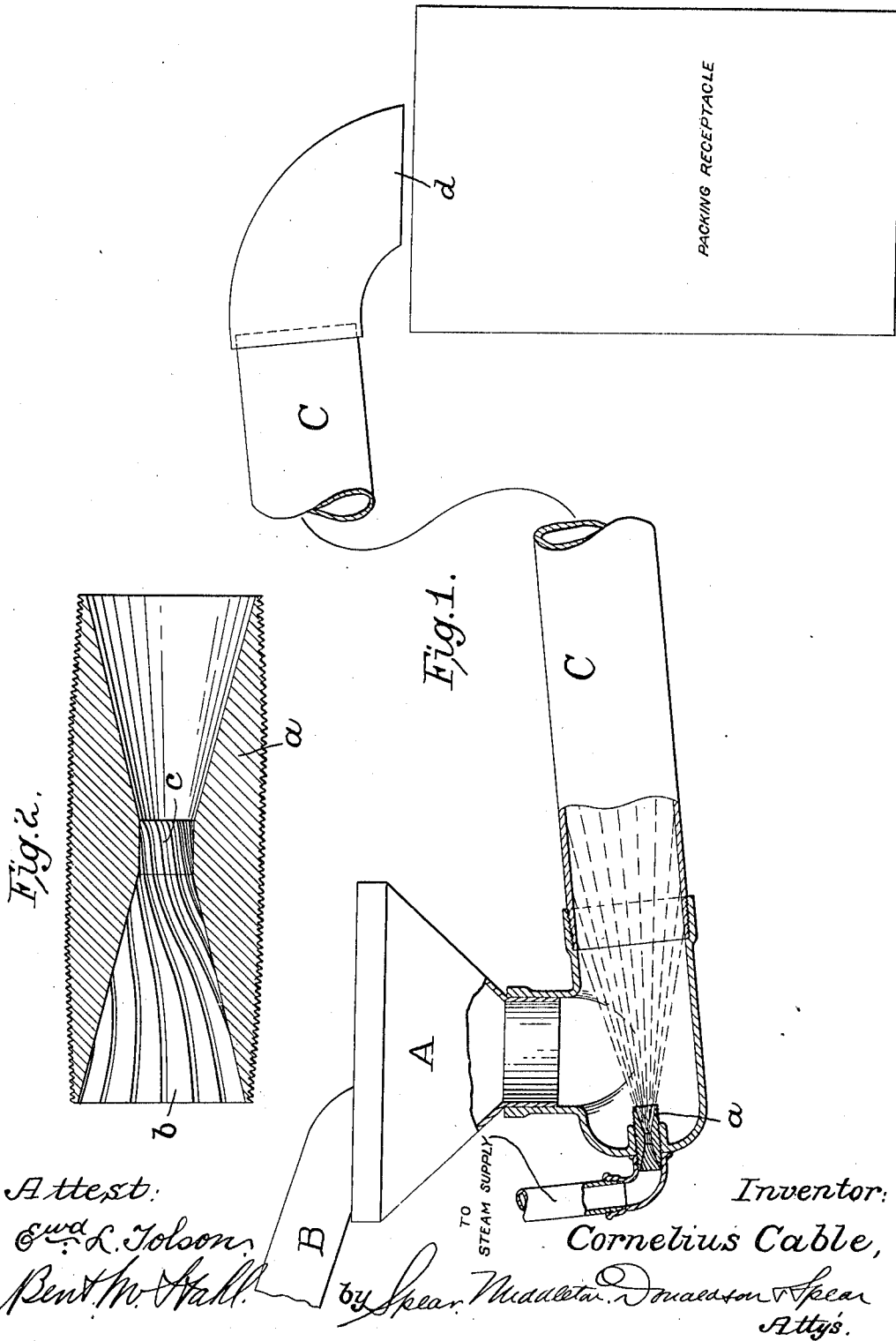


C. CABLE.
CONVEYING AND PACKING MATERIALS.
APPLICATION FILED FEB. 18, 1911.

1,020,962.

Patented Mar. 26, 1912.



UNITED STATES PATENT OFFICE.

CORNELIUS CABLE, OF ELKHART, INDIANA.

CONVEYING AND PACKING MATERIALS.

1,020,962.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed February 18, 1911. Serial No. 609,457.

To all whom it may concern:

Be it known that I, CORNELIUS CABLE, citizen of the United States, residing at Elkhart, Indiana, have invented certain new and useful Improvements in Conveying and Packing Materials, of which the following is a specification.

It is the object of my invention to provide for the economical and rapid disposition of the accumulation of ashes from furnaces, and particularly in the case of large plants, and to so treat these ashes as to enable them to be closely packed in receptacles, the character of the ashes being so changed in transit as to enable them to be used as a valuable product in concrete construction whether for street or building purposes.

I carry out my improved method of handling and treating ashes in a very simple manner, and by means of a simple construction such as is shown in the accompanying drawing, in which,

Figure 1 shows at one end the hopper for receiving the ashes and at the other end the receptacle into which the treated material is discharged. Fig. 2 shows a detail view.

A represents a hopper into which the ashes are discharged in any suitable manner, as through a pipe B. A conveyer pipe C receives the material from the hopper A, and this material falls upon a jet of steam issuing from a nozzle *a*, the nozzle being flaring so that the jet expands or enlarges to strike the inner wall of the conveyer, as indicated, and thus supply a force which not only fills the pipe so as to apply power to force through the pipe the material to be discharged but it has a scouring action and prevents the material from adhering to the walls of the pipe. This action is still further aided by a peculiar construction of

the nozzle which, as shown in Fig. 2, has an outwardly flaring front end *b*, which is rifled and these riflings enter the reduced central portion *c* of the nozzle and it will thus be seen that a whirling action of the steam is set up most effectual for keeping the pipe clear and driving everything before it. In practice I find that the action of the steam is not only sufficient to force the material through the pipe but to disintegrate it and crush it so that as it issues at the exit *d* it is finely divided and sufficiently moist to allow the material to compact under the pressure in the receptacle to an extent that will permit three times the amount of material to be forced into the receptacle that the receptacle would ordinarily hold if the material were thrown loosely. The disintegration of the material is so uniform as to make it of the greatest value for use in all kinds of concrete work. The steam supply may come from any suitable source of supply.

What I claim is:—

In combination, in an apparatus for conveying and packing pulverized material, a conveyer pipe C, means for conveying pulverized material thereto through an opening in the side of said pipe and a steam pipe arranged to discharge steam into the end of said pipe C, said steam pipe having a nozzle as *a* arranged to discharge across the material as it falls into the pipe C, said nozzle being flaring and having, upon its inner flaring surface, riflings, substantially as described.

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

CORNELIUS CABLE.

Witnesses:

F. Y. MIDDLETON,
BENNETT S. JONES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."