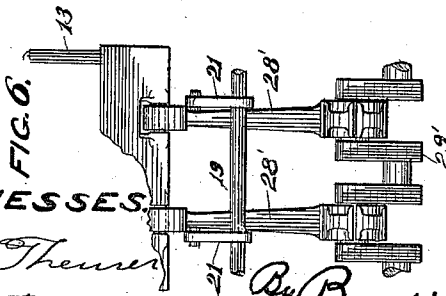
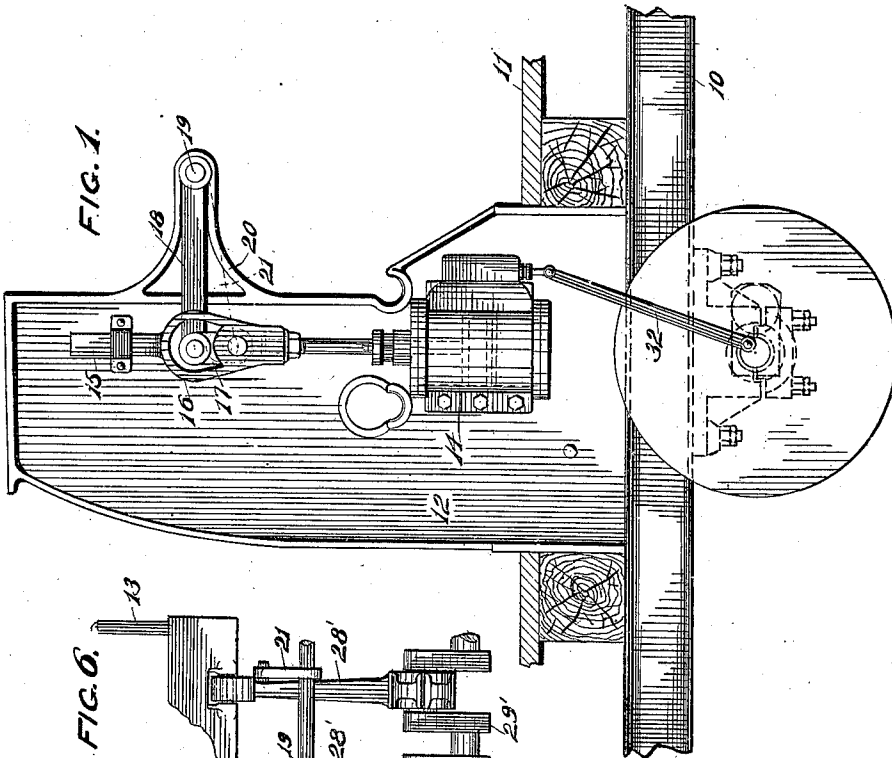
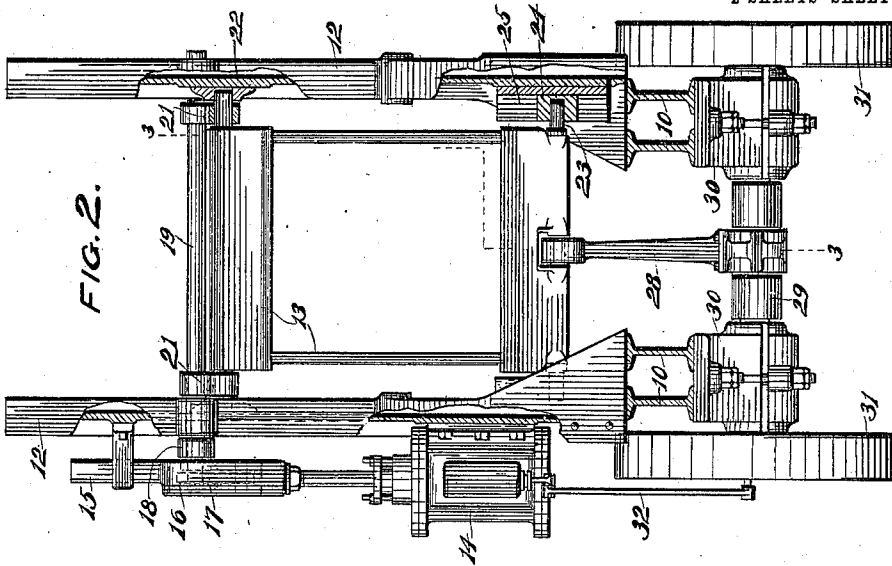


T. S. WILKIN, DEC'D.
 J. B. CARPENTER, SPECIAL ADMINISTRATOR.
 GANG SAW OPERATING MECHANISM.
 APPLICATION FILED JULY 15, 1908.

996,184.

Patented June 27, 1911.

2 SHEETS—SHEET 1.



WITNESSES.

L. Thuermer
Anna F. Schmidt

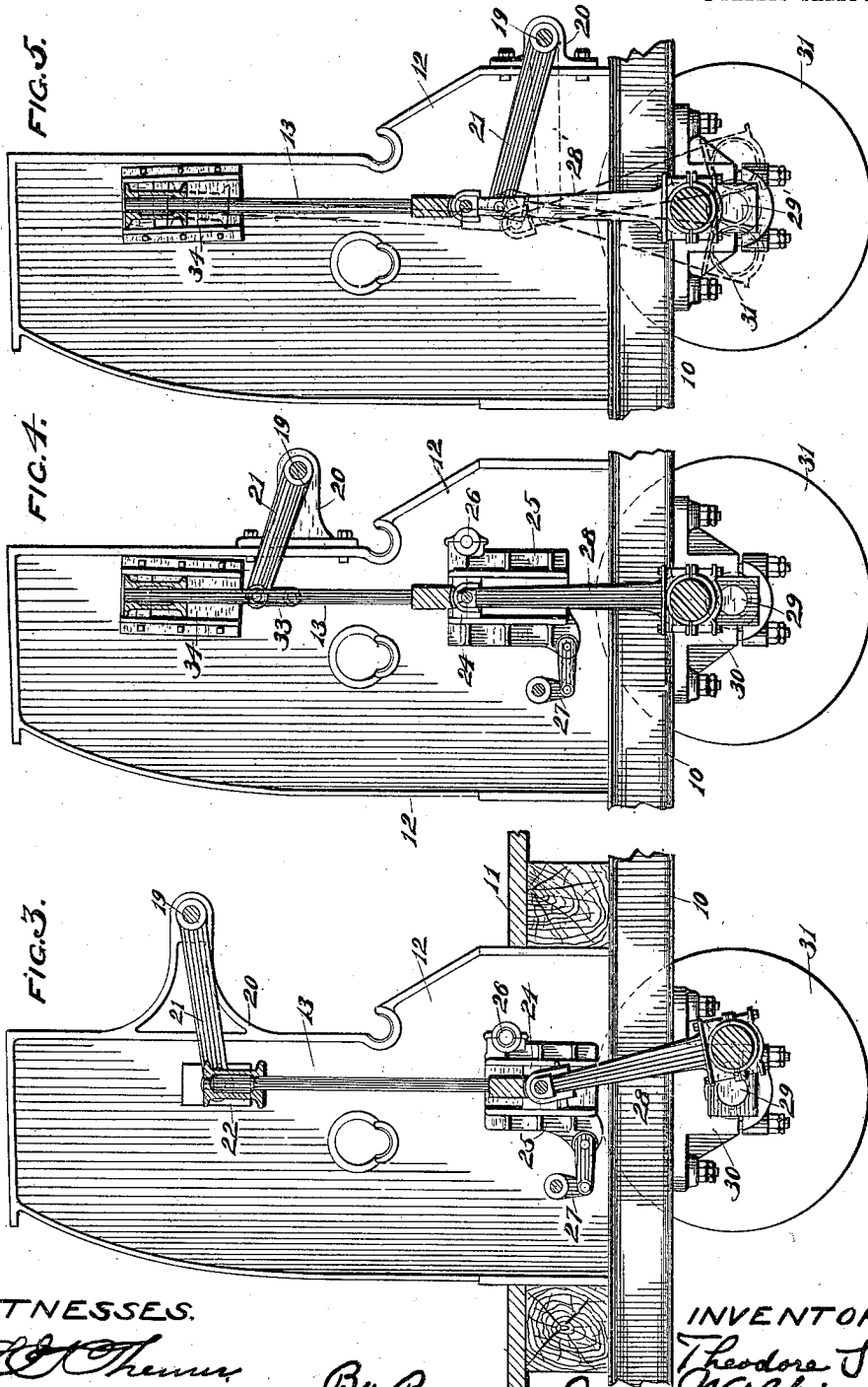
INVENTOR.
Theodore S. Wilkin
 By *Benedict, Morrell & Caldwell*
 ATTORNEYS.

T. S. WILKIN, DEC'D.
J. B. CARPENTER, SPECIAL ADMINISTRATOR.
GANG SAW OPERATING MECHANISM.
APPLICATION FILED JULY 15, 1908.

996,184.

Patented June 27, 1911.

2 SHEETS—SHEET 2.



WITNESSES.

L. H. Thayer
Anna Schmidt

By *Benedict, Morrell & Caldwell*
INVENTOR, *Theodore S. Wilkin*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THEODORE S. WILKIN, OF OSHKOSH, WISCONSIN; JOHN B. CARPENTER, OF OSHKOSH, WISCONSIN, SPECIAL ADMINISTRATOR OF SAID THEODORE S. WILKIN, DECEASED.

GANG-SAW-OPERATING MECHANISM.

996,184.

Specification of Letters Patent. Patented June 27, 1911.

Application filed July 15, 1908. Serial No. 443,635.

To all whom it may concern:

Be it known that I, THEODORE S. WILKIN, residing in Oshkosh, in the county of Oshkosh and State of Wisconsin, have invented new and useful Improvements in Gang-Saw-Operating Mechanism, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has for its object to provide a gang saw with an operating device of novel construction adapted to reciprocate the sash by means of a rock shaft which may furthermore produce the oscillating movement of the sash to free the blades from the work during their return stroke.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the several views; Figure 1 is a side elevation of a gang saw operating mechanism constructed in accordance with this invention; Fig. 2 is a front elevation thereof with the parts broken away for clearness of illustration; Fig. 3 is a sectional view thereof taken on the plane of line 3—3 of Fig. 2; Fig. 4 is a similar view of a modification; Fig. 5 is a similar view of another modification; and, Fig. 6 is a front view of a portion thereof.

In these drawings 10 represents a base comprising long metal beams, preferably I beams, which are securely mounted beneath the floor 11 and support the side frames 12, the latter serving to support and guide the gang sash 13 which carries the saw blades, not shown. An engine 14 or other motive power is mounted on one of the side frames 12 and reciprocates a yoked slide 15 suitably guided in its movements on the side frame 12, the yoke 16 thereof having links 17 connecting it with a crank arm 18 on a rock shaft 19 which is mounted in bracket arms 20 on the side frames. The rock shaft 19 has a pair of rocker arms 21 extending inwardly between the side frames 12 and pivotally connected to the upper end of the sash 13. The upper end of the sash 13 is provided with bearing shoes 22 to ride on the inner surface of the end frames 12 and prevent lateral play of the upper end of the sash, while the lower end of the sash has trunnions 23 fitting in slide blocks 24 which travel in guideways 25, the latter being pivotally mounted on the side frames at 26 and being given a swinging motion by the usual

oscillating mechanism 27 to cause the lower end of the sash to swing back and forth during its vertical reciprocations. The upper end of the sash is caused to swing in addition to the oscillation given to the lower end thereof, by reason of its connection with the rocker arms 21. The position of these rocker arms when the sash is in the upper end of its stroke is nearly horizontal so that during their downward swing the sash is moved forwardly by them to meet the work, its lower end being at the same time moved forwardly by the swinging of the guides 25.

The lower end of the sash 13 is connected by a connecting rod 28 with the crank of a crank shaft 29 which is journaled in pillow blocks 30 secured beneath the beams 10, there being fly wheels 31 mounted at the ends of the crank shaft and a valve connecting rod 32 connecting an eccentric pin of said crank shaft with the valve mechanism of the engine 14.

It will be understood from the foregoing that the construction constituting this invention not only dispenses with the necessity for the upper guide slides to the gang sash, but further assists the oscillation in moving the saw blades toward the work during the working stroke and in clearing them from the work during the return stroke. It is obvious that the rock shaft construction may also be advantageously employed without affecting the oscillation, and such a construction is shown in Fig. 4, where the rock shaft 19 is mounted lower on the side frames 12 and has its rocker arms 21 connected with the stiles of the gang sash 13 by means of pivotal links 33, the guide slide 34 being retained for the upper end of the sash, as usual, as well as the lower guide slide 25 as before. With this construction the operation of the gang sash is effected by means of the engine 14 on the side frame, as shown in Fig. 1, through the instrumentality of the rock shaft, and the crank shaft connection remains the same, but the oscillation of the gang sash is not changed from the ordinary construction.

A further modification of this invention is shown in Figs. 5 and 6, wherein the rock shaft 19 is mounted still lower on the side frames and its rocker arms 21 are connected with a pair of connecting rods 28' which connect the sash with the crank shaft, instead of the single connecting rod 28 as in the

other constructions, the connection between the rocker arms 21 and the connecting rods 28' being at a slight distance from the connection between the connecting rods and the sash. The guide 34 for the upper end of the sash is retained in this construction and the oscillating movement of the sash is produced by the cranks of the crank shaft 29' causing the connecting rods 28' to swing upon their pivotal connections with the rocker arms 21 as fulcrums and thereby swing the lower end of the sash toward the work on the downward stroke and away from the work on the upward stroke. As shown in Fig. 5 the motion of the crank shaft in an anti-clockwise direction causes the connecting rods 28' to swing the lower end of the sash to the right or toward the work during the first part of the downward stroke and counteract the tendency of the rocker arms 21 to move the lower end of the sash in the other direction at this time, and likewise the swing of the connecting rods 28' during the latter part of the downward stroke tends to swing the lower end of the sash to the left and is counteracted by the tendency of the rocker arms 21 to swing the sash in the opposite direction. However, during the upward stroke of the sash the tendency of the rocker arms 21 to swing the lower end of the sash to the left, away from the work, is augmented by the tendency of the connecting rods 28' to move the sash in the same direction and consequently the blades of the sash are freed from the work until the end of the upper stroke is reached, when they are returned to the cut by the combined action of the swing of the rocker arms 21 and the connecting rods 28. With this form of the invention no other mechanism is required for producing the oscillation of the saw.

What I claim as my invention is:

1. In a gang saw, a supporting frame, a gang sash mounted therein, a rock shaft journaled in the frame, rocker arms on the rock shaft supporting the gang sash, an engine mounted on the frame, a sliding rod operated by the engine, a yoke on the sliding rod, a link pivotally mounted in the yoke, and an arm on the rock shaft connected to the link.

2. In a gang saw, a supporting frame, guides on the frame, a gang sash movable in the guides, a rock shaft journaled on the frame, rocker arms on the rock shaft supporting the gang sash and giving oscillation thereto, and means for operating the rock shaft.

3. In a gang saw, a frame, guides on the frame, a gang sash slidably mounted on the guides at one end, a rock shaft journaled on the frame, rocker arms on the rock shaft supporting the gang sash near its other end for giving a reciprocation and an oscillation thereto, and means for operating the rock shaft.

4. In a gang saw, a frame, oscillation guides movably mounted on the frame, a gang sash having its lower end slidably mounted in the oscillation guides, a rock shaft journaled in the frame, rocker arms on the rock shaft connected with the upper end of the gang sash for giving reciprocation and oscillation thereto, and means for operating the rock shaft.

5. In a gang saw, a supporting frame, oscillation guides movably mounted thereon, fixed guides on the frame, a gang sash mounted at its upper end in the fixed guides and at its lower end in the oscillation guides, a rock shaft journaled in the frame, rocker arms thereon, link connections between the rocker arms and the gang sash, and means for operating the rock shaft.

6. In a gang saw, a supporting frame, guides on the frame, a gang sash slidably mounted near its upper end in the guides, a crank shaft, connecting rods connecting the crank shaft with the lower end of the gang sash, a rock shaft mounted on the frame, rocker arms on the rock shaft connecting with the connecting rods near their connections with the gang sash and serving to reciprocate and oscillate the gang sash, and means for operating the rock shaft.

In testimony whereof, I affix my signature, in presence of two witnesses.

THEODORE S. WILKIN.

Witnesses:

R. S. C. CALDWELL,
ANNA F. SCHMIDTBAUER.