

S. ANDERSEN.  
Saw-Grinder.

No. 218,913.

Patented Aug. 26, 1879.

Fig: 1.

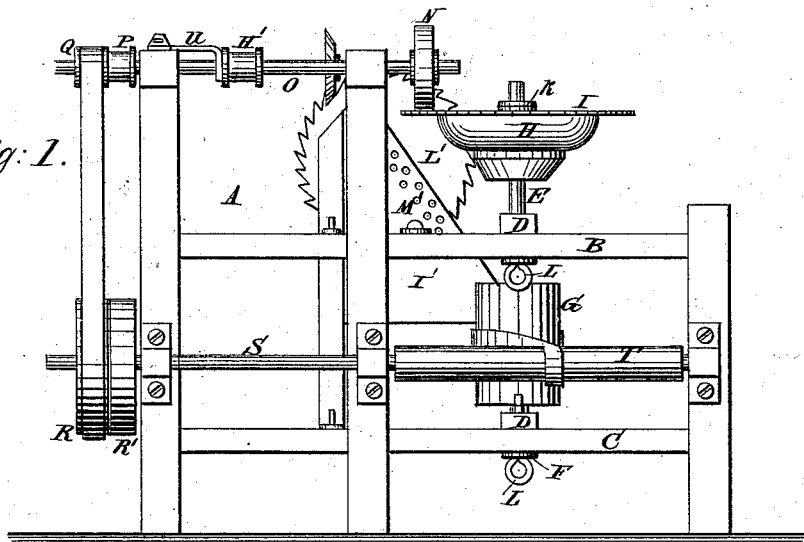


Fig: 2.

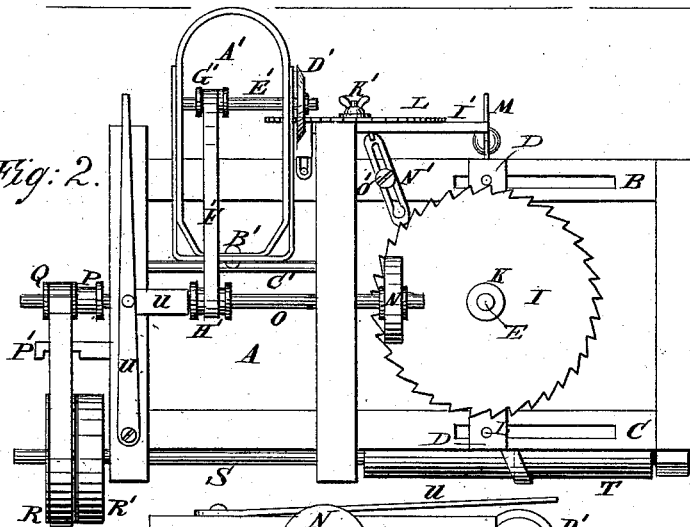
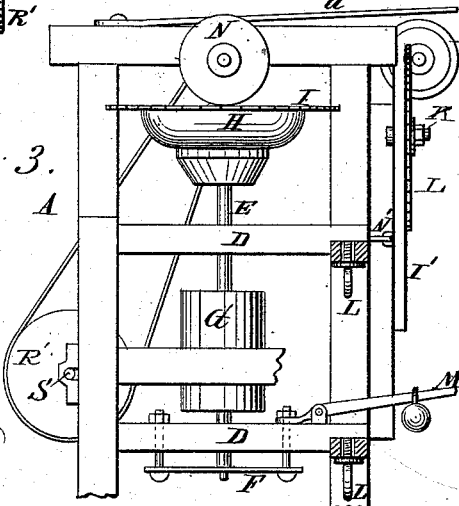


Fig: 3.



WITNESSES:

A. Schehl.  
C. Sedgwick

INVENTOR:

S. Anderson  
BY *Mum & Co*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SOREN ANDERSEN, OF STRONACH, MICHIGAN.

## IMPROVEMENT IN SAW-GRINDERS.

Specification forming part of Letters Patent No. **218,913**, dated August 26, 1879; application filed June 10, 1879.

*To all whom it may concern:*

Be it known that I, SOREN ANDERSEN, of Stronach, in the county of Manistee and State of Michigan, have invented a new and Improved Saw-Grinder, of which the following is a specification.

Figure 1 is a side elevation of the device. Fig. 2 is a plan of the same. Fig. 3 is an end elevation of the same, partly in section.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a simple, cheap, and compact combined saw grinder and gummer.

A is the frame, composed of upright longitudinal and cross timbers, rigidly secured together. Resting and adjustable upon the slotted timbers B and C are the cross-timbers D, through the centers of which passes the vertical shaft E, that has its bearing on the adjustable step F, that is held by screws to the lower cross-timber D, so that it can be raised or lowered by them.

Keyed upon the shaft is the pulley G, and surmounting the shaft is the saw-table H, which is an iron disk having a flat upper face, on which the saw, I, to be ground is secured by setting down the collar K. This part of the device, consisting of timbers D, shaft, pulley, adjustable step, saw-table, and the saw itself, is horizontally adjustable along the timbers B and C, and held in any position by the set-screws L L, that pass through the slots in said timbers into the ends of the lower timbers D. The weighted lever M, that is made fast at one end to one of the screws that hold up the adjustable step, serves as a counter-balance to the saw-table.

N is a square-faced emery-wheel, ordinarily of about one inch face by twelve inches in diameter, or smaller, that is used to grind down tapering saws, especially to any desired gage. This is keyed on one end of the horizontal shaft O, that has its bearings in the upper cross-timbers of the frame, while on the other end is the main driving-pulley P and the pulley Q, from which a belt conducts power to the fast and loose pulleys R R', respectively, that are fixed on the end of the driving-shaft S, on which shaft is the long roller, T, from

which the cross-belt conveys motion to the pulley G.

U is a lever, whose projecting arm clasps the emery-wheel shaft and draws the wheel back and forth, at the will of the operator, over the face of the saw during the process of grinding.

In manufacturing shingles, especially, every effort is made in the direction of saving material and reducing expenses, and for both of these purposes this device is of great advantage. It saves lumber by grinding the saws down to as thin a gage as they will work at, thereby rendering the waste as small as possible; and it saves in power required for the running of the saw, for it is well known that a thin saw will run with less power than a thick one; and through the aid of the combined grinder and gummer, saws can be used until they are actually worn out or worn down too small.

A' is the gummer-frame, which is pivoted on a set-screw, B', to the rod C', that has its bearings in the upper cross-timbers of the frame of the combined device. On this set-screw the gummer-frame can be turned, to give the saw to be gummed any desired hook.

D' is the emery-wheel at the end of the shaft E', which is revolved by the belt F', that passes around the pulley G' and driving-pulley H', respectively.

I' represents the saw-hanger, on which is placed and secured by a screw, K', the saw, L', that is to be gummed. This hanger is provided with the parallel rows of holes M', for the accommodation of various sizes of saws, from six inches up to six feet in diameter, and the hanger can be so adjusted by means of the slotted plate N' and set-screw O' that any desired bevel can be given to the teeth of the saw secured thereto. It is obvious, then, that by this part of the device the teeth of the saw can be cut to any desired depth and to any desired bevel and hook.

It will be seen that the gummer-frame can at will be thrown up and back to disengage it from the saw and stop the work of gumming, and it may as easily be adjusted for work, and both parts of the device may be operated together or separately.

The shifter P' is to shift the driving-belt on or off the tight pulley, in order to move or stop the motion of the saw-table.

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

The combination, with timbers D, of the vertical shaft E, adjustable step F, pulley G, saw-table H, collar K, set-screws L L, lever M,

emery-wheel N, horizontal shaft O, pulleys P, Q, R, and R', shaft S, roller T, shifter P', and lever U, substantially as and for the purpose described.

SOREN ANDERSEN.

Witnesses:

A. MAGNAN,  
PAUL CANNON.