F. G. & W. F. NIEDRINGHAUS.

JOINTS OF VESSELS OF ENAMELED SHEET IRON WARE.

No. 190,243. Patented May 1, 1877.

FIG. 1.

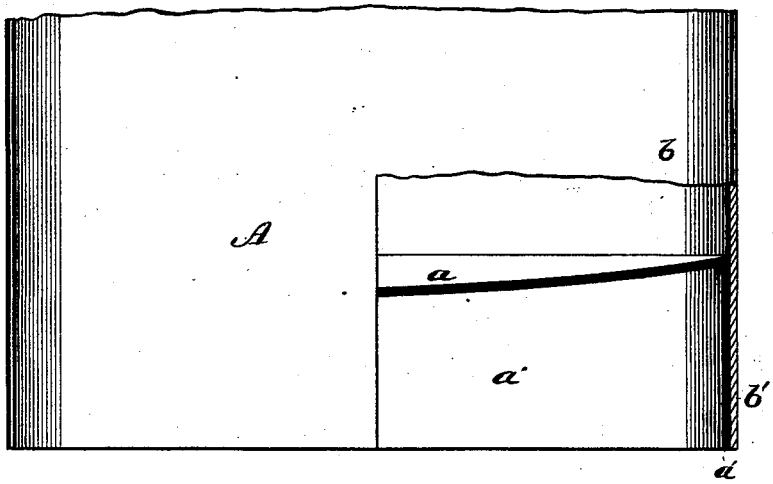
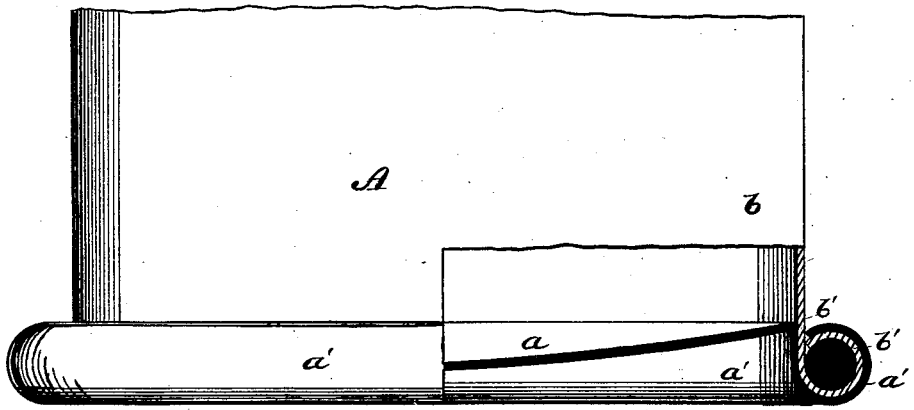


FIG. 2.



ATTEST.

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INVENTORS.

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UNITED STATES PATENT OFFICE.

FREDERICK G. NIEDRINGHAUS AND WILLIAM F. NIEDRINGHAUS, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN JOINTS OF VESSELS OF ENAMELED SHEET-IRON WARE.

Specification forming part of Letters Patent No. **190,243**, dated May 1, 1877; application filed April 2, 1877.

To all whom it may concern:

Be it known that we, FREDERICK G. NIEDRINGHAUS and WILLIAM F. NIEDRINGHAUS, residents of St. Louis, Missouri, have made a new and useful Improvement in the Joints of Vessels of Enameled Sheet-Iron Ware, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is an elevation (partly broken away) of an unfinished vessel, showing the arrangement of the parts of the joint as before being formed, and Fig. 2 a similar elevation, showing the joint as when formed.

Similar letters refer to the same parts.

This improvement is especially applicable to vessels of enameled sheet-iron ware, for, by means of it, a strong neat joint can be readily formed without using anything that conflicts with the application of the enamel.

In the accompanying drawing, A represents a vessel embodying our improvement, and which is illustrated in the joint connecting the bottom *a* of the vessel with its side *b*. The parts are first arranged, as shown in Fig. 1—that is, the bottom *a* is provided with a downwardly-projecting flange, *a'*, that, when the bottom is in place, comes against the lower end *b'* of the side *b*. These last-named parts—flange *a'* and *b'*—are then, by any suitable mechanism, turned outward, up, and over, forming a double hollow bead, as shown in Fig. 2. This serves to lock the side and bottom of the vessel together. An enamel coating is now applied, serving to calk the joint and give a finish to the construction. If desired, a wire may be inclosed within the bead *a' b'*. We preferably, however, omit it, as the cylindrical form of the bead combines the advantages of strength and lightness, and is easy to construct.

We claim—

In a sheet-iron vessel, the herein-described joint consisting of the flange *a'* and end *b'* upturned into a double hollow bead, substantially as set forth, the end *b'* forming a complete circle and meeting the side of the vessel.

F. G. NIEDRINGHAUS.
WM. F. NIEDRINGHAUS.

Witnesses:
CHAS. D. MOODY,
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