No. 798,523. PATENTED AUG. 29, 1905.

W. H. McINTYRE.

ATTACHMENT FOR SULFITE DIGESTERS.

APPLICATION FILED APR. 12, 1905.

Fig. 2.

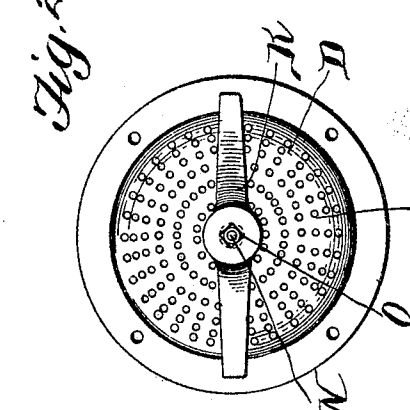


Fig. 1.

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ATTACHMENT FOR SULFITE DIGESTERS.

No. 798,523. Specification of Letters Patent. Patented Aug. 29, 1905.

Application filed April 12, 1905. Serial No. 255,216.

To all whom it may concern:

Be it known that I, WILLIAM H. McINTYRE, a citizen of the United States, residing at Newtonfalls, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Attachments for Sulfite Digesters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in attachments for sulfite pulp-digesters; and the object of the invention is to produce a simple and efficient means whereby the screen at the upper exit end of the digester may be kept clear of bits of wood, lime, &c., the tendency being for this material to go to the top of the digester, where the screen is located, and clog the apertures of the screen and cause a stoppage in the circulation of the steam and acid gases in the digester, thereby rendering the pulp worthless for paper-making.

The invention consists, further, in various details of construction and in combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view through the upper end of the digester, and Fig. 2 is an end view of the screen and wiping device therefor.

Reference now being had to the details of the drawings by letter, A represents a digester showing an end plate B securely held thereto and provided with an exit passageway C, which is suitably packed over the aperture leading through the plate B.

D designates a screen which projects over the face of a metallic plate E, which is held by said top to the digester.

K designates a yoke having oppositely-disposed curved arms which conform to the curvature of said screen, and N designates a rod which passes through the apex of said screen and also through the central portion of said yoke, and a nut O is fitted upon one end of said rod and is adapted to hold said yoke securely in place. The shank portion of said rod N passes through a suitable gland Q, and a wrench or handle may be applied to its outer free end, whereby the rod and the yoke carried thereby may be conveniently turned for the purpose of causing the arms of the yoke to wipe against the convexed surface of said screen to clear the same of chips, particles of lime, or other foreign material which might come into contact with the screen and which would have a tendency to stop the circulation of the steam and acid gases in the event of the foreign matter clogging the apertures N′ in said screen. It will be observed that the walls of said apertures N′ taper outwardly toward the top of the digester, thereby forming a means whereby any foreign matter which may pass into the contracted ends of the apertures will readily pass through without clogging up the apertures.

By the foregoing construction it will be observed that whenever it is desired to wipe the surface of the screen it may be done by the mere rotation of the shaft carrying said yoke, thus making it possible to have a free flow of the gases from the digester.

While I have shown a particular form of apparatus illustrating my invention, it will be understood that I may vary the details of the same, if desired, without in any way departing from the spirit of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a digester, having an exit end at the top thereof, a convexed screen fitted to the top and projecting into the neck of the digester, said screen having perforations, the walls of which are diverging upward, a stirrer having arms adapted to wipe against the convexed surface of said screen and to clear the tapering ends of said perforations of any foreign matter that might lodge therein, as set forth.

2. In combination with a digester, a top secured over the neck of the digester, and provided with a central aperture, an exit-pipe leading through said aperture, a convexed screen, having flanges fixed to said top and

projecting into said neck, said screen having perforations, the walls of which diverge from the convexed surface thereof, a rod passing through said exit-opening and through an aperture in said screen, and a wiper, having concaved arms adapted to clear any foreign matter from the apexes of said perforations.

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

WILLIAM H. McINTYRE.

Witnesses:
CLARENCE J. KEPLER,
FLORA G. RATAN.