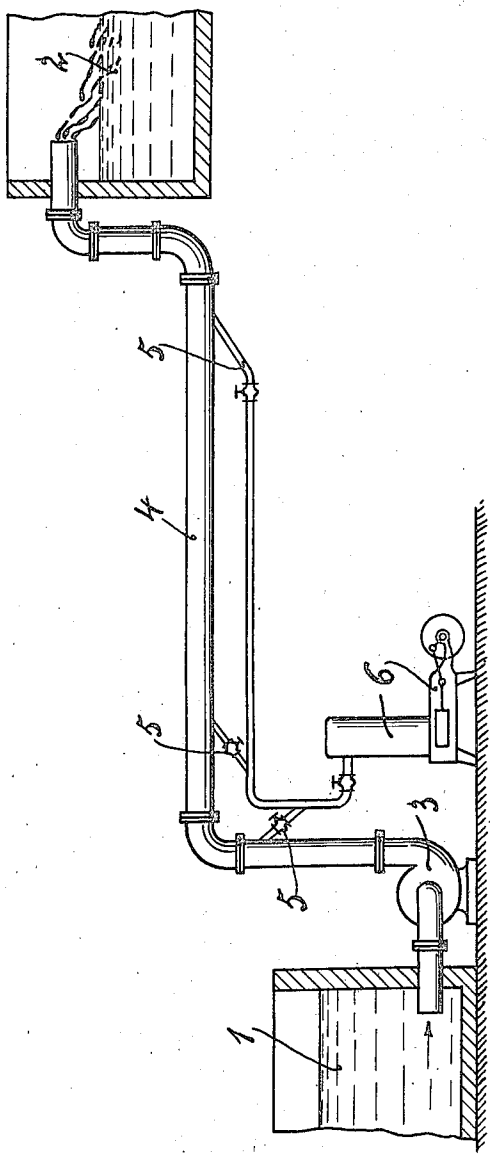
Aug. 28, 1923. 1,466,413

P. C. SCHAANNING

METHOD AND ARRANGEMENT FOR CONVEYING WOOD PULP

Filed Feb. 3, 1922



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UNITED STATES PATENT OFFICE.

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METHOD AND ARRANGEMENT FOR CONVEYING WOOD PULP.

Application filed February 3, 1922. Serial No. 533,821.

To all whom it may concern:

Be it known that I, PEDER CHRISTIAN SCHAANNING, a subject of the King of Norway, residing at Aurvang, V. Holmen n/Christiania, Norway, have invented certain new and useful Improvements in Methods and Arrangements for Conveying Wood Pulp; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

The construction of pumps for conveying wood pulp has always been met by difficulties, when the percentage of wood pulp in liquid exceeds 4–5%.

The difficulties increase when the pulp has to be conveyed through long pipes and when the fibers are particularly long in which cases the wood fibers easily separate from the water and clog the pipes.

This clogging effect is caused by the friction of the pipe walls against the fibers which gradually come to rest along the walls, so that the free cross section is gradually decreased to a small channel in the middle through which only water is pressed, while all the fibers accumulate in the pipe.

This drawback is avoided in accordance with the present invention by means of which it is made possible to convey by pumping wood pulp with a very heavy percentage of wood fibers.

The present invention consists in securing a lively motion of the wood fibers in the conveyer pipe thereby preventing the separation of water and fiber as well as accumulation of wood pulp along the inner surface of the pipes.

This is obtained by introducing at suitable points of the conveyer pipes preferably in front of bends and long straight parts air under a suitable pressure.

This air is preferably introduced in such a manner that it has the same direction as the movement of the pulp in the pipe.

When the air is introduced in the pipe it expands and causes a bubbling movement in the pulp, whereby the separation of water and fiber is prevented.

On the drawing is diagrammatically illustrated an arrangement by means of which the method may be carried into effect.

The pulp is to be conveyed from vessel 1 to vessel 2 by means of centrifugal pump 3. Pipe 4 connects pipe 3 with vessel 2. In said pipe 4 there is introduced at suitable points air jets 5 to which pressure air is supplied from compressor 6, and which are directed in the direction of movement of the pulp.

Claim:

The method of conveying a mixture of water and wood pulp from one vessel to another which comprises forcing the mixture into a closed conduit connecting the two vessels, and maintaining a bubbling of the mixture by introducing air into the conduit at the bottom of the mixture and in substantially the same direction as the flow of the mixture.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

PEDER CHRISTIAN SCHAANNING.

Witnesses:
JAMES J. FOLEY,
DAGNY SYVERSEN.