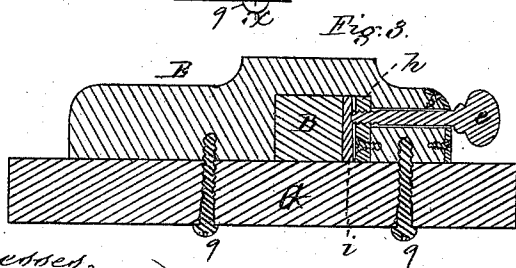
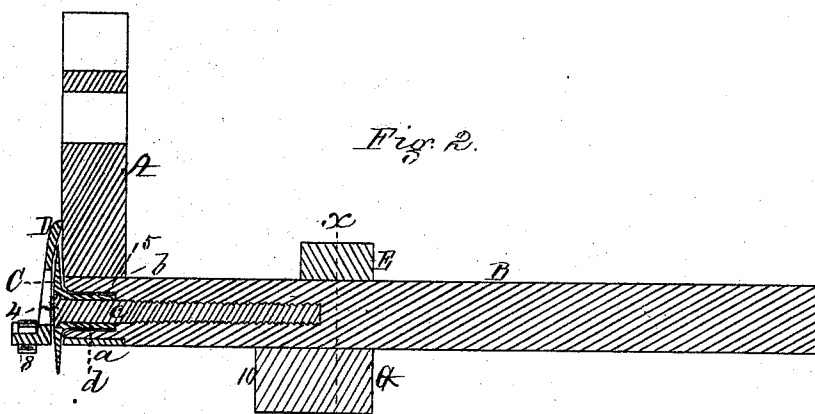
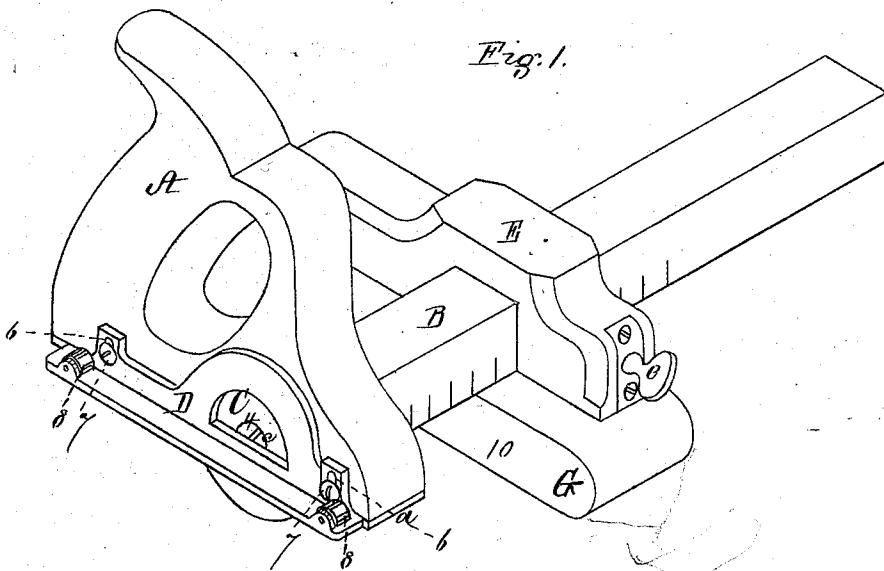


T. RICE.
Splitting-Gages.

No. 142,584.

Patented September 9, 1873.



Witnesses,
R. W. Stearns
W. J. Cambridge

Inventor,
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UNITED STATES PATENT OFFICE.

THOMAS RICE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SPLITTING-GAGES.

Specification forming part of Letters Patent No. 142,584, dated September 9, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, THOMAS RICE, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Splitting-Gages for cutting boards, paper, cloth, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a perspective view of my improved tool. Fig. 2 is a longitudinal section through the center of the same. Fig. 3 is a transverse section on the line *xx* of Fig. 2.

A tool provided with a stationary knife has been employed for splitting boards, the distance of the knife from the edge of the work being regulated by a sliding gage. This stationary knife was objectionable for the following reasons, viz: Considerable strength and pressure were required to cause the knife to enter, and the surface of the work was torn up and made uneven thereby; in addition to which the knife-edge soon became dull and frequently required to be sharpened, which caused it to be rapidly worn away. To overcome the above-mentioned objections is the purpose of my invention, which consists in a sliding gage provided with a knife which revolves while entering the wood or other material, which, consequently, presents but slight resistance thereto, and is split or cut smoothly and evenly, a new portion of the edge of the knife being constantly brought into contact therewith, whereby the frequent dulling, sharpening, and wearing away of the edge incident to the use of a stationary knife is, in a great measure, avoided, and the splitting or cutting performed with great facility.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the handle of my improved tool, the lower portion of which is of rectangular form, covered on its under side by a metallic plate, *a*, secured thereto by screws. Within the lower portion of the handle is cut a rectangular opening, *b*, the lower side of which is closed by the metallic plate *a*. This opening *b* receives one end of a long rectangular bar, B, into which is screwed an

arbor, *c*, provided with an enlargement or head, 4, and with a loose sleeve, *d*, surrounding its cylindrical portion 5, the outer end of the sleeve terminating in a circular knife, C, of considerably larger diameter than the cylindrical portion. This knife is secured in place by the head of the arbor, and, together with the sleeve, revolves freely thereon, when pressed into the wood or other material to be split or cut, both sides of the knife being tapered from its center to its periphery or cutting-edge, as seen in Fig. 2. To the front of the lower end of the handle is secured a plate, D, of the form seen in Fig. 1, provided with a slot, 6, at each end, through which passes a screw, 7, by means of which it is held in place. These slots allow of the plate D being raised or lowered to bring its lower surface to the required height above the lower edge of the knife, the plate D serving as a vertical gage for regulating the depth of the cut. The ends of this gage are provided with rolls 8 8, which are intended to rest on the surface of the work while being cut, whereby the friction thereon is reduced and the passage of the knife through it facilitated. A portion of this vertical gage-plate D is made in the form of a semicircle, which incloses the upper edge of the knife, and serves as a guard to prevent the hand being cut when the tool is in use. The rectangular bar B passes through an opening, of corresponding shape and size, formed in a transverse gage sliding horizontally, and consisting of a cleat, E, secured to a block, G, by screws 9, the surface of the side, 10, of the bar lying in a plane exactly parallel to a plane passing through the edge or periphery of the knife. A metal plate secured to and projecting beyond the upper side of the block G may be used as a guide to keep the block accurately up to the side of the work when the knife is situated at considerable distance therefrom.

It will be seen from the foregoing construction that the bar B is free to slide back and forth within the cleat E, and, when adjusted to the required distance, is clamped securely in place by means of a thumb-screw, *e*, which turns within a nut, *h*, the end of the screw bearing against a metal plate, *i*, and forcing it tightly against the bar. Where a board

about one-half of an inch thick is to be split, the knife is set at a distance from the side, 10, of the block G, corresponding to the width of the strip required, when the knife is pressed into the board and drawn back and forth till it passes through it, but little force being required, owing to the knife revolving. The side of the bar B is provided with a scale to facilitate the setting of the gage E G. Where a board is one inch or more in thickness, the revolving knife penetrates to about one-half of the depth, when the board is turned over and the remaining half cut or split through.

It is evident that my improved knife may be used for cutting boards across the grain, in which case a little more time and pressure are required than when they have to be split.

The above-described tool may be used to

advantage in trimming off the blank margin or selvage of house-paper, or for cutting card or pasteboard, cloth, &c.

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

As a new article of manufacture, the splitting-tool, as described, consisting of the revolving knife C, the adjustable vertical gage-plate D, the rectangular bar B, cleat E, block G, and handle A, all constructed and arranged substantially as and for the purpose set forth.

Witness my hand this 4th day of March, A. D. 1873.

THOMAS RICE.

In presence of—

N. W. STEARNS,

W. J. CAMBRIDGE.