

J. W. SMITH.  
GROOVING MACHINE.

No. 108,943.

Patented Nov. 1, 1870.

Fig. 6.

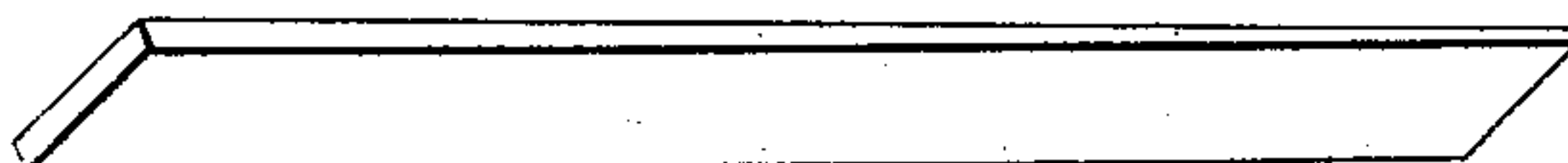


Fig. 3.

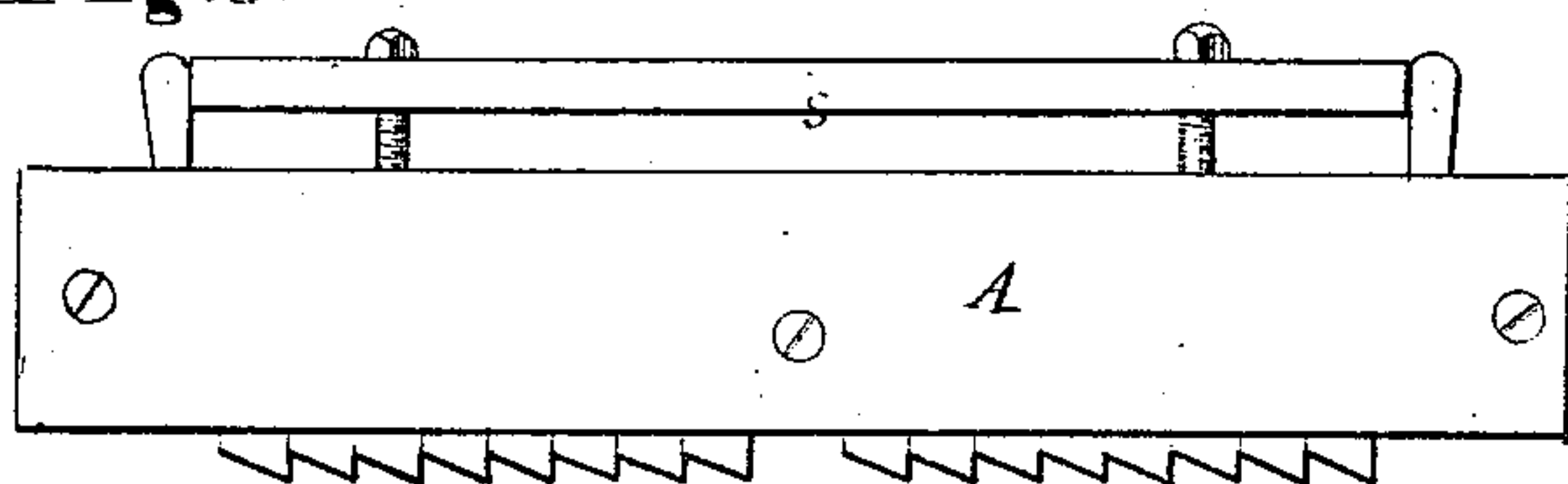


Fig. 4.

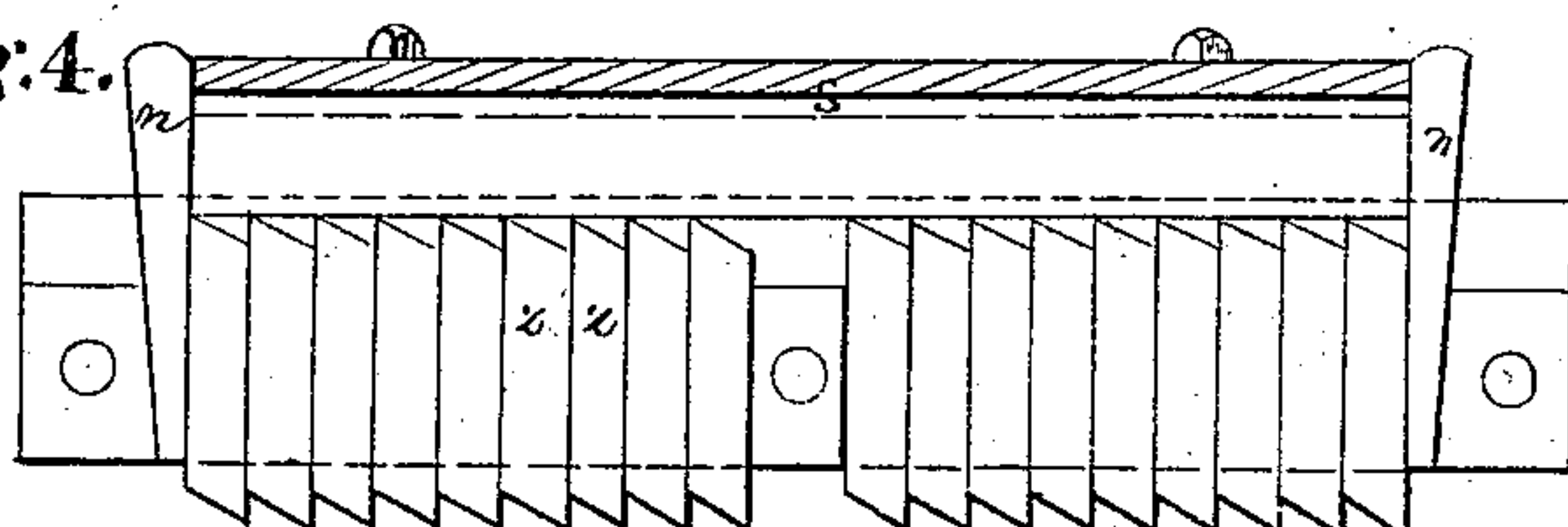
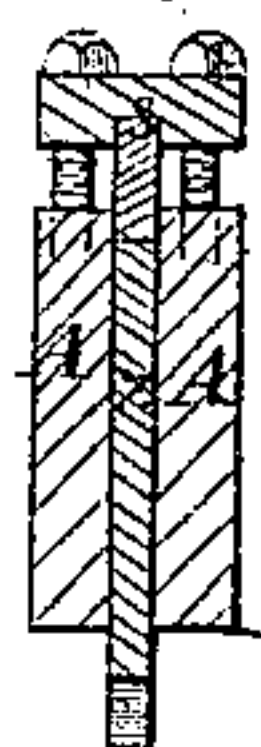


Fig. 5.



Witnesses.

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# United States Patent Office.

JARED W. SMITH, OF HARTFORD, CONNECTICUT.

Letters Patent No. 108,943, dated November 1, 1870.

## IMPROVEMENT IN GROOVING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern :*

Be it known that I, JARED W. SMITH, of Hartford, in the county of Hartford and State of Connecticut, have invented a new and valuable Improvement in Machines for Grooving; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

My invention relates to means for nicking or slotting screw-heads, and for cutting grooves in metal or wood, and consists in arranging and fastening a succession of separate reversible teeth or cutters between two plates, which are screwed together and provided with an adjustable bearing-plate, to be set up against the ends of the teeth, according to requirement, as they become shorter by use.

The letter A of the drawing designates the plates, between which the teeth or cutters are held.

These plates may have different forms, according to the mode of using the cutter.

The cutters *z z* are parallelograms, with the ends oblique to the sides.

Either end of the tooth is adapted to be used in

the cutting operation, and it is found convenient in practice to reverse them until both edges are worn dull.

As they will become shorter when ground, adjustable bearing-plates *s s* are employed to set them up to the proper position.

These bearing-plates are placed between the plates A A, and are adjusted by set-screws.

My invention is designed to result in the saving of much time and labor, as well as material.

I am aware that reversible bits have been used in reamers and planers. I do not claim such; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The plates A A, in combination with the reversible teeth *z z*, and the adjustable bearing-plates *s s*, substantially as shown and described.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

JARED W. SMITH.

Witnesses:

NICHOLAS HARRIS,  
JOHN T. PETERS.