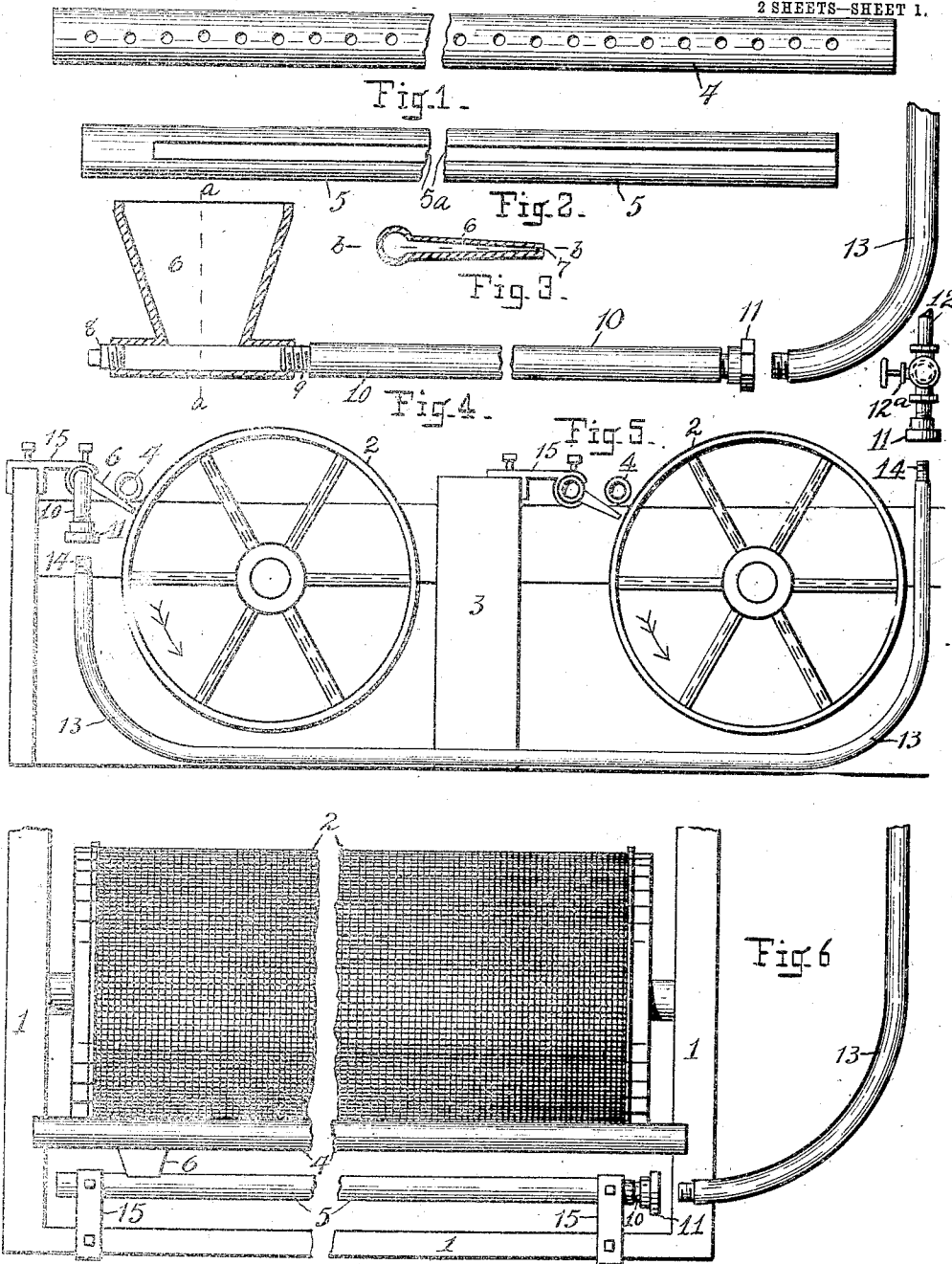


A. T. WYANT.
PAPER MAKING MACHINE CLEANSING DEVICE.
APPLICATION FILED FEB. 1, 1909.

941,750.

Patented Nov. 30, 1909.

2 SHEETS—SHEET 1.



WITNESSES:
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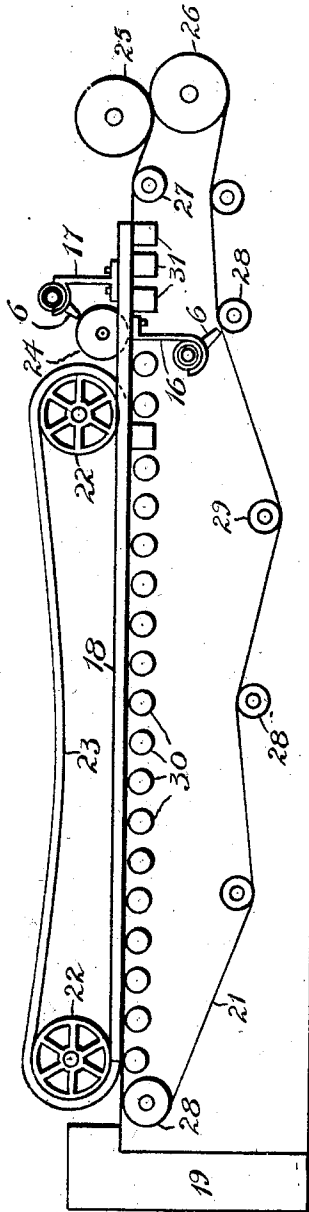


Fig. 7.

Fig. 8.

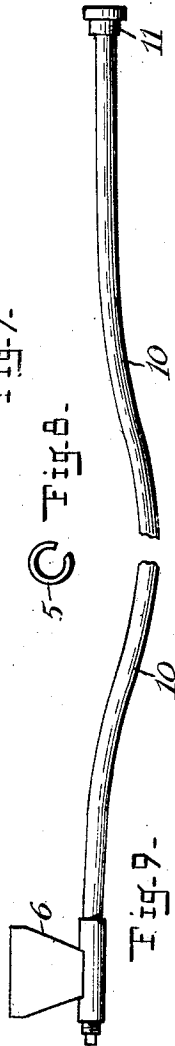


Fig. 9.

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PAPER-MAKING-MACHINE-CLEANSING DEVICE

941,750.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed February 1, 1909. Serial No. 475,532.

To all whom it may concern:

Be it known that I, ALFRED T. WYANT, a citizen of the United States, residing at Neenah, in the county of Winnebago and State of Wisconsin, have invented a new and useful Paper-Making-Machine-Cleansing Device, of which the following is a specification.

My invention relates to a device for directing a jet of steam, hot water, or air, under considerable pressure, or a combination of said cleansing agents, upon the wire covering of the making cylinders, upon the dandy roll, or upon the wire of a Fourdrinier paper making machine, in a thin sheet, and it consists of a steam, hot water or air delivering device formed of metal, a hose attached to said delivery device and being connected with a source of supply of one or a plurality of said cleansing agents, and a guide fixed in position upon the paper making machine frame for receiving said delivering device to be slid back and forth across the entire width of the wire, while the wire is running, and delivering under great pressure a jet of steam, hot water or air, over the entire surface of said wire, and the object of the improvement is, to effectually clean the wire of foreign particles which may clog up the meshes of the wire, without stopping the running thereof.

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

Figure 1 is a plan, showing the delivery side of the usual spraying pipe which is used for delivering jets of water upon the wire covering of the making cylinders of paper making machines. Fig. 2 is a plan showing a pipe, slotted nearly its entire length, which I employ for conveying my steam, hot water or air containing device across the width of the wire to be cleaned, it being of a length in excess of the width of the wire to be cleaned. Fig. 3 is a transverse section upon the line *a, a*, of Fig. 4, of the steam, hot water or air delivering nozzle. Fig. 4 is a plan, in horizontal section upon the line *b, b*, of Fig. 3, of said nozzle, it having a piece of hose attached to it for the delivery to it of the cleansing agent. Fig. 5 represents a short section of the end of a paper making machine, with two of its several making cylinders therein, parts of the machine frame, the pulp delivering vat, the usual spraying pipe, and my improvement located in the rear of the usual spraying

pipe, a section of hose being in position for connection at one end with a steam supply pipe and at the other end with the delivery nozzle. Fig. 6 is a plan of the end of a paper making machine having one of the making cylinders therein, the usual spraying pipe and my improved cleaning device secured in position. Fig. 7 is an elevation representing the forming end of a Fourdrinier machine, the frame being omitted. Fig. 8 is an end elevation of the entering end of the slotted pipe for holding and guiding the jet delivery nozzle. Fig. 9 is a plan, similar to Fig. 4, of the jet delivery nozzle and a section of hose having a member of a union coupling for connecting the nozzle with a source of supply of the cleansing agent. Figs. 1, 2, 4, 6 and 8, are broken in their length for indicating a greater length than is shown. Figs. 1, 2, 3 and 4 are upon a larger scale than Figs. 5 and 6, and Fig. 7 is upon a smaller scale than Figs. 8 and 9.

Similar characters indicate like parts in the several views.

1, indicates a part of a paper making machine frame in Figs. 5 and 6; 2, the making cylinders, of which there may be several. These cylinders are covered with wire cloth, first with about No. 40 mesh and then with a finer mesh. Pulp in hard bunches sometimes gets into these meshes to such an extent as to lessen the working capacity thereof and a cleansing becomes essential. This cleansing is one of the purposes of this invention. The support for the cylinders and side of the machine frame are omitted, for a better showing of the manner of applying the improvement.

3, indicates the pulp delivery vat; 4, the usual pipe for spraying the cylinder; 5, the pipe in my improvement which is used for holding and guiding the jet delivery nozzle, it being provided with an open ended groove 5^a, for permitting the nozzle to slide along in front of the wire, substantially the length of said groove.

6, is the jet delivery nozzle having a narrow delivering aperture, approximately one sixteenth of an inch wide by five or six inches in length, through which aperture 7, a jet of steam &c., is delivered upon the wire in a thin sheet. The nozzle may be cast of a suitable metal and one end of its tubular part closed with a plug 8, while a thimble 9, having a piece of hose 10, attached to it, is fitted to the other end. The slotted pipe 5,

is to be permanently fixed in position transversely of and near each wire in a paper making machine, which is to be cleaned, whether it be the wire covering of the making cylinders, the dandy roll, or the making wire in a Fourdrinier paper making machine. A nozzle having a sufficient length of hose attached for reaching from a source of supply of the cleansing agent is then to be inserted into said slotted pipe with the mouth of the nozzle extending through the slot and toward the wire. Having inserted the nozzle, the valve 12, of the supply pipe 12 is to be opened and steam &c. admitted, while the nozzle is slid back and forth across the width of the wire until it is sufficiently cleaned. This supply pipe may be located wherever it is most convenient. For convenience in its use, the hose 10, is to be supplied with one member, 11, of a union coupling and left permanently in each slotted pipe 5, the source of supply pipe 12, being also supplied with one member 11, of a union coupling, while a length of hose, 13, as required, is provided with the companion coupling members 14, for connecting the supply pipe 12 with the nozzle 6. The pipe 5 is held in position in Figs. 5 and 6 with clamping irons 15, and in Fig. 7 with the hanger 16 and stand 17, one of each being at opposite sides of the machine frame and bolted to the shake rail 18.

In Fig. 7, 19, indicates the flow box; 20, the breast roll; 21, the wire; 22, the deckle wheels; 23, the deckle strap; 24, the dandy roll; 25 and 26, upper and lower couch rolls; 27, guide roll; 28, wire carrying, and 29, a

stretching roll, 30, the table rolls and 31, suction boxes.

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

1. In a wire cleansing device for a paper making machine, a source of supply for steam, hot water, or air, under pressure, a slotted pipe arranged across the paper making machine frame, near to, and parallel with the wire to be cleaned, a tubular inclosure arranged to slide within said pipe, a nozzle extending outward from said tubular inclosure through the slot in said pipe, and being directed toward the wire to be cleaned, an aperture from said tubular inclosure through said nozzle for delivering a jet upon the wire to be cleaned in the form of a thin sheet, a hose connecting the source of supply of the cleansing agent and said tubular inclosure, and a valve for controlling the flow of the cleansing agent through said tubular inclosure and nozzle to the wire to be cleaned.

2. As a means of directing a jet of steam, liquid, or air, under pressure, upon parts of a paper making machine mechanism, an inclosure arranged transversely of said machine, a slot through one side of said inclosure longitudinally thereof, and an inclosure carrying the jet forming force arranged to be slid back and forth within said first named inclosure along said slot for delivering said jet forming force to the mechanism desired.

ALFRED T. WYANT.

Witnesses:

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