W. HOOPER.

APRONS FOR WET ORE SEPARATORS.

No. 184,378. Patented Nov. 14, 1876.

Fig. 1.

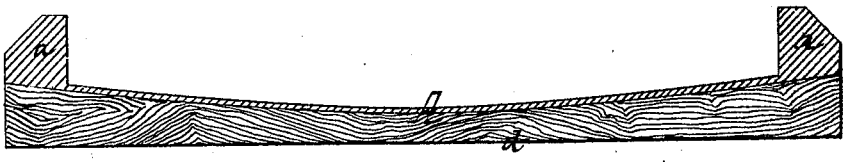
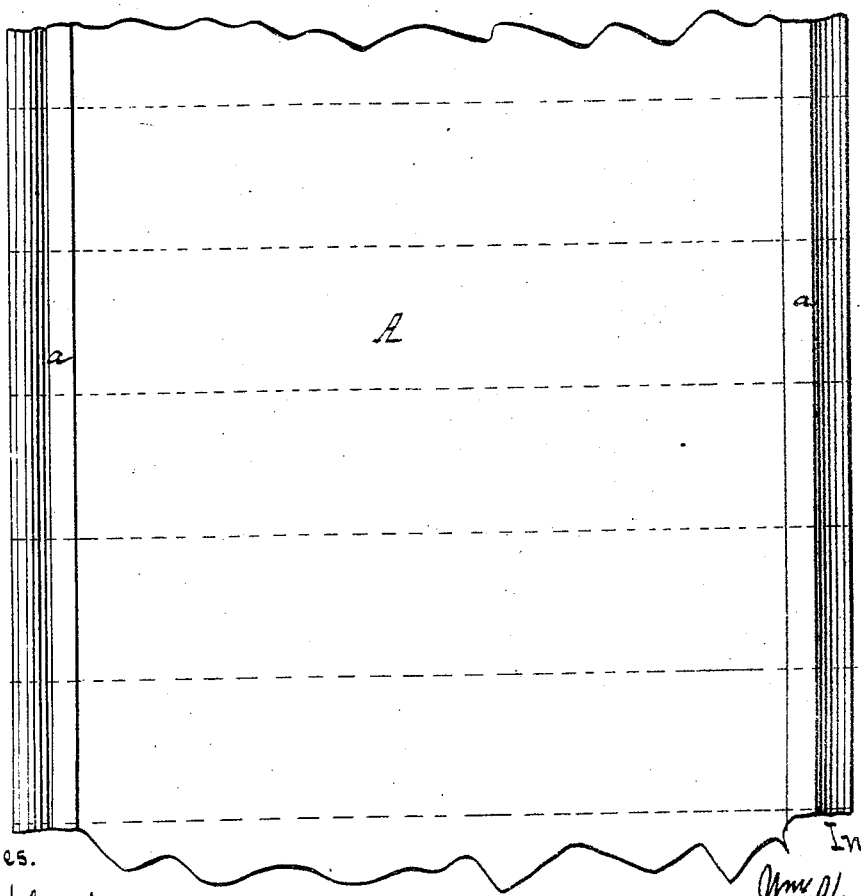


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM HOOPER, OF TICONDEROGA, NEW YORK, ASSIGNOR TO NEW YORK ORE SEPARATOR COMPANY.

IMPROVEMENT IN APRONS FOR WET-ORE SEPARATORS.

Specification forming part of Letters Patent No. **184,378**, dated November 14, 1876; application filed March 15, 1876.

To all whom it may concern:

Be it known that I, WILLIAM HOOPER, of Ticonderoga, in the county of Essex and State of New York, have invented a new and useful Improvement in Aprons for Wet-Ore Separators, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a transverse section. Fig. 2 is a plan or top view.

Similar letters indicate corresponding parts.

This invention relates to an improvement in aprons used in that class of wet-ore separators which I term "slime-machines," and which I have described in my Patent No. 112,919, dated March 21, 1871.

The apron which is described in this patent is provided with longitudinal strips, which prevent the water and ore from running off over the edges of the apron, and which, when said apron is made of great width, divide the same into a series of distinct sluices.

My present improvement consists in an apron for a slime-machine, which is provided with longitudinal strips or rims, and which is depressed between said strips or flanges, so that one or more concave sluices are formed by said apron, whereby the operation of separating the ore is materially facilitated.

In the drawing, the letter A designates an apron for a slime-machine such as described in my Patent No. 112,919, above mentioned. This apron is provided with longitudinal strips or rims *a*, which prevent the water and ore from running off over the edges of the apron, and which, together with the apron, form one or more endless sluices. In the example shown in the drawing only a single sluice is shown; but if the apron is made several feet wide, I divide the same into several sluices, each sluice being about one foot in width.

In the apron shown in my patent above mentioned the sluices between the strips or rims *a* are perfectly flat, and the water and ore, on being admitted to said sluices, is liable to wash from the middle of the sluices toward their corners, where the ore accumulates and adheres, while the central portion of the sluices is left comparatively bare of ore.

By this action the effect of my machine has been deteriorated, and I have now succeeded in overcoming this defect by depressing the apron between the strips or rims *a*, so as to render the sluice or sluices concave, as shown in Fig. 1. The water and ore, on being admitted to one of the concave sluices, has a natural tendency to run toward the deepest portion of the sluice, and I have found that by these means the ore is more uniformly distributed over the sluice, and the effect of my machine has been materially improved.

The concave sluices of my apron may be produced either by supporting the same on concave slats *d*, as shown in the drawing, or the apron may be molded in the desired form.

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

1. An endless apron for slime-machines, having one or more longitudinal sluices which are concave in cross-section, as and for the object specified.

2. The combination of the flexible endless apron and the concave supporting-slats *d*, substantially as herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 29th day of February, 1876.

WILLIAM HOOPER. [L. S.]

Witnesses:
JOHN C. FENTON,
J. B. RAMSAY.