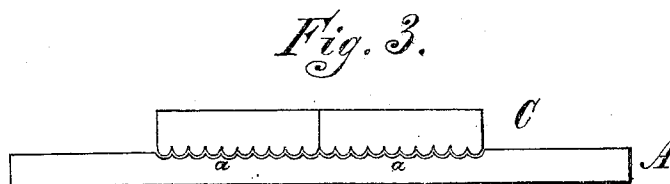
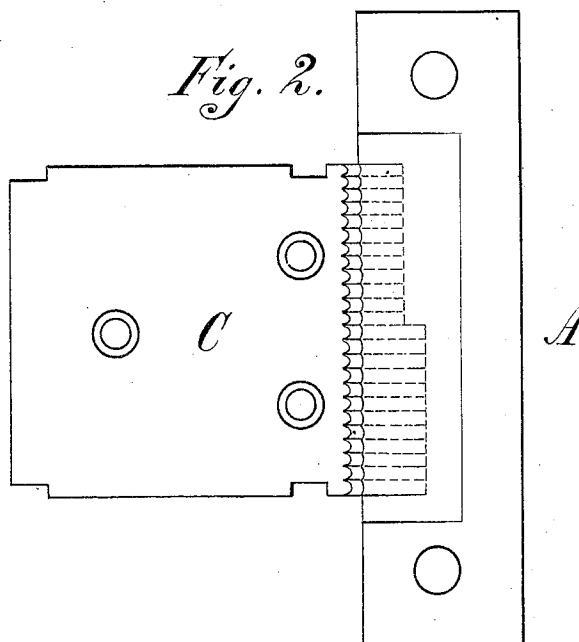
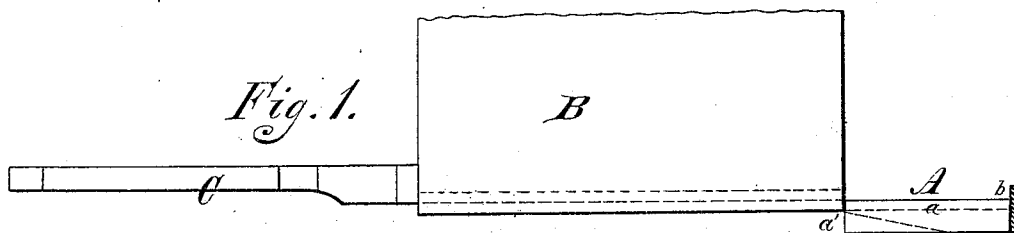


K. H. SCHAFER.

Machinery for Making Match-Sticks.

No. 150,359.

Patented April 28, 1874.



Witnesses:
A. E. Schmandt
Robert H. Hox.

Inventor:
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by *Julius Friedmann & Co.*
Attys.

UNITED STATES PATENT OFFICE.

KONRAD H. SCHÄFER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINERY FOR MAKING MATCH-STICKS.

Specification forming part of Letters Patent No. **150,359**, dated April 28, 1874; application filed September 16, 1873.

To all whom it may concern:

Be it known that I, KONRAD H. SCHÄFER, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Machinery for Making Match-Sticks; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of the device embodying my invention. Fig. 2 is a top or plan view. Fig. 3 is an end view.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in a fluted bed, operating to clear the plane or cutter from shavings and particles of wood, for preventing clogging of the plane and roughening of the wood.

Referring to the drawings, A represents the plane or cutter, which is constructed with a groove or fluted cutting-edge, *a'*, Fig. 1, and also a grooved upper face, *a*, for cutting the lower halves of the match-sticks, as is well known, the other halves being formed by the upper knives *b*, as is also well known. B represents the block of wood to be cut or formed into match-sticks, the same being arranged so that its lower portion will be in line to be cut into by the plane A. C represents a stationary bed, which is so located that it will come against one side of the block A and support the same, and its under face be in line with the upper face of the plane or cutter A. The under face of the bed C is fluted to correspond to the groove of the plane A, the flutings of the bed being adapted to enter the grooves of the plane.

The operation is as follows: Longitudinal reciprocating motions are imparted to the plane

when power is applied thereto. The block being in proper position and braced or held against the bed C, the plane, with its two cutters *a* and *b*, advances and cuts the thickness of a match-stick from the bottom of the block, the number of sticks that are cut simultaneously depending on the number of grooves or flutings in the width of the plane. The shavings that are formed curl and twist, particles of wood are loosened, and "strings" are produced, owing to the nature of the soft wood used. These shavings and strings adhere to the edge of the plane, and are carried forward thereby, and unless cleared will clog the plane and cause roughness to the next series of sticks. To remedy these defects is the object of the fluted bed C. As soon as the cut is made, the plane passes along under the bed, and its grooves ride snugly in the flutings of the latter, so that any shavings or strings in advance are cut by the forward edge of the plane pressing them against the bed, and dust or particles of wood are swept from the upper face of the knife by the inner end of the bed. The full forward motion of the plane having been made, it returns to its first position clear of shavings, &c., and the block is again lowered for another cut. The plane then advances and cuts without clogging and roughening of the wood, and thus well-defined and smoothly-formed match-sticks are produced.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In match-stick machinery, the clearing-bed C, in combination with the plane A, constructed and operating substantially as and for the purpose set forth.

KONRAD HEINRICH SCHÄFER.

Witnesses:

JOHN A. WIEDERSHEIM,
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