March 10, 1925. 1,529,199

T. McNELLY

CENTRIFUGAL DRIER

Filed Aug. 23, 1922

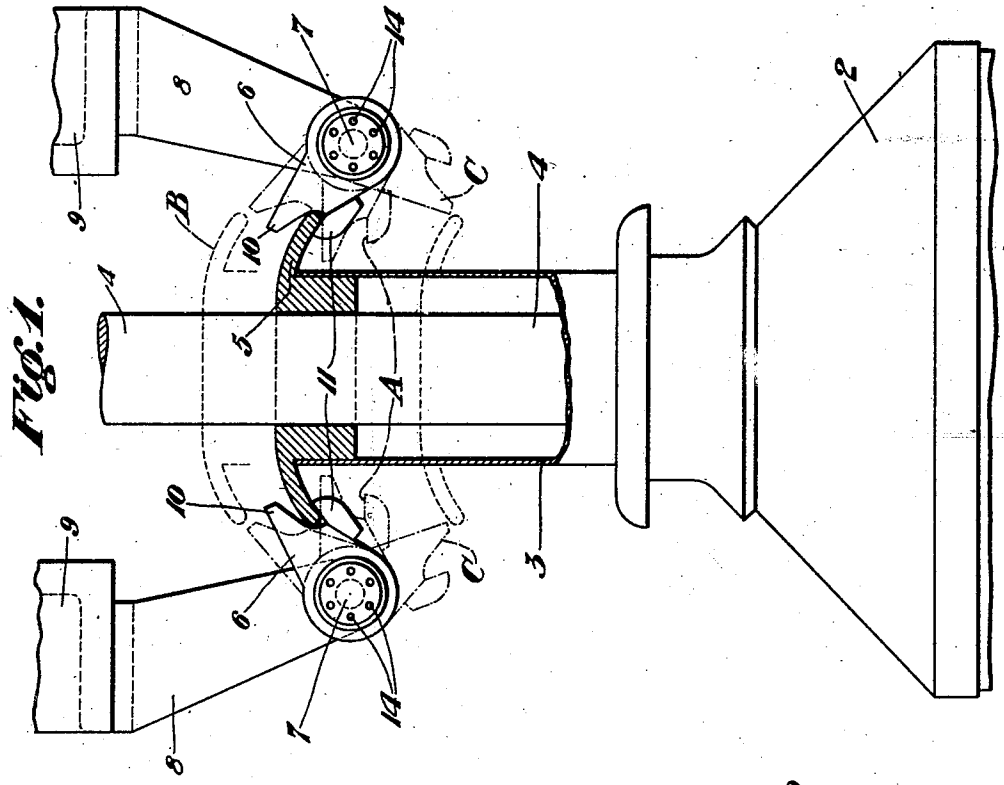


Fig. 1.

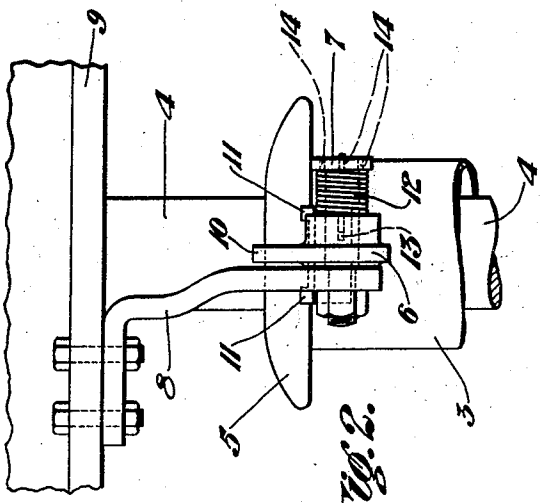


Fig. 2.

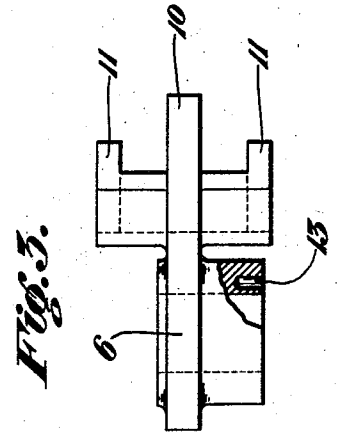


Fig. 3.

Witnesses:
Edwin Trueb

Inventor:
THOMAS McNELLY,
By: D. Anthony Usina
his Attorney.

Patented Mar. 10, 1925. 1,529,199

UNITED STATES PATENT OFFICE.

THOMAS McNELLY, OF CLAIRTON, PENNSYLVANIA.

CENTRIFUGAL DRIER.

Application filed August 23, 1922. Serial No. 583,870.

To all whom it may concern:

Be it known that I, THOMAS McNELLY, a citizen of the United States, and resident of Clairton, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Centrifugal Driers, of which the following is a specification.

This invention relates to bell holders, and more particularly to bell holders for locking the vertically movable bell of centrifugal driers in raised position, and has for one of its objects the provision of holders of this type that will be automatically operated by the bell itself.

Another object is to provide a device of this type that will have the novel features, construction and combination of parts hereinafter described and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, showing the invention applied to the vertically movable basket bell of a centrifugal drier.

Figure 2 is a side elevation taken at right angles to the elevation of Figure 1.

Figure 3 is an enlarged plan of one of the locking or holding dogs.

Referring more particularly to the drawings, the numeral 2 designates the vertically movable basket bell of a centrifugal drier, which has a tubular standard portion 3 adapted to fit around the shaft 4. The portion 3 terminates at its upper end in an outwardly flaring flange 5.

A plurality of locking or holding dogs 6 are pivotally mounted on pins 7 secured in brackets 8. The brackets 8 are secured to suitable supports 9 and are spaced around the shaft 4 so that the dogs 6 are arranged radially from the shaft 4 and extend into the path of travel of the flange 5 on the portion 3 of the bell 2.

The dogs are each provided with upper and lower jaw portions 10 and 11, respectively, adapted to engage around the flange 5 of the bell.

A coil spring 12 is mounted on each of the pins 7 and has one end secured in a hole 13 in the dogs 6 and its other end secured in a selected one of the plurality of holes 14 in the head of the pins 7. The springs are adjusted before being secured in the holes 14 to normally hold the dogs 6 in the dotted line position A.

The dogs 6 are normally pressed downwardly to the dotted line position designated by the letter A (see Figure 1) and in this position they lie in the path of travel of the flange 5. The dogs are adapted to be engaged by the flange 5 as the bell is raised and rocked about the pins 7 until they reach a position slightly above the full line position of Figure 1, when the flange 5 will ride over the bottom jaws 11 of the dogs. At this time the bell will be slightly lowered and becomes wedged against the closed side of the jaws of the dogs, and is thus locked in position.

When it is desired to lower the bell 2 it is raised vertically until the flange reaches the position B, shown in dotted lines in Figure 1, at which time the upper jaws 10 of the dogs will clear the flange and will automatically return to the position A, due to the tension of the springs 12. The basket will now be lowered and during its downward travel it will engage the upper jaw 10 of the dogs and force said dogs to rotate on the pins 7 until they reach the position C shown in Figure 1, at which time the flange 5 will ride beyond the dogs, thus releasing the dogs so that they will return to their original or normal position A. The above cycle of operations may then be repeated as desired.

While I have shown and described one specific embodiment of my invention it will be understood that I do not wish to be limited thereto since various modifications may be made without departing from the scope of my invention as defined in the appended claims.

I claim:—

1. The combination with a vertically movable bell of a centrifugal drier, of means operable by the bell for automatically locking the bell in raised position, said means being adapted to automatically release said bell when said bell is moved a predetermined distance above said locking means.

2. The combination with a vertically movable bell of a centrifugal drier, of a plurality of pivoted locking dogs adapted to engage said bell and lock it in raised position, said dogs being operable by said bell, and said dogs being adapted to automatically release said bell when said bell is moved a predetermined distance above said dogs.

3. The combination with a vertically movable basket bell of a centrifugal drier having an outwardly flaring flange at its top, of a plurality of locking dogs pivotally

mounted at spaced intervals adjacent said bell and extending into the path of travel of said flange, means tending to normally force said dogs downwardly, said dogs being adapted to be engaged by said flange and rotated around their pivotal mountings when said bell is raised, and jaws on said dogs adapted to engage said flange to prevent downward movement of said bell when said bell has been raised a predetermined distance.

4. The combination with a vertically movable basket bell of a centrifugal drier having an outwardly flaring flange at its top; of a plurality of locking dogs pivotally mounted at spaced intervals adjacent said bell and extending into the path of travel of said flange, means tending to normally force said dogs downwardly, said dogs being adapted to be engaged by said flange and rotated around their pivotal mounting when said bell is raised, jaws on said dogs adapted to engage said flange to prevent downward movement of said bell when said bell has been raised a predetermined distance, and said dogs being adapted to automatically release said bell when said bell is raised beyond a predetermined point.

5. The combination with a vertically movable basket bell of a centrifugal drier having an outwardly flaring flange at its upper end, of a plurality of locking dogs pivotally mounted at spaced intervals adjacent said bell and extending into the path of travel of said flange, springs tensioned against said dogs to normally force said dogs downwardly, jaws on said dogs adapted to engage around said flange when said bell is raised a predetermined distance, the closed end of said jaw portion being a greater distance away from the pivotal center of said dogs than the outer edge of said flange, whereby a slight downward movement of said bell will wedge said flange against the bottom closed end of said jaws and prevent the return of said bell to closed position.

6. The combination with a vertically movable basket bell of a centrifugal drier having an outwardly flaring flange at its upper end, of a plurality of locking dogs pivotally mounted at spaced intervals adjacent said bell and extending into the path of travel of said flange, springs tensioned against said dogs to normally force said dogs downwardly, jaws on said dogs adapted to engage around said flange when said bell is raised a predetermined distance, the closed end of said jaw portion being a greater distance away from the pivotal center of said dogs than the outer edge of said flange, whereby a slight downward movement of said bell will wedge said flange against the bottom closed end of said jaws and prevent the return of said bell to closed position, said dogs being adapted to automatically disengage from said flange when said bell is raised beyond a predetermined point.

In testimony whereof I have hereunto set my hand.

THOMAS McNELLY.