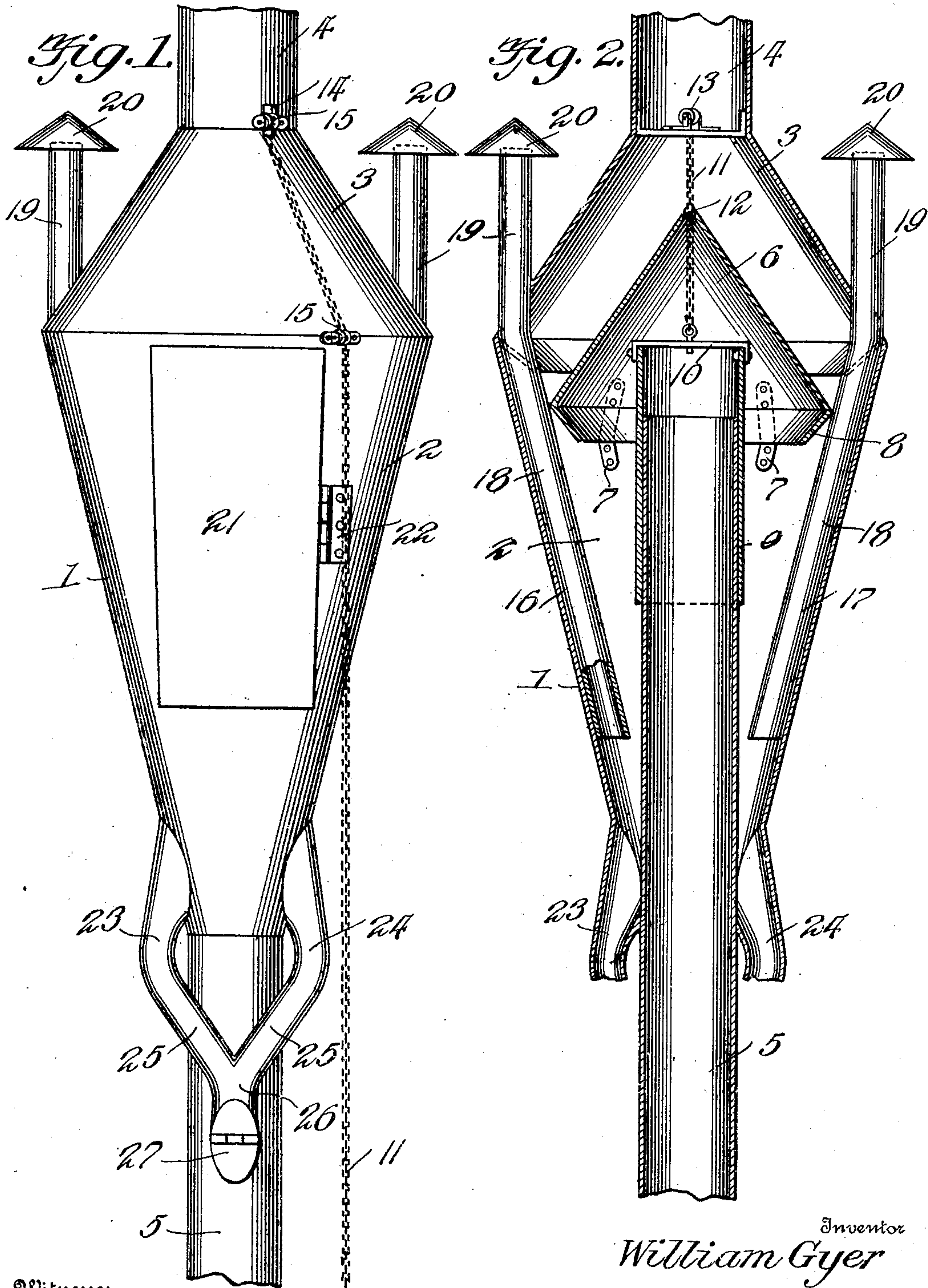


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DUST COLLECTOR.
APPLICATION FILED SEPT. 23, 1908.

962,757.

Patented June 28, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM GYER, OF FULLERTON, PENNSYLVANIA.

DUST-COLLECTOR.

962,757.

Specification of Letters Patent. Patented June 28, 1910.

Application filed September 23, 1908. Serial No. 454,366.

To all whom it may concern:

Be it known that I, WILLIAM GYER, a citizen of the United States, residing at Fullerton, in the county of Lehigh and State of Pennsylvania, have invented new and useful Improvements in Dust-Collectors, of which the following is a specification.

This invention relates to dust collectors, especially adapted for use in connection with cement or like mills, and has for an object to provide a simple collector which will effectively collect dust and which will be provided with simple means for carrying away steam or moisture arising from the mill and hopper, thus preventing dust, cement or material being operated upon by the mill from adhering to the sides of the hopper and clogging the same.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claim may be resorted to without departing from the spirit of the invention.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a front view of the dust collector, Fig. 2 is a vertical section.

Referring now more particularly to the drawing, there is shown a dust collector 1 comprising a hopper 2 of substantially inverted cone shape, and at the top, the said hopper is provided with a substantially conical cap 3. The cap carries at the apex thereof a flue or pipe 4 adapted to be inserted through a roof or the like. The hopper 2 is provided with a centrally located dust intake pipe 5 adapted to be connected at its lower end to a mill, and at the upper end the said pipe is disposed slightly beneath the cap 3.

A hollow conical element 6 is disposed above the upper end of the pipe 5, and the walls of said element are disposed in spaced relation to the walls of the cap, as clearly shown in Fig. 2 of the drawing. The element 6 is preferably provided with brackets 7 which may be secured in any suitable manner to the interior of the hopper 2. At the lower end, the element 6 is provided with an annular downwardly flared flange 8 which is thus directed toward the pipe 5.

A sliding pipe or draft element 9 is mounted upon the pipe 5 at the upper end thereof and carries a transversely extending bracket

10 to which is secured a light chain or similar flexible element 11 guided through a passage 12 at the apex of the element 6, and, as shown, the said chain or element 11 is passed over a pulley 13 in the pipe 4, and is finally passed through a passage 14 formed in the said pipe 4 and over guide pulleys 15 so that it may be conveniently grasped by the operator to operate the element 9 so that it may be moved to regulate the distance between the top of said element 9 and the said element 6 to suit different occasions.

Steam or moisture pipes 16 and 17 are carried by the hopper and have diagonally disposed portions 18 disposed inwardly of the hopper and vertically disposed portions 19 disposed outwardly of the cap 3. The lower open ends of the said pipes 16 and 17 are located adjacent to the lower end of the hopper 2, and are thus adapted to receive steam or moisture arising from the mill or hopper to effectively prevent clogging of the hopper by moist cement or material as will be understood and convey the same to the exterior of the hopper. Suitable conical shaped hoods 20 are located directly above the upper ends of the portions 19 of the pipes 16 and 17.

The hopper 2 is provided at one side thereof with a clean-outdoor 21 which is preferably hinged as shown at 22, and is provided to gain access to the interior of the hopper should it be desired to clean the same or to repair the interior parts of the collector. The hopper, at the bottom thereof is provided with outwardly and downwardly directed discharge pipes 23 and 24, and as shown, the said pipes midway between their lengths are curved inwardly as shown at 25 and are integrally formed with a neck 26 having a hinged gate 27 so that dust may be conveyed to a bin or the like when the mill is in operation.

It will be seen that a simple and efficient dust collector is provided that can be easily attached to a mill of any character and which will effectively collect dust therefrom, as will be readily appreciated. The provision of the pipes 16 and 17 is such that steam or moisture will be carried away from the hopper to thus obviate clogging of the hopper incident to cement and dust adhering to the walls thereof. The provision of the element 9 is such that the device is effectively controlled through the medium of the natural draft, and the said element is

such that it may be conveniently operated and relied upon.

I claim:—

5 In a dust collector, a hopper having a dust intake pipe extending thereinto, said hopper having a flue at its upper end, a hollow conical element located in the hopper and having its apex or reduced end portion disposed immediately beneath the flue of the hopper,
10 a sliding regulator mounted upon the dust intake pipe, means for moving the said regulator toward the said conical element, dust

discharge pipes at the bottom of the hopper, and steam conveying pipes extending through the hopper and having their lower 15 open ends disposed immediately above the said dust outlet pipes.

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

WILLIAM GYER.

Witnesses:

JOHN F. ECKENSBERGER,
SAUL HIRSCHMANN.