No. 615,416. Patented Dec. 6, 1898.

J. M. TITUS.
METHOD OF MANUFACTURING EXCELSIOR.

(Application filed Mar. 20, 1897.)

(No Model.) 3 Sheets—Sheet 1.

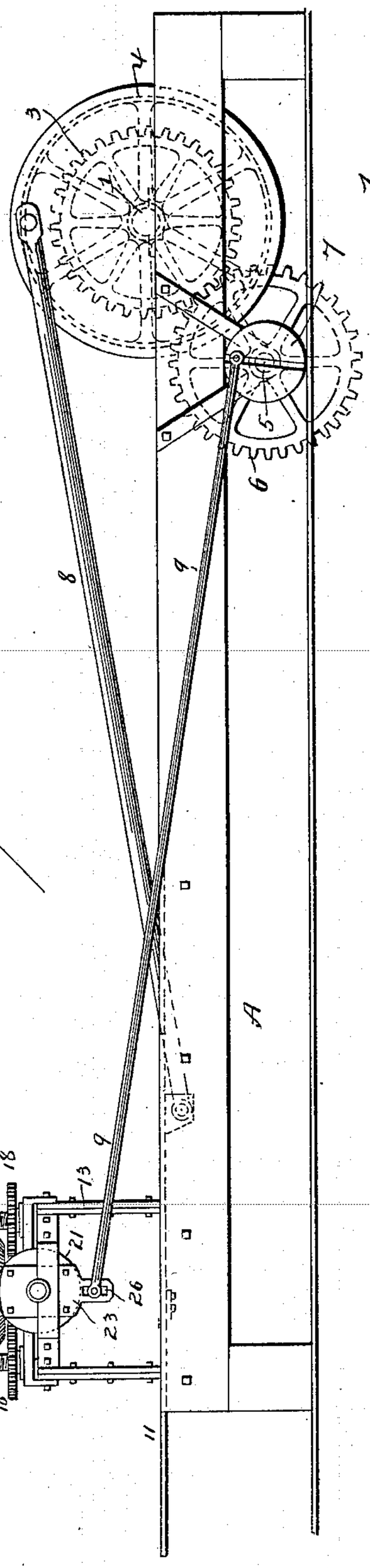

FIG. 1.

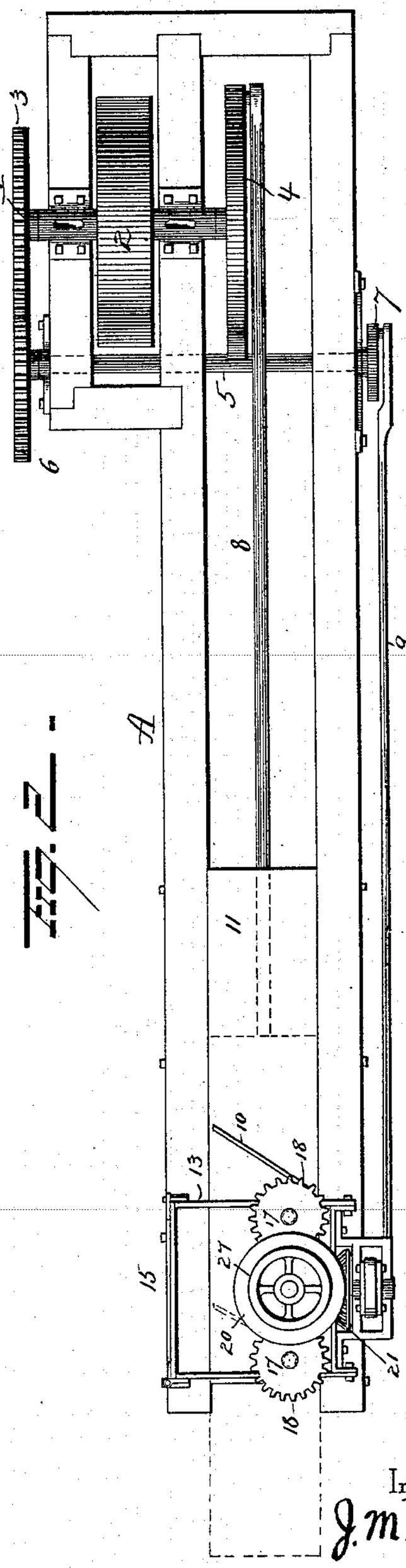

FIG. 2.

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FIG. 3.

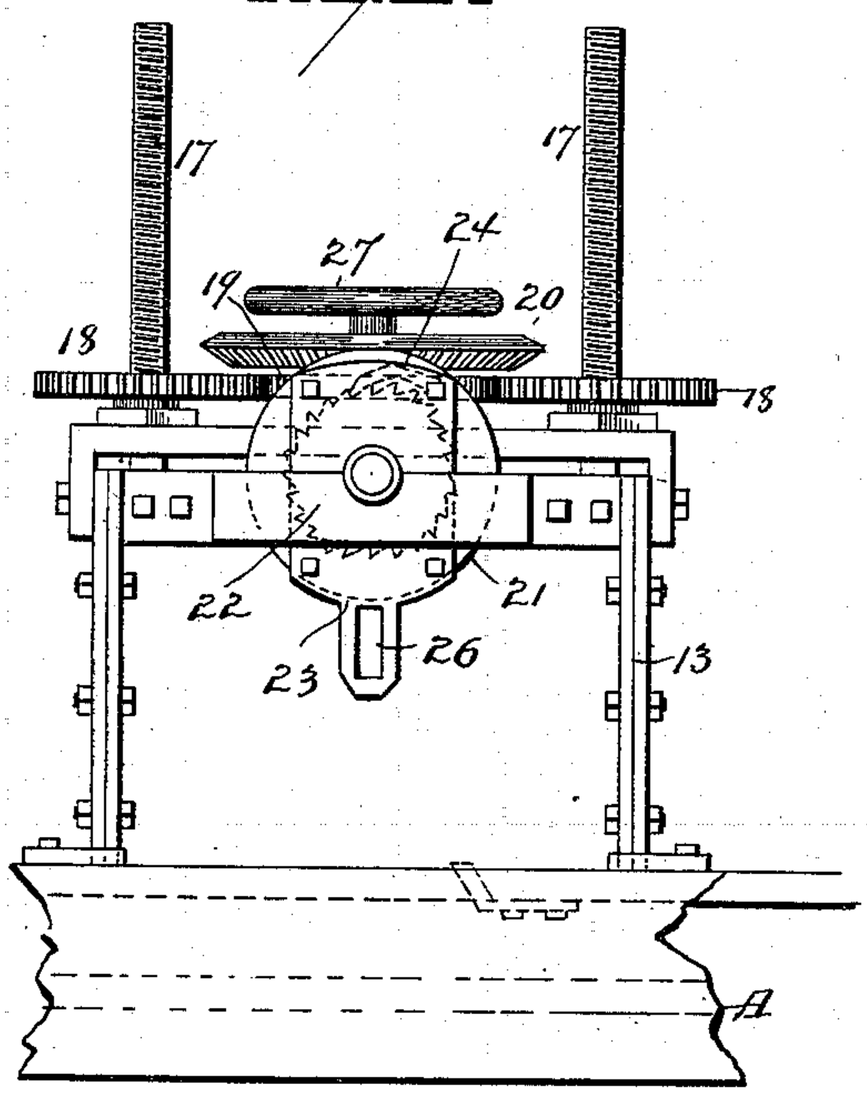


FIG. 4.

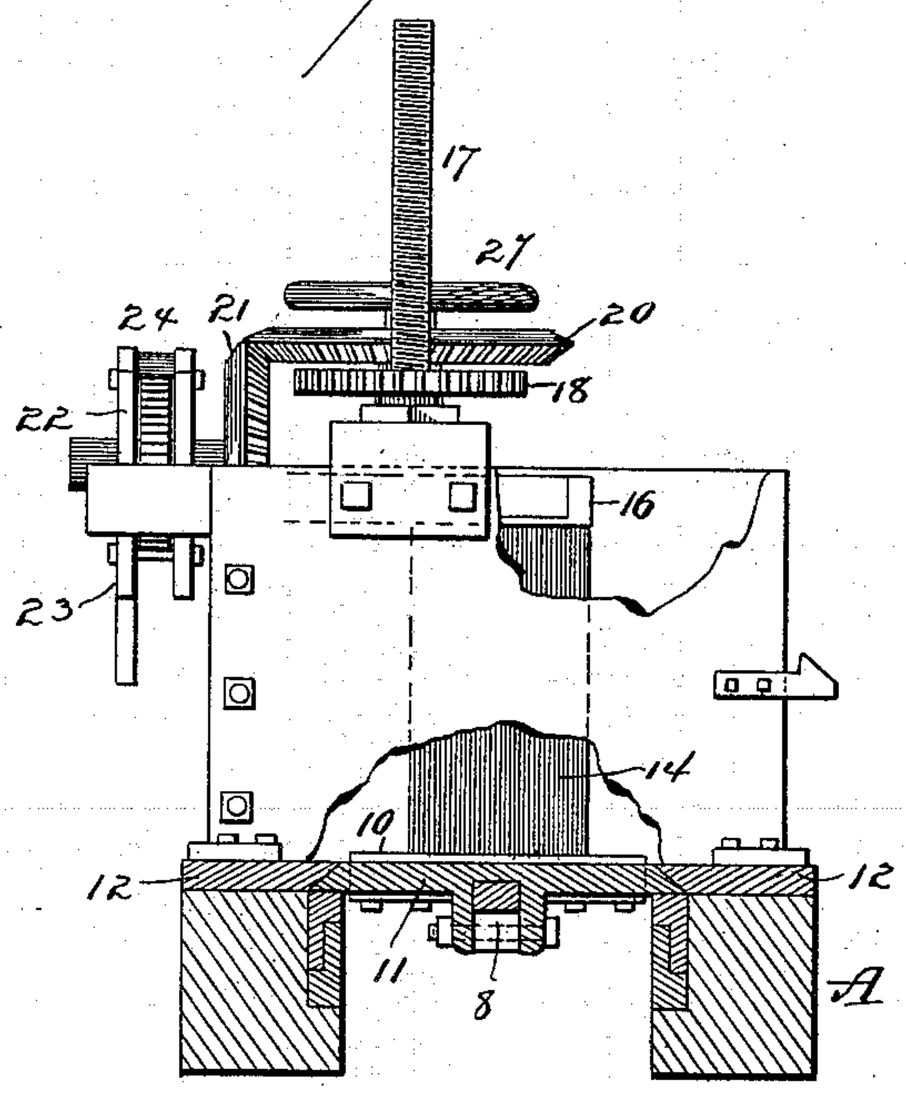


FIG. 5.

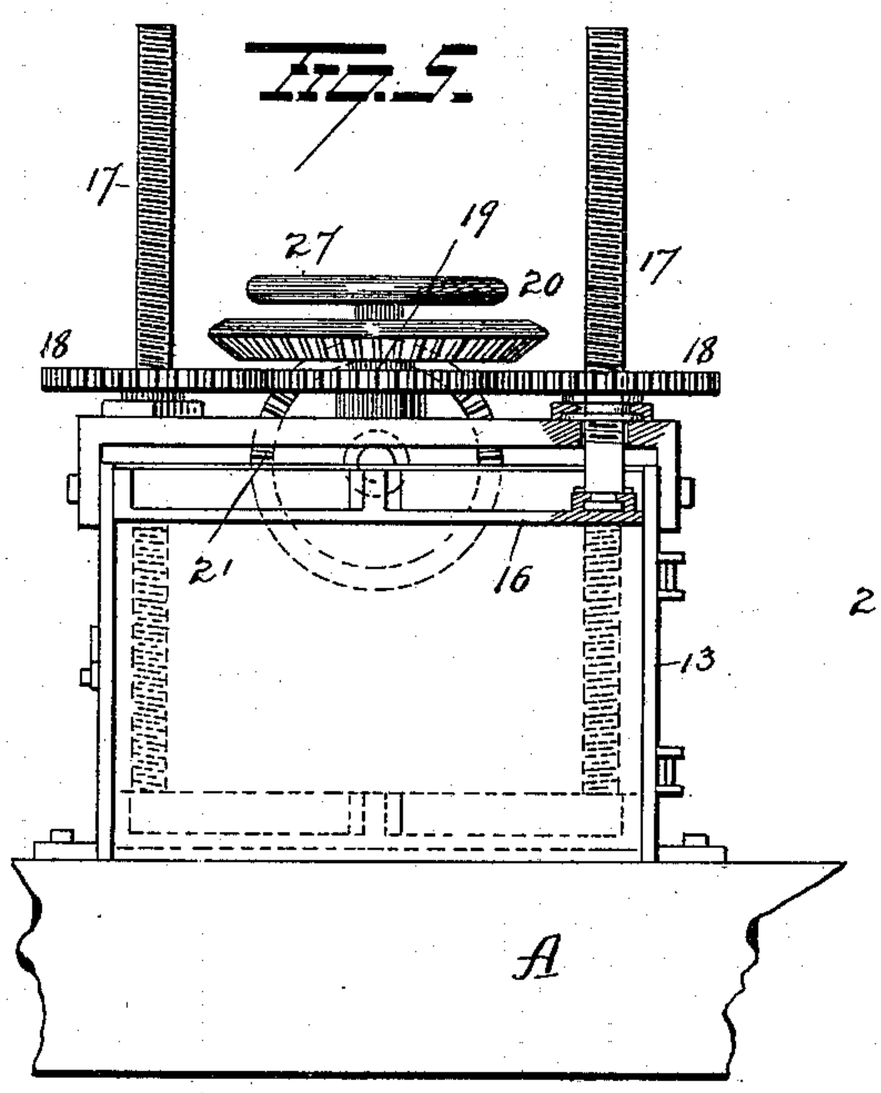
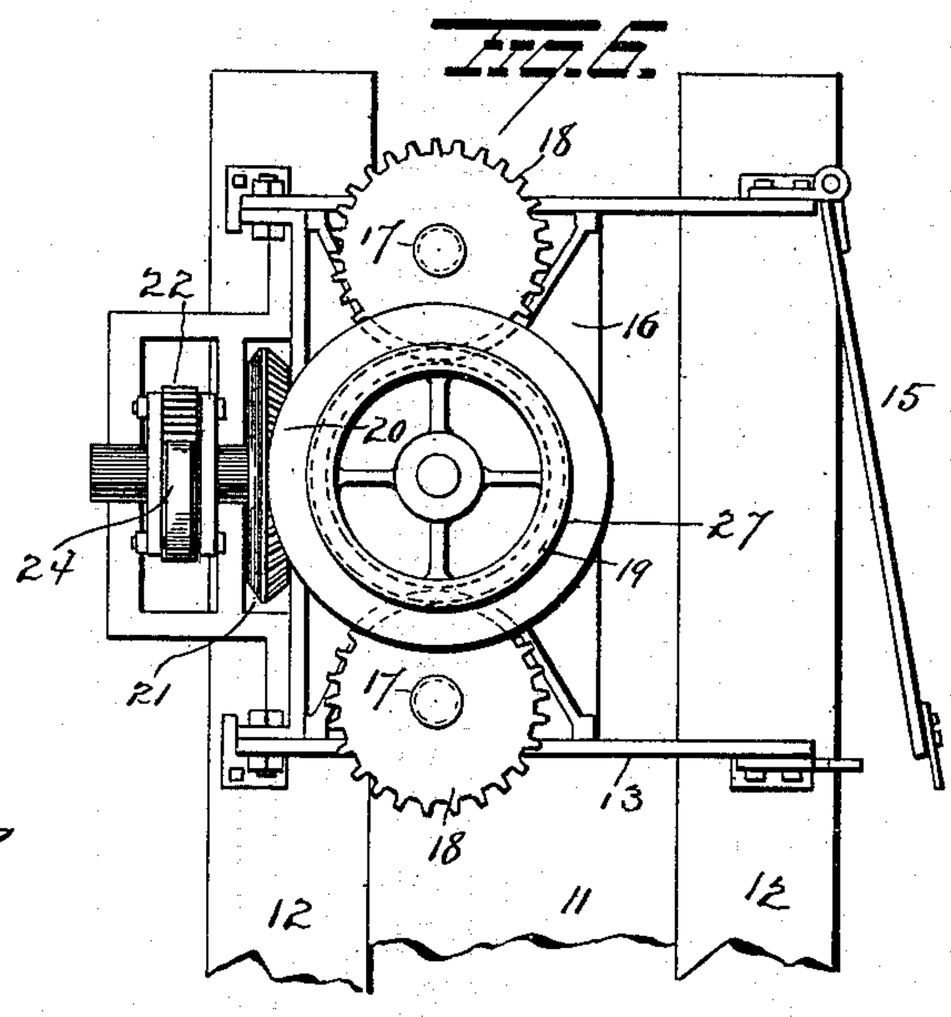


FIG. 6.



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(No Model.) 3 Sheets—Sheet 3.

Fig. 7.

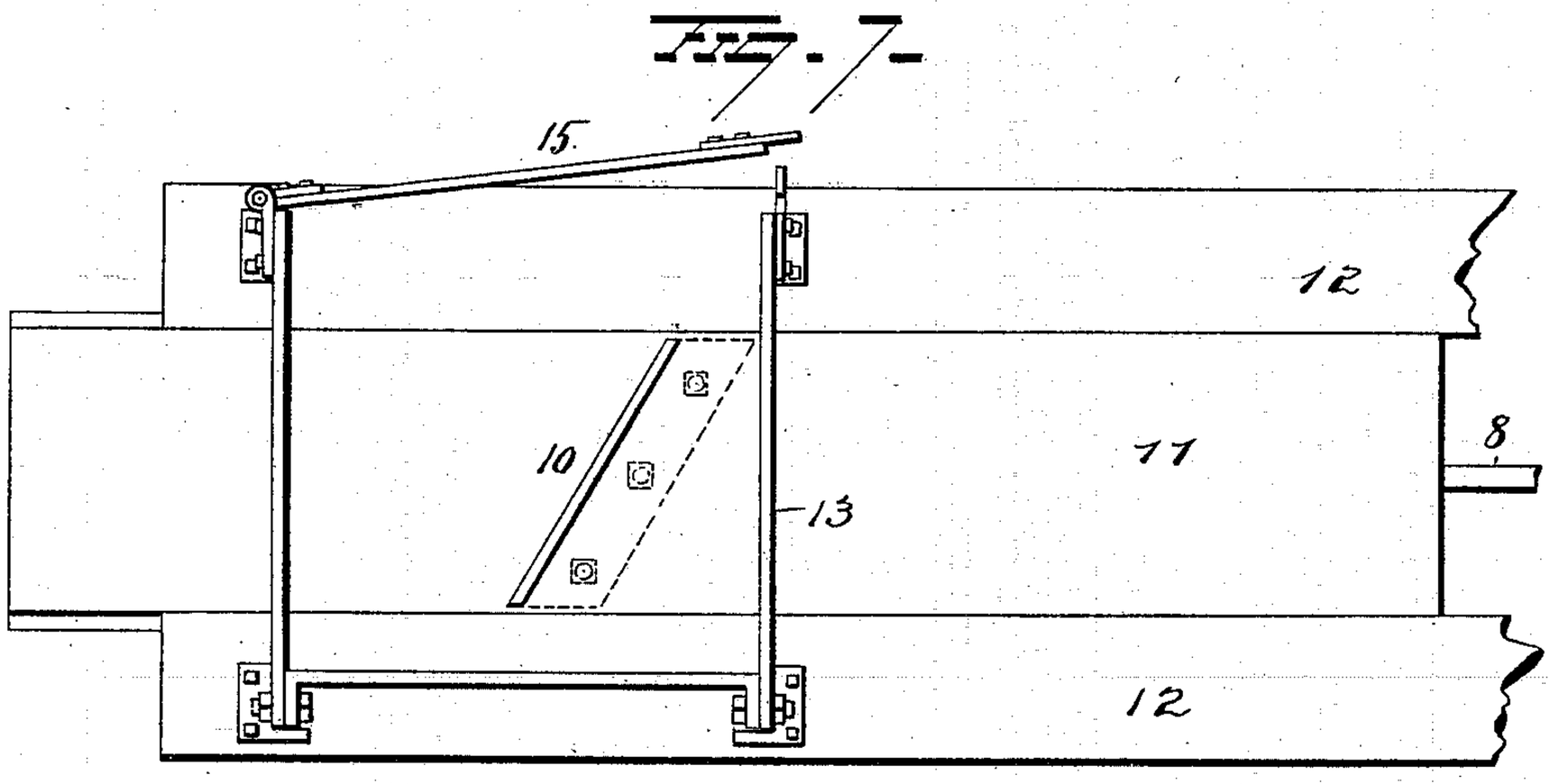
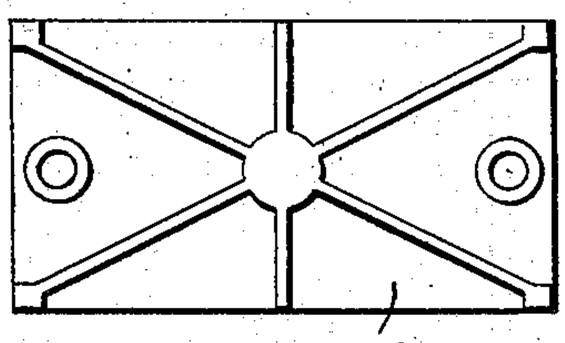


Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES M. TITUS, OF PETERSBURG, VIRGINIA, ASSIGNOR OF ONE-HALF TO ARTHUR B. WOOD, OF SAME PLACE.

METHOD OF MANUFACTURING EXCELSIOR.

SPECIFICATION forming part of Letters Patent No. 615,416, dated December 6, 1898.

Application filed March 20, 1897. Serial No. 628,503. (No specimens.)

To all whom it may concern:

Be it known that I, JAMES M. TITUS, a resident of Petersburg, in the county of Dinwiddie and State of Virginia, have invented certain new and useful Improvements in Methods of Manufacturing Excelsior; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in the art or method of manufacturing excelsior; and it consists in the method of making excelsior, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of a machine for accomplishing this work. Fig. 2 is a plan view, and Figs. 3, 4, 5, 6, 7, 8, and 9 are enlarged details and sections.

A represents the frame of this machine. The numeral 1 indicates the drive-shaft, journaled therein. This shaft has the usual belt-wheel 2, and it is provided at one end with a gear-wheel 3 and at the other with a crank-disk 4. A secondary shaft 5 lies parallel to shaft 1, and it is also provided with a gear-wheel 6 on one end, which intermeshes with and receives motion from gear 3, and a crank-disk 7 at the opposite end. These two crank-disks operate, respectively, the cutter and feed mechanism through pitmen 8 and 9. The cutter or knife 10 is disposed diagonally across the upper face of the reciprocating slide-plate 11, which travels back and forth in guides or ways 12 12.

Above the knife is stationed the box or receptacle 13, in which the veneers 14 are placed vertically and edgewise. This box or receptacle has a door 15 at the side, through which access is obtained to the interior. A follower 16 is placed over the veneers and is adapted to feed the material downward. The feed is controlled by the following mechanism: A pair of screws 17 17 are secured in the follower and extend upward therefrom. Two gear-wheels 18 18 are revolubly connected with this follower and threaded to turn on the screws 17 17, whereby to move the latter up or down, to elevate or depress the follower. An intermediate gear-wheel 19 is meshed with these wheels 18 18 and imparts motion to them. Connected with wheel 19 is a bevel-gear 20, (either integral or rigidly secured thereto.) A bevel-gear 21 is intermeshed with this bevel-gear 20, and connected with it is the ratchet-toothed wheel 22. A pendulum-lever swings on the axis of this wheel. This lever 23 is equipped with a pawl 24, which operates, in connection with the ratchet-toothed wheel, to impart a step-by-step motion thereto as the pendulum-lever is vibrated, and oscillatory motion is imparted to this lever through pitman 9, which is adjustably connected to the outer end of this lever through an elongated slot 26, which makes provision for regulating the swings of the lever and consequently the size of the excelsior to be cut. A hand-wheel 27, connected with bevel-gear 20, is provided for running the follower up again preparatory to putting a new supply of veneers into the machine. The veneers are inserted in the space 30 at one side of the follower 16. A movable side 31 is located at one side. A screw 32 turns in the side 33 of the hopper. This screw is swiveled in the movable side 31. By turning the screw 32 the movable side 31 is moved inward and the veneers are carried to a point beneath the follower 16. The weight of the follower is sufficient then to feed the veneers as fast as they are to be cut by the knife 10 in passing. Thus it will be understood that the veneer which is made in the usual manner or as found on the market is cut into squares or adequate sized or shaped pieces. These are set edgewise, as shown in the drawings, and clamped in the machine, and the machine being set in motion feeds the veneer downward, and following each feed downward the knife is caused to advance along the lower edges of the veneers and cut them into strips, forming the excelsior. Any machine which will accomplish this purpose may be employed, the main and central feature of the improvement being to manufacture excelsior from wood veneer, as described. Therefore it is evident that other machinery might be used or that hereinbefore described might be varied without de-

parting from the spirit and scope of my invention, and hence I do not wish to limit myself to the construction herein set forth; but,

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

1. The art or method of manufacturing excelsior consisting in shaving it from an edge of veneer in a direction lengthwise the veneer.

2. The art or method of manufacturing excelsior consisting in shaving it from a series of veneers set edgewise and side by side, in the direction of the grain of the veneer and longitudinally of the veneer.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES M. TITUS.

Witnesses:
ARTHUR B. WOOD,
JAMES M. QUICKE, Jr.