

J. Hickman,
Pen Machine.

2. Sheets. Sheet. 1.

No. 113,478.

Patented Apr. 11. 1871.

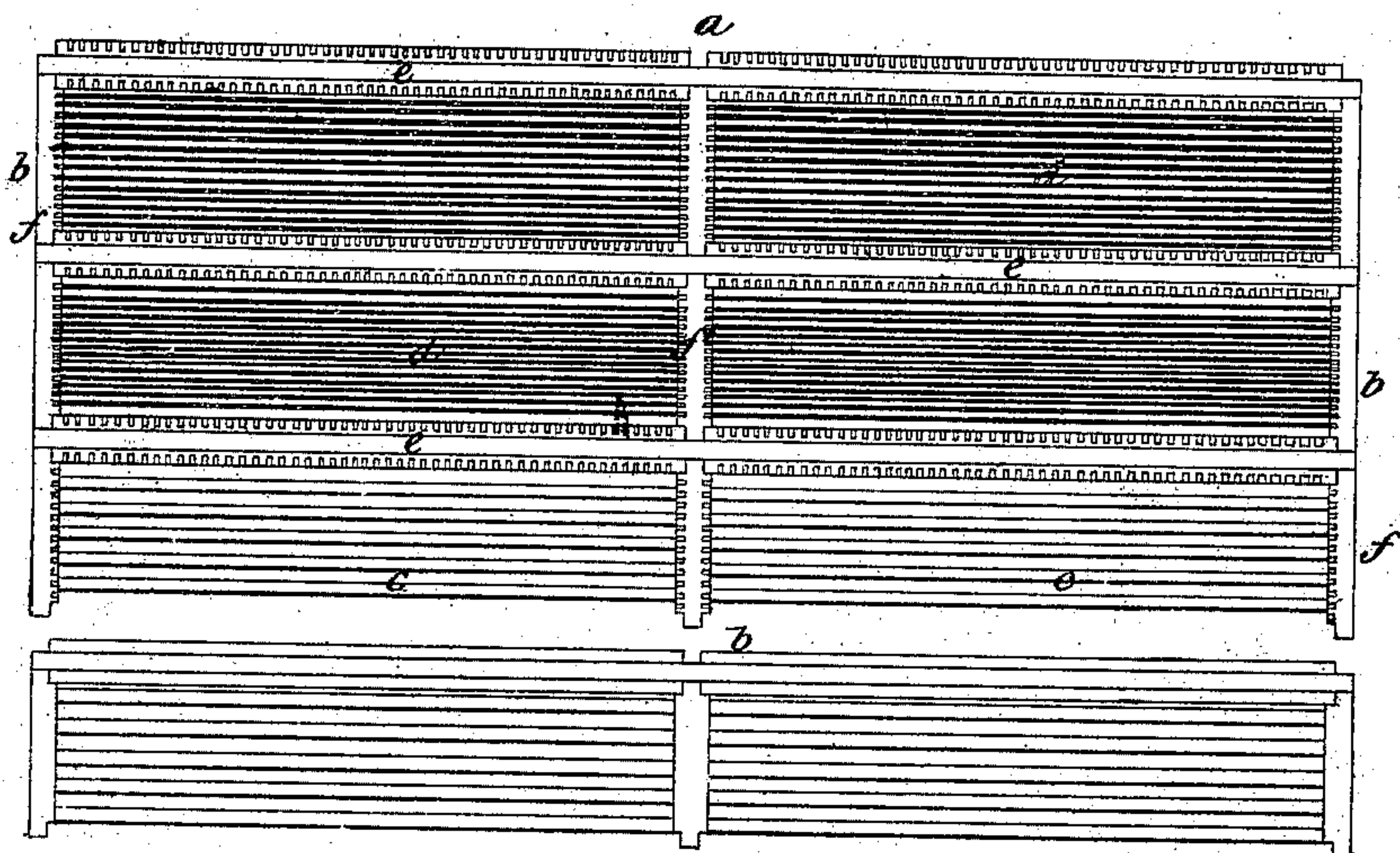


Fig. I.

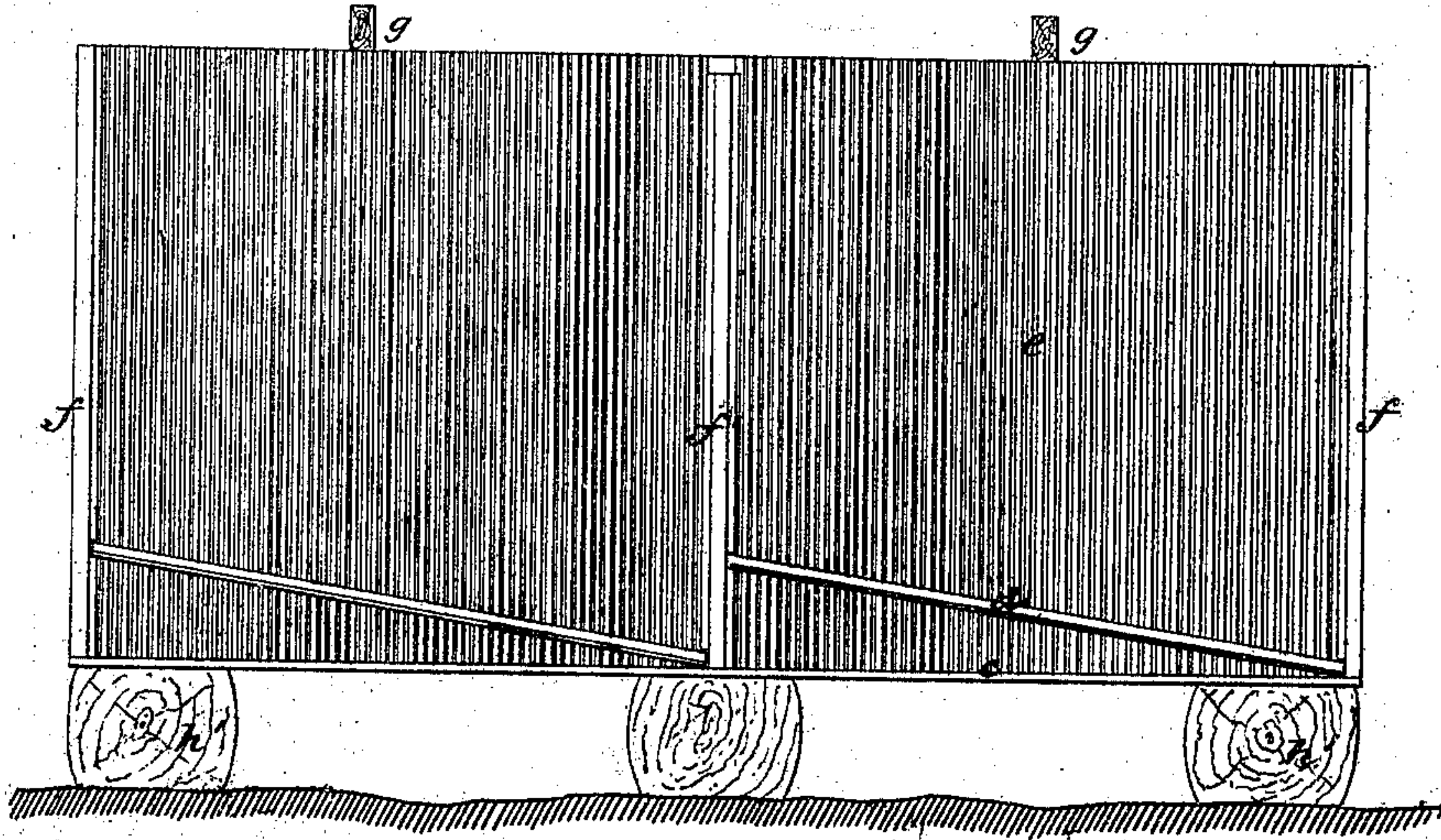


Fig. II

Witnesses

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Charles H. C. Simpson

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2. Sheets. Sheet 2

Peat Machine.

No. 113,478.

Patented Apr. 11. 1871.

Fig. IV.

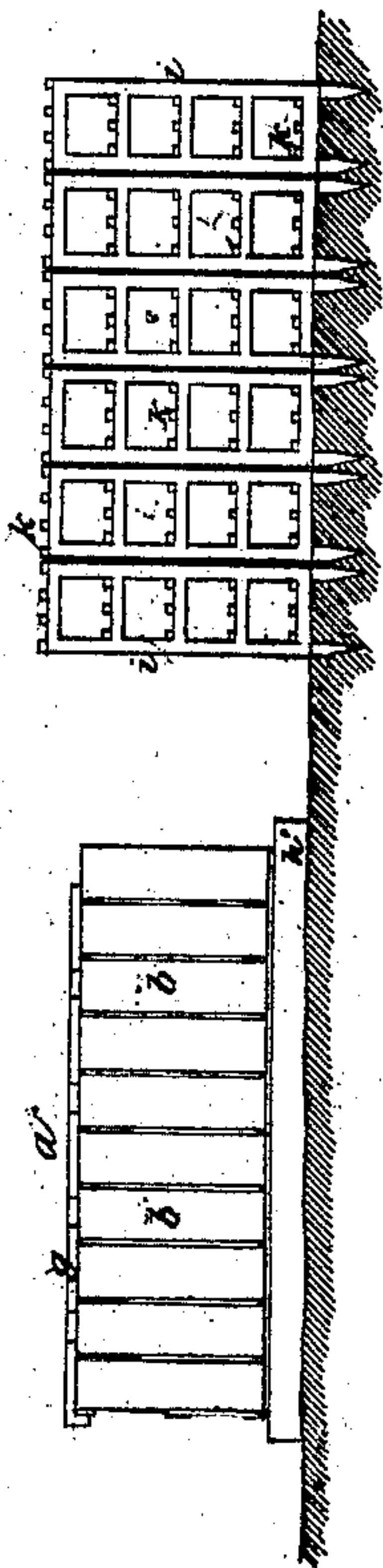
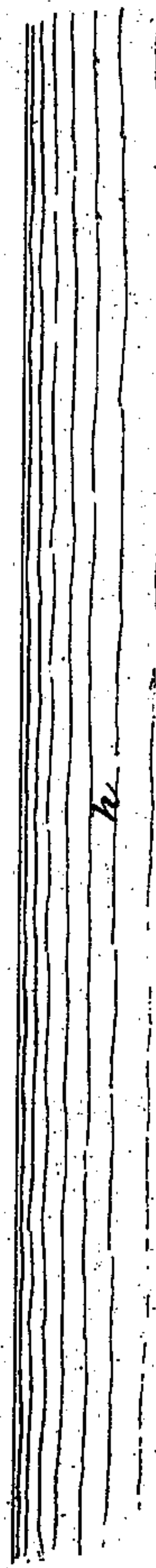
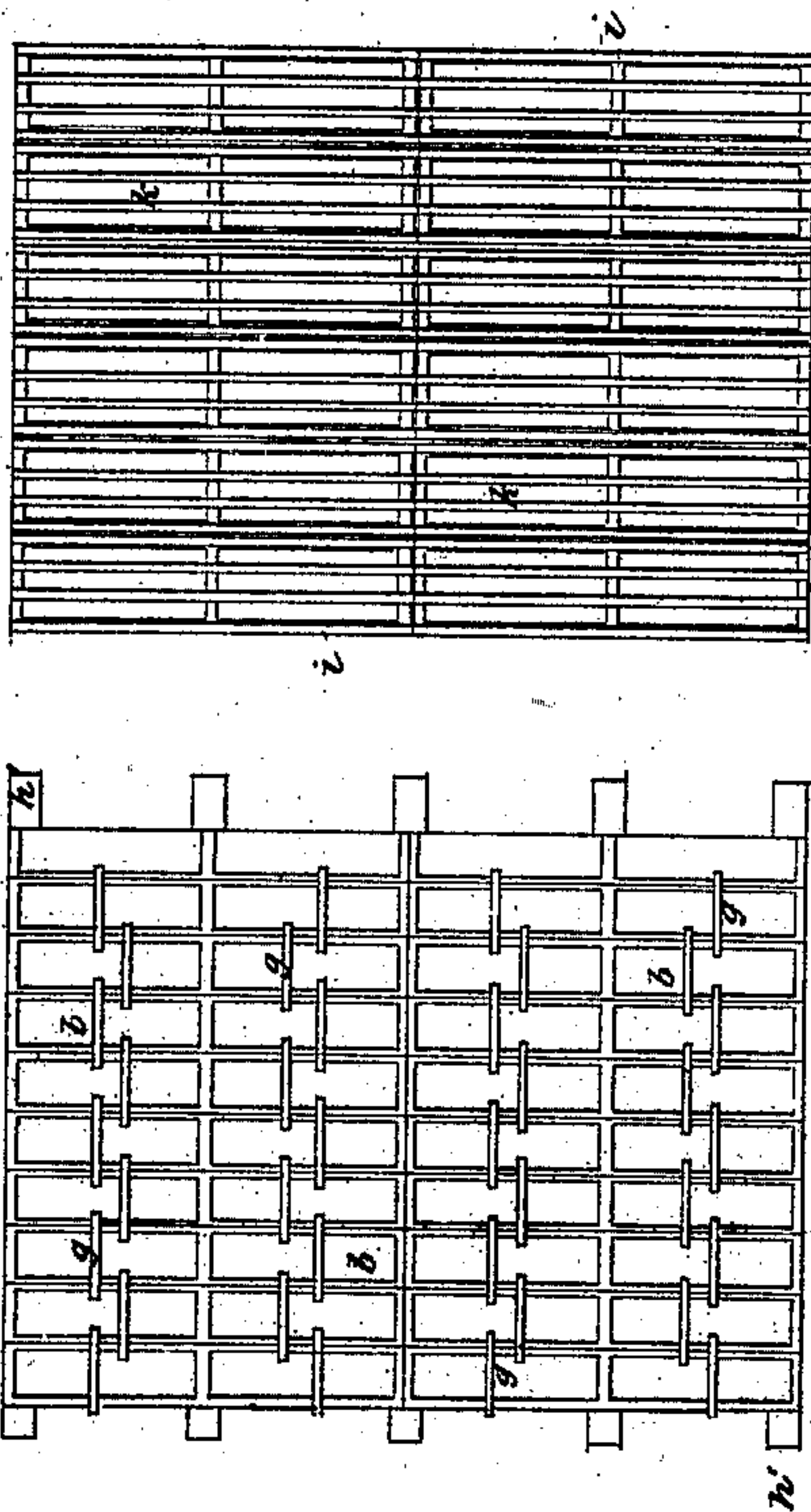


Fig. III.



Witnesses

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United States Patent Office.

DAVID AIKMAN, OF MONTREAL, CANADA

Letters Patent No. 113,478, dated April 11, 1871.

IMPROVEMENT IN THE MANUFACTURE OF PEAT-FUEL.

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, DAVID AIKMAN, of the city of Montréal, in the district of Montreal, in the Province of Québec, gentleman, have invented a new and useful Improvement on the Art, of Curing Peat-Pulp for Fuel and on the apparatus used therefor; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, where—

Figure I represents a plan of the vessel for holding the peat-pulp.

Figure II represents an elevation of the vessel for holding the peat-pulp.

Figure III represents a plan showing general arrangement of vessels for holding the peat-pulp, and trestles for further drying the peat, as situated on the bog.

Figure IV represents an elevation of Fig. III.

This invention has reference to improvements on the art of curing peat-pulp for manufacturing it into fuel, and on the apparatus used therefor, for performing the same in a quicker and more economical manner than by the arts and apparatus at present in use.

It may be here well to describe the *modus operandi* at present known or used, pointing out the differences claimed by my invention, as follows:

In all cases the peat-pulp is cut from the bog by a suitably-formed excavator working in an approximate to a straight or curved line.

The excavators used are usually supplied with a discharging-spout arranged to deliver the peat-pulp at a greater or lesser or at a variety of distances on one side of the cut or canal made by the excavator.

The surface of the earth or bog on which this peat-pulp is distributed, in some cases, is prepared as a bed, with drains formed for the water in the peat-pulp to escape or be separated from it. Although the peat-pulp so arranged may be separated from a large amount of water in a short time, yet to bring the peat-pulp to a sufficiently solid form for further treatment requires considerable time. This is caused chiefly by the naturally damp character of the bed by its situation on the surface of the bog or adjacent ground.

In another instance this is endeavored to be overcome by forming curing-vessels at the edge of the bog, and by cutting a canal in front of them. Now, as this canal is extended in width the excavator becomes removed at such a distance that a vessel has to be employed to receive the peat-pulp from the excavator and convey it to the curing-vessels, into which the vessel's contents are discharged in any suitable manner.

Now, although the separation of the water by the curing-vessels in this case may be very quickly per-

formed, yet it is quite evident that a very large amount of labor will be involved in the operation, and a much larger amount of apparatus required.

By my invention I provide a curing-vessel so constructed that the peat-pulp discharged by the spout of the excavator shall at all times be received within it direct. I also provide a further means of drying the peat after it is removed from the curing-vessel.

In the drawing hereunto annexed similar letters of reference indicate like parts.

Letter *a* is the curing-vessel, formed by constructing a suitable number of cells *b*, each cell, being a counterpart of the next, and equal in size and form, is rendered interchangeable with every other one.

The cells may be made singly or with two or more cells formed in one of the interchanging parts. In Figs. I and II the cells are shown as having a double form in each part, these are of any suitable dimensions, but not larger than that the parts so formed may be lifted, when empty, with ease and carried by two men.

The cells may be constructed in any suitable manner in rectangular forms, similar to boxes of required size, only that the box is minus the top or lid and one side, the back side of the one forming the front side of the other.

The bottom of the cells thus formed is made of rails *c* laid openly, upon which is supported the inclined inner bottom *d*; this consists of a grooved board.

The side *e* may either be formed of rails with grooved boards attached on each side, or by a board with grooves on each side.

The ends *f* are also formed of boards with grooves on their inner surfaces, the center one *f'* being grooved on both sides.

The grooves of the sides and ends are vertical and of any required size, while those on the bottom are longitudinally with it.

It will be seen that each of the interchanging parts is made up of one side *e*, two ends *f*, one central division *f'*, two inner bottoms *d*, and one outer bottom *c*, or correspondingly if made single or otherwise.

Having constructed a suitable number of the cells *b* I place them together, as shown in Fig. III, and secure them by any suitable clasps, *g*, arranged to hold them firmly together.

The number of the cells *b* in a line transverse to the cut of the excavator, forming the canal *h*, will be regulated by the quantity required for holding the amount of material excavated, while the number placed longitudinally will be such that the first ones filled will be sufficiently drained of their water before the last ones are filled.

In placing the cells on the bog I elevate them on stringers *k* of timber, in short pieces, laid in lines under them.

When the peat-pulp is sufficiently drained of its water and ready to be cut into any required shapes the clasps holding the first of the interchanging parts forming the cells *b* are now removed and the front side taken off, exhibiting a wall of solid peat sufficiently set to admit of being cut into bricks, and removed on the spade of the operator and placed, for the purpose of completely drying, upon trestles *i i* and scantlings *k*, as shown in Figs. III and IV.

These trestles are provided with sharpened ends driven into the bog, and are set up at any suitable distance from each other, loose scantlings *k* being laid first on the bottom cross-piece, which prevents the trestles from sinking too far into the bog, so as to form a shelf for the reception of the half-dried peat.

When the peat arranged upon these scantlings comes up to the level of the next cross-piece of the trestles fresh scantlings are laid from trestle to trestle, on which, in its turn, is piled the peat-pulp, and so on, till the first row of trestles is full.

As soon as any cell *b* is emptied of the peat-pulp which it contained it is removed to the other end of the curing-vessel and refastened, by the clasps *g*, to the cell which may form the end of the curing-vessel, in the direction in which the scow or vessel containing the machinery for excavating the peat-pulp moves, thus providing continuously fresh cells to receive the peat-pulp as it issues from the excavator.

As fast as the cells are emptied of their contents and moved from rear to front to receive fresh pulp the short lengths of stringers *h'* which supported them are

carried forward in their turn to support the cells as they are removed.

In like manner, so soon as one row of trestles is completely occupied by the half-dried peat removed from the cells *b* as they are carried forward, another row is placed in front of it, thus constantly following up the curing-vessel *a* in its onward progress.

The peat placed on the racks *i* will remain there until cured ready for market, when it is removed and otherwise stored; the racks are then removed and follow up the curing-vessel in a similar manner to that in which the curer advances alongside of the cut of the excavator.

It will be seen by the foregoing description that by my process the peat-pulp is prepared in the most economical manner, and with the least delay possible.

Having thus fully described my invention,

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

1. The cells *b*, being counterparts, one of the other, and being interchanging the one with the other, forming an advancing and movable curing-vessel, *a*, substantially in the manner and for the purpose described.

2. The cells *b*, having grooved sides and bottoms, and otherwise constructed, substantially in the manner and for the purpose described.

Montreal, 21st day of November, A. D. 1870.

DAVID AIKMAN.

Witnesses:

CHARLES LEGGE,

CHARLES G. C. SIMPSON.