(No Model.)

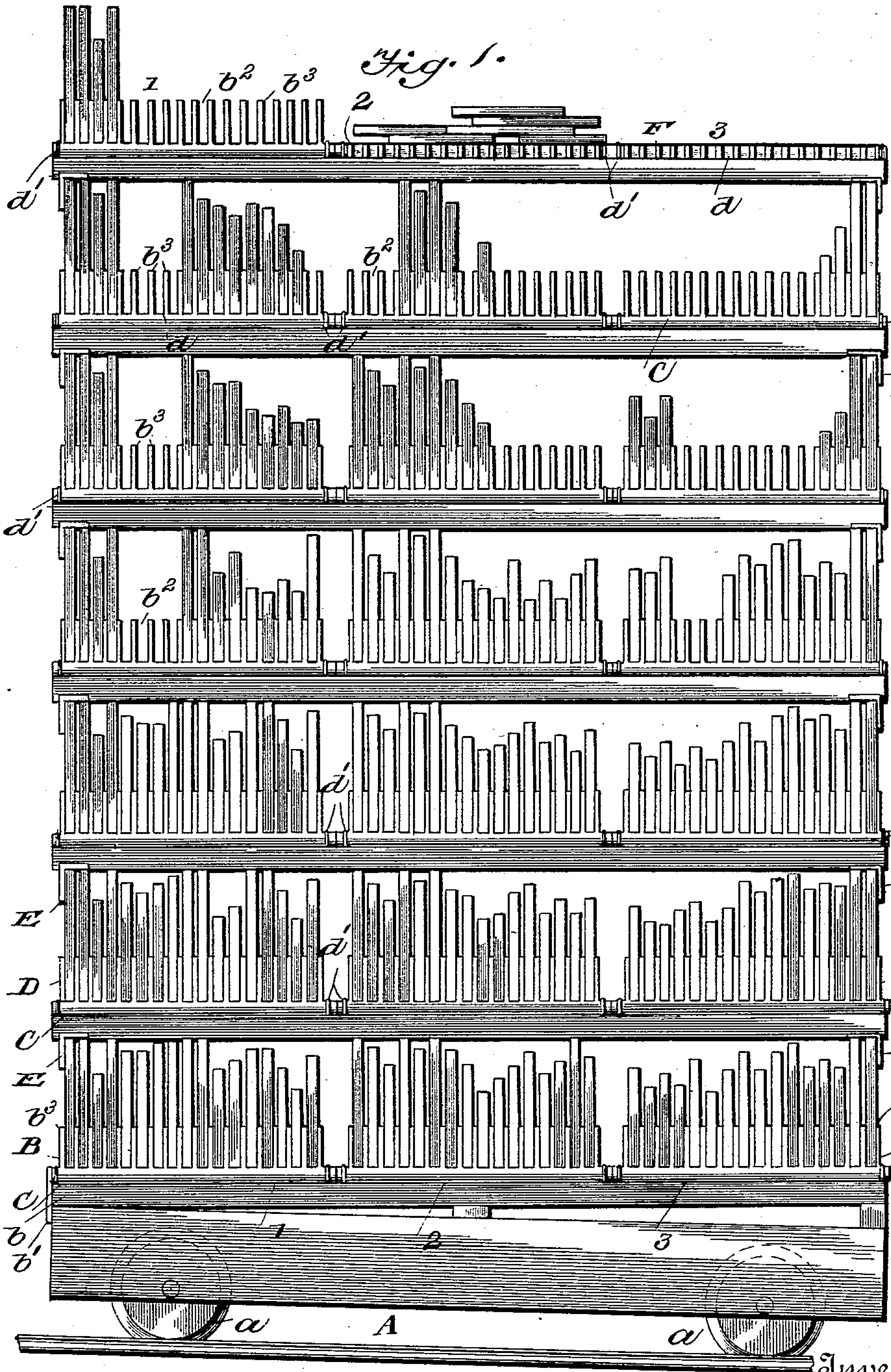
2 Sheets—Sheet 1.

W. A. LEARY.

DRIER TRUCK.

No. 570,644. Patented Nov. 3, 1896.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

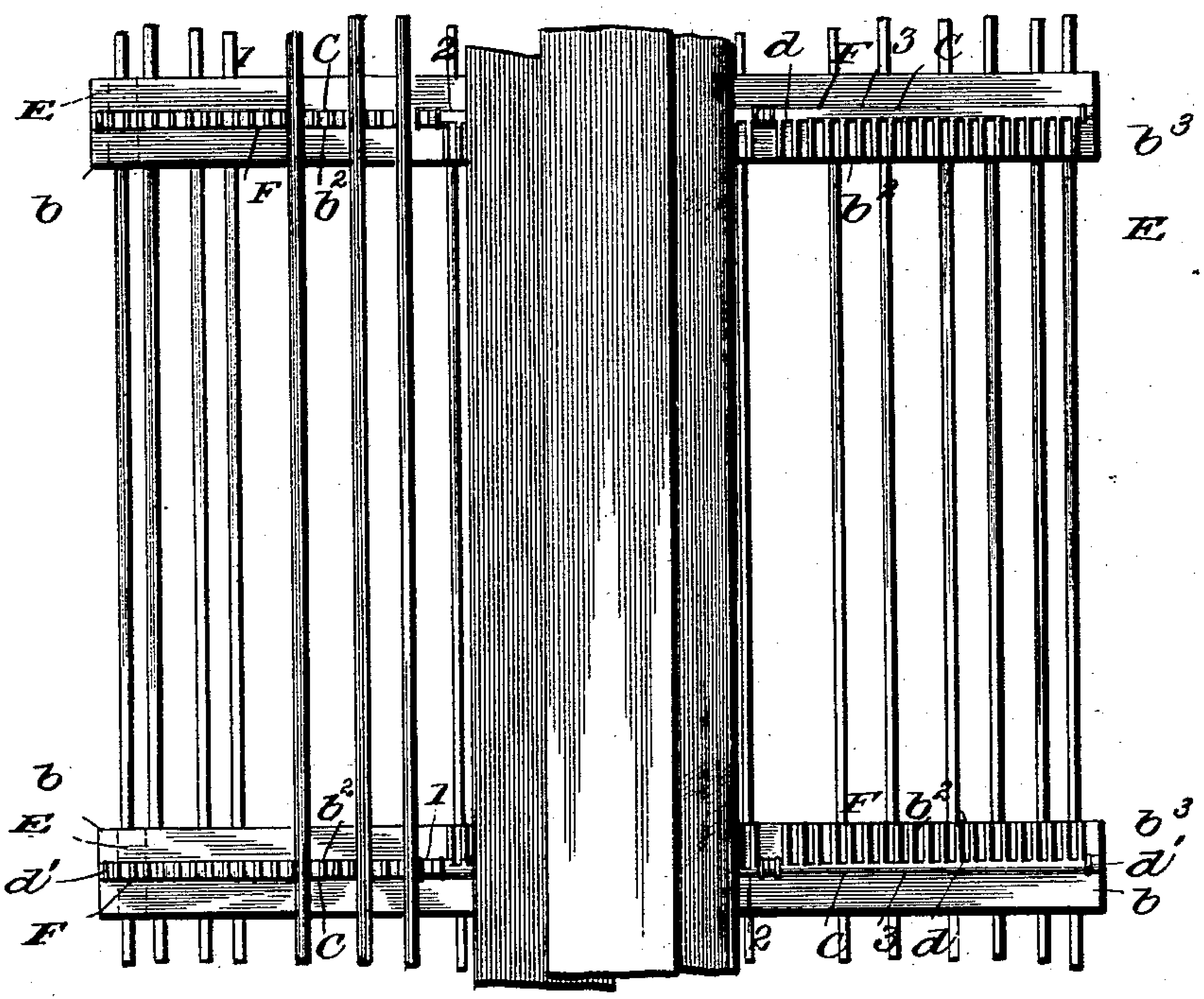


Fig. 3.

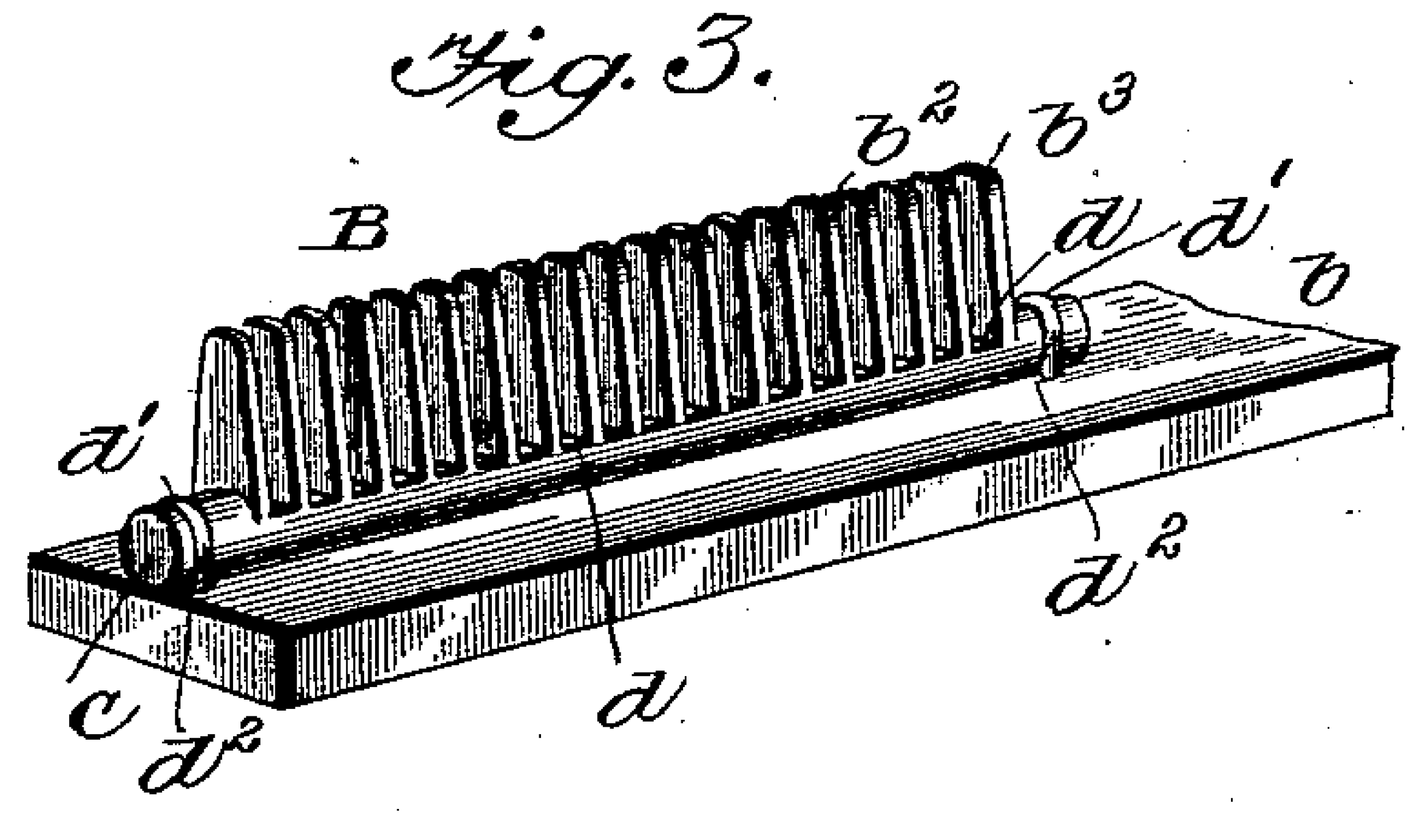


Fig. 4.

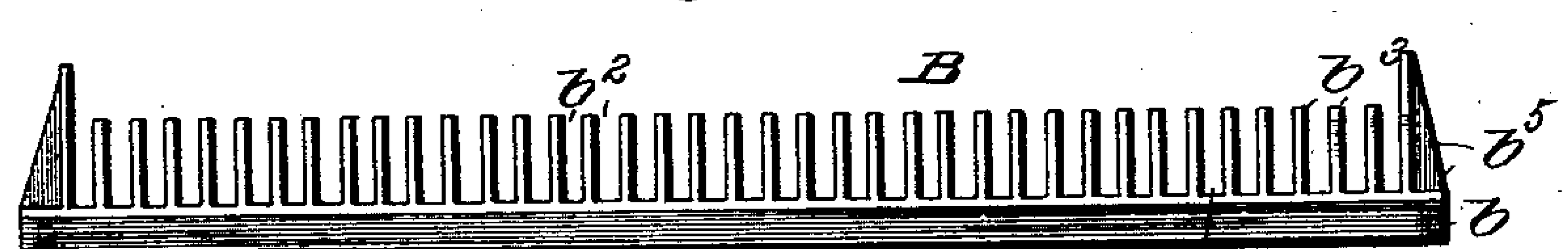
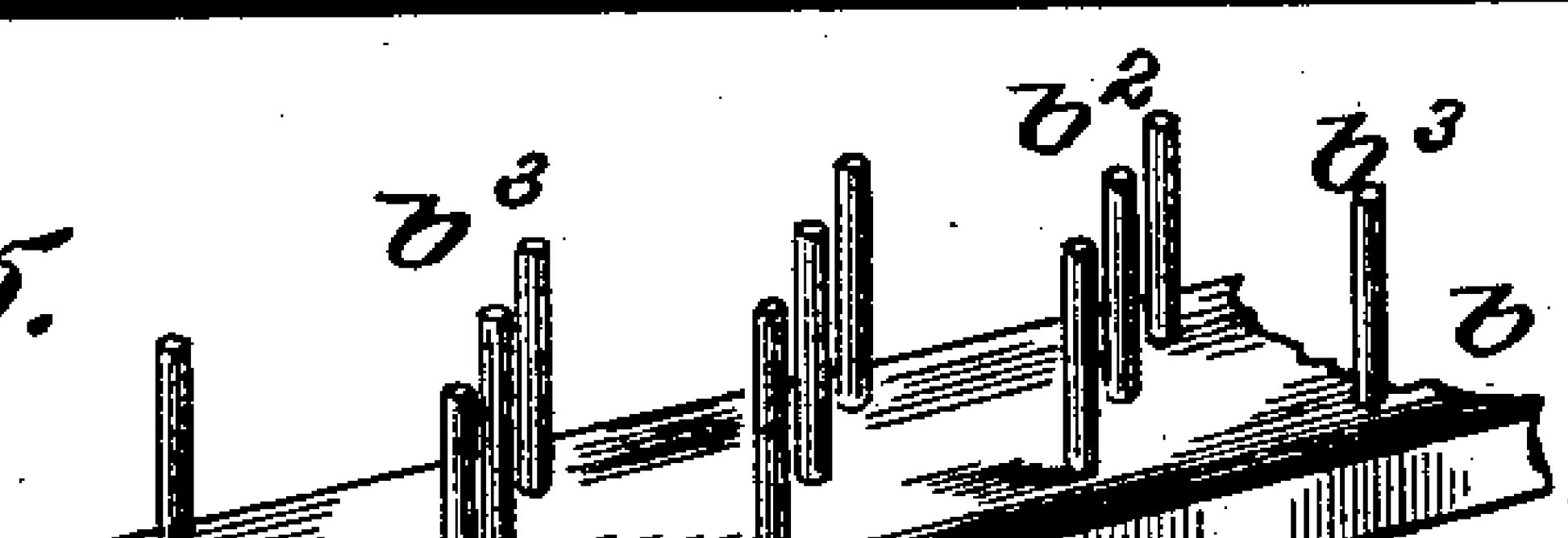


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM A. LEARY, OF NORFOLK, VIRGINIA.

DRIER-TRUCK.

SPECIFICATION forming part of Letters Patent No. 570,644, dated November 3, 1896.

Application filed October 1, 1895. Serial No. 564,315. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. LEARY, of Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Drier-Trucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention contemplates certain new and useful improvements in trucks or supporting-frames for the stacking or piling of lumber in kilns or driers.

Heretofore the drying of lumber in drying-kilns has been confined almost entirely to piling lumber flat on the trucks, that is, with the broad or flat faces horizontal. When thus arranged, the ascending or descending currents of hot air do not heat all the parts of the board equally, one side getting a stronger heat than the other. This is especially true when a number of boards are piled in the usual form, one on the other, with interposed piling or separating sticks. It has been attempted to offset these difficulties and objections by mounting the boards edge upon edge between long posts or standards. This form is shown in Letters Patent No. 476,801, issued to me June 14, 1892. In some instances the boards are slid in between these posts or standards and held separated by piling-sticks; but practice has demonstrated that all such devices and arrangements are impracticable, heavy and cumbersome, expensive, and worthless to all practical purposes.

The main object of my present invention is to provide an easy, practical, and economical way of mounting and supporting the boards while being dried, and I accomplish this by stacking the boards after the form of a system of pallets. Each pallet comprises racks having division-spaces for separating and keeping separated each board from the others and holding them in this position until dried, all piling-sticks being dispensed with. The division-spaces are formed by series of short posts or studs of any material and shape, projecting upwardly from a common support. These posts or studs are of sufficient height to hold the boards in place, and the strain is divided equally. The boards, or some of them, of each tier or pallet preferably form the support for the supporting-racks of the next higher tier or pallet. In this way I provide innumerable horizontal and perpendicular air-passages, allowing of circulation on both sides of each board alike, as well as around the edges of the latter, producing an even drying at every point. Each row or series of short posts may consist of independent parallel uprights projecting from a single base-board, or they all may be formed integral with a base attached to said base-board. This connecting-base may be continuous from end to end of the base-board, but it is preferably formed in sections and mounted in such manner that the posts or studs of each section can be turned down into a horizontal position when the boards are first thrown upon the frame, and each section is righted as the boards are positioned between its posts or studs.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation, illustrating my invention. Fig. 2 is a plan view thereof. Fig. 3 is a detail view in perspective. Figs. 4 and 5 are views of slightly-modified forms of my invention.

Referring to the drawings, A designates a truck, the wheels *a* of which travel on the inclined track *a'*. In practice two such trucks are usually employed and designed to be held in line with each other on parallel tracks.

B designates a row of short posts or studs extended longitudinally on the top of the truck-frame on a horizontal plane. This row of posts is mounted on a longitudinal base-board *b*, which at its ends is connected by plates *b'* to the truck-frame. It will be noted that all the posts of the row are parallel, with intervening spaces b^2 between them, to allow boards being inserted on edge into said spaces, said boards being supported and held in perpendicular positions by adjacent posts engaging their opposite sides. The boards are inserted in the corresponding spaces of the row of posts of the two trucks. These posts or studs may consist of single independent spike-like rods b^3, serially arranged with intervening spaces driven into base-board *b*, (see Fig. 5,) or they may all be formed integral with a

continuous connecting-base b^4, which is bolted or otherwise secured to said base-board, as shown in Fig. 4, with metallic brace-plates b^5 at the ends; but I prefer to form the row in three separate sections 1 2 3. In this preferred form the short posts or studs of each section are made integral with a base-rod C, which is rounded save between the posts, where it is flattened, as at *d*. Each base-rod C is connected to the base-board *b* so that it can be turned and the posts thereof caused to assume either horizontal or vertical positions. This connection may consist of staples *d'*, fitting peripheral grooves d^2 of said base-rod and driven into the base-board *b*. The object of this arrangement is to prevent breaking or damaging the posts when the boards are first dumped or piled thereon, prior to being stacked, and allow the posts of each section to be turned into perpendicular positions as the boards are being placed within the intervening spaces of the opposite rows. This is illustrated at the top of Figs. 1 and 2, in which the sections 2 and 3 of the two rows are shown with their posts turned down into horizontal positions, with the boards as dumped or thrown thereon, while the posts of section 1 occupy perpendicular positions, the boards being inserted in position between them.

The description so far, with the exception of the illustration just given, has been confined to the construction of the posts or studs, and particularly the row thereof immediately supported by the trucks; but one of the most important points of my invention lies in the manner in which the subsequent tiers of boards are mounted upon the lowermost tier, that is to say, the boards are stacked in pallet-like form upon their edges, each board being independent of the others, leaving intervening vertical spaces between the opposed sides of adjoining boards and horizontal spaces between the longitudinal edges of the boards of the different tiers, whereby a free circulation of hot air entirely around each board is obtained. To accomplish this, I provide several sets of base-boards having the short posts mounted thereon. After the full quota of boards of the lowermost tier has been supplied, the boards of maximum width being preferably placed in the central and end spaces, two series of posts D are extended transversely over said boards and parallel with the lower row B. The base-boards of these different series are held in position as against sliding by angle-plates E, attached to their under sides, the vertical portions of said plates bearing against the sides of the end boards, upon which said base-boards rest. The boards being stacked between the posts of this series, first in one section of said series, then in the second, and finally in the third, as above stated, the next tier of boards is stacked in like manner and so on to the top, two series of posts or studs F being placed upon the top edges of each tier of boards until the limit is reached. Thus all the series of supporting posts or studs subsequent to the first or lowermost series are supported by the upper horizontal edges of the widest boards of the next lower tier. In this way the boards of one tier in no way engage or contact with the boards of adjacent tiers, and the base-boards of the supporting-posts form intervening horizontal passages between the different tiers. In addition, the boards of each tier being spaced apart, vertical passage-ways are obtained. Thus I provide for the thorough heating and drying of the boards at every point, the heat being free to circulate throughout the entire stack. The posts or studs being made of metal, as well as their connecting-base, the heat consumed thereby will aid in the drying of the boards. Hence the means employed for separating the boards aid in the drying thereof and do not serve as impediments thereto, as occurs where "stickers" are used to separate horizontally-stacked boards or where boards are stacked edge on edge. It will be seen that the completed stack of boards shows them in pallet-like form from bottom to top, and this arrangement resulting in continuous passage-ways for hot air throughout the entire stack the drying or heating of the lumber is quickly and thoroughly accomplished.

I claim as my invention—

1. A frame or support for boards or lumber while being dried in which the boards are stacked on their edges in independent tiers or pallets, and supports for each board and tier or pallet forming spaces between all of said boards and also between said tiers or pallets, substantially as set forth.

2. A frame or support for boards or lumber while being dried in which the boards are stacked in tiers of pallet-like form, having a series of supporting posts or studs interposed between each tier and forming the supports for the boards composing the latter, said posts or studs separating said boards, whereby vertical and horizontal passages throughout the stack are obtained, substantially as set forth.

3. A frame or support for boards while being dried, in which the boards are stacked in tiers of pallet-like form, having series of posts or studs located between each tier, and supports for said posts or studs resting on the upper edges of the boards of the next lower tier, said posts or studs separating the boards comprising each tier, as set forth.

4. A truck or supporting-frame for a stack of boards to be dried, having a series of short posts or studs with intervening spaces in which boards to be dried are placed on their edges, and upper corresponding series of posts or studs extended transversely over said stacked boards and supported by the edges thereof, as set forth.

5. A truck or supporting-frame for a stack of boards to be dried, having a series of short posts or studs with intervening spaces in which boards to be dried are placed on their edges, upper corresponding series of posts or

studs, and base-boards upon which said posts or studs are mounted, said base-boards being extended transversely over the next lower tier of boards by which they are supported, as set forth.

6. A truck or supporting-frame for a stack of boards to be dried, having a series of short posts or studs with intervening spaces in which the boards to be dried are placed on their edges, upper corresponding series of posts or studs and base-boards upon which said posts or studs are mounted, said base-boards being extended transversely over the next lower tier of boards by which they are supported, and having angular portions at their ends for engaging the end boards of said tier, as set forth.

7. The combination with a truck or frame, of a base-board, a series of short posts or studs, and a base connecting said posts or studs and mounted on said base-board, as set forth.

8. The combination with a truck or frame, of a base-board and a row or series of short posts or studs mounted thereon and arranged in independent disconnected movable sections, as and for the purpose set forth.

9. The combination with a truck or frame, of a base-board, and a row or series of short posts or studs arranged in independent sections and capable of being turned on said base-board so as to occupy horizontal and vertical positions, as and for the purpose set forth.

10. The combination with a truck or frame, of a base-board, a row or series of short posts or studs and a base formed in independent sections movably mounted on said base-board, said posts or studs projecting from or formed with said base, as set forth.

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

WILLIAM A. LEARY.

Witnesses:
J. NOTA MCGILL,
WM. S. HODGES.