Aug. 18, 1931. H. N. WEIR 1,819,050

JORDAN ENGINE PLUG

Filed Sept. 14, 1929

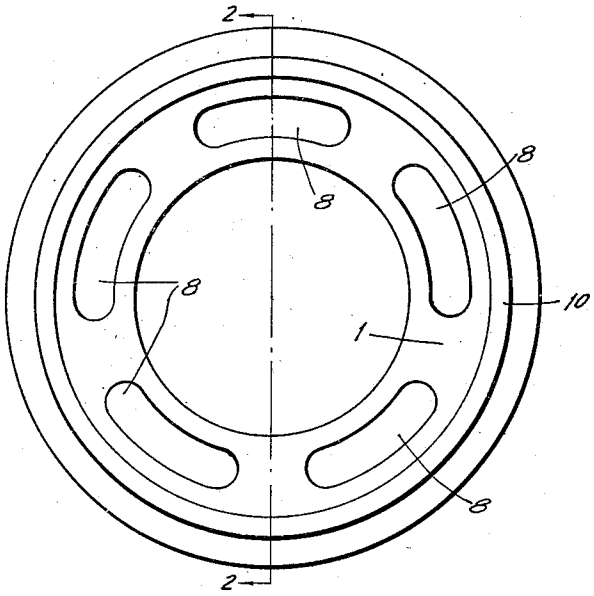


FIG. 1

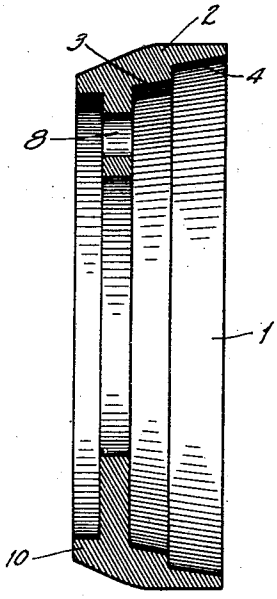


FIG. 2

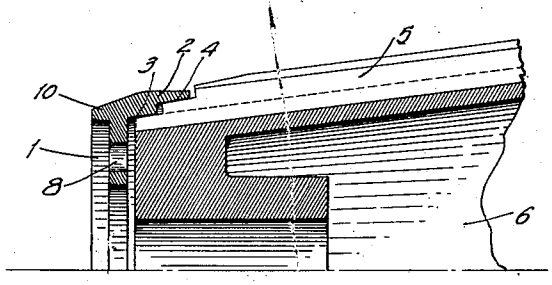


FIG. 3

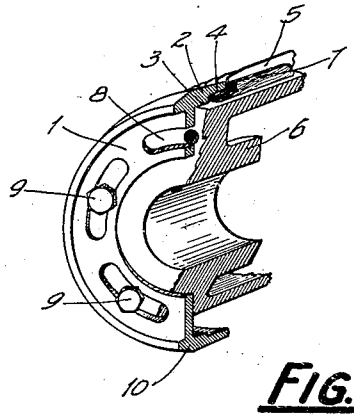


FIG. 4

INVENTOR

Harry N. Weir

BY

ATTORNEY

Patented Aug. 18, 1931 1,819,050

UNITED STATES PATENT OFFICE

HARRY N. WEIR, OF HOOSICK FALLS, NEW YORK, ASSIGNOR TO THE NOBLE & WOOD MACHINE CO., OF HOOSICK FALLS, NEW YORK, A CORPORATION OF NEW YORK

JORDAN ENGINE PLUG

Application filed September 14, 1929. Serial No. 392,498.

My invention relates to paper making machinery and particularly to improvements in the construction of jordans, refining engines and the like.

Machines of this character comprise a tapered shell provided on the interior with fixed cutting elements, and a cone or plug having cutting elements or blades on the surface thereof, and which is axially mounted to rotate within the shell. Material to be treated is introduced into the smaller end of the device and is carried forward to the larger end and discharged therefrom by centrifugal force.

Even with the better grades of stock, containing no hard material, the large amount of water passing through the jordan eventually causes the wood in the wedges which secure the cutting elements in place to warp, rise at the end, and be destroyed, and the blades loosened.

My invention particularly relates to metal rings or discs for securing the bars and wedges of a Jordan plug at the smaller end. I am aware, of course, that there are rings somewhat similar in shape to my improved ring but they do not perform the same functions as will be brought out hereinafter.

The object of my invention is to provide an improved ring of hard, cast metal, preferably steel, which will secure and wedge in place both the bars or knives and also the wooden wedges. My ring accomplishes additional functions to those now in use, viz: it secures the wedges and protects them from warping, raising and being destroyed. Since the wedges are held in place, the tendency of the blades to loosen will be very much lessened.

My invention, therefore, includes the novel elements and the combinations and arrangements of elements described below and illustrated in the accompanying drawings, in which—

Fig. 1 is an elevation of my improved plate for the smaller ends of Jordan plugs;

Fig. 2 is a section taken on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary longitudinal section of a Jordan plug with wedges omitted showing the method of fitting my protective plate over the bars or knives; and

Fig. 4 is a fragmentary view of the smaller end of the jordan showing the annular plate attached to the plug.

Referring to the drawings, 1 represents my ring or plate. The plate, 1, is provided on the inner edge with the flange 2. This flange is provided with a plurality of conical or sloping annular recesses, 3 and 4. The recesses, 3 and 4, fit over and secure in place the removable notched knives, 5, of the Jordan plug, 6, and the upper or outer recess, 4, fits over and secures in place the notched ends of wooden wedges, 7.

The plate, 1, is also provided with curved slots, 8, adapted to receive cap screws, 9, for securing the plate to the plug. I also provide the disc or plate, 1, with the flange, 10, for protecting the screws, 9.

When the plate, 1, is drawn against plug, 6, it holds and secures in place both the bars or knives, 5, and wedges, 7, thereby protecting the wedges and preventing them from warping and raising.

While I have described my invention in its preferred embodiment it is to be understood that the words which I have used are words of description rather than of limitation and that the drawings are merely illustrative. Hence changes, within the purview of the appended claims, may be made without departing from the true scope and spirit of my invention.

What I claim is—

1. The combination with a Jordan plug having removable knives and wedges and extending radially to different distances, of a removable annular plate extending around and protecting the smaller end of said plug and having different portions engaging said knives and wedges respectively and thereby securing the same in position.

2. The combination with a Jordan plug having removable notched knives and wedges, of an annular metal section having a flange provided with a plurality of annular recesses fitting over the smaller end of said plug and embracing said knives and wedges whereby said elements are held in place.

3. The combination with a Jordan plug having removable notched knives and wedges, of an annular metal section having a flange provided with a plurality of annular recesses fitting over the smaller end of said plug, both of said recesses securing in place said knives and one of said recesses securing said wedges.

5. The combination with a Jordan plug having removable notched knives and wedges, of an annular metal plate having a flange provided with a plurality of conical annular recesses fitting over the smaller end of said plug and wedging said knives and wedges in place.

5. The combination with a Jordan plug having removable notched knives and wedges, of an annular metal plate having a flange provided with a plurality of conical annular recesses fitting over the smaller end of said plug, both of said recesses securing in place said knives, and one of said recesses securing said wedges.

HARRY N. WEIR.