

No. 707,806.

Patented Aug. 26, 1902.

E. E. THOMAS.
LUMBER CONVEYER.

(Application filed Jan. 21, 1902.)

(No Model.)

3 Sheets—Sheet 1.

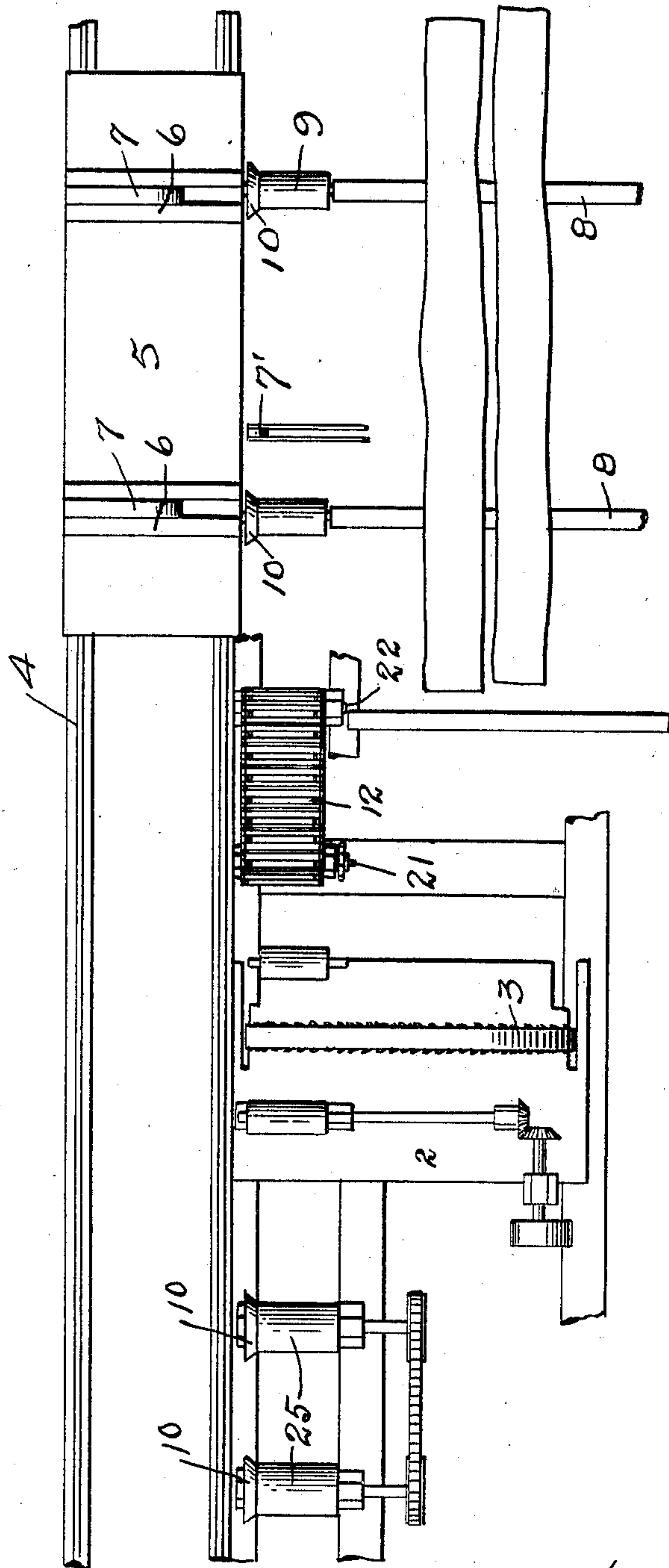


FIG. 1.

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No. 707,806.

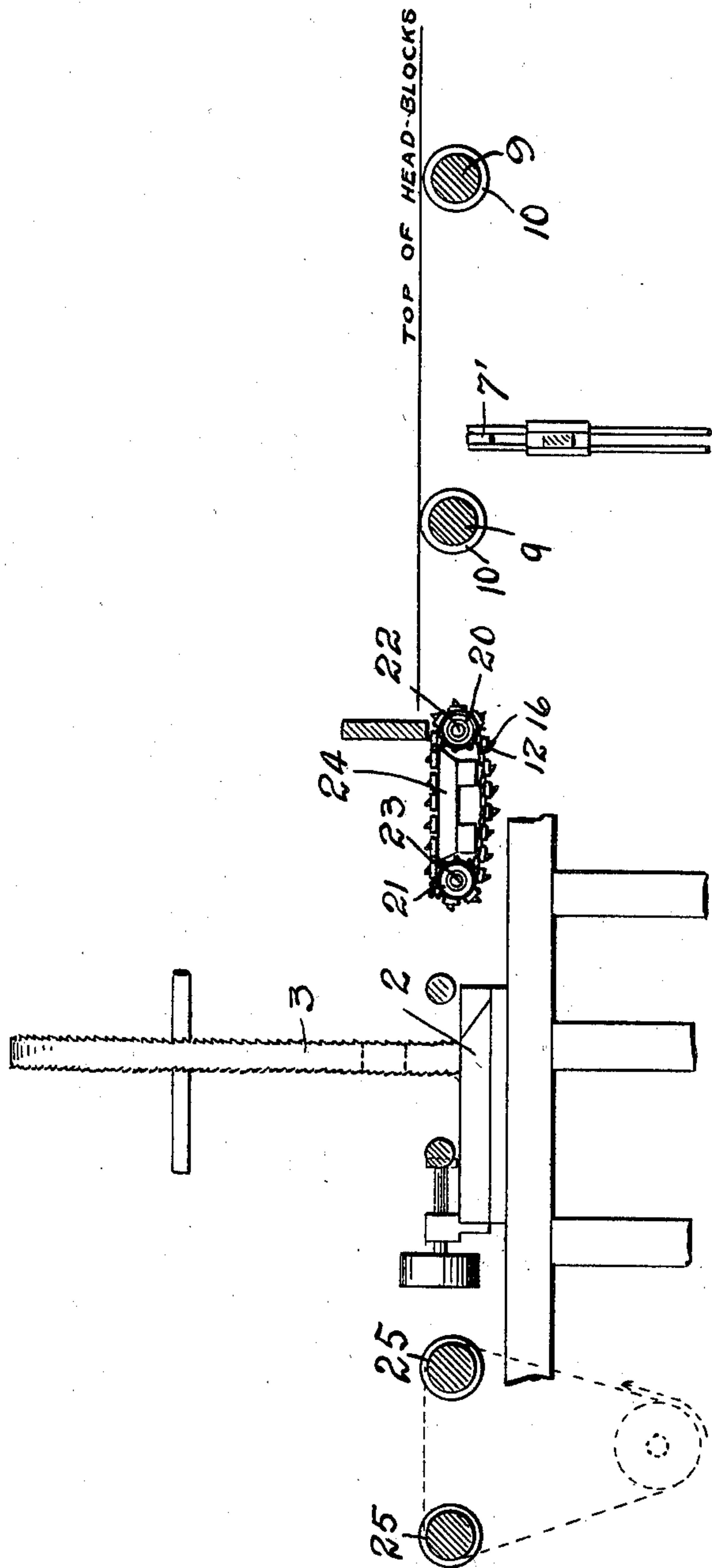
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3 Sheets—Sheet 2.



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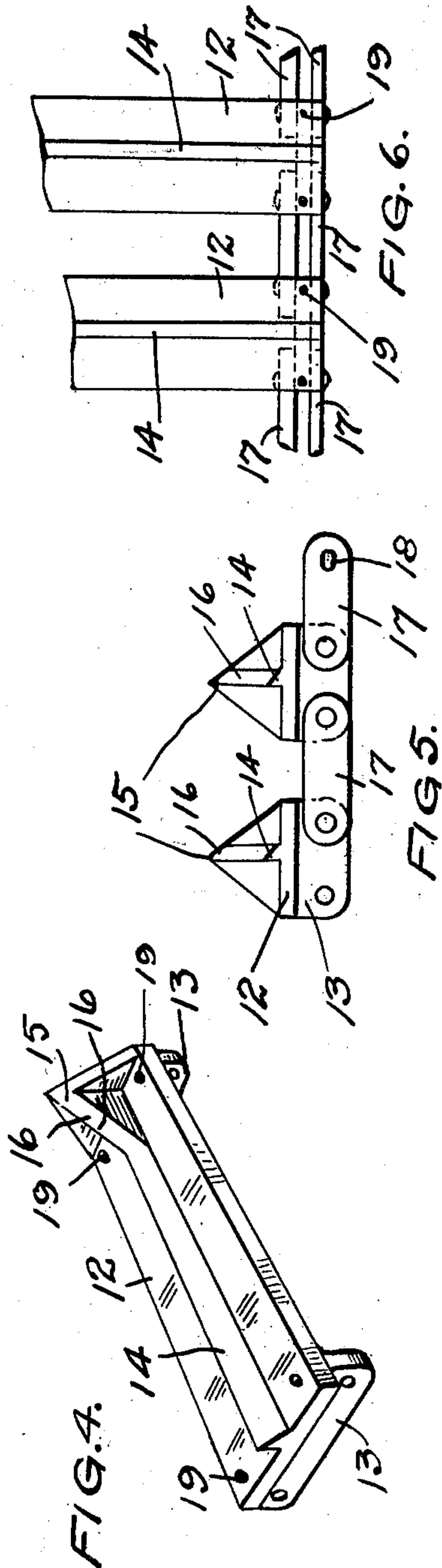
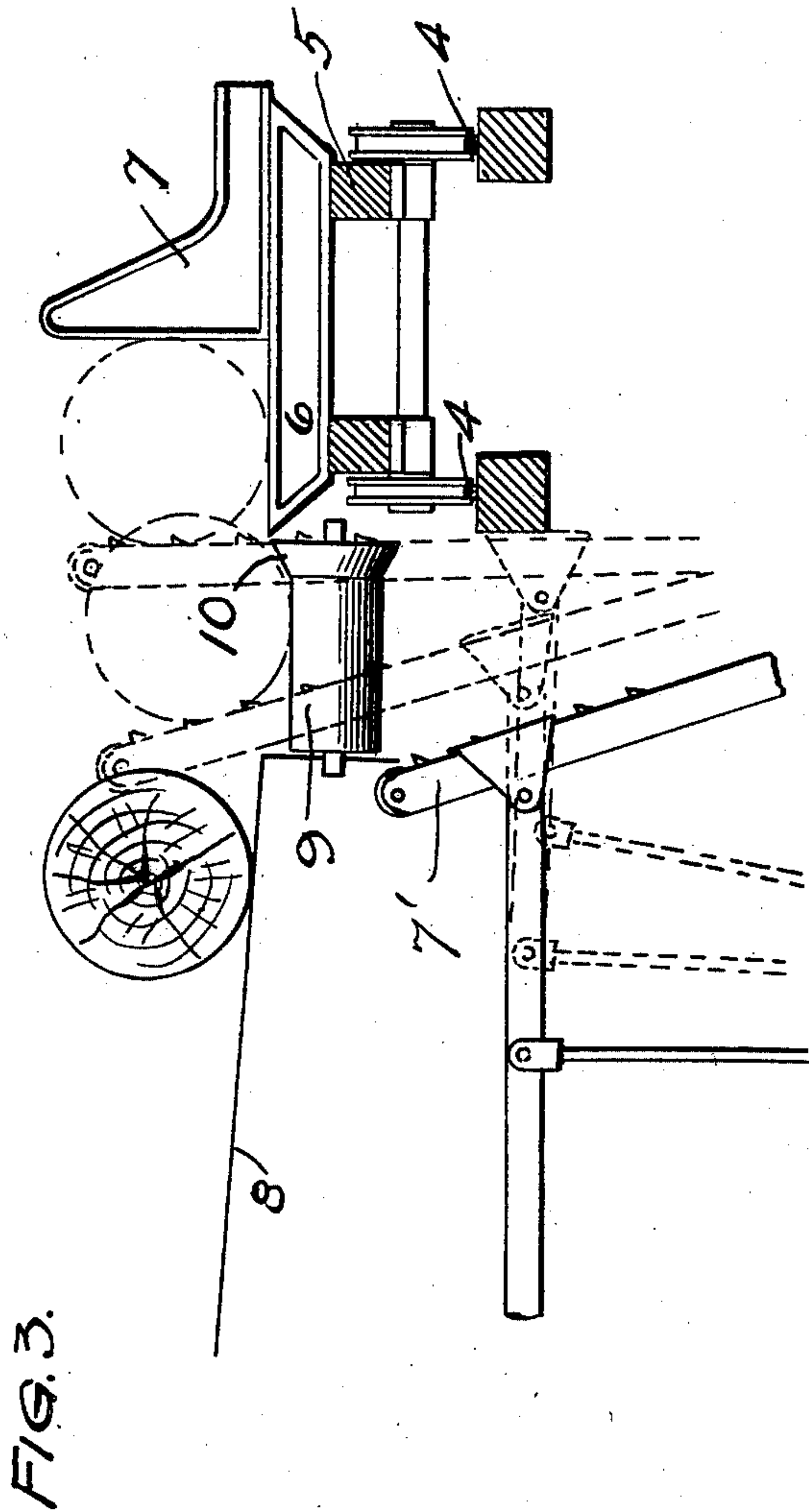
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

EDWIN E. THOMAS, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-HALF TO UNION IRON WORKS, OF MINNEAPOLIS, MINNESOTA, A CORPORATION OF MINNESOTA.

LUMBER-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 707,806, dated August 26, 1902.

Application filed January 21, 1902. Serial No. 90,650. (No model.)

To all whom it may concern:

Be it known that I, EDWIN E. THOMAS, of St. Paul, Ramsey county, Minnesota, have invented certain new and useful Improvements in Lumber-Conveyers, of which the following is a specification.

My invention relates to sawmill machinery; and the object of the invention is to provide means whereby the logs may be transferred with greater ease from the deck to the carriage.

A further object is to provide means for causing the lumber as it falls from the carriage to assume a proper and safe carrying position on the conveyer.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in providing moving lumber-guides between the conveyers or supports and carriage and over which the logs may be easily raised or rolled onto the head-blocks.

Further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a double-cutting band-mill with my invention applied thereto. Fig. 2 is a side elevation of the mill and the lumber-conveying means. Fig. 3 is an end view showing the position of the lumber-supporting means with respect to the log deck and carriage. Figs. 4, 5, and 6 are details showing the construction of the moving lumber-conveyer.

In the drawings, 2 represents a band-mill; 3, a saw of the double-cutting type; 4, the track; 5, the log-carriage, provided with the usual head-blocks 6 and knees 7, and 7' a steam nigger-bar of the usual type.

8 represents the log-deck, suitably spaced from the track and carriage, and in said space I provide idle rolls 9, that are preferably supported in fixed bearings below the level of the head-blocks, so that as the lumber falls therefrom on the backward or return movement of the carriage it will drop a sufficient distance to insure its assuming the proper carrying position on the lumber-conveyer. To guide the lumber and cause the lower edges thereof to

swing outward in falling, a movement that usually has been accomplished by hand, I provide said rolls with cone-shaped or beveled faces 10, which act as guides to receive the lower edges of the lumber and direct it to its proper flatwise position on the rolls. These faces may be integral with or arranged on disks independent of the rolls, as preferred, and extend from the ends of the rolls to a point substantially on a level and near the head-blocks and serve to bridge the space between the rolls and blocks, so that the lumber will slide easily from one to the other. These rolls are below the level of the log-deck to serve as guides over which the logs are rolled from the deck to the carriage. The logs may be rolled from the deck by power or by hand and are then lifted or rolled from the rolls up onto the head-blocks by the usual steam nigger-bar. During this operation of raising the logs onto the blocks the cone-faces will present smooth inclined surfaces over which the logs may be easily moved without striking the ends of the head-blocks or any other obstruction, and the loading of the logs onto the carriage can be accomplished easily and without danger of shock or jar to the carriage or the mechanism arranged thereon.

Between the log-deck and the saw I provide a lumber-conveyer belt or bed, consisting of bars or slats 12, having depending lugs 13 at their ends and provided with longitudinal ribs 14, which at their inner ends terminate in teeth 15, that have inclined faces or edges 16. The bars 12 are arranged at intervals and connected by links 17, which are provided with slots 18, through which the rivets are inserted into holes in the lugs 13. The rivets are fastened in the slots, but turn in the holes in the lugs, and the bearings therein may be kept lubricated through oil-holes 19. The links 17 pass over sprocket-wheels 20 and 21, mounted upon shafts 22 and 23, provided in suitable bearings, and the bars 12 travel over a table or floor 24, provided between said shafts. The ribs 14 have edges to engage the under side of the lumber and move the same toward the live rolls on the opposite side of the band-mill, and the beveled or inclined faces 16 receive and direct the lower edges of the lumber as it falls from

the head-blocks to a flat carrying position on the bars of the conveyer. These inclined faces 16 also prevent the lumber from working over to the inner side of the conveyer and coming in contact with and being cut by the saw while passing the same. After leaving the conveyer the lumber is engaged by the live rolls 25, driven by any suitable means (not shown) on the opposite side of the band-mill from said conveyer, and these rolls are provided with beveled faces, corresponding to those already described, which serve to direct the lumber that is cut to the proper position on the rolls. By providing the rolls with inclined surfaces I am able to load the logs with greater ease and be assured that the lumber as it falls from the head-blocks will slide down to its proper carrying position upon the rolls and conveyer without the assistance of an attendant, and the inclined faces on the conveyer-bed not only direct the lumber thereon, but prevent it from coming in contact with the saw while passing away from the mill.

I claim as my invention—

1. The combination, with a saw, log-deck and carriage, of an endless conveyer belt or bed arranged below the level of the carriage-blocks and whereon the lumber falls that is cut on the backward or return movement of the carriage, said bed being composed of a series of slats or bars arranged at intervals, ribs provided lengthwise of said bars, and faces provided at or near the inner ends of said bars and inclined toward the middle of the same to receive the lower edges of the lumber as it falls from the carriage.

2. The combination, with a double-cutting band-mill and the log-carriage, of rolls arranged to receive the lumber as it falls from the carriage, cone-shaped or beveled faces provided near the inner ends of said rolls to receive the lower edges of the lumber and direct it to its proper flatwise carrying position on said rolls and an endless lumber-conveying bed or belt having slats provided near their inner ends with inwardly-inclined surfaces.

3. In a sawmill, a lumber-conveyer comprising a series of bars or slats and links connecting the same, said bars being provided near one end with inclined faces to engage the lumber and direct it to its proper carrying position on said bars, and means for driving said conveyer.

4. The combination, with a band-saw mill, of a lumber-conveyer bed or belt provided near the saw and comprising a series of metal bars or slats and links connecting the same, and projections or teeth provided near the inner ends of said bars and having inclined faces to receive and direct the lumber to the proper carrying position on said bars and said projections being also adapted to act as guides to prevent the lumber from coming in contact with the saw while traveling over said conveyer.

In witness whereof I have hereunto set my hand this 18th day of January, 1902.

EDWIN E. THOMAS.

In presence of—

RICHARD PAUL,
M. C. NOONAN.