To all whom it may concern:  

Be it known that I, JAMES A. McDOUGALL, a citizen of the United States of America, and resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Driers for Thin Lumber and Veneer, of which the following is a specification.  

The object of my invention is a means for drying thin lumber, without permitting it to warp, and without injuring the fiber of the wood, in the process.  

A further object of my invention is a drier which will economize space, in the drying. This object is attained by the means described in the specification, and illustrated in the accompanying drawings, in which,  

Figure 1 is a side elevation of a drier embodying my invention, the upper part thereof being shown broken away. Fig. 2 is a partial end elevation of the drying frames or gridirons, upon an enlarged scale. Fig. 3 is a central horizontal sectional view of two gridirons, between which a piece of lumber is interposed.  

Referring to the parts: Each gridiron is made of longitudinal strips, A, A', A2, upon opposite sides of which sticks, B, B', are secured at regular intervals. Strips, B, B', in cross section are in the form of a truncated triangle and are secured with the bases adjacent to the strips, A, A', and A2. These gridirons are made preferably of wood.  

The frame of the drier is composed of uprights, D, connected by beams, E. The uprights, D, carry clamping screws, F, to the inner ends of which bearing blocks, f, are swiveled.  

In operation the thin boards of lumber, or veneer, G, are placed upon the beams, E, alternately with the gridirons. When a compartment of the frame has been filled thus with alternating boards and gridirons, as is illustrated in Fig. 1, a bearing plate or board, H, is placed between the end board and the blocks, f, of the clamping screws, which are then turned so as to press the stack of boards or veneers between the board, H, and the opposite uprights, D. Then the succeeding floors or compartments of the frame are filled with the lumber and gridirons thus arranged. A free circulation of air is had between the successive boards to be dried, and the vapors therefrom rise readily through the vertical air chutes, which are formed between the gridirons and the boards. The strips, B, B', having only limited bearing upon the boards to be dried, permit a thorough exposure of all parts of the board to the currents of air. The board is held firmly upon each side and at short intervals by the strips, B, B'; this prevents the thin lumber from warping or twisting during the process of drying, so that the board, when dried, is free from warp.  

While room is left for the free circulation of air between the boards, the clamping of the boards between the gridirons, enables me to stack a large number of boards for drying, in a limited space.  

What I claim is:  

1. In a drier for wooden boards the combination of a structural framework adapted to support pressure frames vertically upon edge, a series of pressure frames each consisting of horizontal strips and vertical sticks of uniform dimensions secured at intervals upon each side of the sticks, and pressure screws mounted in the structural framework and adapted to hold the wooden boards vertically upon edge and under pressure between the strips of the frames.  

2. In a drier for wooden boards the combination of a structural framework adapted to support pressure frames vertically upon edge, a series of pressure frames each consisting of horizontal strips and vertical sticks having reduced faces, the sticks being secured upon both sides of the strips with their reduced faces outward and pressure screws mounted in the structural framework and adapted to hold the wooden boards upon edge between the reduced faces of the strips.

JAMES A. McDOUGALL.

Witnesses:
WALTER F. MURRAY,
AGNES MccORMACK.