

Winfield & Colwell,

Dressing Staves.

N<sup>o</sup> 53,211.

Patented Mar. 13, 1866.

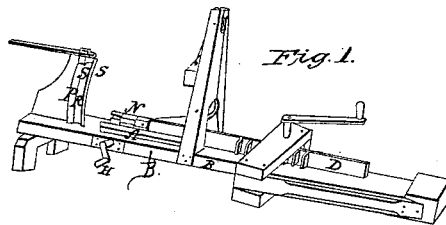


Fig. 1.

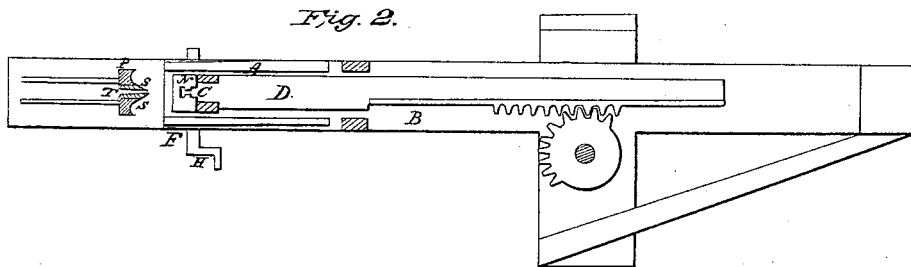


Fig. 2.



Fig. 3.

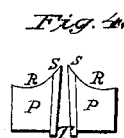


Fig. 4.

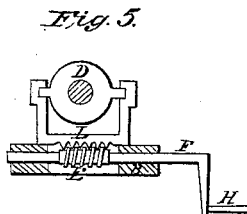


Fig. 5.

Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN R. WINFIELD AND WILLIAM S. COLWELL, OF PITTSBURG, PA.

## IMPROVEMENT IN STAVE-MACHINES.

Specification forming part of Letters Patent No. 53,211, dated March 13, 1866.

*To all whom it may concern:*

Be it known that we, JOHN R. WINFIELD and WILLIAM S. COLWELL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Stave-Dressing Machines; and we hereby declare that the following is a full, clear, and exact description of our invention, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon.

The nature of our invention consists in making the bars that strengthen and support the knives concave on the front, or that part near the edge of the knives, for the purpose of causing the shavings to curl and obviate the tendency to "eat in" and thereby sliver or split the bolt during the operation of shaping the stave.

Another part of our invention consists in constructing or furnishing the forcing-bar with a revolving head, to take the friction off the end of the bolt and allow irregular or twisted "stuff" to "list" and follow the grain of the wood during its passage between the knives.

We also make the guide-box that supports and carries the forcing-bar adjustable, so as to give direction to the bolt and cause it to press or bear hardest against either knife, as the nature and size of the wood may require.

To enable others to understand and make our improvements, we will proceed to describe their construction by reference to the accompanying drawings, wherein—

Figure 1 represents a perspective view of our stave-dressing machine. Fig. 2 is a transverse longitudinal section of the same. Fig. 3 represents a longitudinal section of the knives and supporting-bars. Fig. 4 is a cross-section enlarged. Fig. 5 is intended to represent a vertical transverse section of the guide-box and forcing-bar, showing the plan of adjustment.

All the drawings are lettered, and similar letters denote corresponding parts in the several views.

We construct our machine for dressing staves by making a frame of wood or any suitable material, at one end of which are attached, by bolts or otherwise, two curved knives, S S, standing vertically, and so arranged with reference to each other as to leave an open space, T, between them the thickness of the required stave. These knives S S are set at a slight angle, or so that the edges are nearer each other

than the backs, to prevent binding of the wood in its forced passage through the space.

One part of our invention consists in attaching by bolts two strong cast-iron bars, P P, to the outside of these knives S S, curved to fit thereto, and making each bar with a concave face, R, next the edge of the knives S S, for the purpose of causing the shavings, as they strike against the concave of the bars P P, to take a backward motion and curl, whereby they are less liable to eat in and sliver or split the stave than when allowed to pass off in a straight line. We also furnish the forcing-bar D, or that part of the mechanism that drives the wood through the space between the knives, with a metallic revolving head, N, attached thereto by a pivot, C, which, as the pressure is brought against the bolt of wood, takes the friction off the end by turning, which allows the wood to list and follow the grain, whereby we are enabled to make staves of crooked or twisted stuff, which cannot be done where the bolt in turning has to overcome the friction against its end.

Another improvement we have made consists in making the guide-box A adjustable; and this we accomplish by pivoting the guide-box A to the frame B, upon which it rests, at that part farthest from the knives, and attaching to the under side of said box, at the other end, a cogged rack, L, the teeth of which mesh into an endless screw, E, supported by a shaft, F, passing through the frame B. On one end of this shaft is a small crank, H, by which the operator is enabled to shift the box A to either side of the frame B, and thereby cause the wood to bear against either knife necessary to economize the stuff.

We claim—

1. Constructing the forcing-bar D with a revolving head, N, for taking the friction off the end of the bolt during the operation of forcing it through the space between the knives, as herein set forth.

2. In making the guide-box A that supports and carries the forcing-bar D adjustable, so as to give direction to the bolt and cause it to press or bear hardest against either knife, as the nature and size of the wood may require.

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Witnesses:

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