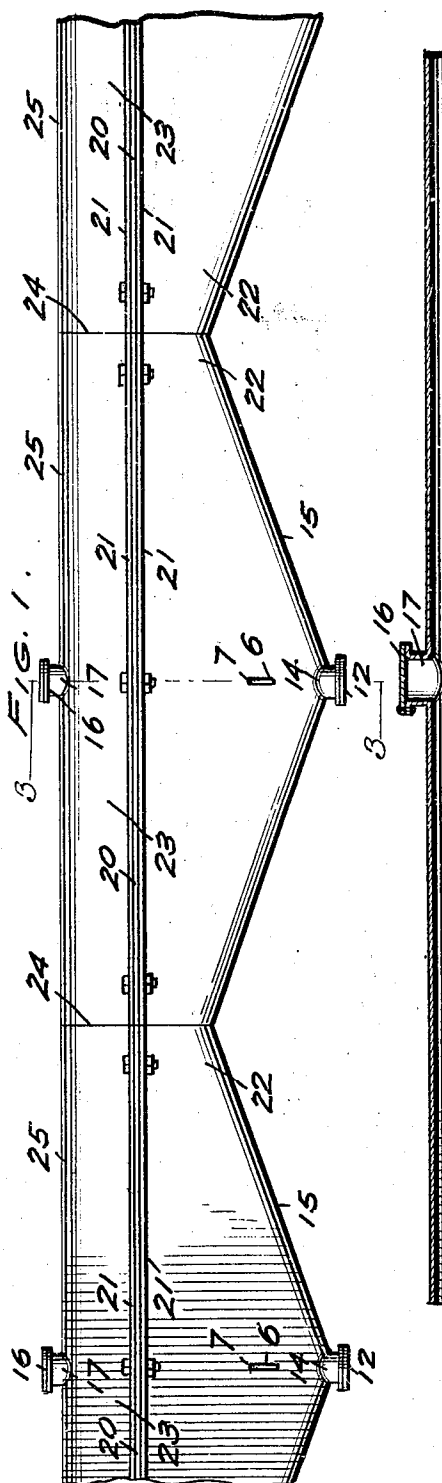
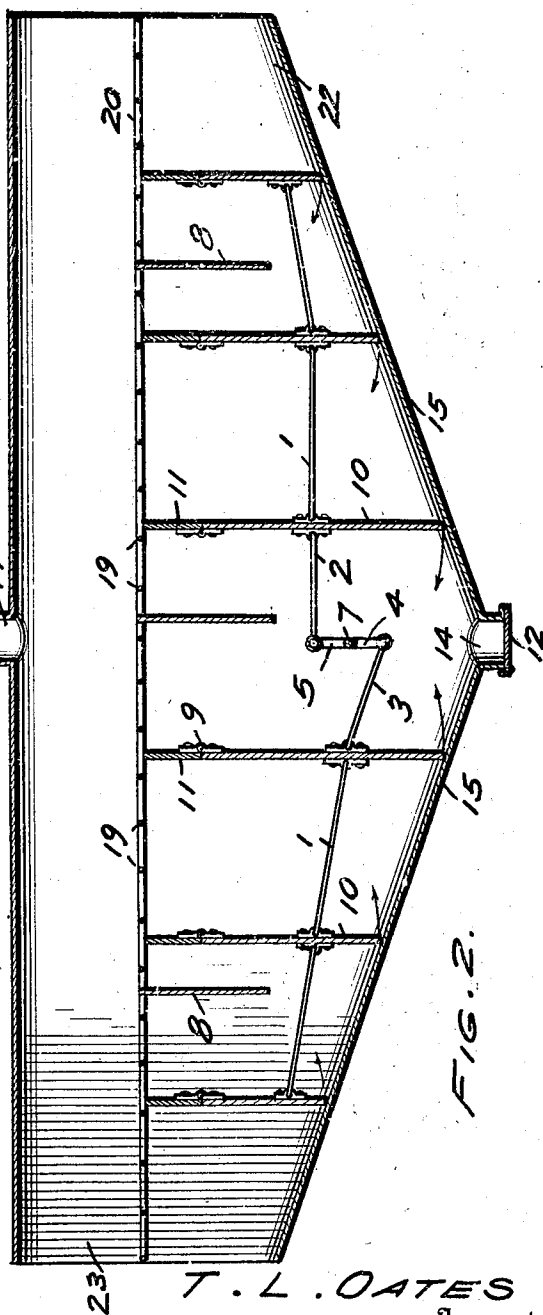
1,663,091

T. L. OATES

CONVEYING PIPE COTTON CLEANER

Filed Aug. 3, 1926

2 Sheets-Sheet 1



T. L. OATES

Inventor

By *Chas. H. Oates*
Attorneys

March 20, 1928.

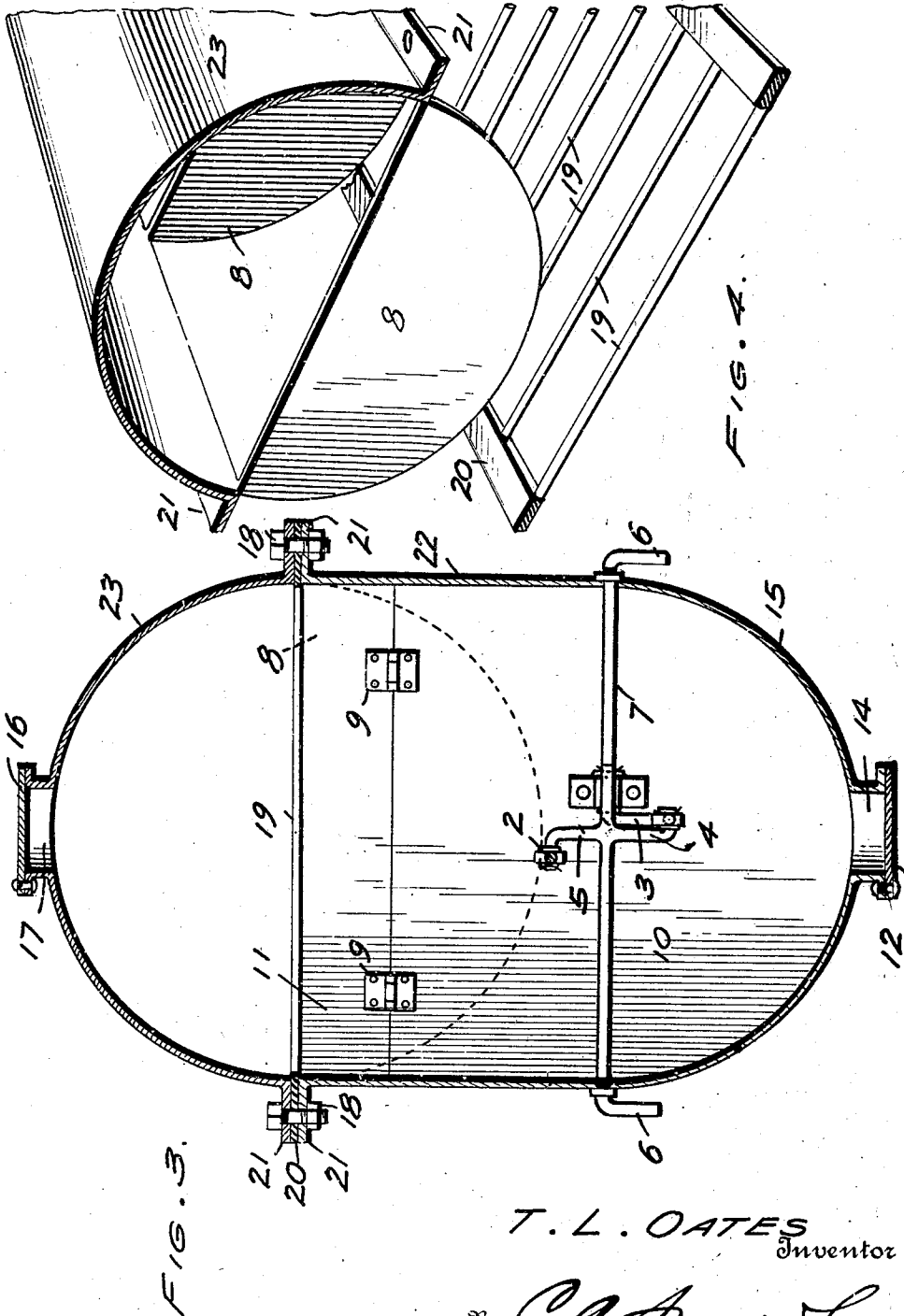
1,663,091

T. L. OATES

CONVEYING PIPE COTTON CLEANER

Filed Aug. 3, 1926

2 Sheets-Sheet 2



T. L. OATES

Inventor

By *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

THOMAS L. OATES, OF RHODHISS, NORTH CAROLINA.

CONVEYING-PIPE COTTON CLEANER.

Application filed August 3, 1926. Serial No. 126,890.

This invention aims to provide novel means for cleaning cotton whilst the cotton is being carried along by air blast from one place to another.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows in side elevation, a device constructed in accordance with the invention;

Figure 2 is a longitudinal section showing one of the parts of the conduit delineated in Figure 1;

Figure 3 is a transverse section on the line 3—3 of Fig. 1, divers parts being in elevation.

Figure 4 is a perspective view wherein sundry parts are disposed in spaced relation to each other.

The device forming the subject matter of this application preferably is made of metal, and includes a conduit 25, comprising a plurality of sections 24, placed end to end. Since the sections 24 are alike, a description of one section will answer for all.

The section 24 includes an upper member 23 of approximately semi-circular, trough-shaped outline, and a lower member 22, of trough-shape, the members 22 and 23 having cooperating flanges 21 between which are located side pieces 20 of a screen 19 extended the full length of the section 24. Securing elements 18 pass through the flanges 21, the flanges engaging the side bars 20 of the screen 19, and the upper member 23 and the lower member 22 thus being held together.

In the top of each upper member 23 there is an opening 17 disposed about midway between the ends of the said member and controlled by a movable closure 16. Each lower member 22 has bottom portions 15 which slant downwardly toward a point about mid-

way between the ends of the lower member 22, there being an outlet 14 at the lowermost portion of the bottom of the lower member 22, the outlet 14 being controlled by a movable closure 12.

Cross plates 11 are secured at their ends to the sides of the lower member 22, and doors 10 are hinged at 9 to the cross plates 11 for vertical swinging movement. When the doors are in the depending positions shown in Figure 2, they close the space between the sides of the lower member 22, and between the bottom 15 and the lower end of the cross plate 11. Baffles 8 are located between some of the cross plates 11. There may be as many or as few of the baffles 8 as occasion may demand. The baffles are located below the screen 19 and are connected at their ends to the sides of the lower member 22.

A horizontal shaft 7 is mounted to rock in the sides of the lower member 22 and is located approximately midway between the ends of the section 24. The shaft 7 has external handles 6 whereby it may be rocked. The shaft 7 is supplied with a crank 5 and with a crank 4 located within the lower member 22 of the section 24. A link 3 connects the crank 4 with the adjacent doors 10, and a link 2 connects the crank 5 with an adjacent door 10. The said doors 10 are connected with the next adjoining doors, and the doors are connected, one to another, by rigid connections 1 which are pivoted to the said doors.

In practical operation, the cotton is driven along by a blast of air, in the upper member 23, above the screen 19. The dirt and trash in the cotton, as the cotton is carried along over the screen 19, tends to drop downwardly into the compartments that exist between the doors 10. The baffles 8 help to confine the blast of air to the space above the screen 19, and the dirt, therefore, falls down on the inclined bottom portions 15 of the lower member 22. The shaft 7 may be rocked by means of the handles 6, and, then, the cranks 5 and 4, together with the links 3 and 2, and the connections 1, will open the doors 10, the dirt passing downwardly along the bottom portions 15, and outwardly through the outlet 14, the closure 12 having been opened. The closure 16 may be opened to give access to the space above the screen 19, in the

event of clogging, or any other exigency requiring access to the space above the screen 19.

What is claimed is:—

- 5 1. In a device of the class described, a conduit, a screen in the conduit and dividing the conduit into upper and lower portions, the lower portion being provided with an outlet, doors in the lower portion of the
10 conduit on opposite sides of the outlet, the doors being movably mounted to permit trash to pass through the outlet, and transverse baffles located between certain of the doors and below the screen.
- 15 2. In a device of the class described, a conduit, a screen in the conduit and dividing the conduit into upper and lower portions, the lower portions of the conduit having an outlet, and the bottom of the lower portion of the conduit slanting in opposite di-
20 rections lengthwise of the conduit to the outlet, doors in the lower portion of the conduit, and means for mounting the doors movably, so that they may be opened to per-
25 mit trash to pass along the bottom of the lower portion of the conduit out of the outlet.
- 30 3. In a device of the class described, a conduit, a screen in the conduit and divid-
ing the conduit into upper and lower por-

tions, the lower portion of the conduit hav-
ing an outlet, and the bottom of the lower
portion of the conduit slanting in opposite
directions lengthwise of the conduit to the
outlet, doors in the lower portion of the con- 35
duit, means for mounting the doors movably,
connections uniting the doors for move-
ment in groups, a shaft mounted to rock in
the conduit between the innermost doors
of the groups, the shaft having cranks, and 40
links connecting the innermost doors of the
groups with the cranks.

4. In a device of the class described, a
conduit, a screen in the conduit and divid- 45
ing the conduit into upper and lower por-
tions, the lower portion of the conduit hav-
ing an outlet, and the bottom of the lower
portion of the conduit slanting in opposite
directions lengthwise of the conduit to the
outlet, cross plates located immediately be- 50
low the screen, doors hinged to the lower
edges of the cross plates, and arranged in
groups on opposite sides of the outlet, means
for connecting together the doors of each
group, means assembled with the innermost 55
doors of the groups for operating all of the
doors.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature.

THOMAS L. OATES.