

No. 627,567.

Patented June 27, 1899.

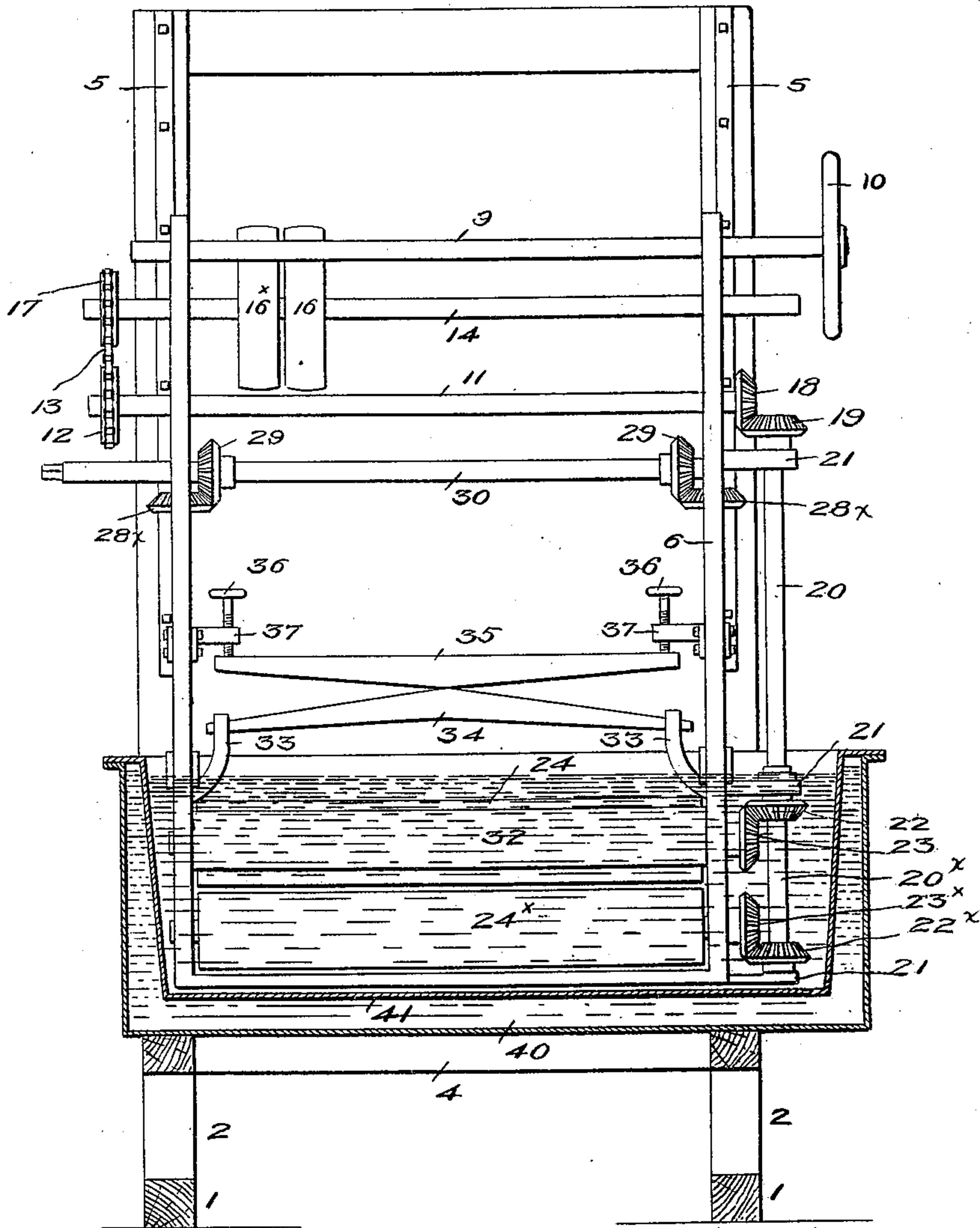
W. C. BOSENBURY.  
GLUE SPREADING MACHINE.

(Application filed Aug. 30, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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2 Sheets—Sheet 2.

Fig. 2.

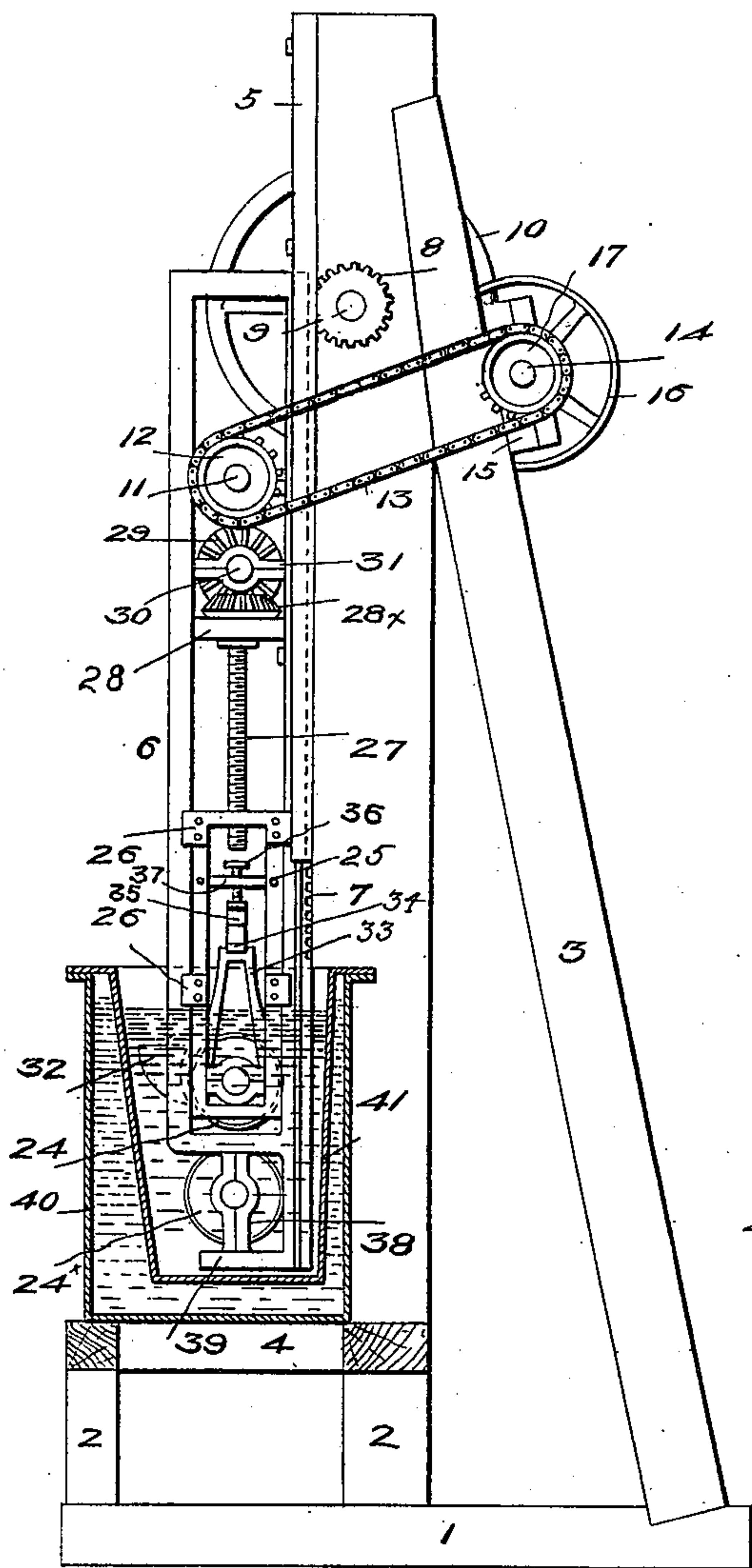
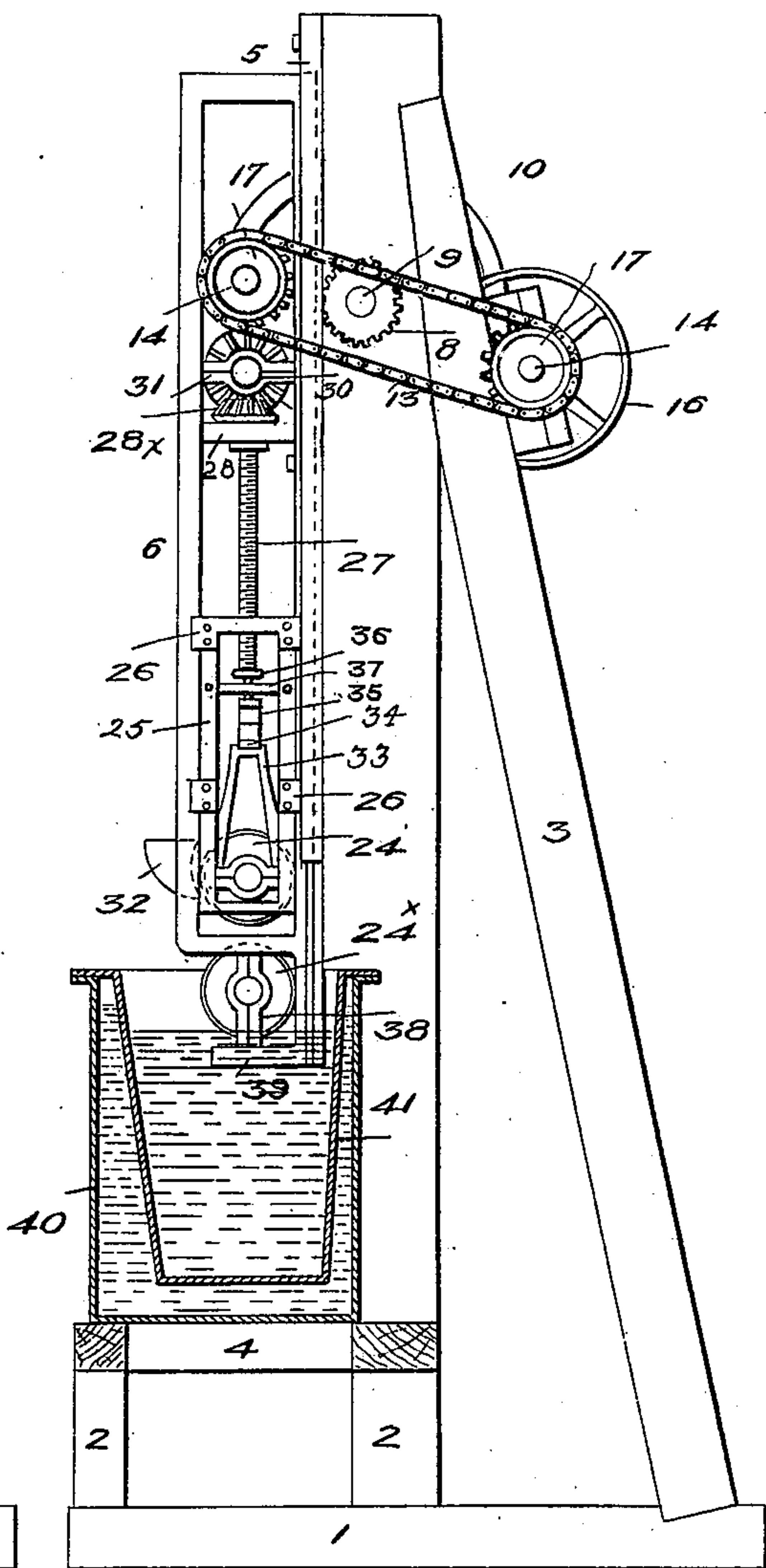


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## GLUE-SPREADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 627,567, dated June 27, 1899.

Application filed August 30, 1898. Serial No. 689,884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM C. BOSENBURY, a citizen of the United States of America, and a resident of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Glue-Spreading Machines, of which the following is a specification.

My invention relates to an improved machine for spreading glue—that is, a machine to spread glue upon surfaces of boards when forming veneered or laminated surfaces.

One object of my invention is the provision of a machine for the purpose stated and of the character named which is adapted to spread glue upon surfaces of any thickness or width, which will spread glue upon the top as well as the bottom surface, which can be operated by any manner of power, and which will do its work in an efficient and thorough manner.

Another object of my invention is the provision of a glue-spreading machine which will operate upon straight or curved surfaces, which is adjustable in every particular, and which is the embodiment for a machine of this kind of simplicity and durability, and also which is inexpensive to manufacture and will also operate and perform its functions in a perfect and thorough manner.

To attain the desired objects, the invention consists of a glue-spreading machine embodying novel features of construction and combination of parts, substantially as disclosed herein.

Figure 1 represents a front elevation of my improved glue-spreading machine, the glue-pot being in section. Fig. 2 is a side elevation thereof, showing the normal position of the glue-spreading mechanism, the glue-pot also being in section; and Fig. 3 is a similar view with the glue-spreading mechanism in the position it assumes when ready for use.

In the drawings the numeral 1 designates the base, having mounted thereon the standards 2, the braces 3, and the glue-pot support 4.

Secured upon the face of the standards are the guides 5, between which is mounted the movable frame 6, upon whose rear edges are the rack-teeth 7, which are operated upon or engaged by the gear-wheels 8, mounted upon the shaft 9, which is journaled in the standards, said shaft being operated upon by the

hand-wheel 10 to raise or lower the movable frame 6. Journaled in this frame 6, near the top thereof, is the shaft 11, having the sprocket-wheel 12, over and around which passes the sprocket-chain 13, said sprocket and chain being revolved by means of the shaft 14, journaled in the bearings 15 on the braces 3 and carrying the loose and fast pulleys 16 and 16<sup>x</sup>, which are operated upon by a band from any kind of power or driving mechanism, and secured upon the end of the said shaft is a sprocket-wheel 17, which is adapted to revolve the sprocket 12, and chain 13 to revolve the shaft 11. Upon the other end of the shaft 11 is the bevel gear-wheel 18, which meshes with the bevel gear-wheel 19 upon the end of the vertical shaft 20, which is journaled in the bearings 21, and secured upon the lower portion of said shaft with their faces toward each other are the bevel gear-wheels 22 and 22<sup>x</sup>, the top one of which is slidably mounted upon the portion 20<sup>x</sup> of the vertical shaft 20, and both of said gear-wheels are adapted to engage the bevel gear-wheels 23 and 23<sup>x</sup>, mounted upon the ends of the rollers 24 and 24<sup>x</sup>.

The roller 24 is mounted in the sliding frame 25, which is held in the frame 6 by means of the guide-strips 26 and through which frame at the top are the adjusting-screws 27, which are journaled in the braces 28, and upon the upper ends of the said adjusting-screws are secured the bevel gear-wheels 28<sup>x</sup>, whose teeth mesh with the bevel gear-wheels 29, secured upon the shaft 30, which is journaled in the bearings 31, secured in the upper portion of the frame 6, said shaft having one end squared for the reception of a handle, which is revolved to raise the sliding frame to spread the rollers apart so as to receive a thin or a thick piece of board. Secured to this sliding frame just in front of the top roller is the glue-feeding receptacle 32, having openings in its bottom so as to feed the glue to the top roller while the machine is in operation, and also secured to the top roller at its ends are the arms 33, and having secured therein the curved arm 34, having resting thereon the other oppositely-arranged curved arm 35, whose ends are forced downward by means of the set-screws 36, mounted in the braces or arms 37, which are secured to the upper parts of the sliding



frames 25, the whole forming a tension device for the rollers. The roller 24<sup>x</sup> is journaled in vertical bearings 38, which are mounted between the end of the frame and the foot 39 of said frame.

Resting upon the glue-tank support 4 is the tank 40, which is adapted to contain the water, and suspended in said tank is the glue-pot 41, into which the frame 6 is adapted to be placed or over which it is adapted to be operated. The frame 6 is so constructed that when raised to its highest position for use the lower roller's lowest point on its surface will be immersed in the glue.

I would state here that the roller's surface may be covered with felt or carpet or in fact with any material that would operate as desired.

From this description, taken in connection with the drawings, the operation of the machine is readily understood, but briefly stated is as follows: In Fig. 1 the frame is lowered, being out of use, but when it is desired to use the machine the movable frame 6 is raised by means of the rack-and-sprocket mechanism to the position shown in Fig. 3, the rollers being adjusted to the thickness of the board, the spreading mechanism is set in action by means of the vertical shaft and the horizontal shafts which carry the bevel gear-wheels and the fast and loose pulleys which are connected to the driving mechanism, and it will be seen that the machine may be stopped or set in action by shifting the band from the driving power from the loose to the fast pulley, or vice versa. It will thus be seen that when the machine is not in use both the glue-spreading rollers and the glue-tank carried by the upper roller are fully immersed in the main glue-tank, which being kept heated prevents the glue on the rollers and in the small tank from hardening, and also that the small tank is filled in preparation for use. When the machine is to be used, the frame carrying the two rollers is lifted to raise the upper roller entirely out of the glue and permit the passage of material between the rollers, while the lower roller still remains sufficiently within the tank to receive glue therefrom and apply it to the lower surface of the material, while the upper roller applies the glue to the upper surface thereof as the material is passed between the rollers.

It is evident that I provide a glue-spreading machine which is adjustable to accommodate various thicknesses of board, which is easily and quickly set in motion or stopped, and which is simple and durable, as well as extremely cheap and practical.

I claim—

1. In a glue-spreading machine, the combination with a main vertical frame, guides mounted upon the upper forward portion thereof, a sliding frame mounted in said guides, and glue-spreading mechanism mounted in said sliding frame, having one stationary and one adjustable member, means for

holding said mechanism at any desired point, mechanism for operating said members, means for raising and lowering said sliding frame, a glue-receptacle in the main frame under the sliding frame, to allow the spreading mechanism to be completely immersed therein when not in use and to feed glue to the lower portion of said mechanism when in use.

2. In a glue-spreading machine, the combination of a main vertical frame, guides mounted upon the forward part of said frame, a frame slidably mounted in said guides, means for raising and lowering said frame and holding it at any desired location between its limit of movement, a glue-spreading mechanism located in the lower portion of said frame having a lower stationary member, and an upper adjustable member, mechanism for operating said members, and a glue-receptacle arranged upon said main frame to allow the spreading mechanism to be completely immersed therein when not in use and to feed glue to the lower stationary roller of said mechanism when in use.

3. In a glue-spreading mechanism or machine, the combination with a suitable frame, of a glue tank or receptacle mounted upon said frame, of a sliding frame mounted upon the frame above the glue-receptacle carrying the glue-spreading mechanism, mechanism for raising and lowering said sliding frame from and into the glue-tank, so that the glue-spreading mechanism may be completely immersed or only a portion thereof be immersed, means for adjusting the glue-spreading mechanism, and mechanism for operating said spreading mechanism mounted in the upper part of the frame.

4. In a glue-spreading machine, the combination with the frame consisting of the base, the standards rising therefrom, and the braces connected to the standards and base, of the glue tank or receptacle mounted upon the base, and resting against the standards, a movable or sliding frame mounted in guides upon the front of the standards and having rack-teeth on the rear sides thereof, a shaft mounted near the top of the standards carrying a gear-wheel and hand-wheel adapted to engage said teeth on the movable frame to raise or lower the said frame, glue-spreading mechanism mounted in the lower end of the frame consisting of the lower stationary roller, and the upper adjustable roller, a vertical shaft carrying gears adapted to revolve said rollers, and mechanism near the top of the standards and connected to the braces for revolving the said vertical shaft.

5. In a glue-spreading machine, the combination with a suitable frame, of a glue tank or receptacle having means to heat the glue connected therewith and secured upon said frame, guides mounted on the front of the frame above said tank, a movable frame adapted to slide in said guides, means for raising and lowering said frame from and into said tank,



a glue-spreading mechanism mounted in the lower end of the frame and adapted to be immersed in the glue-tank and consisting of the stationary roller and the adjustable roller, said adjustable roller carrying a glue-feeder receptacle in such a position as to feed the glue to the roller when the rollers are in operation, and means for operating the glue-spreading mechanism mounted in said frame.

6. In a glue-spreading machine, the combination with a suitable frame, of the glue-tank mounted upon the lower part of the frame, a movable frame mounted in guides on said frame above the glue-tank and adapted to have its lower end raised out of or lowered into the glue in the tank, glue-spreading mechanism mounted in the lower portion of said movable frame, means for separating or adjusting the said mechanism in the movable frame, and mechanism for operating the glue-spreading mechanism consisting of the vertical shaft and horizontal shaft mounted in said movable frame, and another horizontal shaft mounted in the main frame and having sprocket-chain connection with the other hori-

zontal shaft and also carrying fast and loose pulleys to revolve said shaft to operate the glue-spreading mechanism.

7. In a glue-spreading machine, the combination with a main frame, guides mounted upon said frame, a sliding frame mounted in said guides, means for raising and lowering the sliding frame, a spreading mechanism located in said sliding frame, consisting of a stationary lower roller and a top adjustable roller carrying a glue-feeding tank, mechanism for operating said rollers, and a heated glue-receptacle arranged upon the main frame, below the sliding frame to allow the spreading mechanism to be completely immersed therein when not in use and to feed glue to the lower stationary member of said mechanism when in use.

Signed by me, at Richmond, Wayne county, Indiana, this 22d day of August, 1898.

WILLIAM C. BOSENBURY.

Witnesses:

J. C. BOONE,

CHARLES S. BOSENBURY.