

(No Model.)

J. MORRISH.
SAW.

No. 566,865.

Patented Sept. 1, 1896.

Fig 1

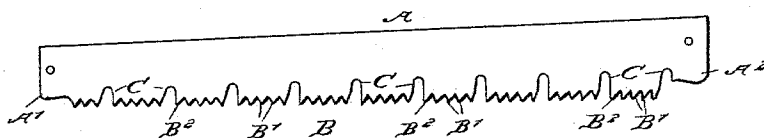


Fig 2

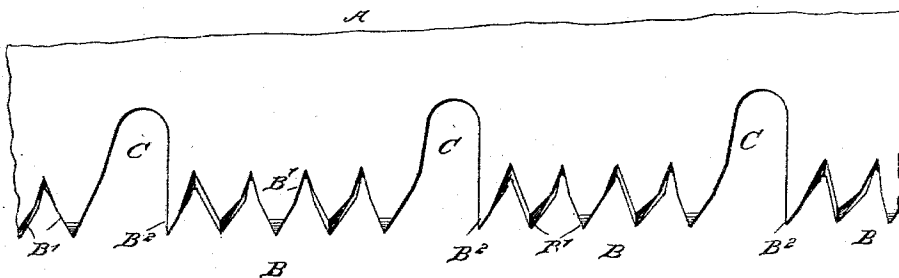


Fig 3

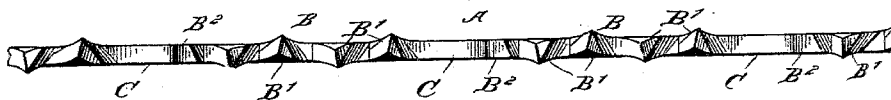
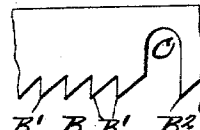


Fig 4

WITNESSES:

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JOHN MORRISH, OF MAYVILLE, NORTH DAKOTA.

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SPECIFICATION forming part of Letters Patent No. 566,865, dated September 1, 1896.

Application filed June 4, 1895. Serial No. 551,683. (No model.)

To all whom it may concern:

Be it known that I, JOHN MORRISH, of Mayville, in the county of Traill and State of North Dakota, have invented a new and Improved Saw, of which the following is a full, clear, and exact description.

The invention relates to bucksaws, hand-saws, ice-saws, and similar saws to be manipulated by one person.

The object of the invention is to provide a new and improved saw arranged to smoothly enter the material without jerking or jumping, and also arranged to do the most cutting on the forward stroke and to remove sawdust in coarse pieces with great ease.

The invention consists of a saw-blade provided with groups of teeth separated by throats, each group of teeth having multiple cutting-teeth and a rake-tooth, the said cutting-teeth beginning with no pitch at the outer end of the blade and gradually increasing in pitch to the butt-end of the blade.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is an enlarged side elevation of part of the same. Fig. 3 is a plan view of the cutting edge, and Fig. 4 is a fragmentary view showing the construction and arrangement of the saw-teeth.

The saw-blade A is provided at its cutting edge with groups of teeth B, separated from each other by throats C, which increase in depth from the forward or point end A' of the blade A to the butt-end A², as plainly indicated in Fig. 1. Each group of teeth B is provided with multiple cutting-teeth B' and a rake-tooth B² at the back of the throat and in the front of the cutting-teeth belonging to this group. The cutting-teeth B' are preferably four in number, with the teeth alternately swaged to opposite sides of the blade A, as plainly indicated in Fig. 3. The cutting-teeth B' begin with no pitch at the point end A' of the blade and increase gradually in pitch to the butt-end A², where the teeth

are given considerable forward pitch, it being understood that by this arrangement the saw-blade enters the material smoothly and easily to gradually increase its cutting without experiencing any jerks or jumps, as is the case with saws as now constructed, and having a uniform pitch in the teeth from one end of the saw-blade to the other. This increase in the pitch is clearly shown in Fig. 4.

The teeth B' are set out sufficiently to clear the blade A and are filed with moderate bevels and with the inside corner filed off, as indicated in Fig. 2. The rake-teeth B² have no set and are filed square, with the face extending at right angles to the face of the saw-blade at the point of the saw, and increase in pitch to the butt corresponding to the cutting-teeth. (See Fig. 3.) Now it will be seen that by having four cutting-teeth B' in each group, which makes two teeth to set out on each side of the blade, a crease is cut in the material sufficiently deep to enable the rake-teeth B² to bring out the sawdust in coarse pieces and with great ease, the sawdust dropping out of the kerf as the teeth pass through the material cut. As the teeth increase gradually in pitch from the point to the butt end, it permits the cutting edge of the saw-blade to smoothly enter the material without jerking or jumping, and when the blade is well advanced in the material it will make a deeper cut. As the saw-blade advances forward and makes a deeper cut the sawdust requires more room. Consequently the throats are made to gradually increase in depth from the point to the butt end of the saw-blade.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A saw, having groups of teeth separated by throats, each group having multiple cutting-teeth and a rake-tooth, said teeth being graduated in pitch from end to end of the saw, the teeth of one end of the saw having no pitch and the teeth at the opposite end of the saw having a forward pitch, substantially as set forth.

JOHN MORRISH.

Witnesses:

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C. L. GRANDIN.