

No. 769,091.

PATENTED AUG. 30, 1904.

I. KITSEE.

METHOD OF CLEANSING PAPER MAKING MACHINES.

APPLICATION FILED DEC. 16, 1903.

NO MODEL.

Fig. 1.

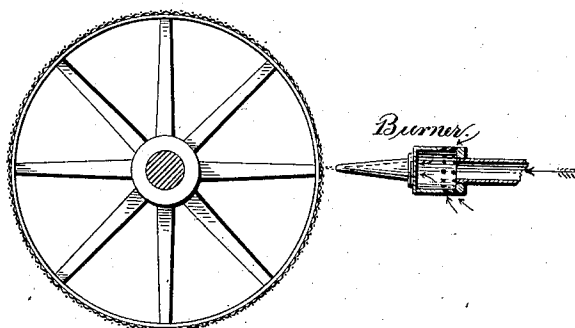
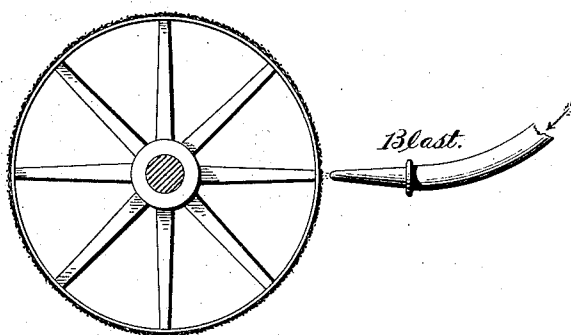


Fig. 2.



Witnesses:

James Hutchinson.
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UNITED STATES PATENT OFFICE.

ISIDOR KITSEE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CHARLES L. HAMILTON, OF PHILADELPHIA, PENNSYLVANIA.

METHOD OF CLEANSING PAPER-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 769,091, dated August 30, 1904.

Application filed December 16, 1903. Serial No. 185,461. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR KITSEE, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Methods of Cleansing Paper-Making Machines, of which the following is a specification.

My invention relates to paper-making machines, and has more special reference to an improvement in the method of cleansing what is technically called in such machines the "dandy" and the "wire." In another application, for which Letters Patent were granted to me April 14, 1903, under Serial No. 725,345, I have described a process by which the screen and dandy of such machines may be cleaned with the aid of the electric current. Such cleansing process has proven successful in such cases where fiber and other impurities have accumulated on the surface of the wire; but in the process of cleansing dandies it was found that in some of these parts of the paper-machine small woody fibers became wedged between the outer wire of the dandy and the inner support. These fibers are, so to speak, embedded between two metallic surfaces. The current therefore cannot reach these fibers.

In practice it was found that where a dandy can be cleaned of the (on the surface) accumulated "dirt" in about ten minutes with a current density of only one ampere for twenty-five square inches such current will not act at all on the fiber wedged in between these two conducting-surfaces, and a current density of at least one to two amperes per square inch is necessary for the removal of such fiber and even then it takes a greater length of time. In practice such large amount of current is hardly practical, for the reason that the dandy is usually from ninety to one hundred inches long and about ten to twelve inches in diameter, having, therefore, an exposed surface of over three thousand square inches.

In my experiments to substitute for the electrolytic process a cheap and economical method of removing the wedged-in fibers I had recourse to the process of charring such fibers, and for this purpose I subjected the whole wire to a heating process; but if the dandy is subjected as an entirety to a very

high temperature the expansion of the wire will be uneven; for the reason that part of such wire is secured to the metallic backing or spider and part of such wire is left free, and this unequal expansion results in a contortion of the wire, thereby making it unfit for further use. As the wooden fiber is invariably wedged in between this spider and the wire, I thought it expedient to make use of a fine jet of flame directed against the wedged-in fiber, and this expedient proved entirely successful. In such places where a supply of gas is at hand I employ what is known as a "Bunsen-burner" jet, whereby the supply of gas, as well as air, can be regulated at will and whereby the flame can also be regulated so as to terminate in a point adapted to heat just the surface desired and to thereby char the underlying woody fiber. Where gas is not conveniently at hand, gasoline, with a blow-pipe, may be substituted therefor, and as the fiber is invariably embedded between the metallic spider-support and the wire of the netting no undue contortion of the screen will result. To remove the carbonized fiber, the dandy may be subjected then to the electrolytic process as outlined in the Letters Patent above mentioned, or the carbonized matter may be removed with the aid of mechanical means, such as rubbing with a brush or blowing off with the aid of a steam-blower.

The use of steel brushes and the use of steam-blowers are so well known to persons versed in the art of paper-making that it is unnecessary for me to go into detail here as to the operation of same. It suffices to say that I have after carbonizing the fiber on part of a dandy removed the same in one series of experiments with the aid of the electrolytic process, in a second series of experiments with the aid of a brush, and in a third series of experiments with the aid of a hand-blower.

I have described the method of carbonizing the fiber with the aid of a flame; but it is obvious that the same result may be attained with an electric current, with the aid of which that part of the dandy where the fiber is embodied may be heated to a degree, so as to carbonize said fiber.

In the drawings, Figure 1 is a sectional ele-

vation of a dandy-roll, illustrating the application thereto of a burner for carbonizing the fiber; and Fig. 2 is a similar view illustrating the application of a blast for removing the fiber after being carbonized.

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

1. The method of cleansing a dandy used in paper-machines from the woody fiber embedded therein which consists in first carbonizing said fiber and then removing the carbonized particles.

2. The method of removing particles of fiber embedded between parts of a paper-machine which consists in first carbonizing said particles and then removing said particles.

3. The method of cleansing parts of a paper-

machine having embedded therein woody fibers which consists in subjecting said fibers to a high temperature thereby breaking up said fibers and then removing the broken-up particles.

4. The method which consists therein that the fibers embedded between the outer netting and the inner support of a dandy are subjected first to a high temperature, thereby carbonizing the same, and are then subjected to a process whereby the charred particles are removed.

In testimony whereof I hereby sign my name, in the presence of two subscribing witnesses, this 17th day of August, A. D. 1903.

ISIDOR KITSEE.

Witnesses:

EDITH R. STILLEY,

H. C. YETTER.