(Model.)

E. STRUPPE.

Wood Graining Machine.

No. 238,181. Patented Feb. 22, 1881.

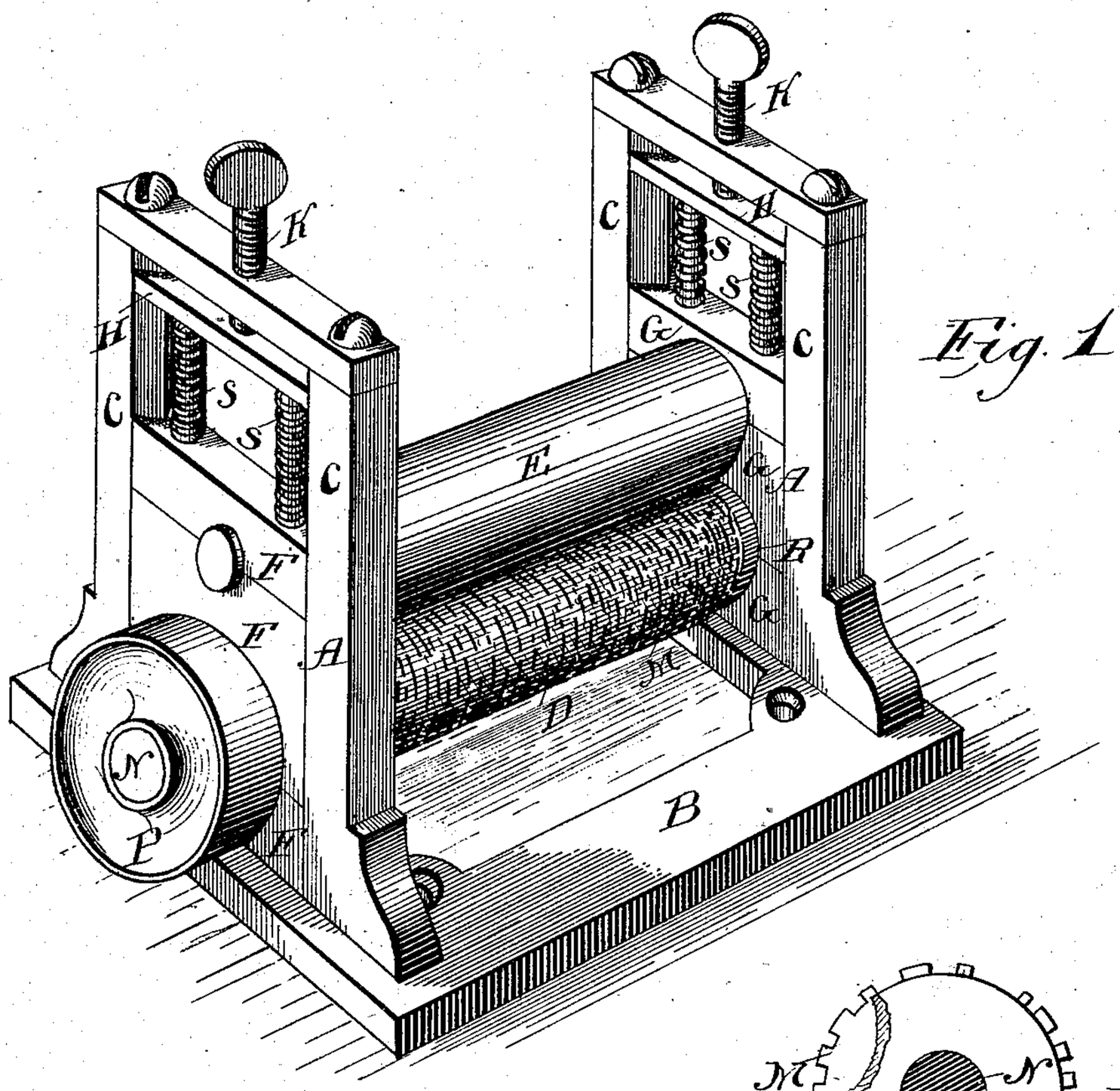


Fig. 1.

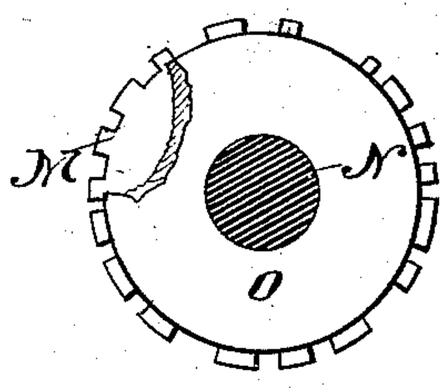
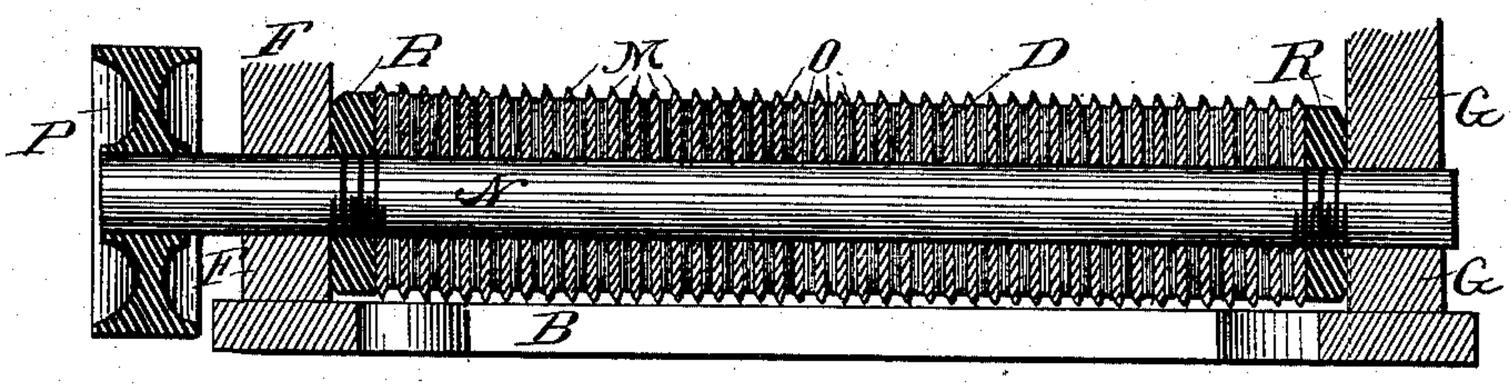


Fig. 3.

Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD STRUPPE, OF MILWAUKEE, WISCONSIN.

WOOD-GRAINING MACHINE.

SPECIFICATION forming part of Letters Patent No. 238,181, dated February 22, 1881.

Application filed June 1, 1880. (Model.)

To all whom it may concern:

Be it known that I, EDWARD STRUPPE, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Wood-Graining Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of machines which are employed to produce an imitation of the grain or cellular structure of one kind of wood upon the surface of a closer-grained and cheaper variety of the same, which may or may not be dyed to render the imitation more complete.

It consists, essentially, in a new and improved construction of the rolls used to produce the imitation-grain and prepare the wood for the subsequent process of dying where such is employed.

In the accompanying drawings like letters are used to designate similar parts.

Figure 1 is a perspective view of my invention. Fig. 2 is a longitudinal section of the surfacing-roller; and Fig. 3 shows the disks, washers, and shaft, which are assembled to form the roller in detail.

A is the frame-work of my machine, provided with a suitable base, B, and with side uprights, C C C C. Between each pair of uprights, at the ends of my machine, are vertically-sliding bearing blocks or boxes F F G G, in which the surfacing-roller D and pressure-roller E are journaled, and the whole is arranged to permit the greater or less separation of the rollers to suit the varying thickness of the lumber operated upon. Springs S S S S are placed between the upper boxes and followers H H, which are pressed downward by adjusting-screws K K. These serve to adjust the pressure of the springs so as to properly press the surfacing-roller into contact with the lumber. To the end of the surfacing-roller is attached the driving-pulley P.

The roller D is formed of thin circular disks of tempered steel, M, knife-edged and sharpened so as to be slightly rounding at their circumferences, and of unequal lengths, as shown in the drawings. These are perforated at the center and strung upon a central shaft, N, alternating thereon with smaller thin washers, O, which serve to separate them slightly. The whole are tightly clamped together by means of the nuts R R at the ends of the shaft N, and the whole forms a roller very effective for the purpose at a comparatively slight expense. If the cells are to be very close together the washers may be, when certain woods are to be imitated, entirely dispensed with. The disks are preferably notched in different patterns, so that the grouping of the cutting-edges upon roller D shall be such as to produce the closest imitation of the cells in the grain of the wood to be imitated. Their ordinary grouping is shown in Fig. 1.

In using my invention any appropriate wood—such as bass-wood, for instance—is first planed and reduced to the desired dimensions, and it is then passed between the rollers D and E, while D is caused to revolve by means of power communicated to pulley P. The sharp protruding edges of the disks separate the grain of the wood, thereby producing cavities closely resembling the cells in more open-grained woods, without removing any part of the material or roughing up its surface as a result, which is the case when the surface is removed or is punctured with blunt or rough points or edges. If appropriately-colored dye be applied to the wood after this operation is performed, the dye will lodge in the cavities, which will also partly close in consequence of the swelling produced by the absorption of the moist dye-stuff, and the effect will be heightened. A good result will follow, however, if the wood be dyed before it is treated with the graining-machine. The position in which the rolls stand is immaterial, and the presser-roll may be placed above or below, as desired, although the arrangement shown in the drawings is preferred.

I am aware that wood has heretofore been artificially grained by embossed and engraved rollers, and such I do not claim.

While I have stated that the knife-edges may be made of unequal lengths, I do not wish to be understood as limiting myself to such

construction, for, when preferred, they may be of equal length.

Having thus described my invention, what I claim is—

A roll for graining wood, consisting of a central shaft and a series of interchangeable disks, provided at their peripheries with short knife-edges, said disks being adjustably secured upon said shaft, whereby the roll may be adapted to cut different patterns or designs, as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD STRUPPE.

Witnesses:

E. H. BOTTUM,

CHARLES F. HUNTER.