S. N. KRAWCHENKO.

SAWING MACHINE.

APPLICATION FILED AUG. 19, 1908.

928,135.

Patented July 13, 1909.

2 SHEETS—SHEET 1.

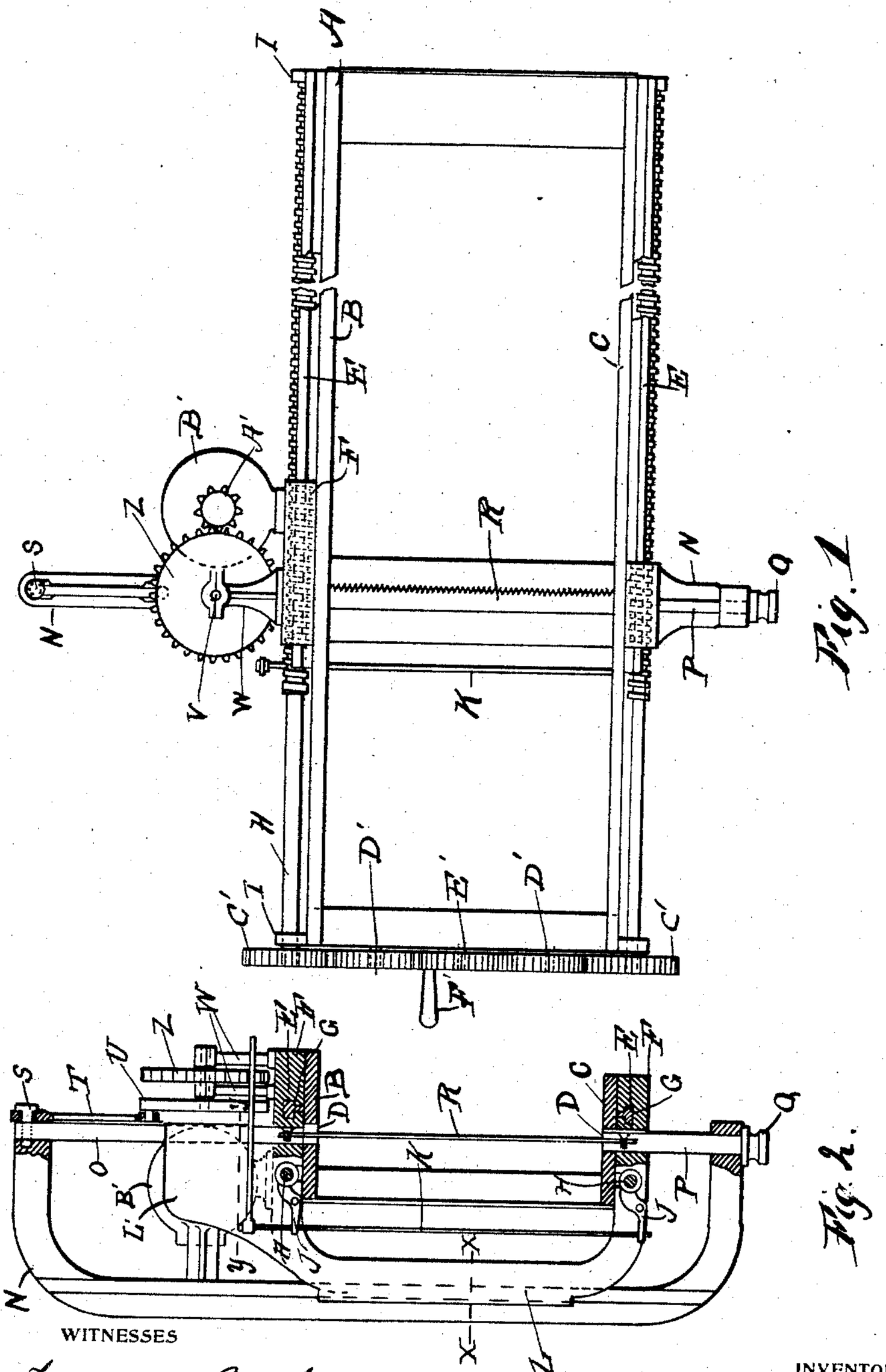

Fig. 1.

Fig. 2.

WITNESSES

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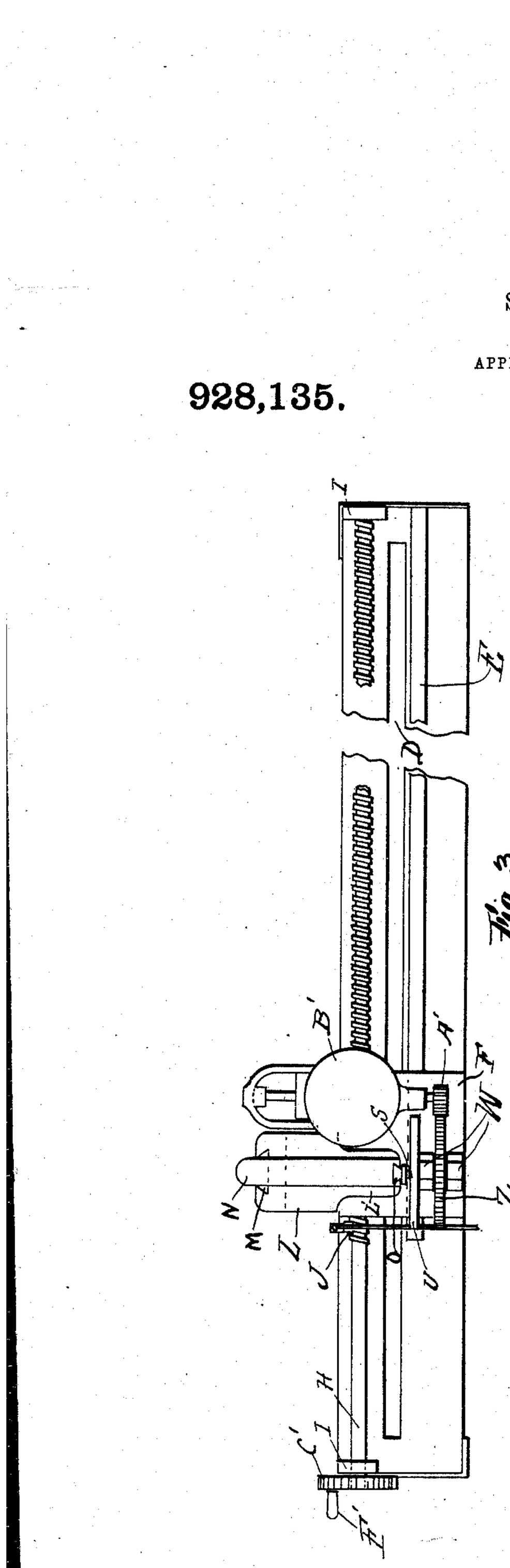

Fig. 3.

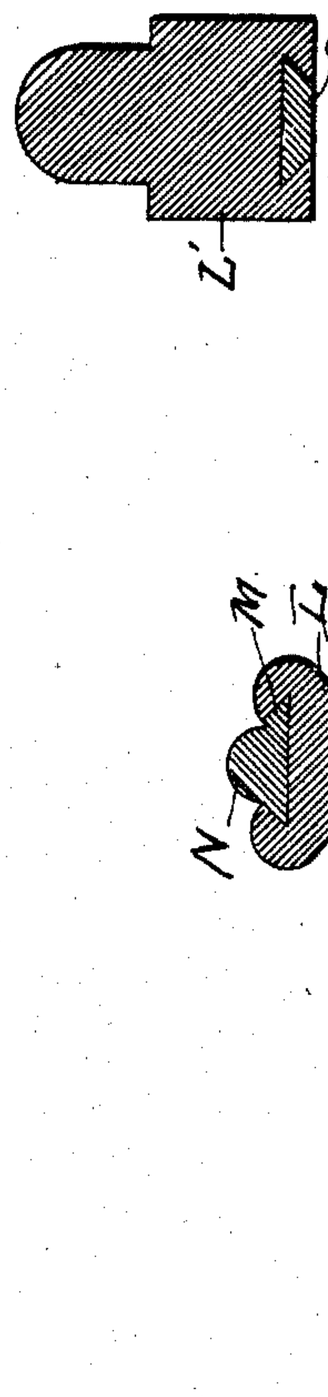

Fig 5

Fig 4

Fig. 6

WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL N. KRAWCHENKO, OF WILMINGTON, DELAWARE.

SAWING-MACHINE.

No. 928,135. Specification of Letters Patent. Patented July 13, 1909.

Application filed August 19, 1908. Serial No. 449,207.

To all whom it may concern:

Be it known that I, SAMUEL N. KRAWCHENKO, a citizen of the United States, residing at Wilmington, county of Newcastle, and State of Delaware, have invented a certain new and useful Improvement in Sawing-Machines, of which the following is a specification.

My invention relates to a new and useful improvement in sawing machines adapted for a variety of uses but designed with special reference to ship builders' use.

It is a well known fact that in building ships especially those known as scows and freighters very large timbers are used and portions of these have to be cut away so as to form a joint, and this is done to-day by sawing a little way and then chopping a piece out which takes a considerable length of time, and this piece that is taken out is wasted as it is in very small pieces, but by the use of my improved saw this may be overcome because said saw will be fastened to the timber by the lower portion of the frame and the timber then sawed the desired length, thus taking the whole piece out at one time so that it may be kept for other uses.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of my improved sawing machine. Fig. 2, an end view thereof, portions thereof being broken away to more fully show some of the parts. Fig. 3, a plan view thereof. Fig. 4, a sectional view at the line X—X of Fig. 2. Fig. 5, a section at the line Y—Y of Fig. 2, and Fig. 6, a plan view of one of the timbers and the cuts which are generally made on the same.

In carrying out my invention as here embodied, A represents the frame of the sawing machine having an upper table B and a lower table C in which are formed the slots D. With these tables are also formed the guides E for guiding the carriages F in which are formed the slots G the same shape as the guides and adapted to slide back and forth thereon.

H denotes threaded rods movably secured to the table by suitable brackets I.

J represents threaded latches pivoted to the carriages, and to these are fastened the rod K so that when they are to be disengaged from the threaded rods H it may be done so simultaneously by pressing said rod K downward.

L represents a yoke, the ends of which are secured to the carriages F, so that said carriages will be kept in alinement and both moved in at the same time when in operation. In said yoke is formed a dovetail M for the reception of the saw frame N, to the upper end of which is secured the saw head O, said saw head being dovetailed in the extension L′ of the yoke L, so as to compel it to move up and down vertically. To the lower end of said saw frame it attached the adjustable bolt P, on which is threaded the thumb nut Q, said bolt being fastened to the lower portion of the saw blade R, the upper portion of said saw blade being attached to the saw head O.

S is a stud pin passing through the saw head O into the saw frame N for journaling the crank T to the saw frame and saw head, the opposite end of said crank being movably secured to the wheel U secured to the shaft V journaled in the brackets W which are attached to the upper carriage F, on this shaft is also fastened a gear wheel Z the teeth of which mesh with the pinion A′ of the motor B′, said motor being fastened to the upper carriage so that it moves along with it.

C′ indicates gear wheels attached to the ends of the threaded rods H, and D′ other gear wheels the teeth of which mesh with the teeth of the gear wheels C′, and E′ is still another gear wheel meshing with the teeth of the gear wheels D′, and on this is attached a handle F′ so that the gear wheel E′ may be turned thus turning the gear wheels whose teeth mesh with it in this way turning the gear wheels C′ which are attached to the ends of the threaded rods H thereby turning said threaded rods.

In Fig. 6, I have shown one of the timbers in which F′ represents the main portion thereof and G′ the parts which are cut away, and these parts G′ in the usual way of cutting them are wasted but by the use of my saw they will be saved in their entirety.

From the foregoing description it will be seen that by placing my improved saw on the end of one of these timbers and securing said saw thereto by means of screws or in some other suitable manner the saw will be held stationary and in line with the cut which is wanted until the cut is completely made. To operate the saw the motor B′ is turned on which through the medium of the pinion A′ and the gear wheel Z will cause the shaft V to rotate, thus rotating the wheel U drawing the saw R up and down through the medium of the crank T which will draw the saw frame N up and down.

By turning the gear wheel E′ it will cause the threaded rods H to rotate moving the carriages F along the tables B and C through the medium of the threaded latches J, and when a sufficient amount of the timber has been sawed the rod K may be pressed down thus disengaging the threaded latches from the threaded rods, thus allowing the carriages to be moved back ready for the next operation.

Of course I do not wish to be limited to the exact details of construction here shown as these may be varied within certain limits without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—

1. In a sawing machine, a frame comprising an upper and lower table having slots formed therein, guides secured to said tables, carriages having grooves formed therein to conform with the shape of the guides, means for moving said carriages along the tables, a yoke secured to said carriages, a saw frame dove-tailed in the yoke, a saw head secured to the upper end of the saw frame and dove-tailed in the extension of the yoke, an adjustable bolt fastened to the lower end of the saw frame, a saw blade secured to the upper end of the adjustable bolt and to the lower end of the saw head, brackets fastened to the upper carriage, a shaft journaled therein, two wheels, one of which is a gear wheel secured to said shaft, a crank attached to the saw head and the bracket and also to one of the wheels, and a motor for turning said wheels thus causing the saw to move up and down, substantially as shown and described.

2. In a sawing machine, a frame comprising upper and lower tables having slots formed therein, guides formed with said tables, threaded rods fastened to said tables, carriages having grooves formed therein to conform with the guides, yoke fastened to said carriages, threaded latches pivoted to said carriages and adapted to engage with the threaded rods, a rod attached to said latches for simultaneously disengaging them from the threaded rods, a saw frame dove-tailed in the yoke, a saw head secured to the upper end of said saw frame and dove-tailed in the extension of the yoke, an adjustable screw attached to the lower end of the saw frame, a thumb nut threaded on said adjustable bolt for drawing it up and down, a saw blade secured to the upper end of the adjustable bolt and to the lower end of the saw head, brackets attached to the upper carriage, a shaft journaled therein, a wheel attached to said shaft, a crank one end of which is attached to said wheel, the opposite end being fastened to the upper end of the saw head by means of a stud, a gear wheel also secured to the shaft, a motor, the teeth of the pinion of said motor adapted to engage with the teeth of the gear wheel, gear wheels secured to the ends of the threaded rods, other gear wheels the teeth of which are adapted to engage with the gear wheels secured to the threaded rods, another gear wheel the teeth of which are adapted to engage with the last named gear wheels, and a handle attached to said gear wheel for rotating it thus rotating the other gear wheels, likewise the threaded rods which cause the carriages to move along the tables, as shown and described.

3. In a sawing machine, a frame comprising an upper and lower table having slots formed therein, guides secured to said tables, carriages having grooves formed therein to conform with the shape of the guides, means for moving said carriages along the tables, a yoke secured to said carriages, a saw frame dove-tailed in the yoke, a saw head secured to the upper end of the saw frame and dove-tailed in the extension of the yoke, an adjustable bolt fastened to the lower end of the saw frame, a saw blade secured to the upper end of the adjustable bolt and to the lower end of the saw head, brackets fastened to the upper carriage, a shaft journaled therein, two wheels, one of which is a gear wheel, secured to said shaft, a crank attached to the saw head and the bracket and also to one of the wheels, and means for turning said wheels thus causing the saw to move up and down, as specified.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

SAMUEL N. KRAWCHENKO.

Witnesses:
WLADYSLAW WISNIEWSKI,
S. M. GALLAGHER.