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A. J. TAPLIN.

Graining Rollers.

No. 164,056. Patented June 1, 1875.

Fig. 1.

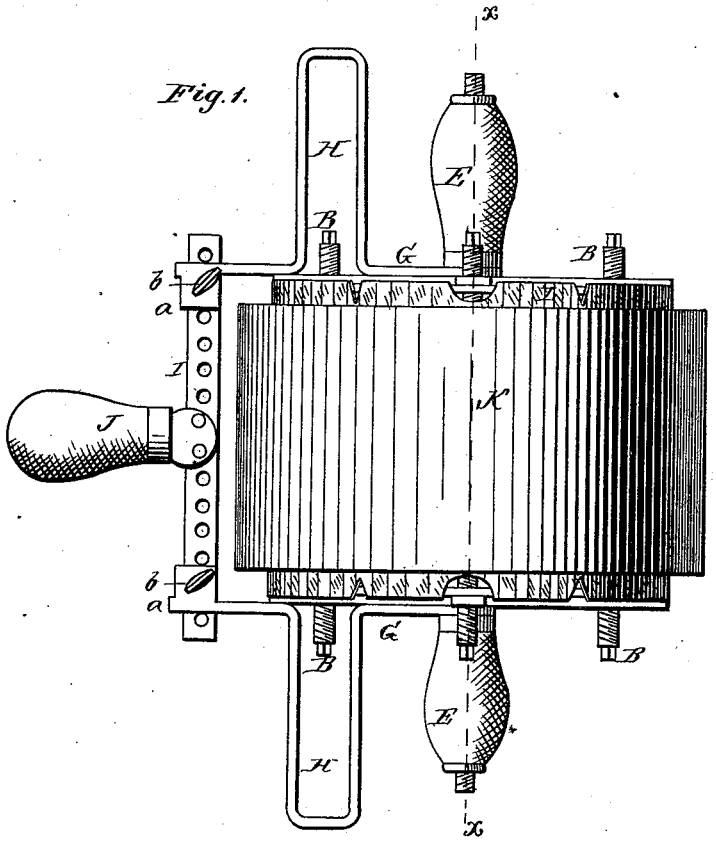
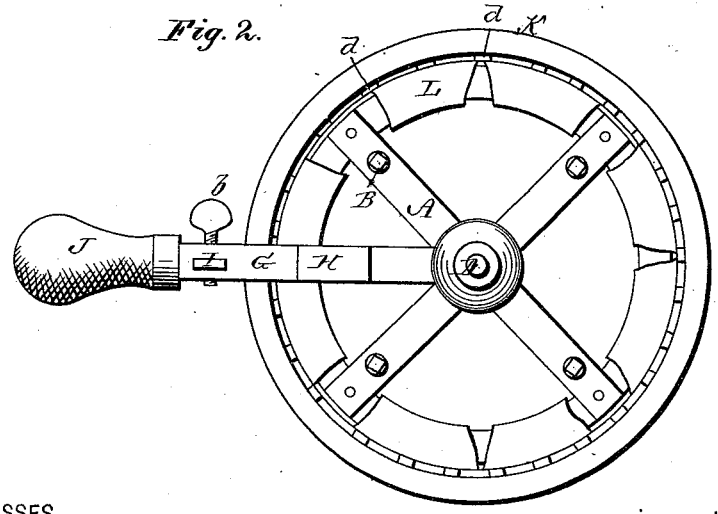


Fig. 2.



WITNESSES

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2 Sheets--Sheet 2.

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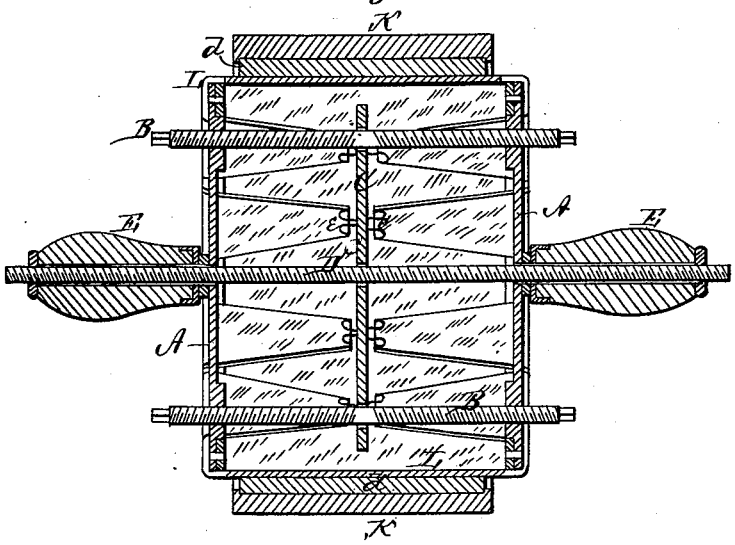
Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT J. TAPLIN, OF BLOOMINGTON, ILLINOIS.

IMPROVEMENT IN GRAINING-ROLLERS.

Specification forming part of Letters Patent No. **164,056**, dated June 1, 1875; application filed March 6, 1875.

To all whom it may concern:

Be it known that I, ALBERT J. TAPLIN, of Bloomington, in the county of McLean and in the State of Illinois, have invented certain new and useful Improvements in Graining-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an adjustable or extension graining-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view of my machine. Fig. 2 is an end elevation of the same, and Fig. 3 is a section through the line *x x*, Fig. 1.

A A represent two light portable iron wheels, connected by means of four right-and-left-hand screws, B B, passing through the spokes or radial arms of the wheel. These screws also pass through the ends of supporting or strengthening bars C C, which are attached to and kept in position by a center shaft, D, passing through the centers of said bars and through the centers of the wheels A A. These wheels revolve on the shaft D, and on the ends of the shaft are fastened or placed suitable handles E E. By this construction of the frame-work of my machine it can be easily extended and contracted, or adjusted to the desired width corresponding with the different objects and surfaces required to be grained, by means of a suitable thumb-piece or key applied on the ends of the right-and-left-hand screws B B. On each end of the center shaft D is placed a lever, G, the outer end of which forms a socket, *a*, and through these sockets passes a bar, I, having the handle J permanently attached to it in the center, the bar I being adjusted according to the size of the wheel, and held in the sockets by means of set-screws *b b*. The levers G G are bent outward, as shown at H H, forming openings for the passage of the ends of the screws B B when the wheel revolves, even when contracted to the smallest possible size. The handle J is used for propelling the machine, and the handles E E for guiding the machine and adapting it to work in a mechanical manner while in use, more particularly for graining objects and surfaces in a horizontal position, such as lock-rails for doors, coffins, furniture, or other similar manufactured goods. The outside surface or belting consists of a composition, K, fastened on a canvas or other belt, L, passed around and under the rims of the wheels A A, and fastened in the center on the inside.

The composition K is made in the following manner: Ten ounces pressed flaxseed-oil is heated to near the boiling-point in an iron vessel, when one ounce of chloride of sulphur is added, which readily dissolves therein. Two pounds of best glue is dissolved by means of a water-bath, and eight ounces of glycerine added thereto, which are thoroughly mixed by stirring. The two preparations are then mixed together and well stirred, after which, while yet warm, it is poured into molds from one-eighth to one-quarter of an inch in thickness, more or less, and in length and width to correspond with the belt desired.

If a smooth surface is required for transfer graining-belts the molds are made of sheet-iron; but if the impression or the figure of the grain is required to be permanently fixed in order to grain from the belt to the object or surface, the figure of the grain in the desired wood must be made to rise or stand out by a successive steaming and drying process. This is readily done by having the piece of desired wood placed in a steam-chest for about one or two hours, then bringing it out of the steam-chest and placing it before a hot furnace, or in a drying-kiln or other position, where it will dry rapidly, repeating this operation two or three times, according to the hardness or solidity of the wood. By this process the figure of the grain in the wood is made to stand out in such a manner that the composition K, being molded thereon, will have the permanent impression or figure of the grain in the wood molded from one-eighth to three-sixteenths of an inch in depth, and exactly corresponding with the grain in the wood.

While the composition is yet warm and in

the mold wooden laths *d d* are pressed into the composition at suitable intervals. The laths *d* are thus permanently fastened to the composition K, and keep the composition to an even surface while on the graining-machine. The canvas belt L is then fastened to the slats, and the edges thereof cut to form triangular flaps, which fold over and under the rims of the wheels A A, and are fastened together by eyelets *e e*, or other suitable fastening.

When the belting is thus fastened the machine is easily adjusted by means of the extension-screws B B.

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

1. In a graining-machine, the combination of the adjustable wheels A A, right-and-left-hand adjusting-screws B B, center shaft D, and supporting-arms C C, substantially as and for the purposes herein set forth.

2. The combination of the adjustable frame, composed of wheels and screws A B, with center shaft D, levers G G with bends H H and sockets *a a*, the sliding bar I with handle J, and the set-screws *b b*, all substantially as and for the purposes herein set forth.

3. In a graining-machine, the outside belting, consisting of the composition K, slats *d d*, and canvas or other belt L, arranged upon an adjustable frame, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of January, 1875.

ALBERT J. TAPLIN.

Witnesses:
H. MORRISON,
N. W. COX.