

The Canadian Patent Office

RECORD




Vol. XXII.—No. 8.

AUGUST 31st, 1894.

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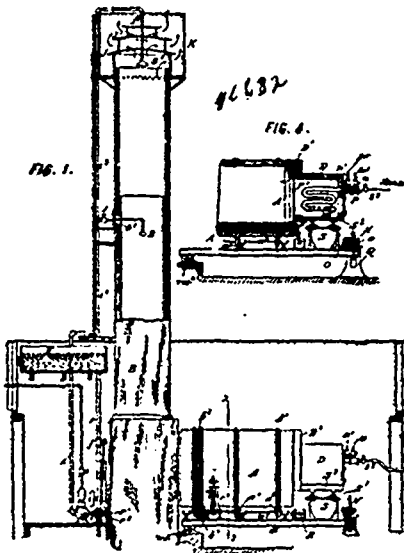
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INVENTIONS PATENTED.

NOTE.—Patents are granted for 13 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 46,602. Apparatus for Recovering Alkali.

(Appareil pour obtenir de l'alcali.)



The Blackman Patent Pulp Company, assignee of Henry Blackman, New York, U.S.A., 1st August, 1894; 6 years.

Claim.—1st. In a calcining furnace comprising a calcining chamber and a stack, the combination of means for introducing a liquid to be treated into said stack so that it shall descend therein and be thereby concentrated, a tank for receiving the liquid thus concentrated, and a pump for drawing the concentrated liquid from this tank and introducing it into the calcining chamber. 2nd. In a calcining furnace comprising a calcining chamber and a stack, the combination of means for introducing a liquid to be treated into said stack so that it shall descend therein and be concentrated thereby, a tank for receiving the liquid thus concentrated, a pump for drawing the concentrated liquid from this tank and introducing it into the

calcining chamber, and means for controlling the introduction of liquid into the stack so as to preserve a uniform level in said tank consisting of a valve operated by a float and responding to variations of level of the liquid in said tank. 3rd. A calcining furnace consisting of a calcining chamber and an upright stack, a tank at the base of said stack for receiving the solution to be calcined, a pump and connecting pipe adapted for drawing off the solution from said tank, and a pipe leading from the outlet of said pump and discharging into said stack, whereby the liquid is circulated in said tank, and repeatedly showered down the stack and returned into said tank preparatory to being discharged into the calcining chamber. 4th. In a calcining furnace, the combination with the calcining chamber and stack of a concentrating tank built within the base of the stack, an outlet therefrom to the calcining chamber, a standpipe exterior to the furnace and communicating with said tank, a supply tank and a pipe extending therefrom for delivering liquid to said concentrating tank, a valve in said pipe, and a float in said standpipe for automatically operating said valve and thereby controlling the height of liquid in the concentrating tank. 5th. In a calcining furnace, the combination of a calcining chamber and stack, a concentrating tank within the furnace, an agitator within said tank, a pump and connecting pipe, adapted for drawing off the solution from said tank, and a pipe leading from the outlet of said pump and discharging the solution into the stack, whereby the solution in said tank is agitated and may be repeatedly circulated from said tank and steamed down the stack. 6th. In a calcining furnace comprising a calcining chamber and a stack, the combination of means for introducing a liquid to be treated into said stack so that it shall descend therein and be thereby concentrated, a tank for receiving the liquid thus concentrated, a pump for drawing the concentrated liquid from said tank, a pipe receiving the liquid from said pump, and discharging it into the calcining chamber, and a valve in said pipe for regulating the rate of admission to the calcining chamber. 7th. In a calcining furnace comprising a calcining chamber and a stack, the combination of means for introducing a liquid to be treated into said stack, so that it shall descend therein and be thereby concentrated, a tank for receiving the liquid thus concentrated, a pump for drawing the concentrated liquid from said tank, a pipe receiving the liquid from said pump, and discharging it into the calcining chamber, and a valve in said pipe for regulating the rate of admission to the calcining chamber, and means for controlling the operation of said pump, consisting of a stand-pipe in communication with said valved discharge-pipe, a float responding to variations of level in said stand-pipe, and means operated by the rise and fall of said float for controlling the application of power to said pump. 8th. In a calcining furnace comprising a calcining chamber and a stack, the combination of means for introducing a liquid to be treated into said stack, so that it shall descend therein and be thereby concentrated, a tank for receiving the liquid thus concentrated, a steam pump for drawing the concentrated liquid from said tank, a pipe receiving the liquid from said pump and discharging it into the calcining chamber, and a valve in said pipe for regulating the rate of admission to the calcining chamber, a stand-pipe in communication with said valved discharge-pipe, a float responding to variations of level in said stand-pipe, and a valve in the steam-pipe supplying steam to said pump connected to and operated by said float, whereby the speed of the pump is automatically governed proportionally to the adjustment of said valve. 9th. In a calcining furnace comprising a calcining chamber and a stack, the combination of means for introducing a liquid to be treated into said stack, so that it shall descend therein and be thereby concentrated, a tank for receiving the liquid thus concentrated, a pump (51) with its suction-pipe (t) connected to said tank for drawing the concentrated liquid therefrom, a discharge-pipe (t') ascending from said pump, a vertical pipe (p') receiving the liquid from said pipe (t'), a pipe (p) extending thence into the calcining chamber, a valve (p²) or