

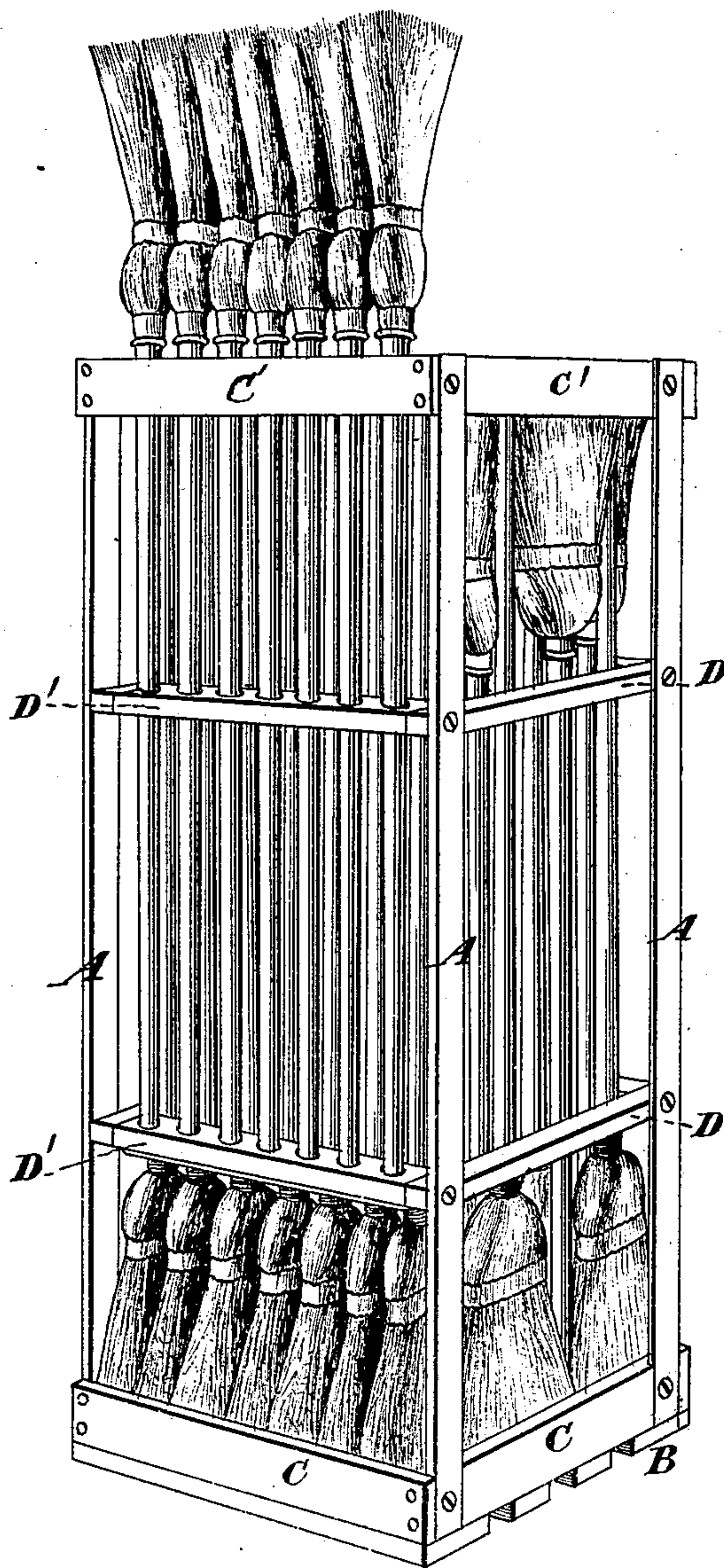
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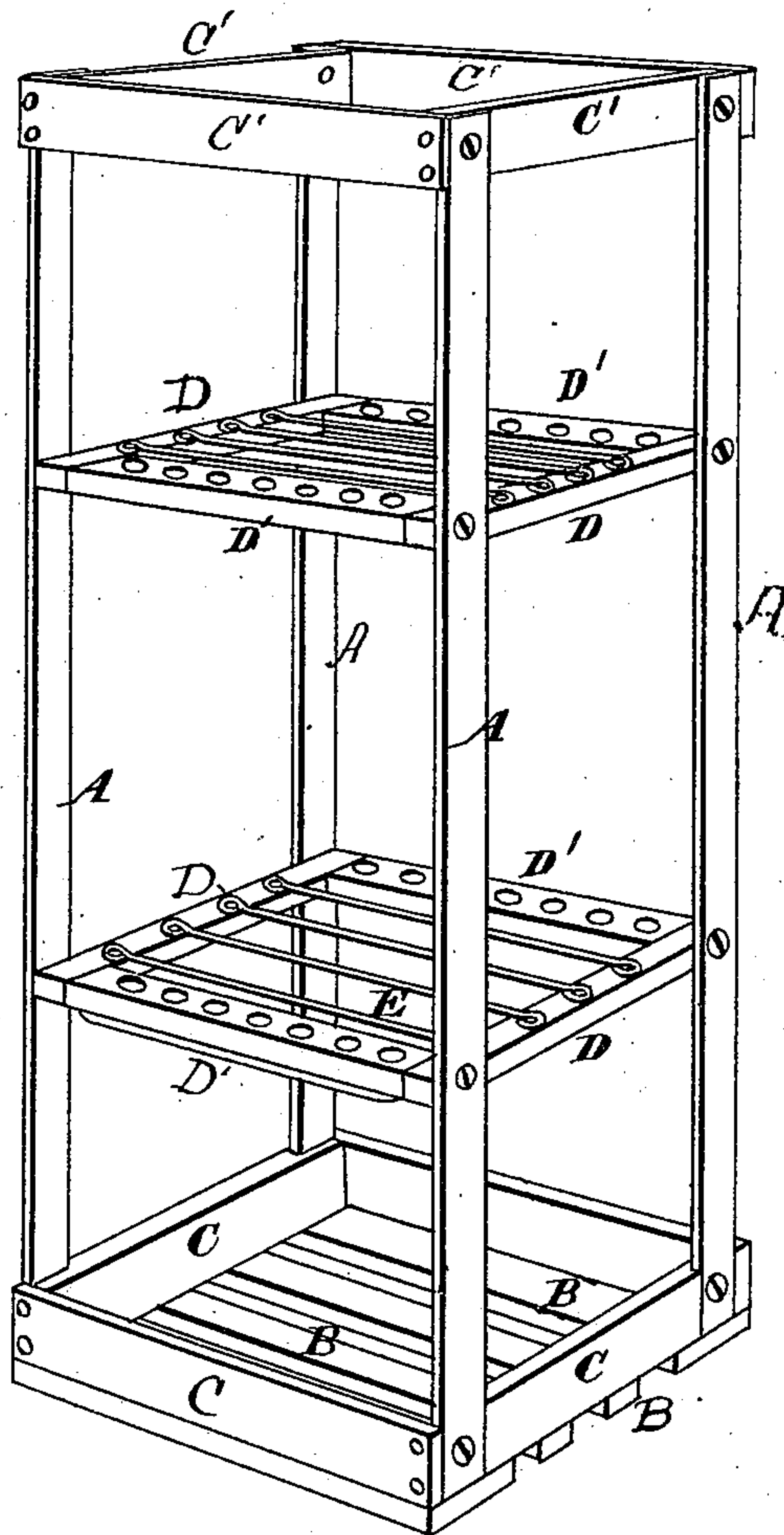
No. 226,891.

Patented April 27, 1880.

*Fig. 1.*



*Fig. 2.*

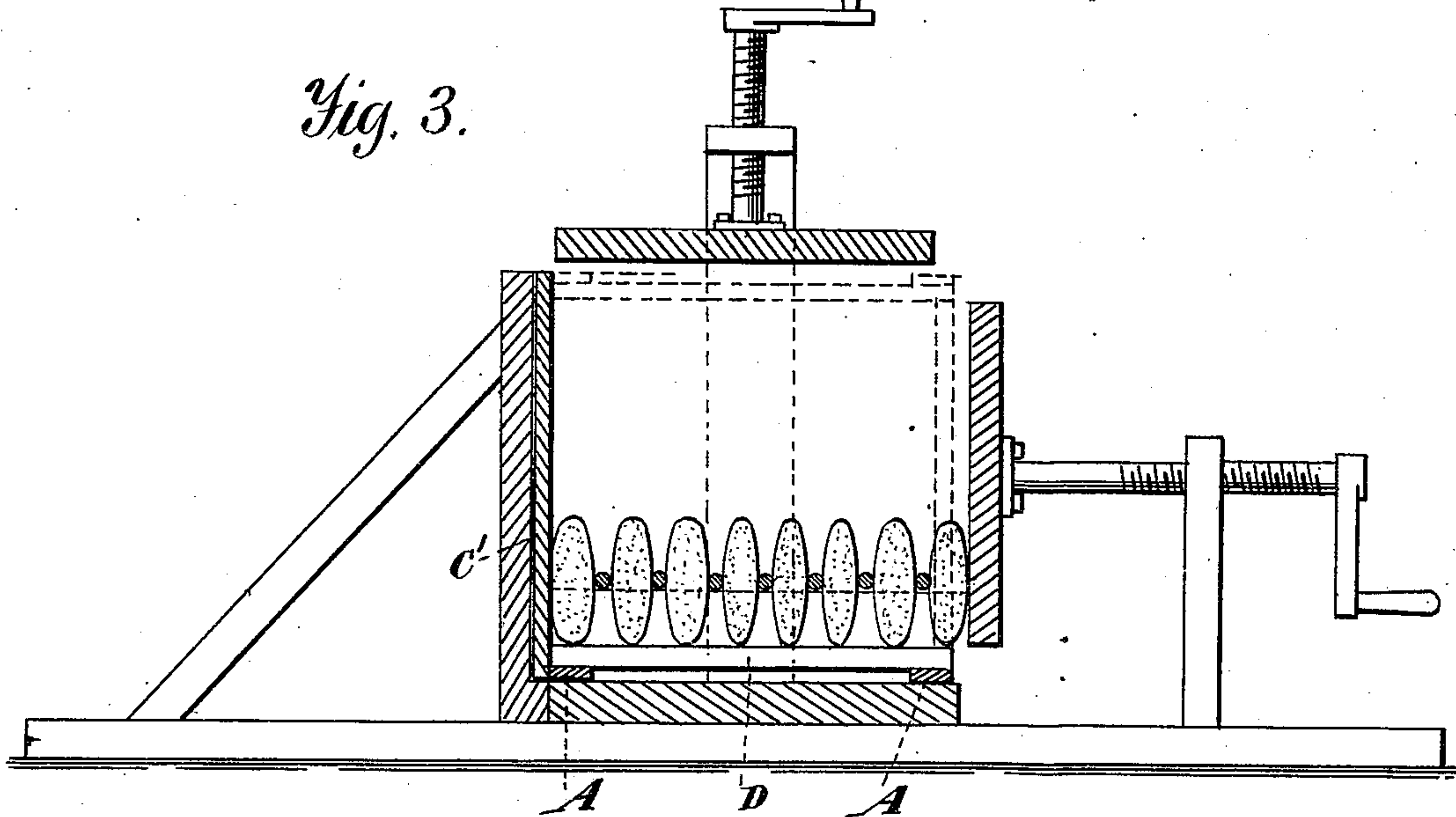


Witnesses.  
A. Ruppert,  
Geo. F. Mason.

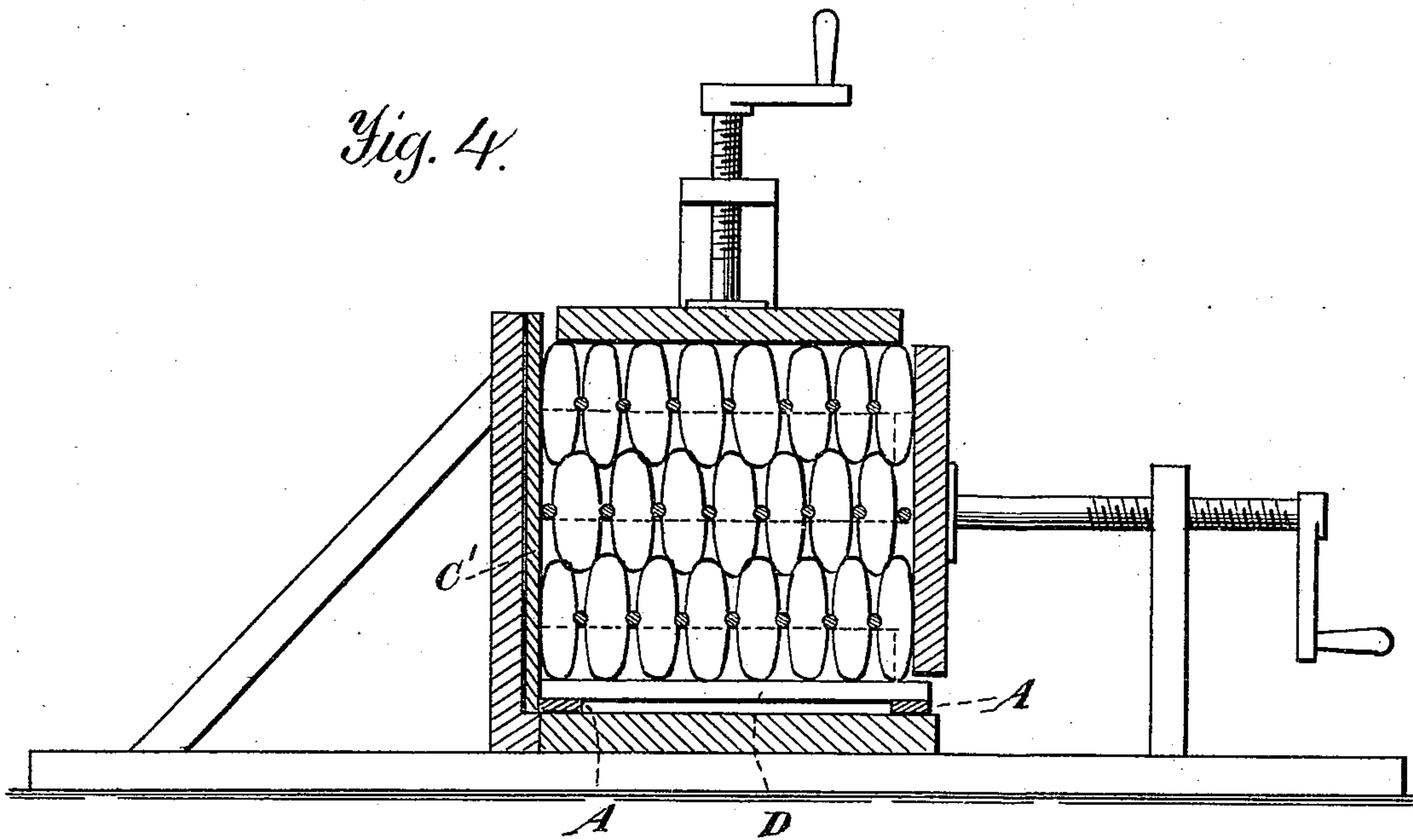
Joe. N. Tym  
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*Fig. 3.*



*Fig. 4.*



Witnesses.  
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# UNITED STATES PATENT OFFICE.

JAMES N. TYM, OF JACKSON, MICHIGAN.

ART OF PACKING BROOMS AND IN THE CASE EMPLOYED THEREIN.

SPECIFICATION forming part of Letters Patent No. 226,891, dated April 27, 1880.

Application filed November 10, 1879.

*To all whom it may concern:*

Be it known that I, JAMES N. TYM, of Jackson, in the county of Jackson and State of Michigan, have invented a new and useful Improvement in the Art of Packing Brooms and in the Case Employed Therein, of which the following is a specification.

The practice, as it has heretofore prevailed among broom-makers, is to tie their brooms in bundles, and so ship them loosely. The consequence has been that on reaching their destination the brooms are often found to be in very bad order. Besides this, brooms thus packed take up a great deal of space, and in consequence the cost of shipping is very greatly increased, particularly when freight charges are based upon the space occupied.

To obviate these disadvantages I have devised a mode of packing brooms by which they are laid alternately with the brush in opposite directions, and are compressed in a press to which pressure is applied simultaneously in two directions, and when thus compressed they are then confined in a shipping package or frame, which, while protecting them from external injury, confines them so that they shall occupy the least possible space.

In the annexed drawings, making a part of this specification, Figure 1 is a perspective view of a packing-case with one tier of brooms exhibited for retailing. Fig. 2 is a perspective view of the case without the brooms. Fig. 3 is a transverse section of the press, showing the first position thereof in which the brooms are laid in place. Fig. 4 is a similar section, showing the press filled with brooms as they are compressed by the forward movement of the plungers.

The same letters are employed in all the figures in the indication of identical parts.

The following description will enable any one skilled in the art to construct and apply my packing-case.

A A are the longitudinal bars, a little longer than the entire length of a broom. B B are slats placed across the bottom of the packing-case and fastened to the side pieces, C C, which are attached at the ends of the pieces A A, so as to form a rectangular frame, the bars A A being connected at their upper end by the pieces C' C', and intermediately by the pieces

D, thus forming a strongly-braced packing-case.

The pieces D' D' have a series of holes bored in line with one another, of a size sufficient to receive a handle of a broom. These parts are preferably connected by screws.

A series of wires, E, are stretched across between the tiers or layers of brooms and fastened to the bracing-bars D, for the purpose of holding the brooms in position after one or more tiers have been removed for retailing.

In packing the brooms a press is employed the bed of which is formed of the bottom and one vertical side, forming two sides of a square or parallelogram, the vertical side being strongly braced to sustain the pressure applied from a follower parallel to that side and actuated by a screw or other power.

Another screw is arranged above, working at right angles to the first-named screw, for the purpose of compressing the brooms on top while pressure is being applied from the side, so as to prevent the brooms being thrown up by the pressure. Two of the bars A A are then laid on the bottom of the press, and the side pieces, C D C', are laid on the bottom of the press. The compressing side pieces, D' D', are laid in recesses formed to receive them in the vertical part of the bed of the press. A tier of brooms, laid alternately head and handle, are laid on edge on the part of the frame which is in the bottom of the press, temporary blocks being inserted for the purpose of supporting the handles in such position that the handle of one broom shall bear against the middle of the head of the next broom in the tier, and the handles shall be approximately parallel with one another. Another tier of brooms is then laid in and similarly supported on temporary blocks, and so on until enough brooms have been placed in the press to fill the packing-frame. The upper screw is then turned down far enough to confine the brooms in the line of what is intended to be the third side of the packing-case. The horizontal screw is then turned so as to firmly compress the brooms in position, and the follower-plate brought into the plane of what is intended to be the fourth side of the case. The other parts of the case are then attached, preferably by screws, and the wires passed between the



handles and fastened to the braces D D. The brooms are then ready for shipment.

As pressure is applied by the handles to the heads of the brooms the brush portion of the broom retains its proper form, and is perfectly

When the brooms are received by the retailer one tier is withdrawn through the open end of the frame and the handles passed down through the holes in the frames D', leaving the brooms in perfect order for exhibition, as shown in Fig. 1, the wires E retaining the others in their proper position in the case.

By this means I am enabled not only to transport brooms in safety, but also to furnish to the retailer a frame for exhibiting them.

The function in the press herein illustrated of the upper platen, it will be seen, is merely to confine the brooms on that side, as it is not intended to compress them. The only active agent of compression is the platen, which acts against the sides of the broom (in the case illustrated, the one on the side) for the purpose of holding the handles against the middle of the heads of the adjoining brooms, the pressure being sufficient to slightly indent the heads, and so confine the handles in position. It follows as a consequence that any third side which confines the broom on the edge will be the equivalent of the upper platen represented, as that side is made movable merely for convenience in laying the brooms, and it will not be at all necessary that it should be a moving part if the brooms are laid flatwise and the pressure is applied from above.

Racks for retailing in which the handles are inserted through holes in a frame-work are in common use. My invention is distinguished from them in this, that the packing-case is made of such length and has the side braces so disposed as to confine the brooms and protect the broom-corn from liability to be injured in transit, and the side pieces, or part of them, being bored to receive the handles. The same case which serves as a package to

carry the brooms in safety also forms a rack for displaying them when offered for retail.

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

1. As an improvement in the art of packing brooms for shipment, first laying the brooms in alternation with the handle of one bearing against the middle of the head of the next in series, and so confining them in a press while pressure is applied in a line substantially at right angles to the width of the broom, so as to indent the heads to confine the handles, and then securing them by means of a packing from inclosing and retaining them in position, substantially as set forth.

2. A packing-case for brooms consisting of longitudinal bars A A and lateral braces C D C', for confining the brooms during shipment, intermediate wires E E, for supporting the brooms remaining after a tier or tiers have been removed, and having a series of holes through the side braces, so that the case shall perform the double function of a package for shipment and a rack for exhibiting the brooms at retail, substantially as set forth.

3. A packing-case for brooms consisting of longitudinal bars A A and lateral braces C D C', for confining the brooms during shipment, and having a series of holes through the side braces, so that the case shall perform the double function of a package for shipment and rack for exhibiting the brooms at retail, substantially as set forth.

4. A packing-case for brooms, substantially such as described, the side braces, D', of which are perforated for receiving the handles of the brooms while exposed for sale, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of November, 1879.

JAMES NEEDHAM TYM.

Witnesses:

EDWIN L. KIMBALL,

SAMUEL M. PUTNEY.