H. PARKER.

CENTRIFUGAL SCREEN.

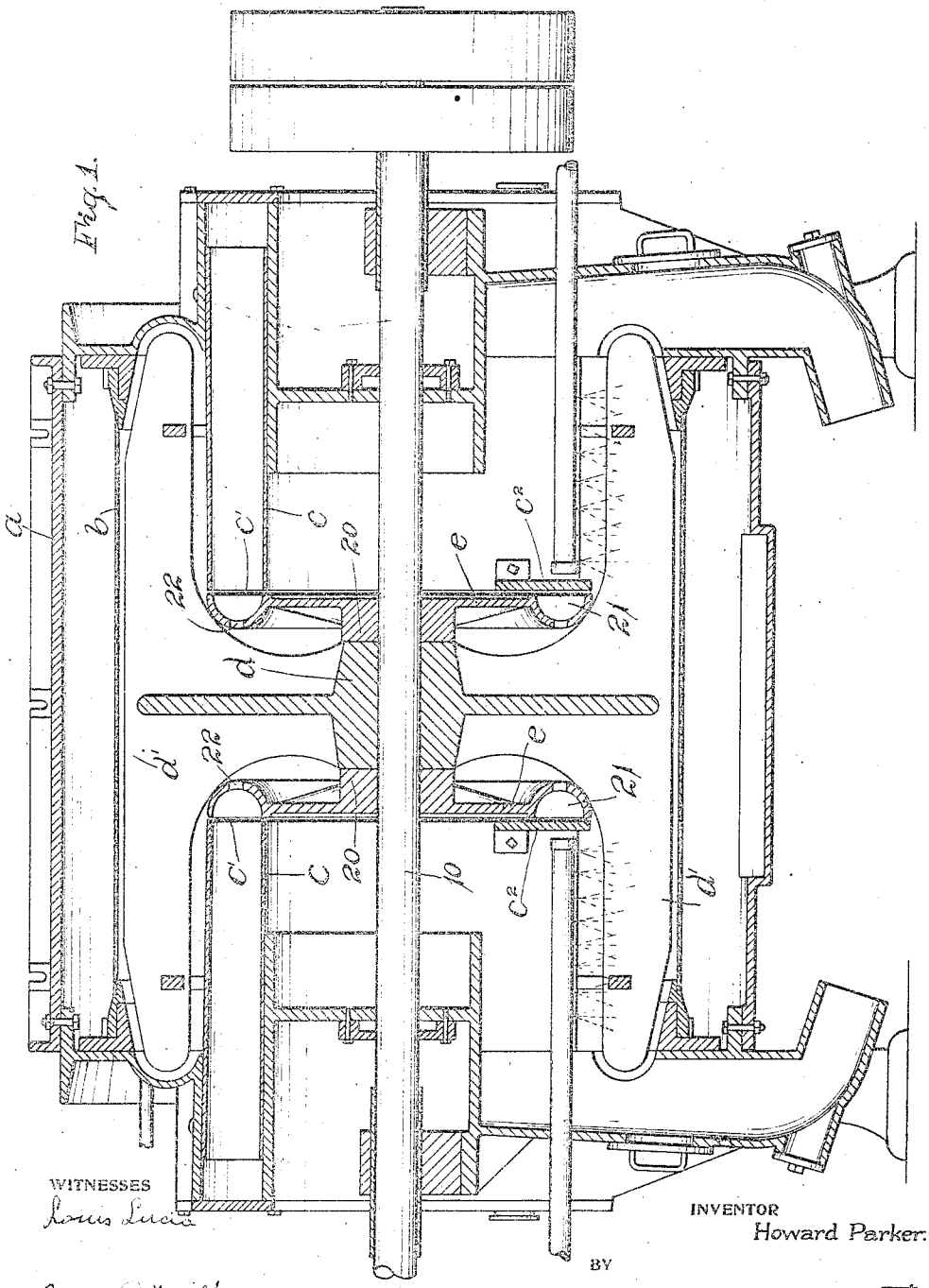
APPLICATION FILED NOV. 15, 1911.

1,036,318.

Patented Aug. 20, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

Louis Lucas

M. E. O'Neill

INVENTOR

Howard Parker.

BY

A. E. Hoyt

ATTORNEY

H. PARKER.

CENTRIFUGAL SCREEN.

APPLICATION FILED NOV. 15, 1911.

1,036,318. Patented Aug. 20, 1912.

3 SHEETS—SHEET 2.

Fig. 3.

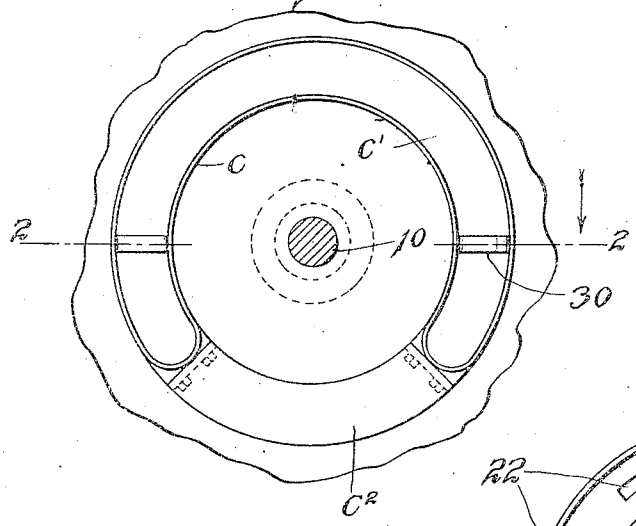


Fig. 4.

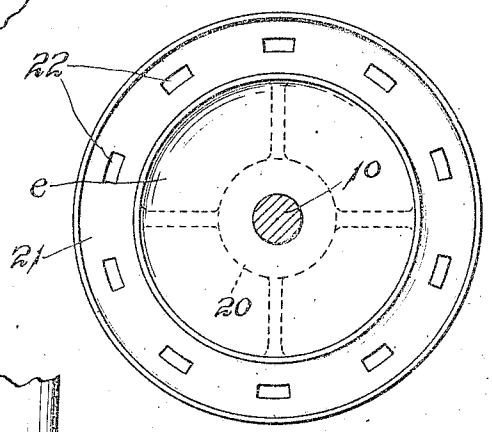
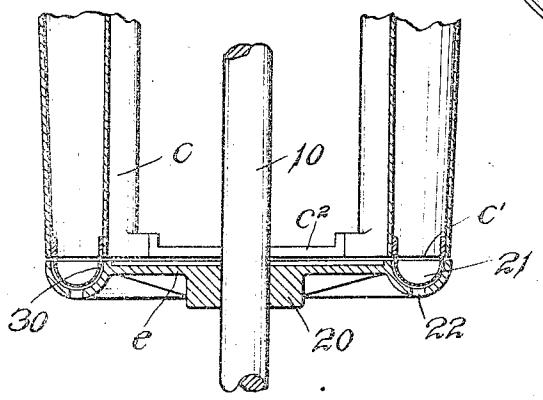


Fig. 2.



WITNESSES

Louis Lucia

M. E. O'Neill.

INVENTOR

Howard Parker.

BY

H. E. Nast

ATTORNEY

UNITED STATES PATENT OFFICE.

HOWARD PARKER, OF NASHUA, NEW HAMPSHIRE.

CENTRIFUGAL SCREEN.

1,036,318. Specification of Letters Patent. Patented Aug. 20, 1912.

Application filed November 15, 1911. Serial No. 660,446.

To all whom it may concern:

Be it known that I, HOWARD PARKER, a citizen of the United States, and a resident of Nashua, in the county of Hillsboro and State of New Hampshire, have invented certain new and useful Improvements in Centrifugal Screens, of which the following is a specification.

This invention relates particularly to horizontally arranged centrifugal screens such as are used in the screening of pulp stock, and the invention relates in particular to what may be termed a distributer utilized for distributing the unscreened stock within the machine at a point where it is taken up by the blades of a rotary impeller. In connection with the distributer a device is provided to prevent the clogging of the feed outlets by chips and knots.

The invention will be more particularly described in connection with the drawings in which—

Figure 1 is a central vertical section of a screen in which my invention is embodied. Fig. 2 is a detail view on enlarged scale in central section of an end of a feed spout and a distributer. Fig. 3 is an end view of the feed spout with the distributer removed. Fig. 4 is a view of the inner end of the distributer.

Referring to the drawings *a* is the screen casing, *b* the screen cylinder which may or may not be rotatable, *c c* the feed spouts projecting into the interior of the screen drum at each end thereof, the inner ends of these feed spouts being squared off as indicated at *c' c'*. These feed spouts are of horse-shoe shape as indicated in Fig. 3 and at the inner end of the spouts a filler plate c^2 extends between the edges for the purpose which will be hereinafter stated.

d is the hub of the impeller mounted on the shaft 10 and having the blades *d' d'* which rotate in the space between the screen drum and the feed spouts and by means of which the stock is forcibly thrown against the screen.

e e are the distributers rotatably mounted on the shaft 10. These distributers each comprise a hub 20 and a circumferential channel 21 which fits against the open inner ends of the feed spouts *c c*, the rear wall of the channel being apertured as at 22 forming stock outlets. The unscreened stock entering the machine through the feed spouts passes into this rotating distributer and thence into the interior of the screen through the apertures 22 and also through the space between the end of the spout and the face of the distributer. The filler plate c^2 is utilized to hold the stock in the channel 21 and prevent it from dumping out in the lower part of the machine as the channel in its rotation passes between the lower edges of the feed spout. These distributers, the essential part of which is the channel, can be carried directly by the impeller hub or blades if desired, rather than formed as a separate structure separately mounted on the shaft. By its use the stock is given a whirling or rotary motion before it goes to the impeller blades and increases the efficiency of the machine particularly in respect of the amount of power used to operate it.

To avoid clogging of the outlets by knots or slivers and other large pieces of material, I attach to the feed outlets knives 30 which project into the channel 21 of the distributers with their cutting edges opposed to the direction of rotation of the distributers, with the result that any knots or slivers or large pieces of material are cut and ground so that they will readily pass out of the pulp outlets. By preference I use and have illustrated a U-shaped knife which corresponds rather closely to the cross sectional shape of the channels in the distributers.

I claim as my invention:

1. In a centrifugal screen, the combination with a parti annular stationary feed spout, of a rotary distributer arranged in operative relation to said spout and provided with stock outlets.

2. In a centrifugal screen, the combination with a parti annular open ended feed spout, of a rotary distributer mounted opposite to and in operative relation with the open end of said spout and provided with stock outlets.

3. In a centrifugal screen, the combination with a parti annular stationary open ended feed spout, of a rotary distributer having a circumferential channel located opposite to the open end of said spout.

4. In a centrifugal screen, the combination with a stationary open ended feed spout, of a rotary distributer provided with a circumferential channel located opposite to and in operative relation with the open end of said spout, the rear wall of said channel being apertured.

5. In a centrifugal screen, the combination with a feed spout, and a distributer arranged in operative relation thereto and adapted to receive stock delivered by the spout, of a cutter secured to said spout and projecting into said distributer.

6. In a centrifugal screen, the combination with a casing, a screen drum, a stationary feed spout and an impeller provided with blades mounted for rotation in the space between the spout and feed drum, of a rotary distributer provided with a recessed face arranged in operative relation with said spout and stock outlets in the rear wall of said recess.

7. In a centrifugal screen, a casing, a screen drum, a stationary feed spout, an impeller provided with blades, and a rotary distributer interposed between said feed spout and said impeller and adapted to receive the stock from said feed spout and deliver it to said impeller.

HOWARD PARKER.

Witnesses:
MARTIN F. MANEY,
ROBERT A. FRENCH.