J. I. Raly a,

Dressing Staves.

No. 50,782. Patented Oct, 31, 1865.

Fig. 2

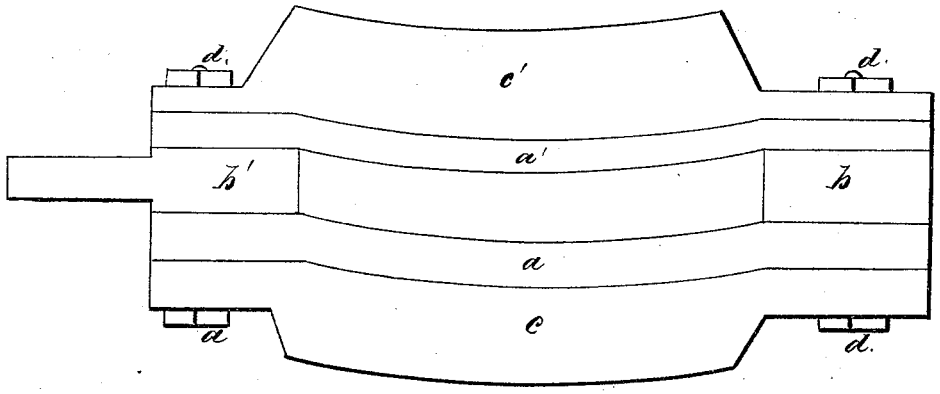


Fig. 3.

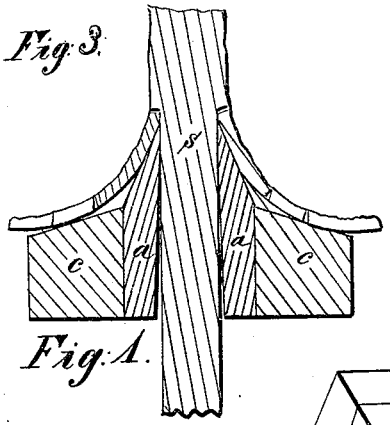
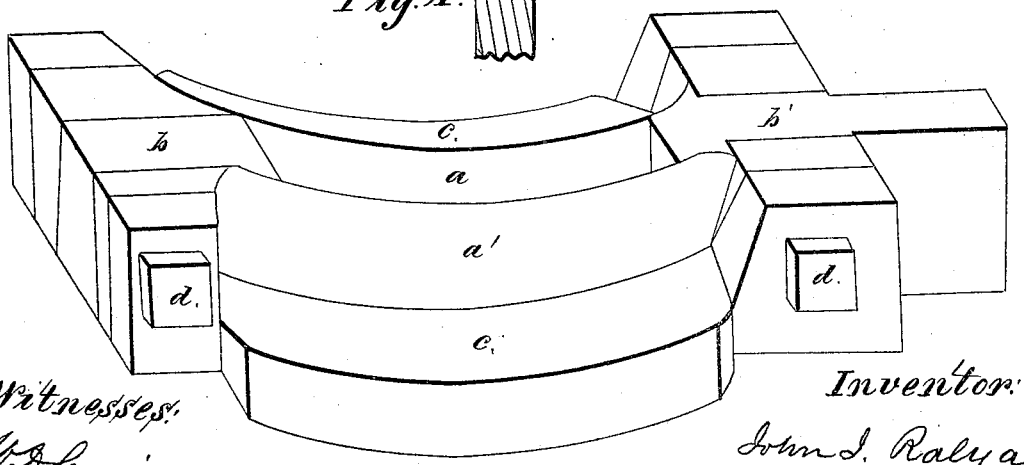


Fig. 1.



Witnesses:
W. D. Lewis
Allan C. Bakewell

Inventor:
John I. Raly a
by his attorney
W. Bakewell.

UNITED STATES PATENT OFFICE.

JOHN I. RALYA, OF ALLEGHENY, PENNSYLVANIA.

IMPROVEMENT IN CUTTING STAVES.

Specification forming part of Letters Patent No. **50,782**, dated October 31, 1865.

To all whom it may concern:

Be it known that I, JOHN I. RALYA, of the city of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Knives for Planing or Dressing Staves; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective representation of my improved knife for stave-dressers. Fig. 2 is a view of the back of the knife. Fig. 3 is a transverse section through the knife, showing its operation in dressing a stave.

In the several drawings like letters of reference denote similar parts.

It is well known that in the manufacture of staves by means of what is usually called the "stationary knife" the wood is apt to rive or run into slivers, which, as the stave passes between the knives, will follow the grain of the wood and sometimes split the stave in two, or, at any rate, eat into it at one side or the other so deeply as to render it useless.

The object of my invention is to obviate this difficulty, which I accomplish by making a shoulder or projection from the outer side of each of the blades of the knife, commencing about half-way down the side at the base of the bevel, at such an angle to the beveled face of the blade or cutter as that the splinters or shavings will be turned outward so abruptly as to be thereby broken off, not at the shoulder or projection, but above the edge of the cutters, and thus effectually prevent the riving of the stave.

To enable others skilled in the art to make use of my improvement, I will proceed to describe the construction and operation of my improved stave-dressing knife more fully.

In the drawings, *a a'* are two curved blades or cutters having their edges parallel to each other, the cutters being separated by the blocks *b b'* at each end. These separating-blocks *b b'* are somewhat thicker at bottom than at top, so as to give the necessary clearance to the cutters, the edges of which are thus brought a little closer together at their backs, the distance between the parallel cutting-edges of the blades *a a'* being equal to the thickness to which the finished stave is to be dressed.

The outer faces of the blades or cutters *a a'* are beveled like a chisel-point, and on the outside of each blade or cutter is placed a shoulder-piece, *c c'*, which extends the entire length of the blade, and in depth from the back of the blade about half-way up its side to the point where the beveled part of the cutter commences. The pieces thus placed together, consisting of two blades, *a a'*, two shoulder-pieces, *c c'*, and two separating-blocks, *b b'*, are united together by means of a bolt, *d*, at each end.

It is not necessary that the shoulder-pieces *c c'* should be made separate from the blades *a a'*; but it is preferable, in order that the blades or cutters may be more conveniently sharpened.

The upper face of each of the shoulder-pieces *c c'* is not square with its sides, but is sloped outward from the blade *a*, as seen in Fig. 3. The angle which the sloping face of the shoulder-pieces makes with their inner side is considerably less acute than the angle between the beveled face of the cutters and their inner side.

The operation of the knife thus constructed is as follows: The rough stave to be dressed is placed against the edges of the cutters *a a'* and forced by suitable machinery into and through the space between them, the edges of the cutters shaving the stave down to the required thickness and curved shape. If the shaving cut from the stave be thin and the grain of the wood even, the shaving will curl up outside of the cutters; but if the shaving be thick, or if the grain of the wood inclines inward so as to be in danger of splintering the stave by riving the wood instead of cutting it, the sliver or shaving, coming against the sloping edge of the shoulder-piece *c* or *c'*, will be forced abruptly outward by the change of the angle of inclination from the face of the blade to that of the shoulder-piece, and the sliver will be broken off a little above the edge of the knife, as shown in Fig. 3, in which *s* represents the stave. If the sliver had commenced to run inward, the knife-edge will enter the stave outside of the line of cleavage of the sliver, and thus prevent the stave being rived instead of shaved.

The effect of my improvement is to cut smooth staves of uniform thickness without the spoiling of the staves by the splintering of the wood,

which very frequently takes place with the use of the stave-dressing knives of ordinary construction.

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

Constructing the knives for stave-dressers with a shoulder projecting at an obtuse angle from the outer face of each blade of the knife, substantially as hereinbefore described, for the purpose of breaking off the shavings or slivers, so as to prevent the riving of the stave.

In testimony whereof I, the said JOHN I. RALYA, have hereunto set my hand.

JOHN I. RALYA.

Witnesses:
ALLAN C. BAKEWELL,
W. D. LEWIS.