

H. VOELTER.
WOOD PULPING MACHINE.

No. 96,515.

Patented Nov. 2, 1869.

Fig. 1.

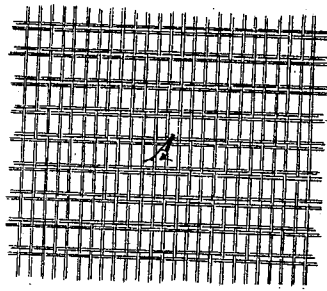


Fig. 2.



Fig. 3.

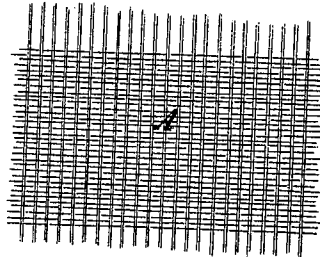
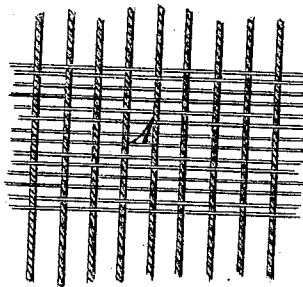


Fig. 4.



Witnesses.
E. F. Kastenhuber
C. Wäblers

Inventor.
H. Voelter
per
Wm. Santwood, Clerk
Attys

United States Patent Office.

HEINRICH VOELTER, OF HEIDENHEIM, WURTEMBERG.

Letters Patent No. 96,515, dated November 2, 1869.

IMPROVEMENT IN WOOD-PULPING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HEINRICH VOELTER, of Heidenheim, in the Kingdom of Wurtemberg, have invented a new and useful Improvement in Wood-Pulping Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention.

Figure 2 is a transverse section of the same.

Figure 3 is a plan of a modification of the same.

Figure 4 is a similar view of the same in a larger scale than the previous figure.

Similar letters indicate corresponding parts.

This invention relates to an improvement in that part of a wood-pulping machine, which serves to assort the fibres after the wood has been reduced by grinding-mechanism, such, for instance, as that described in Letters Patent granted to me in the United States, on the 10th of August, 1858, and also on the 22d of May, 1866.

In these patents I have described assorting-cylinders or drums, which are intended to assort the fibres according to their different degree of fineness, and these drums have heretofore been covered with wire netting or gauze, having square meshes. But long experience has shown to me that the value of the pulp produced would be greatly enhanced if the length of the fine fibres could be increased, while in the present mode of assorting the fibres, the long, fine fibres could be obtained only mixed with the coarse fibres.

The reason why it was not possible to separate the long, fine fibres from the coarse fibres, I found in the construction of the assorting-sieves, the meshes of which have heretofore always been square, and since these meshes had to be very fine, in order to prevent the passage of coarse fibres through them, it is obvious, that with the fineness of the sieves, the length of the fibres, capable of passing through them, was necessarily reduced in the same proportion. The fine, long fibres therefore remained mixed with the

coarse fibres, and, in consequence thereof, their value was greatly depreciated, or, if they were returned to the reducing-machine, their length was reduced below the required point.

This difficulty I have avoided simply by using sieves A with oblong meshes, as shown in the drawing.

If the fineness of these wires is increased, the meshes still remain long enough to allow the passage through them of the long, fine fibres, while the coarse fibres are prevented from passing, and the value of the pulp produced is materially improved.

In constructing my improved sieve with oblong openings, several difficulties had to be overcome, since the meshes being choked up by coarse fibres at short intervals, have to be cleaned repeatedly, and in being cleaned they are subjected to a considerable strain, which is liable to disturb the shape of the meshes.

I have, therefore, constructed the sieves of wires of different thickness and elasticity, as shown in figs. 1 and 2, where fine and elastic wires are used in pairs as filling, with coarser wire forming the warp, said fine wires being placed close together and twisted in opposite directions round the coarse wires, as shown.

Instead of using fine wires in pairs, as shown in figs. 1 and 2, I have also used, for the filling, strands of wire produced by twisting a number of such fine wires together, as shown in figs. 3 and 4. Such strands preserve a certain degree of elasticity, and when thrown into the warp, they are capable of retaining the warp-threads in position, and thereby the dislocation of the meshes by the frequent operation of cleaning is obviated.

What I claim as new, and desire to secure by Letters Patent, is—

In wood-pulping machines, the use of assorting-sieves with oblong meshes, constructed as herein shown and described.

This specification signed by me, this 21st day of August, 1869.

HEINR. VOELTER.

Witnesses:

GUSTAV SCHON,
ROBERT GUTCKUNST.