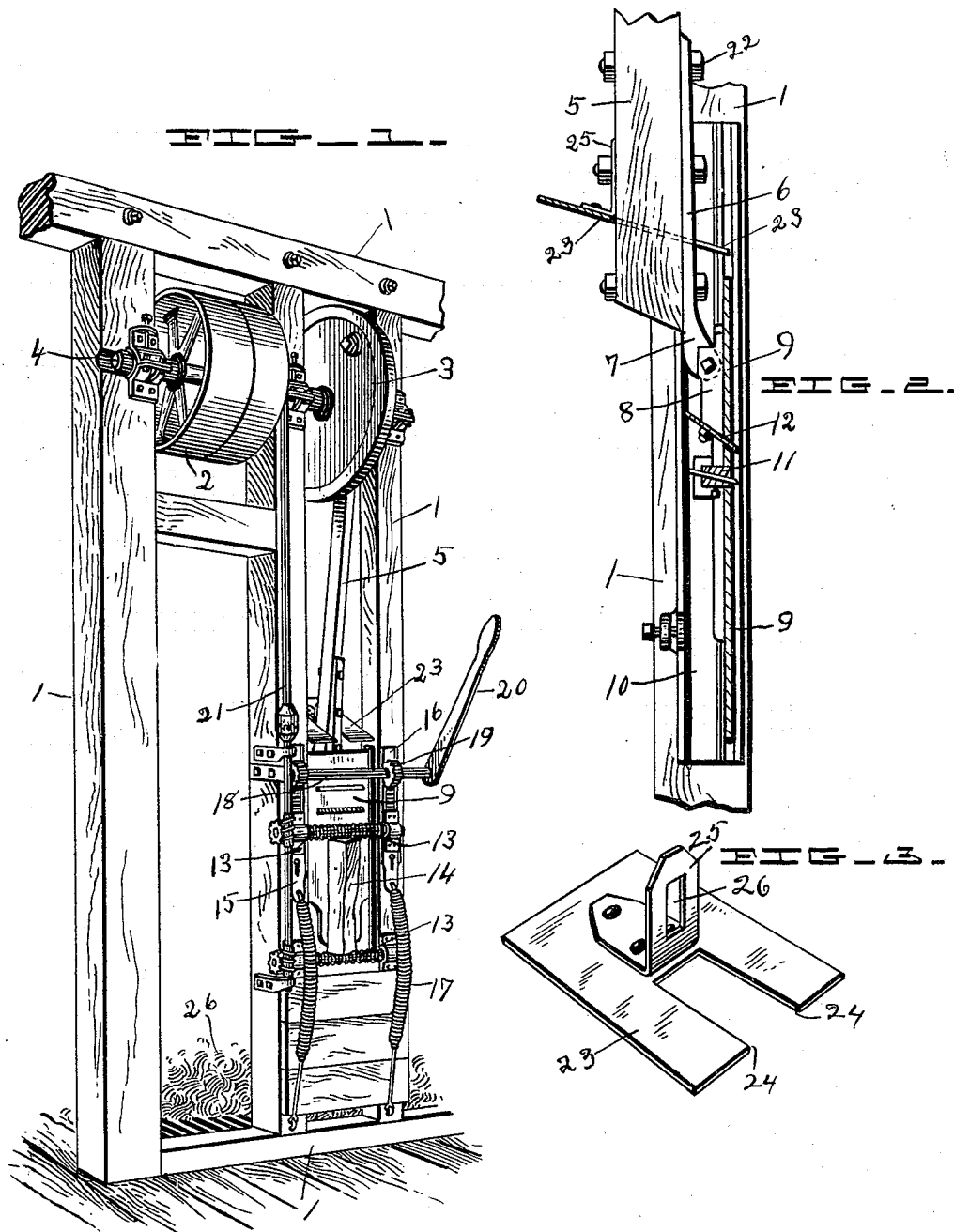


(No Model.)

T. M. SHANK.
EXCELSIOR MACHINE.

No. 520,618.

Patented May 29, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS M. SHANK, OF KENOVA, WEST VIRGINIA.

EXCELSIOR-MACHINE.

SPECIFICATION forming part of Letters Patent No. 520,618, dated May 29, 1894.

Application filed March 6, 1894. Serial No. 502,602. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. SHANK, of Kenova, county of Wayne, and State of West Virginia, have invented certain new and useful Improvements in Excelsior-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

10 This invention relates to an attachment on excelsior machines whose object is to prevent excelsior, while being cut and while the machine is running, flying in a place where it will be tramped upon and otherwise injured, 15 lost and wasted.

In vertical excelsior machines, for example, an upward stroke of the pitman and knife plate, or cross head, causes suction or upward draft which catches some excelsior and carries it upward. In such machines all the excelsior as it is cut should fall down behind the machine. There a place is provided for it and kept clean. In front of the machine there is always trash, sticks, splinters, &c., 25 and the operator stands there while feeding the machine, whereby the floor becomes unfit to receive excelsior. That portion of the excelsior fibers, which is drawn upward by the upward movement of the knife plate, is largely caused to fall in front of the machine 30 when the knife plate moves down, or to fall in some other part of the room where it will be trampled upon or lost. If it falls in front of the machine, the next time the operator feeds, he will trample it in the dirt. My invention is intended to prevent this loss by throwing or blowing the excelsior which rises upward during the upward movement of the knife plate, downward and backward on the 40 pile of excelsior behind the machine.

I have tested this improvement in my excelsior factory considerably and find that by it I do not lose any excelsior whatever, not a fiber, by reason of the cause above mentioned. 45

The nature of this improvement will appear more fully from the following description and the annexed drawings.

Figure 1 shows the front of a well known 50 upright excelsior machine, the view being slightly in perspective. Fig. 2 is a central

vertical section through the knife plate and lower end of the pitman. Fig. 3 is a detail view of my attachment.

In detail, 1 is the framework of the machine 55 having mounted in the upper part a pulley 2 with a crank wheel 3 on the shaft 4. Connected with the crank wheel 3 is a vertical moving pitman 5 usually made of wood.

6 is an iron plate bolted at the lower end 60 of such pitman and provided with a wrist 7 which is pivotally secured to the bracket 8 on the rear face of the knife plate 9.

10 is a slide way mechanism or guide for the knife plate. 65

11 is a spur block and 12 the planing knife. On the front of the machine are feed rollers 13 to hold the block of wood 14, such feed rollers being mounted in the cogsliding plates 15 which slide in the bed plate 16 and is normally held down by the springs 17. 70

18 is a shaft provided with pinions 19 and a handle 20 used for elevating the upper feed roller.

21 is a mechanism for feeding the feed rolls. 75 This is, so far, a description of a well known machine and not my invention.

It is observed in this machine that there are three bolts 22 which secure the plate 6 to the lower end of the pitman. By means of 80 the middle one of these three bolts I secure to the rear of the pitman the plate 23 constructed as shown in Fig. 3. This plate has a recess cut out of it at 24, of such size as to receive the pitman and enable the plate to 85 pass by each side of the pitman as shown in Figs. 1 and 2. The depth of this recess should be such as to enable the forward edge of the plate to extend over but not beyond the upper end of the knife plate. If it extends beyond 90 the knife plate it will strike the stationary parts of the front of the machine. This plate 23 is secured to the pitman by means of the bracket 25 provided with the slot 26 which is adapted to fit over the middle bolt on the 95 pitman whereby the nut when screwed down will hold it rigidly in position. The length of the slot 26 in the bracket 25 should be such as to enable a vertical adjustment of the plate 23 so as to keep the front edge of the plate as 100 near the upper edge of the knife plate 9 of the machine as possible. The dimensions of the

plate 23 of course will depend upon the size and construction of the machine; it should not be so large as to interfere with any of the fixed parts but at the same time should be large enough to accomplish the object which is desired. Of course there are other readily suggested forms of attaching this plate 23 to the pitman or knife plate so as to accomplish the object of my invention. 26 is the pile of excelsior. It is to be observed that this plate will prevent any excelsior which is drawn upward by the upward lift of the knife plate and pitman from getting over the top of the knife plate when the latter goes down and the downward movement of the pitman with the plate 23 on it will create a downward and somewhat backward blast which will blow the excelsior down into the place desired. Therefore it is preferable to attach the plate 23 at about the angle shown in Fig. 2 to give proper direction to the blast against the flying excelsior behind the machine. To set the plate in the desired angle all that is necessary is to alter the angle of the bracket 25. Therefore it is seen that the vertical and the angular position of this plate are both readily adjustable. The saving in excelsior which results from this improvement in the course of a year amounts to a large sum and therefore renders the improvement a valuable and meritorious one.

Without limiting myself to the specific form shown, what I claim as my invention, and de-

sire to secure by Letters Patent of the United States, is the following:

1. In an excelsior machine, a guard plate mounted on a reciprocating part of the machine and adapted to prevent flying excelsior from falling where it will be wasted.

2. In an excelsior machine, a guard plate mounted on the pitman and set at such an angle that it will throw flying excelsior into the proper place.

3. In a vertical excelsior machine, a guard plate so mounted on a reciprocating part of the machine and at such an angle that it will prevent flying excelsior from escaping over the knife plate to the front and throw the same into its proper place.

4. In an excelsior machine, a recessed guard plate adapted to fit on and about the pitman and means of adjustably connecting such guard plate to the pitman.

5. In an excelsior machine, the combination with the pitman and knife plate, of the guard plate recessed so as to fit about the pitman, and a bracket secured to such guard plate and provided with a slot whereby such guard plate can be so attached to the pitman that it will be vertically and angularly adjustable.

In witness whereof I have hereunto set my hand this 21st day of February, 1894.

THOMAS M. SHANK.

Witnesses:

I. N. POTTS,

W. B. WILSON.