No. 607,214. Patented July 12, 1898.

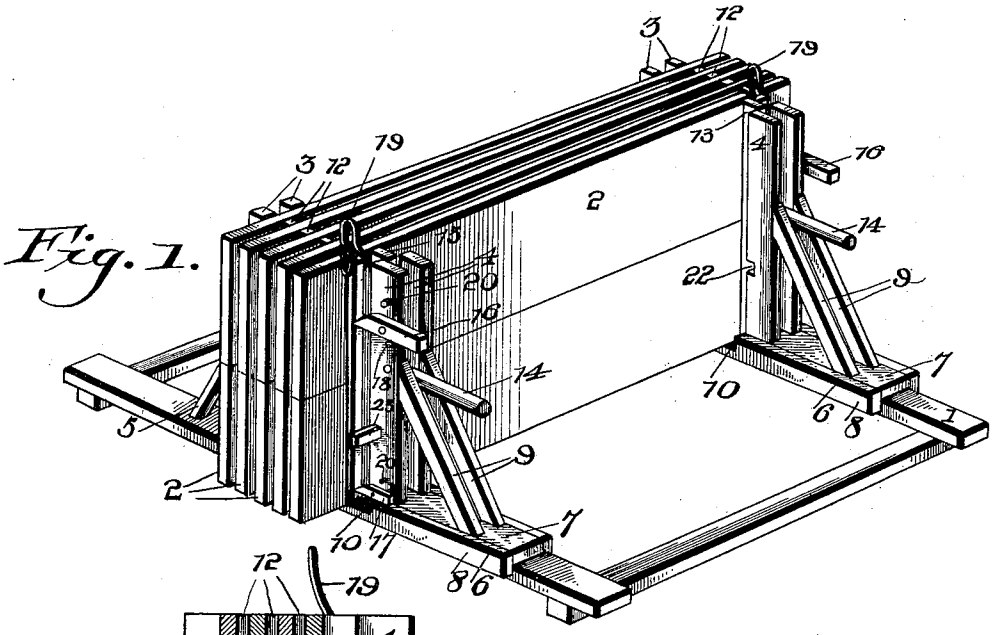
W. R. CARROLL.

LUMBER STACKER.

(Application filed July 21, 1897.)

(No Model.)

Fig. 1.



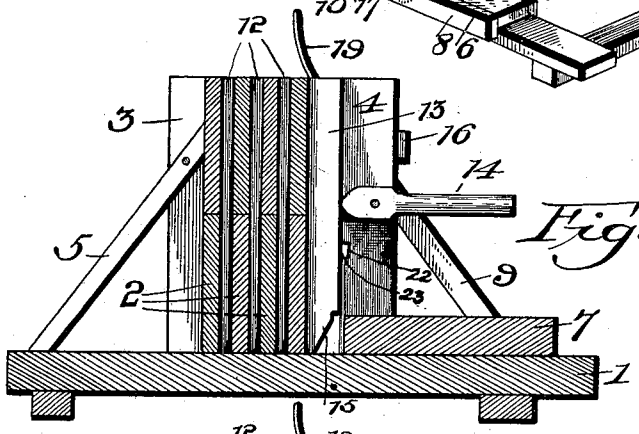


Fig. 2.

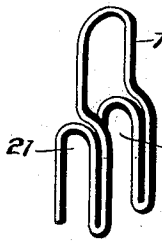


Fig. 4.

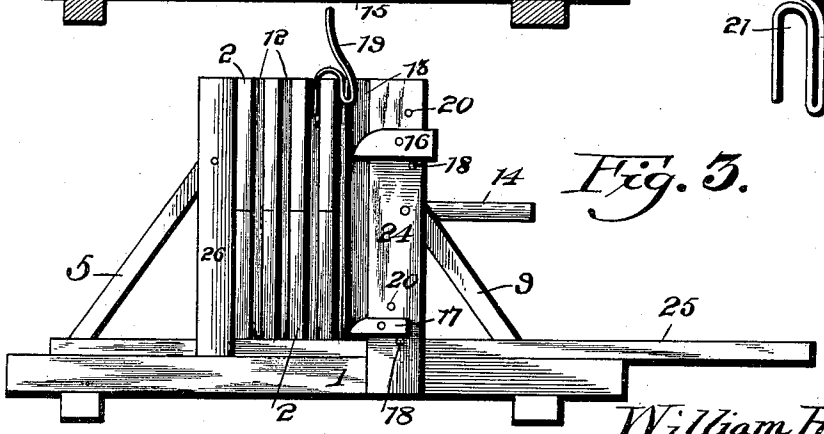


Fig. 3.

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Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM R. CARROLL, OF KEATCHIE, LOUISIANA.

LUMBER-STACKER.

SPECIFICATION forming part of Letters Patent No. 607,214, dated July 12, 1898.

Application filed July 21, 1897. Serial No. 645,478. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. CARROLL, a citizen of the United States, residing at Keatchie, in the parish of De Soto and State of Louisiana, have invented a new and useful Lumber-Stacker, of which the following is a specification.

The invention relates to improvements in lumber-stackers.

The object of the present invention is to improve the construction of lumber-stackers and to provide a simple and efficient device adapted to enable lumber to be rapidly and conveniently stacked in a yard with the boards resting upon their side edges in tiers to protect the lumber from the weather.

A further object of the invention is to enable the tiers or boards to be conveniently spaced to provide for a free circulation of air through the lumber.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a lumber-stacker constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a side elevation illustrating a modification of the invention. Fig. 4 is a detail perspective view of one of the wire clips.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 1 designate a pair of sills designed to rest upon the ground or other suitable support and adapted to form a supporting-framework for stacked lumber and hold the same out of contact with the ground.

The boards 2, which are arranged edgewise in vertical tiers, are supported by stationary uprights or standards 3 and adjustable uprights or standards 4, which are adapted to be gradually moved away from the stationary standards or uprights to provide space for the lumber and to enable the tiers thereof to be filled in successively.

The stationary standards 3, which are preferably arranged in pairs, as shown, are suitably secured to the sills and are supported by inclined braces 5, secured at their upper ends between the standards 3 and extending downward and rearward therefrom and fastened at their lower ends upon the upper faces of the sills near the rear ends thereof.

The adjustable standards 4, which are slidingly mounted upon the sills, are disposed in pairs, each pair being mounted upon a slide 6, composed of a top portion 7 and depending sides 8, which embrace the sides of the sill. Inclined braces 9 are mounted upon the slides and are secured to the standards or supports 4 at the front edges thereof. The sides 8 of each slide are extended along the side edges of the sill a considerable distance, and their inner portions are cut away at 10 flush with the upper face of the sill in order that the lumber may rest upon the same.

The boards, which are arranged edgewise in vertical tiers, as shown, are separated by vertical spacing strips or sticks 12, interposed between each tier, and the stacked lumber is engaged by vertical bars 13, which are operated by cam-levers 14, whereby the adjustable standards are gradually moved away from the stacked lumber a sufficient distance to provide a space for the vertical strips or sticks and a tier of boards. Each lever 14 is fulcrumed between the adjacent standard 4, and it is adapted to be swung either up or down toward a horizontal position to cause its head to engage the bar 13, which has its lower end 15 beveled to cause it to drop backward upon the standards when released by the lever and provide a space for a tier of lumber.

The sticks are engaged by upper and lower automatically-operated pivoted catches 16 and 17, provided with beveled engaging ends and normally supported in a horizontal position by lower stops 18, and the arms or portions of the catches resting upon the stops 18 are of sufficient weight to cause the said catches to assume a horizontal position when swung upward by the introduction of the lumber and released from such contact. The points of the catches engage the vertical strips or sticks, and the latter are prevented from moving laterally out of a vertical position by clips 19. The upward swing of the rear ends of the catches is limited by stops 20, which prevent the catches from swinging entirely over and reversing their position. Each clip, which is substantially U-shaped, is provided at the ends of its sides with U-shaped loops 21 and is constructed of a single piece of wire doubled to form the U-shaped body portion of the clip and having the terminals of the sides

thereof bent to form the inverted-U-shaped loops 21, which are adapted to straddle the upper edge of a board. When mounted upon the upper edge of a board, the clip is arranged at the side edges of the strips or sticks in front and in rear of such board, and it is advanced each time a tier of lumber is introduced between the stack and the standards carrying the operating mechanism.

The standards 4 are provided at their inner or rear edges with recesses 22, adapted to receive a key or wedge 23, which is introduced in such recesses after the operation of stacking has been completed, and it is adapted to hold the bar 13 against inward or backward movement.

Instead of mounting the operating mechanism upon adjustable standards it may, as illustrated in Fig. 3 of the accompanying drawings, be disposed on stationary standards 24, and the lumber may be stacked upon a slide 25, carrying standards 26. The operating mechanism is the same as that before described, the only difference being that the stack is moved away from the operating mechanism to provide the necessary space for a tier of lumber instead of forcing the operating mechanism away from the stack. The arrangement first described is deemed preferable, because with such construction the stack does not have to be moved each time a tier is introduced; but in some instances the construction illustrated in Fig. 3 may be found advantageous.

The separate tiers may be composed of any desired number of boards, arranged edgewise, as shown, and if desired or found necessary, owing to any increased length of the standards, the levers 14 may be duplicated and arranged at the top and bottom of the standards or at any other desired points.

The invention has the following advantages: The devices are capable of enabling lumber to be rapidly and conveniently stacked, and such stacking may be performed by a less number of hands than the ordinary way of stacking lumber. The lumber is arranged in vertical tiers with the boards resting upon their side edges to avoid exposing the surfaces to the weather to a great extent, and intervening air-spaces are provided between each tier of lumber to afford a free circulation of air in order that lumber may quickly dry.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a device of the class described, the combination with a suitable support, of fixed and movable standards mounted thereon, a vertical bar arranged to bear against the stack and adapted to drop back automatically when released, and means for operating the vertical bar, substantially as described.

2. In a device of the class described, the combination with a suitable support, of fixed and movable standards mounted thereon, an operating-lever fulcrumed on one of the standards and adapted to force the latter apart, and a vertical bar arranged to be engaged by the lever and adapted to bear against the stack, said bar being beveled at its lower end, whereby it is adapted to drop back automatically when released by said lever, substantially as described.

3. In a device of the class described, the combination with a suitable support, of fixed and movable standards mounted thereon, means for forcing the standards apart, and a stick-supporting clip provided with inverted-U-shaped sides adapted to straddle a board and receive a stick between them to hold the same against lateral movement, substantially as described.

4. In a device of the class described, the combination with a suitable support, of fixed and movable standards mounted thereon, means for forcing the standards apart, the upper and lower automatically-operating catches pivoted to one of the standards and adapted to engage a spacing stick or strip, and stops limiting the pivotal movement of the catches, substantially as described.

5. In a device of the class described, the combination with a suitable support, of fixed and movable standards mounted thereon, means for forcing the standards apart, the upper and lower stick engaging catches mounted on one of the standards, and a substantially U-shaped clip provided at its sides with inverted-U-shaped bends adapted to straddle a board and support a stick against lateral movement, substantially as described.

6. In a device of the class described, the combination of a sill, a fixed standard mounted thereon, a slide arranged on the sill and having depending sides embracing the same, a pair of adjustable standards mounted on the slide, an operating-lever fulcrumed between the adjustable standards, a bar adapted to engage a stack and arranged between the adjustable standards, and upper and lower catches, substantially as described.

7. In a device of the class described, the combination with a suitable support, of fixed and movable standards mounted thereon, one of the standards being provided with a recess, a vertical bar located adjacent to the recessed standard and arranged to bear against the stack, and a wedge arranged in the recess of the standard and locking the bar against backward movement, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM R. CARROLL.

Witnesses:

WILLIAM R. SUTHERLIN,

LOUIS H. BELL, Jr.