L. BRANDEIS.

Machine for Making Plates of Clay and Other Plastic Material.

No. 208,363. Patented Sept. 24, 1878.

Fig. 1.

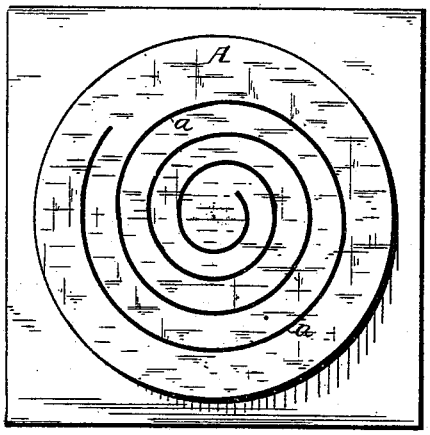
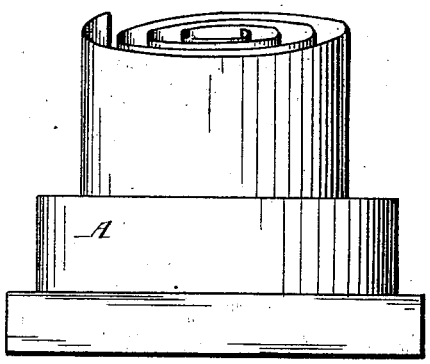


Fig. 2.



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UNITED STATES PATENT OFFICE.

LUDWIG BRANDEIS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR MAKING PLATES OF CLAY AND OTHER PLASTIC MATERIAL.

Specification forming part of Letters Patent No. **208,363,** dated September 24, 1878; application filed September 7, 1878.

To all whom it may concern:

Be it known that I, LUDWIG BRANDEIS, of Brooklyn, Kings county, New York, have invented an Improvement in Making Plates of Clay and other Materials, of which the following is a specification:

The object of my invention is to reduce clay, metal, or other material to sheets by means of dies and presses much less in size than those heretofore required.

In the drawing which forms part of this specification, Figure 1 is a plan view, showing one form of die which I have employed, and Fig. 2 a side elevation.

Heretofore in reducing clay, lead, or other metal or composition to the form of a sheet, it has been customary to press the material, by hydraulic or other pressure, through an outlet corresponding in width to the width of the sheet to be produced. This mode of manufacture involves the use of large and expensive presses adapted to wide and costly dies, and is objectionable, because of the expense of the apparatus and cost of operating the same.

I overcome these objections by the use of a die in which the opening, while equal in length to the width of the sheet to be formed, is disposed in curved, waved, or spiral lines, so as to occupy a space the width of which is very much less than that of the resulting sheet. Thus the die A in the drawing, of, say, twelve inches in diameter, is provided with a spiral opening, *a*, of, say, five feet in length, through which the material is forced in the form of a loose roll, which, when out, produces a sheet five feet in width.

It will be apparent that a hydraulic press adapted to operate with a die of twelve inches diameter is much less costly, and may be operated with greater facility and with far less cost than a press and die five feet in width.

Where it is desirable to produce sheets having longitudinal ribs or varying in thickness, it may be effected by making the opening *a* of the proper shape.

I claim—

1. As an improvement in the art of producing sheets of clay or other material, the mode described of forcing the material through a die having an opening conforming to a spiral or other bent line, producing a coiled or bent sheet, and then flattening the latter, as set forth.

2. A die for the production of sheets of clay or other material provided with a spiral opening, *a*, equal in length to the width of the sheet to be produced.

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

LUDWIG BRANDEIS.

Witnesses:

CHARLES E. FOSTER,

J. D. MURPHEY.