No. 662,720.

Patented Nov. 27, 1900.

W. HANSMANN.

SAWING MACHINE.

(Application filed July 26, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

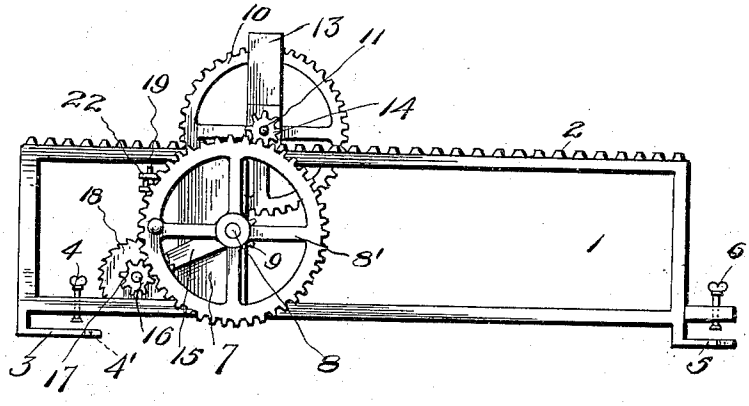


Fig. 2.

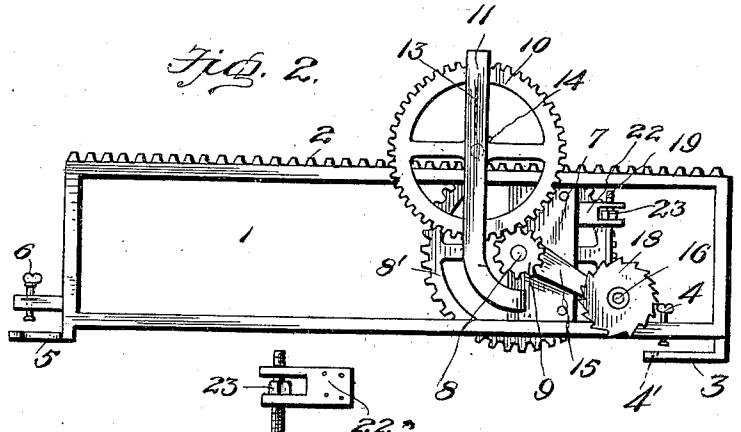
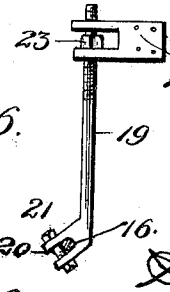


Fig. 6.



Witnesses.
C. C. Hunt.
H. Allison

Inventor
William Hansmann,
by
H. B. Williamson & Co
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

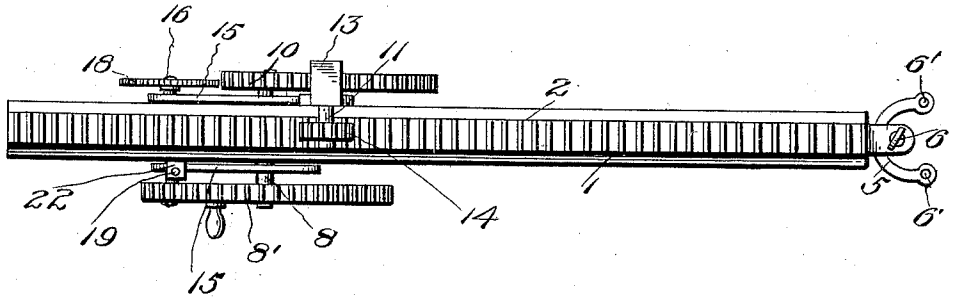


Fig. 4.

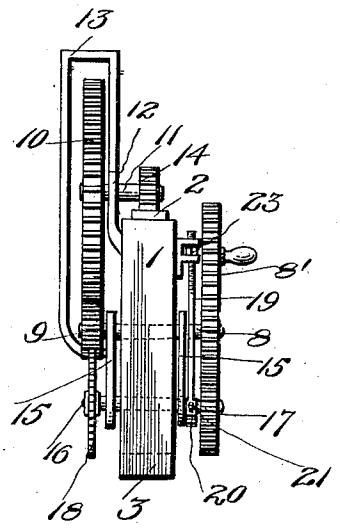
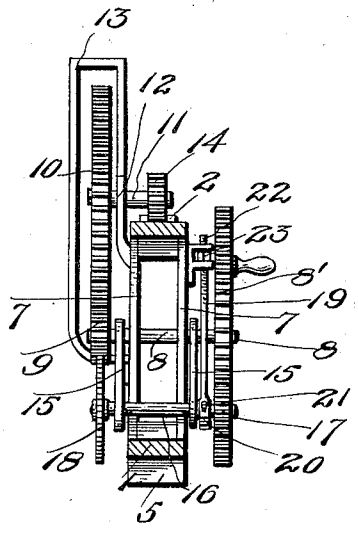


Fig. 5.



Witnesses
C. C. Hunt
Robt. Addison

Inventor
William Hansmann
by A. B. Williamson & Co
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM HANSMANN, OF MANSON, IOWA.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 662,720, dated November 27, 1900.

Application filed July 26, 1900. Serial No. 24,897. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HANSMANN, a citizen of the United States, residing at Manson, in the county of Calhoun and State of Iowa, have invented certain new and useful Improvements in Sawing-Machines; and I do 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 improvements in sawing-machines, and has for its object to provide a simple and effective construction of machine for cutting through the walls of frame buildings onto which extensions are to be built or corner-boards secured and for cutting out door and window openings.

The invention is primarily designed to provide a transportable machine which will perform its work in an effective manner and form a clean joining-line and prevent injury to the material caused by tearing or cutting through the wall in the usual way.

With this and other minor objects in view the invention consists of certain novel features of construction and combination and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a front or outer side elevation of a sawing-machine embodying my invention. Fig. 2 is a rear or inner side elevation thereof. Fig. 3 is a top plan view. Fig. 4 is a rear or lower end elevation. Fig. 5 is a cross-section through the main frame looking toward the rear of the saw-carrier and gearing. Fig. 6 is a cross-section through the saw-shaft and detail side elevation of the adjusting device therefor.

Referring now more particularly to the drawings, wherein like reference-numerals designate corresponding parts throughout the several views, the numeral 1 represents the open main frame of the transportable sawing-machine, which is rectangular in form and comparatively long and narrow, having the general shape of a rectangular loop and provided along its upper rail with rack-teeth, forming a longitudinal rack-bar 2. At each end this frame is provided with fastening devices for securing it to the clapboards or wall of a building, said fastening devices being located in the same horizontal plane below the bottom rail of the frame. The fastening device at the rear or lower end of the frame consists of a forwardly-extending hook or shoe 3, provided with a screw-clamp 4 for engagement with a clapboard when the building is provided with clapboards and with one or more holes 4′ for the passage of nails or screws when the building is not so provided. The fastening device at the front of the frame also projects forwardly or outwardly and comprises a U-shaped member 5, with which coacts a clamping-screw 6 on the forward end of the frame. The free ends of this U-shaped member are formed with holes 6′ for the passage of nails or screws when the wall of the building is smooth and without clapboards. When the wall of the building to be operated upon is provided with clapboards, the free ends of the parts 3 and 5 are inserted beneath the projecting edges of two adjacent clapboards and the screw-clamps 4 and 6 brought to bear upon the outer surfaces of the clapboards to clamp the frame thereto; but when the wall of the building is smooth the parts 3 and 5 rest thereon and are fastened thereto by screws or nails passed through the holes 4 and 6, as will be readily understood.

In the main frame is mounted a traveling saw-carrier frame formed of side boards or plates 7, connected by bolts or other suitable connecting means. In this frame is mounted a transverse drive-shaft 8, to one of the projecting ends of which is fixed a spur drive-gear 8′ and to the opposite projecting end a pinion 9. This pinion meshes with a gear-wheel 10, mounted upon the outer end of a counter-shaft 11, located above said drive-shaft 8 and journaled in a bracket-arm 12, rising from the saw-frame, which bracket-arm is reinforced by a brace 13, also rising from the saw-frame. A pinion 14 is mounted upon the inner end of the counter-shaft 11 and meshes with the rack-bar 2, whereby motion is communicated from the drive-gear 8 to cause the saw-frame to travel longitudinally back and forth in the main frame 1, as will be readily understood.

Upon the ends of the drive-shaft 8 are pivotally mounted the forward ends of two swinging arms 15, in the rear ends of which is journaled the saw-shaft 16, which carries at one

end a pinion 17, meshing with the drive-gear 8', and at its other end a circular saw 18. The saw and saw-shaft are thus adjustably mounted to swing in a vertical plane, so that the saw may be raised or lowered, as desired. To adjust and hold these parts fixed in adjusted position, an adjusting-rod 19 is provided. This rod is provided at its lower end with a slotted extension 20 to receive the saw-shaft and a set-screw 21 to retain the shaft in position and at its upper end is fitted to slide loosely in a bifurcated bracket 22, fixed to the saw-carrier frame and provided with an adjusting-nut 23, by adjusting which the saw and saw-shaft may be raised and lowered in an obvious manner. The gearing is so constructed and arranged as to move the saw-carrier frame slowly in the main frame while revolving the saw at a rapid rate of speed.

In the practical operation of the machine the main frame 1 is secured to the wall of the building in the manner hereinbefore described, so as to extend longitudinally of and bring the saw in the line along which it is to cut. The gearing is then operated to cause the saw to travel forwardly in the frame 1 and to cut through the wall of the building as it travels along. If the surface to be cut is longer than the length of the machine, the latter is then adjusted along said surface and the operation continued until the work is completed. The wall of the building may thus be rapidly and cleanly cut through to remove a portion of the building for the reception of a wing or addition or to form a door or window opening without marring or injuring the material. The gearing is so constructed and arranged in the present instance that a left-hand rotation of the drive-wheel is required to revolve the saw and propel the saw-frame forwardly; but it will of course be understood that a chain-and-sprocket or other suitable mechanism may be employed to secure the proper motion of the parts by a right-hand rotation of the drive-gear.

Changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

In a transportable sawing-machine, the combination of an open main frame provided with fastening means and with a rack-bar, a saw-carrier frame mounted to travel in said main frame, a drive-shaft carrying a pinion and a drive-gear, a counter-shaft carrying a pinion meshing with the rack-bar, and a gear meshing with the first-named pinion, a saw-shaft pivotally mounted and carrying a saw and operated by the drive-gear, and means for adjusting the saw-shaft and saw and holding the same fixed in adjusted position, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM HANSMANN.

Witnesses:
SWAN CARLSON,
M. J. FOLEY.