

(No Model.)

G. W. RUSSELL.

PULP PRODUCING APPARATUS FOR PAPER MAKING.

No. 341,435.

Patented May 4, 1886.

Fig: 1.

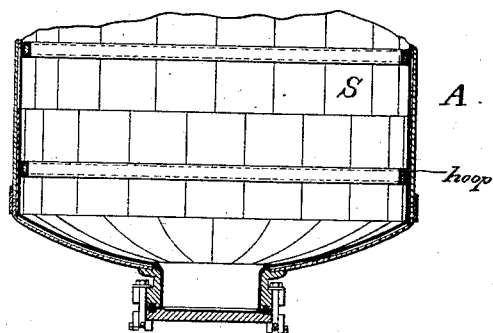


Fig: 2.

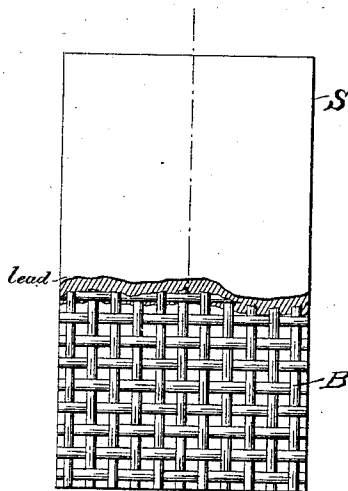


Fig: 3.



Witnesses.

John F. Nelson.

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Attys

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UNITED STATES PATENT OFFICE.

GEORGE W. RUSSELL, OF LAWRENCE, MASSACHUSETTS, ASSIGNOR TO THE
AMERICAN SULPHITE PULP COMPANY, OF PORTLAND, MAINE.

PULP-PRODUCING APPARATUS FOR PAPER-MAKING.

SPECIFICATION forming part of Letters Patent No. 341,435, dated May 4, 1886.

Application filed April 1, 1885. Renewed February 25, 1886. Serial No. 193,242. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. RUSSELL, of Lawrence, county of Essex, and State of Massachusetts, have invented an Improvement in Pulp-Producing Apparatus for Paper-Making, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The object of this invention is to provide the interior of iron or steel boilers used in the manufacture of paper from comminuted wood, esparto, and other fiber-producing materials with a lining capable of resisting the action of acid salts used in the manufacture of pulp.

In another application, Serial No. 160,860, filed concurrently herewith, I have shown a compound sectional lining composed of a metal plate having projections or prongs.

In this my present invention the compound lining is composed of a central layer of wire-cloth, the meshes or interstices between the crossings of the wire (which crossings may, if desired, be locked one into the other) being filled with an acid-resisting compound, preferably of lead or a metal compound containing lead, the said lead compound being cast upon the reticulated or woven wire-cloth while in a mold, and so as to more or less cover both sides and the edges of the said body. The wire employed in the segmental sections will be completely enveloped or covered by the lead, so that the said sections, when placed edge to edge within the boiler and against the interior wall of the boiler, will present lead to lead, and being shaped as segments or curved they will remain in position. The edges of the said sections will thereafter be united by means of solder or by partially fusing the lead of the sections, as described in my said application.

Figure 1 in vertical section represents a sufficient portion of a boiler for pulp-making to illustrate my invention. Fig. 2 on a larger

scale represents a section of my improved lining detached, with part of the lead removed; and Fig. 3 a section of Fig. 2.

The interior of each section is composed of strong wire-cloth, such as used for malt-kiln floors, screens, &c.

The wire-cloth A in each section S is of slightly less area than that desired for the area of the finished section to be put into the boiler, so that the wire-cloth, when placed in a mold of the proper size for the section, may be completely covered or enveloped at its sides and ends with the lead compound poured into the mold, the said compound not only filling all the meshes of the wire-cloth, but also fully covering the sides and ends of the wire used, so that the lead-covered sections S, when placed in position against the inner wall of the boiler B, will present their lead-covered edges in contact, to be thereafter soldered or fused together, as described in my other application.

If desired, the sections S may be further held in place by a lead-covered iron ring, as in my said application.

The wire-cloth may be made as stiff as desired, and a section stiffened by it may be shaped to the boiler better than when the plate is of cast-iron.

I claim—

In a pulp-making apparatus, the boiler B, combined with a lining fitted therein, composed of wire-cloth covered with a lead compound, the wire-cloth being completely covered in all its parts by the lead compound, the edges of the lining-sections being made liquid-tight, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. RUSSELL.

Witnesses:

WM. H. FINCKEL,
GEO. M. FINCKEL.