G. W. CAMERON.

COTTON CONVEYING AND PACKING DEVICE.

APPLICATION FILED DEC. 3, 1909.

988,307.

Patented Apr. 4, 1911.

3 SHEETS—SHEET 1.

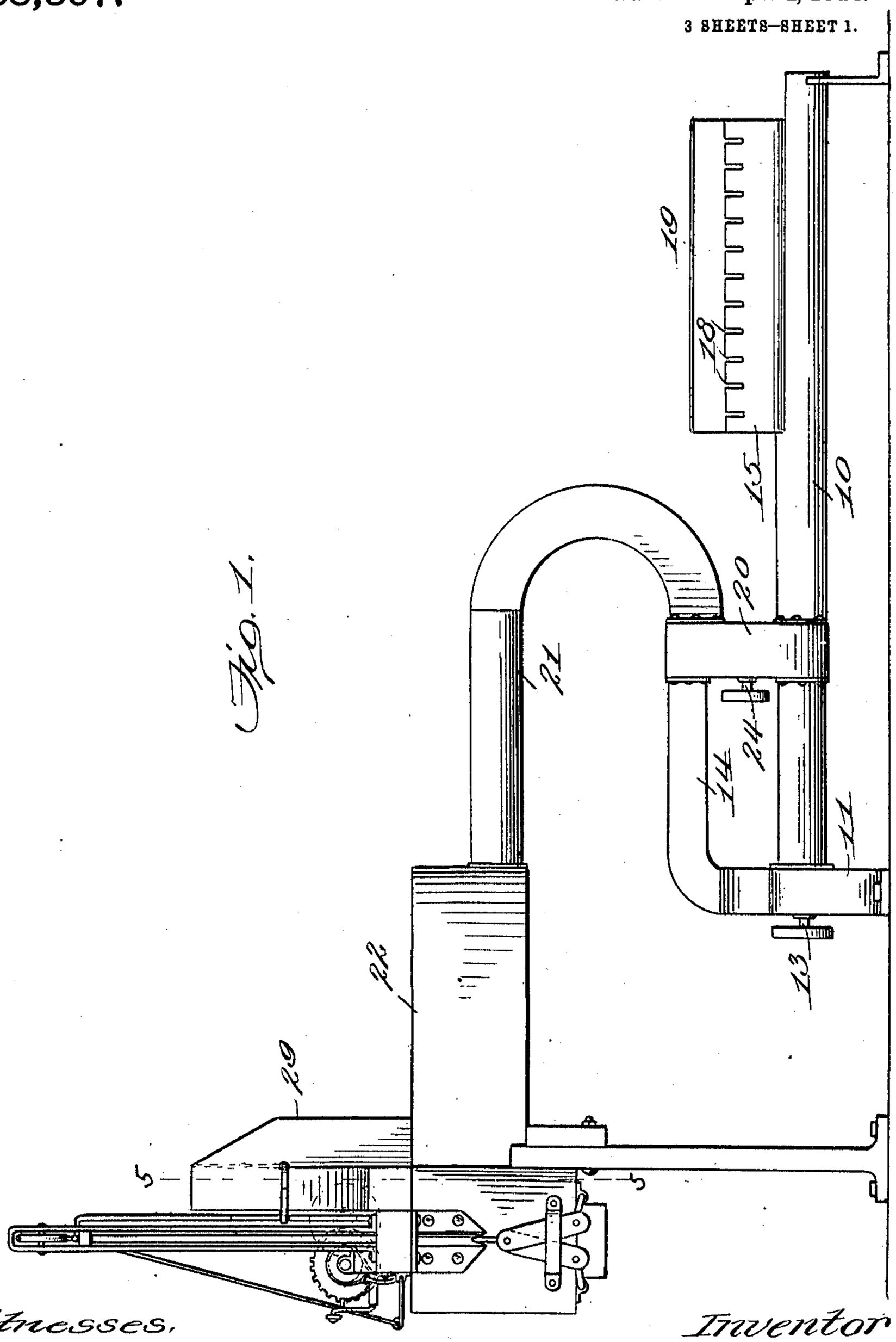

Fig. 1.

Witnesses.

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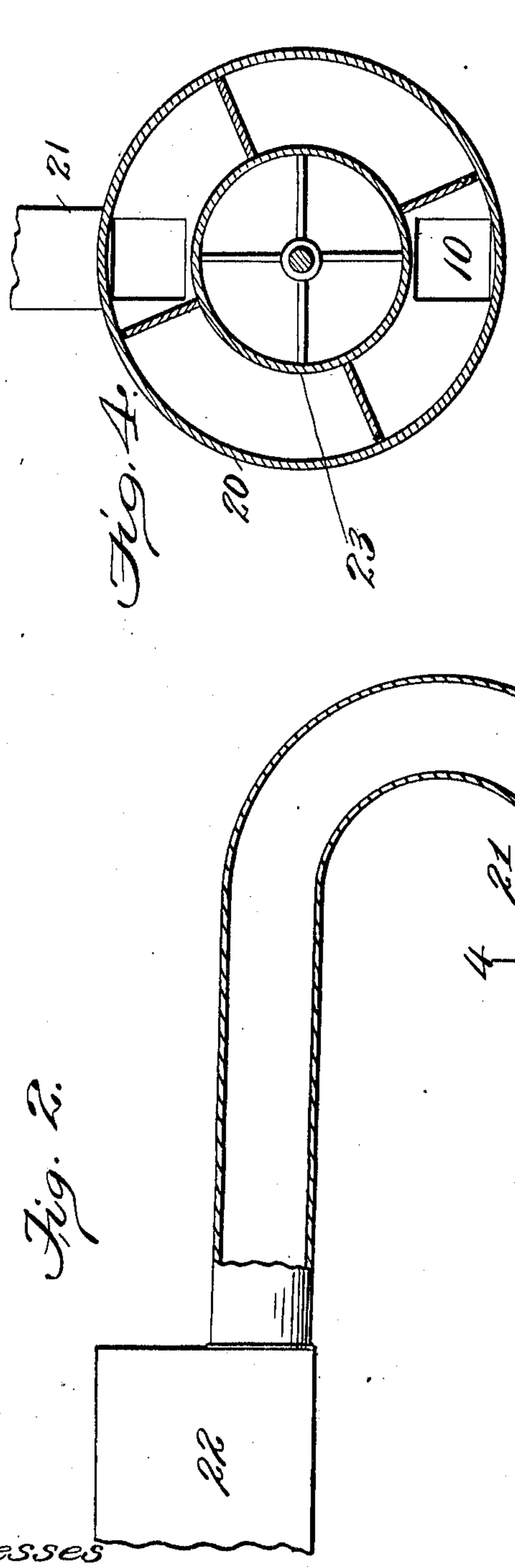

Fig. 1.

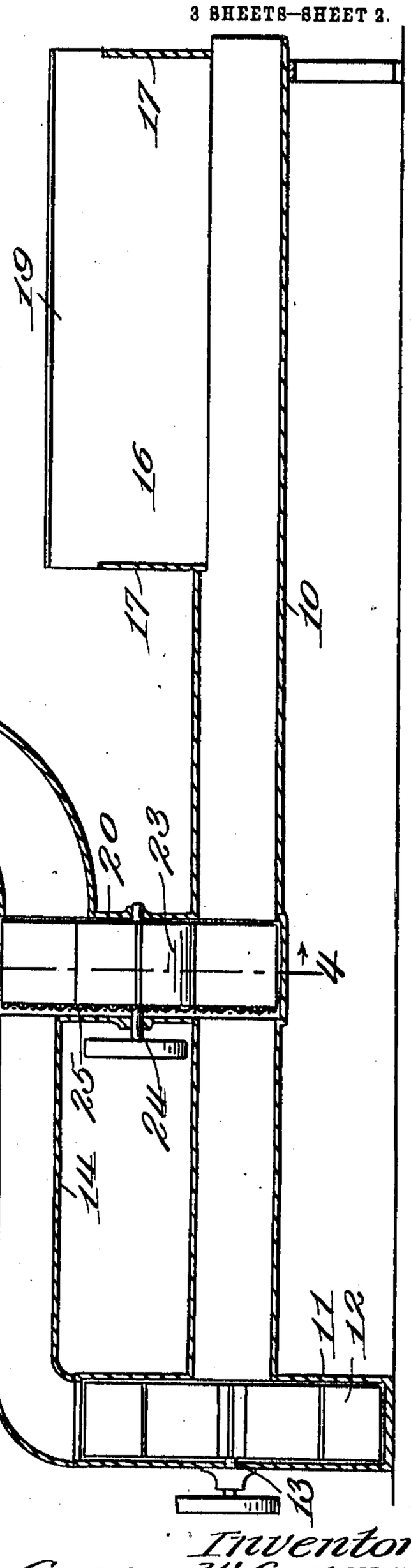

Fig. 2.

Witnesses

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3 SHEETS—SHEET 3.

Fig. 3.

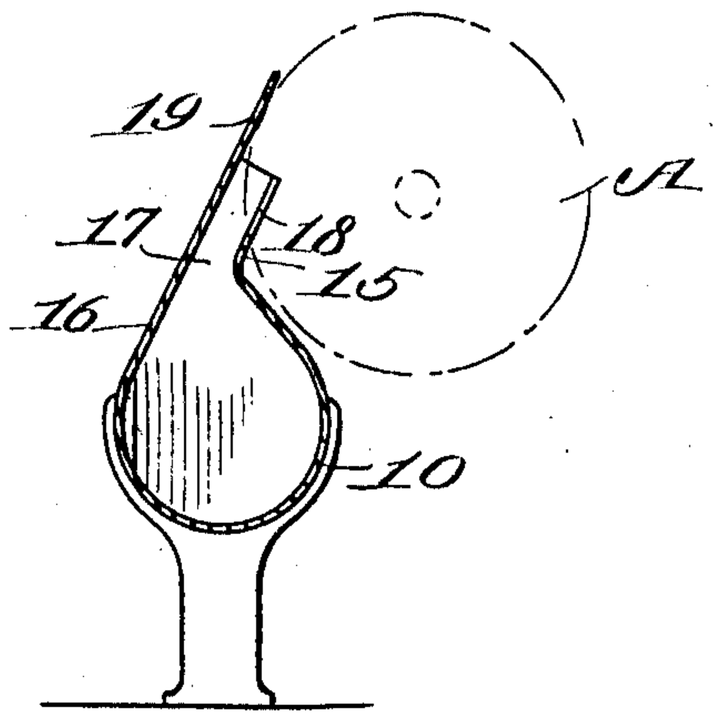
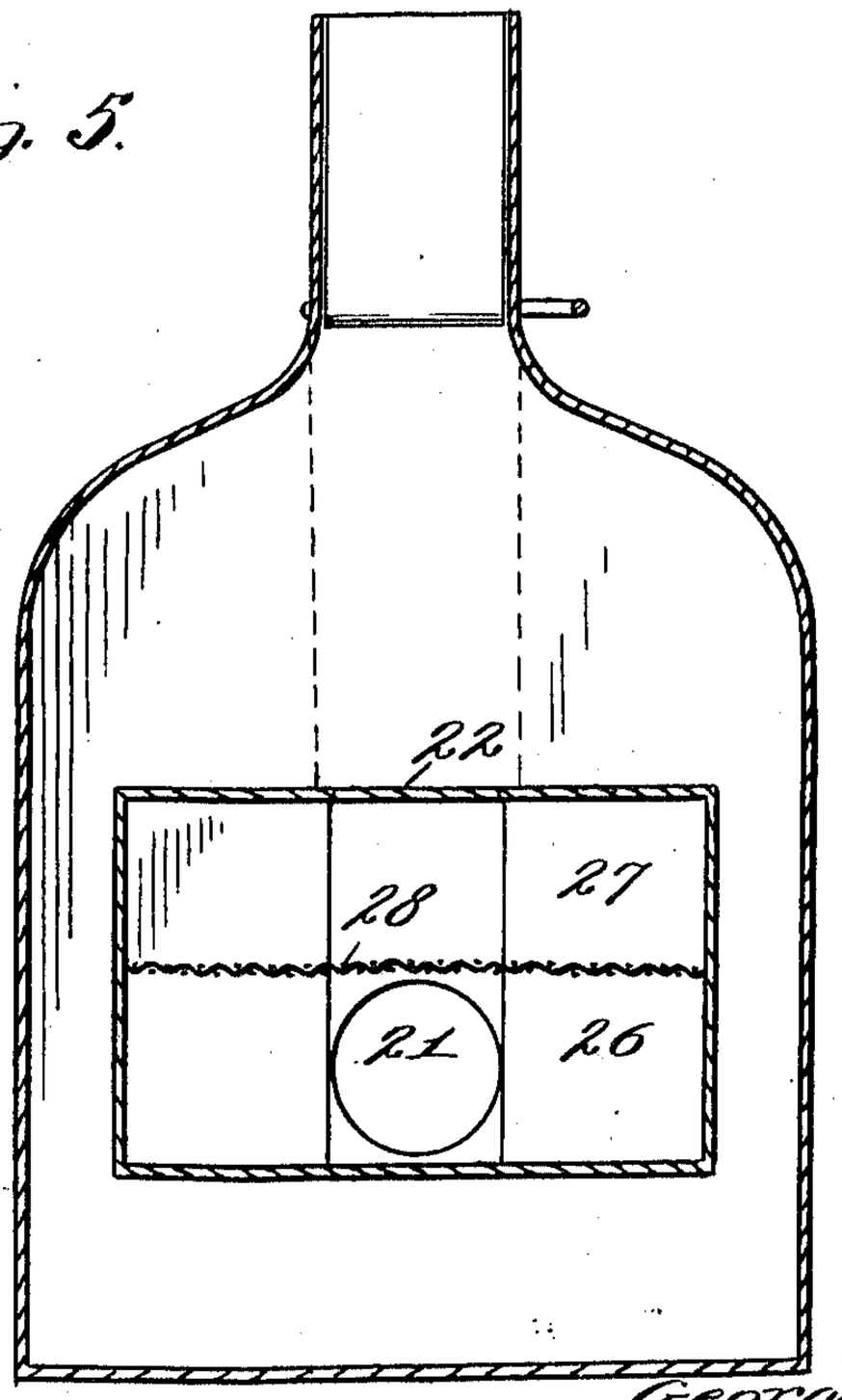


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE W. CAMERON, OF HONDO, TEXAS.

COTTON CONVEYING AND PACKING DEVICE.

988,307. Specification of Letters Patent. Patented Apr. 4, 1911.

Application filed December 3, 1909. Serial No. 531,217.

To all whom it may concern:

Be it known that I, GEORGE W. CAMERON, a citizen of the United States, residing at Hondo, in the county of Medina and State of Texas, have invented certain new and useful Improvements in Cotton Conveying and Packing Devices, of which the following is a specification.

My present invention relates to cotton conveying and packing machinery, and my object is to provide a combined device for pneumatically removing cotton from a gin, and conveying the cotton therefrom and delivering it to a packing device.

A further object of my invention is to provide a device for directly removing the lint from a gin saw and conveying the same therefrom through an exhaust pipe.

A further object of my invention is to provide a separator for withdrawing the lint from the exhaust pipe and delivering it to a blast pipe.

Further objects, and the resultant advantages, of my invention will be apparent to those skilled in the art, by reference to the following description, in which reference is made to the accompanying drawings, forming a part of this specification, and in which,

Figure 1 is a side elevation of my complete invention. Fig. 2 is a vertical, longitudinal section through the pneumatic conveying and removing portion of my device, broken away at the juncture thereof with the lint receiving chamber. Fig. 3 is a transverse sectional view through a gin saw and my lint removing device applied thereto. Fig. 4 is a cross-section through the separator casing, on line 4—4 of Fig. 2. Fig. 5 is a cross-section through the packing device on line 5—5 of Fig. 1.

Referring now to the pneumatic conveying portion of my apparatus, shown particularly in Figs. 2, 3 and 4, I provide a lint out-take pipe 10 which communicates at one end with a fan casing 11, in which is mounted an exhaust fan 12, upon a pulley shaft 13, and which discharges the air sucked into the casing 11 from pipe 10, through a pipe 14 leading from the upper portion of said casing and parallel with and above the pipe 10. At its opposite end, pipe 10 communicates with the atmosphere through a rectangular frame comprising side walls 15 and 16 secured at their inner edges to said pipe in angular relation thereto, the wall 16 having end extensions 17 bent around the end of wall 15 and secured thereto to form the end of the casing. The wall 15, in its outer longitudinal edge, has a plurality of equidistantly spaced slits 18 for a purpose to be hereinafter referred to. In its operative position, as shown in Fig. 3, the frame just described, is placed in close juxtaposition to a gin saw within a cotton gin, whereby the saw blades A enter the slits 18 of the frame wall 15 and are subjected to the suction through said frame for the purpose of removing the lint from the saw teeth. As is well known the centrifugal action of the gin saws A, causes the disintegration and discharge of motes from the lint, and for the purpose of furthering this action I provide the frame wall 16, farthest from the saws, with an extension lip 19, projecting beyond the slitted edge of wall 15, and which is sufficiently flexible to provide for its adjustment in close proximity to the gin saw teeth whereby it lightly scrapes the lint carried thereby and causes any clinging motes to slide outwardly upon its outer surface. From this it will be understood that the lint removing frame takes the place of the usual gin brush.

Extending at its lower portion through the out-take pipe 10, and placed transversely thereof between the fan casing 11 and the lint removing frame, is a separator casing 20 through which the lint-laden exhaust air thus passes. The air discharge pipe 14, before mentioned as leading from the upper portion of the fan casing 11, extends to the upper portion of the separator casing 20, and communicates therethrough with the lint blast pipe 21 leading from the opposite side of said casing and curving upwardly to the lint receiving chamber 22 at its rear end. A spider frame 23 is mounted within the separator casing 20, upon a pulley shaft 24, and supports a disk screen 25, circular in shape and of a size to closely fit the interior of said casing. Thus the screen 25 intercepts the lint from the out-take pipe 10 and, on account of its rotation carries the lint up to the blast pipe 21 and discharges such lint thereinto on account of the blast through pipe 14. Thus the lint is delivered, by blast, to a lint receiving chamber 22, to which pipe 21 leads, said chamber being divided into upper and lower chambers 27 and 26 by a horizontal screen 28. The lower chamber 26 is, of course, the lint chamber, while from the upper chamber there extends upwardly

an air-discharge flue 29. Operating in conjunction with the lint receiving chamber is a packing device which is the subject of a companion application, and which, therefore, need not be described in the present application.

From the foregoing it is thought the operation of my device, as a whole, will be readily understood. Of the several specific advantages, however, it should be mentioned that the area of the out-take pipe 10 is greater, of course, than the opening in the lint removing frame, so that the air sucked into said pipe from said frame will expand and greatly aid the partial vacuum in cooling the fiber.

I claim:

1. The combination of a lint removing exhaust flue, a lint feeding blast flue adjacent said exhaust flue, a closed casing connecting said flues, and a rotatory screen mounted in said casing to span said flues and transfer the lint from the exhaust flue to the blast flue.

2. The combination of a lint removing exhaust flue, a lint feeding blast flue adjacent said exhaust flue, a closed casing connecting said flues and communicating therewith, a fan at one side of said casing to create an exhaust of air in one direction and a blast in the opposite direction, through the respective flues, and a circular rotating screen within said casing to receive the lint from the exhaust flue and transfer it into the blast flue.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. CAMERON.

Witnesses
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