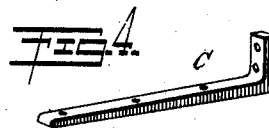
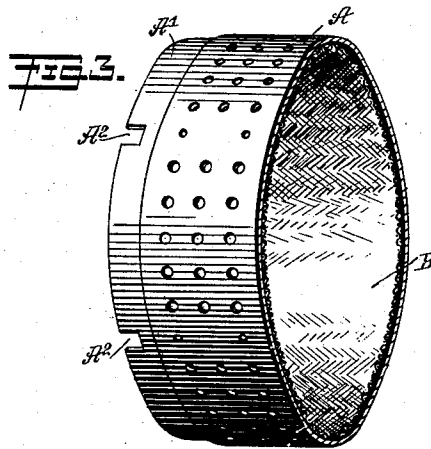
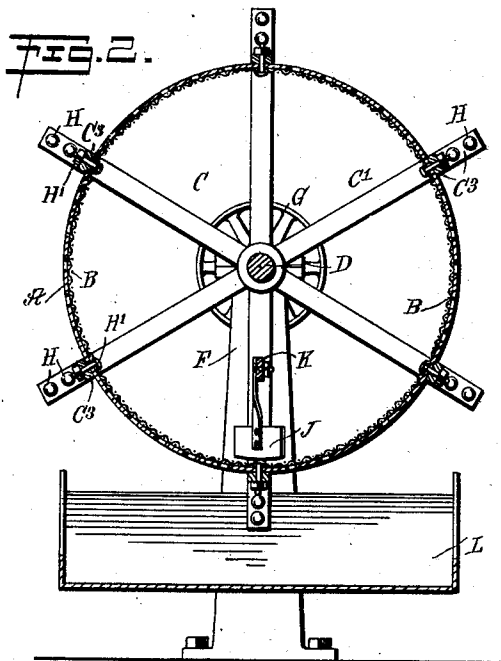
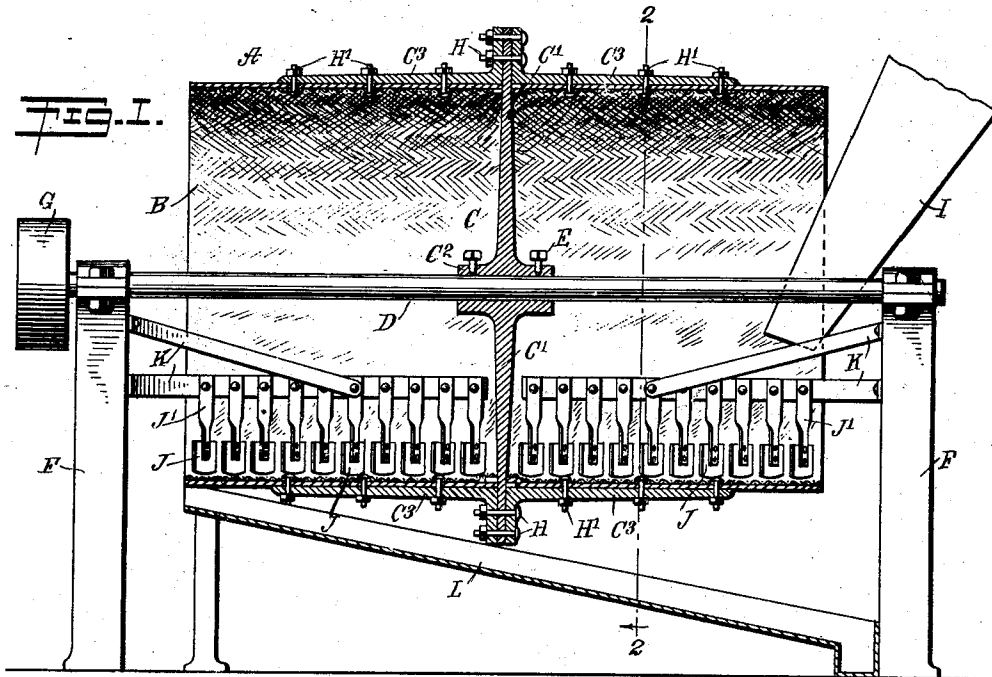


J. M. WHITE.
CENTRIFUGAL DRIER.
APPLICATION FILED JUNE 25, 1910.

992,621.

Patented May 16, 1911.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN M. WHITE, OF MAPLETON DEPOT, PENNSYLVANIA.

CENTRIFUGAL DRIER.

992,621.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed June 25, 1910. Serial No. 568,807.

To all whom it may concern:

Be it known that I, JOHN M. WHITE, a citizen of the United States, and a resident of Mapleton Depot, in the county of Huntingdon and State of Pennsylvania, have invented a new and Improved Centrifugal Drier, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved centrifugal drier, more especially designed for drying wet sand and other wet material, and arranged to permit continuous operation without danger of clogging and to allow of running the drier with comparatively little power.

For the purpose mentioned, use is made of a revoluble perforate drum disposed horizontally and open at both ends, one end for receiving the wet material and the other for discharging the dry material, a lining of fabric material for the inner surface of the drum, a shaft extending centrally through the drum and beyond the ends thereof, and a spider attached to the shaft and supporting the drum approximately at the middle thereof.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal sectional elevation of the centrifugal drier; Fig. 2 is a cross section of the same on the line 2—2 of Fig. 1; Fig. 3 is a sectional perspective view of one of the drum sections; and Fig. 4 is a perspective view of one of the angular arms of the spider spokes.

The drum A is perforate and is provided at its inner surface with a lining B, of a suitable fabric material. The drum A is preferably made in two sections having their inner ends A' overlapping and provided with openings A² for the passage of the outer ends of the spokes C' of a spider C, secured with its hub C² on a shaft D, by the use of set screws E or other suitable fastening devices. The shaft D extends centrally through the drum A and projects beyond the ends thereof, and the outer ends of the shaft D are journaled in suitable standards F, and on one outer end of the shaft D is secured a pulley G, connected by a belt with other machinery for imparting a rotary motion to the shaft D and the drum A.

Angular arms C³ extend lengthwise of the

drum A, at the outside thereof, and are fastened by bolts H to the outer ends of the spider spokes C', and by bolts H' to the drum A, as plainly indicated in Figs. 1 and 2. Thus by the arrangement described, the drum A is supported approximately at its middle on the spider C, and hence the ends of the drum A are unobstructed so that the material to be dried can be readily passed into one end of the drum, through a spout I to be discharged at the other end of the drum.

In order to convey the material forward in the drum, use is made of two sets of angular conveyer plates J, arranged within the drum A at opposite sides of the spider C, as plainly indicated in Fig. 1. The conveyer plates J are provided with upwardly-extending shanks J' attached to the brackets K secured to the standards F, so as to support the conveyer plates J within the drum A and with the lower edges of the conveyer plates in close proximity to the inner surface of the lining B of the drum A. Underneath the drum A is arranged a chute L, for receiving the water or other liquid separated from the material and passing through the meshes of the lining B and through the perforations of the drum A, to drop into the chute L, to be conducted to one side of the machine.

The operation is as follows: When the drum A is rotated and the wet material is fed into one end of the drum A through the spout I, then the rotary motion given to the drum carries the material along and by the centrifugal action separates the water from the material, the water passing through the fabric lining B and the perforations in the drum A and flows down the outside thereof, the force being broken by its passage through the lining to finally pass into the chute L to be conveyed to one side. The material in the drum A is gradually conveyed forward by contact with the conveyer plates J, and when the material reaches the discharge end of the drum A, it is practically dry and the dried material passes out of the discharge end of the drum A.

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

1. A centrifugal drier, comprising a horizontally-disposed perforate drum open at both ends, a lining of fabric material for the inside of the drum, a revoluble shaft ex-

tending centrally through the said drum and projecting beyond the ends thereof, and a spider secured on the said shaft and supporting the said drum approximately at the middle thereof.

2. A centrifugal drier, comprising a horizontally-disposed perforate drum open at both ends, a lining of fabric material for the inside of the drum, a revoluble shaft extending centrally through the said drum and projecting beyond the ends thereof, a spider secured on the said shaft and supporting the said drum approximately at the middle thereof, and fixed angular conveyer plates inside the drum and arranged along the bottom thereof to convey the material forward in the drum.

3. A centrifugal drier, comprising a horizontally-disposed perforate drum open at both ends, a lining of fabric material for the inside of the drum, a revoluble shaft extending centrally through the said drum and projecting beyond the ends thereof, a spider secured on the said shaft and supporting the said drum approximately at the middle thereof, two sets of angular conveyer plates in the bottom portion of the drum, and brackets extending into the drum through the open ends thereof to support the said plates.

4. A centrifugal drier, comprising a horizontally-disposed perforate drum open at

both ends, a lining of fabric material for the inside of the drum, a revoluble shaft extending centrally through the said drum and projecting beyond the ends thereof, a spider secured on the said shaft and supporting the said drum approximately at the middle thereof, two sets of angular conveyer plates in the bottom portion of the drum, brackets extending into the drum through the open ends thereof to support the said plates, and standards in which the shaft is journaled and to which the said brackets are secured.

5. A centrifugal drier, comprising a perforate drum made in sections having overlapping ends provided with openings, a lining of fabric material for the said drum, a shaft extending centrally through the said drum, a spider secured to the said shaft at the middle of the drum, the spokes of the spider extending through the said drum end openings, and longitudinally-extending arms attached to the outside of the drum and the terminals of the said spokes.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN M. WHITE.

Witnesses:

FRANK H. HARRISON,
S. M. WILSON.