R. G. Hunt,

Wood Molding Machine.

No. 32,871. Patented July 23, 1861.

Fig 1.

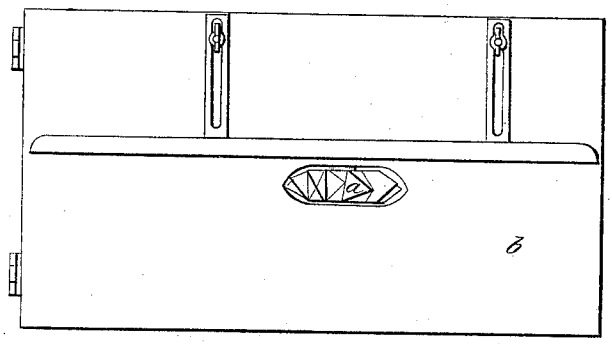


Fig 2.

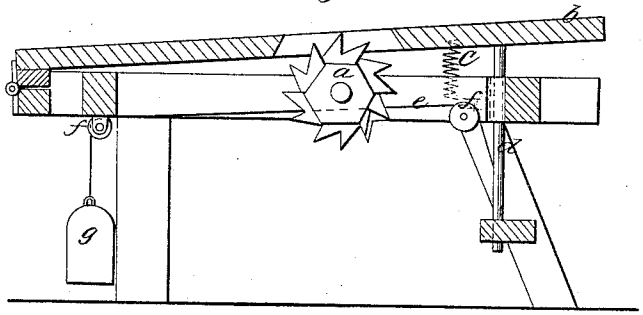


Fig 3.

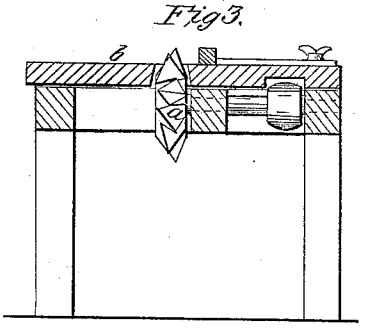
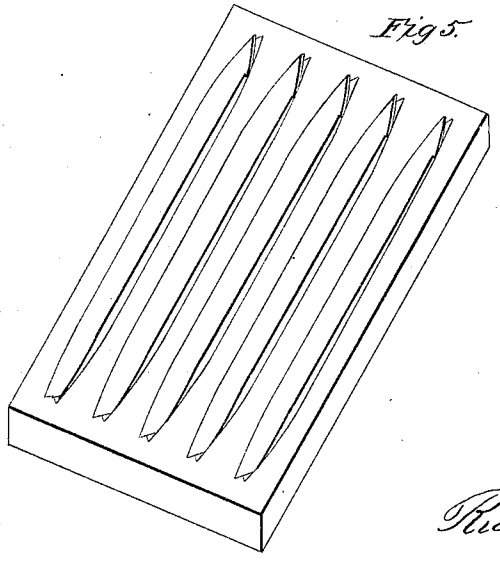


Fig 4.



Fig 5.



Witnesses:

F. C. Thacher
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Richard G. Hunt

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

RICHARD G. HUNT, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR SLOTTING GAS-SIEVES.

Specification forming part of Letters Patent No. **32,871**, dated July 23, 1861.

To all whom it may concern:

Be it known that I, RICHARD G. HUNT, of the city and county of New York, and State of New York, have invented certain new and useful Improvements in Machines for Slotting Wooden Sieves Used in Gas-Purifying Apparatus; and I do hereby declare that the following is a full and correct description thereof, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference thereon.

The mode of making wooden sieves for gas-purifiers usually practiced is to bore conical holes in a piece of board of the required size, or to mortise a series of bars into end pieces, to which they are secured by wooden pins, the sieve when made being in shape and form similar to a wooden foundry-pattern for casting an ordinary square drop-grate, such as are used in furnaces. Another mode of making wooden sieves is described at page 207, Clegg's Treatise on Coal-Gas, edition 1859, published in London. This mode is said to be the invention of one Evans, and to consist in slotting boards by a series of chisels arranged for that purpose in a machine, and this mode resulted in converting the pieces of boards into sieves having alternate bars and slots in one solid piece, which could be made wider by joining a number together to the width required. It is obvious that although by this means sieves for gas-purifiers might be made from one piece of board, or, to use a common phrase, "out of the solid," still the action of the mortising-chisel is such that it would be impossible to make the bars wedge-shaped in section, so that they would present a large upper surface to sustain the lime and a small lower surface to permit of the free passage of the gas between the bars; besides, and what is more important, perhaps, the action of the chisels would not admit of making the ends of each bar a little wider on the under side, so as to give strength to the bar and that portion of the end wood that connects it with the next bar.

Both of the above-named desirable results are obtained by the action of my machine.

The first part of my invention consists in combining with a yielding hinged bed or table a rotating cutter having its cutting-edges upon a series of inclined pyramidically-shaped teeth, the four faces of which are at differing angles and so arranged as to present a cutting-edge at only one side of each tooth alternately, the front face of each tooth being inclined diagonally to the axis of the cutter alternately in reverse directions for the purpose of clearing the shaving.

The second part of my invention consists in combining a spring or its equivalent with the hinged bed or table, on which the board is placed to be slotted, in manner substantially as hereinafter described, and in such manner as to enable the operator simply by pressing down the board when placed on the table over the cutter to gradually enter the cutter into the solid wood, and by relieving the board from pressure to remove it from the action of the cutter.

The drawings annexed illustrate my invention.

Figure No. 1 is a plan view of the machine; Fig. No. 2, a side elevation in section; Fig. No. 3, a transverse cut section; Fig. No. 4, a detached view of cutter; and Fig. No. 5, a perspective view of sieve, showing the lower surface of the bars.

Letter *a* represents the cutter; *b*, the hinged bed or table provided with a suitable guide and the spring *c*, by which it is kept raised above the teeth of the cutter when not depressed by the operator in operating the machine. The sliding bar *d*, cord *e*, pulleys *f*, and weight *g* constitute an equivalent arrangement for the same purpose. Either or both may be used.

What I claim as my invention and improvement in machines for slotting wooden sieves for gas-purifiers is as follows, viz:

1. The pyramidically-toothed cutter with cutting-edges alternately on opposite sides of the teeth, substantially as described, in combination with a yielding hinged bed or table, substantially as described.

2. The hinged bed, in combination with a spring or equivalent, substantially as described.

RICHARD G. HUNT.

Witnesses:
F. C. TREADMAKER,
WM. LEE.