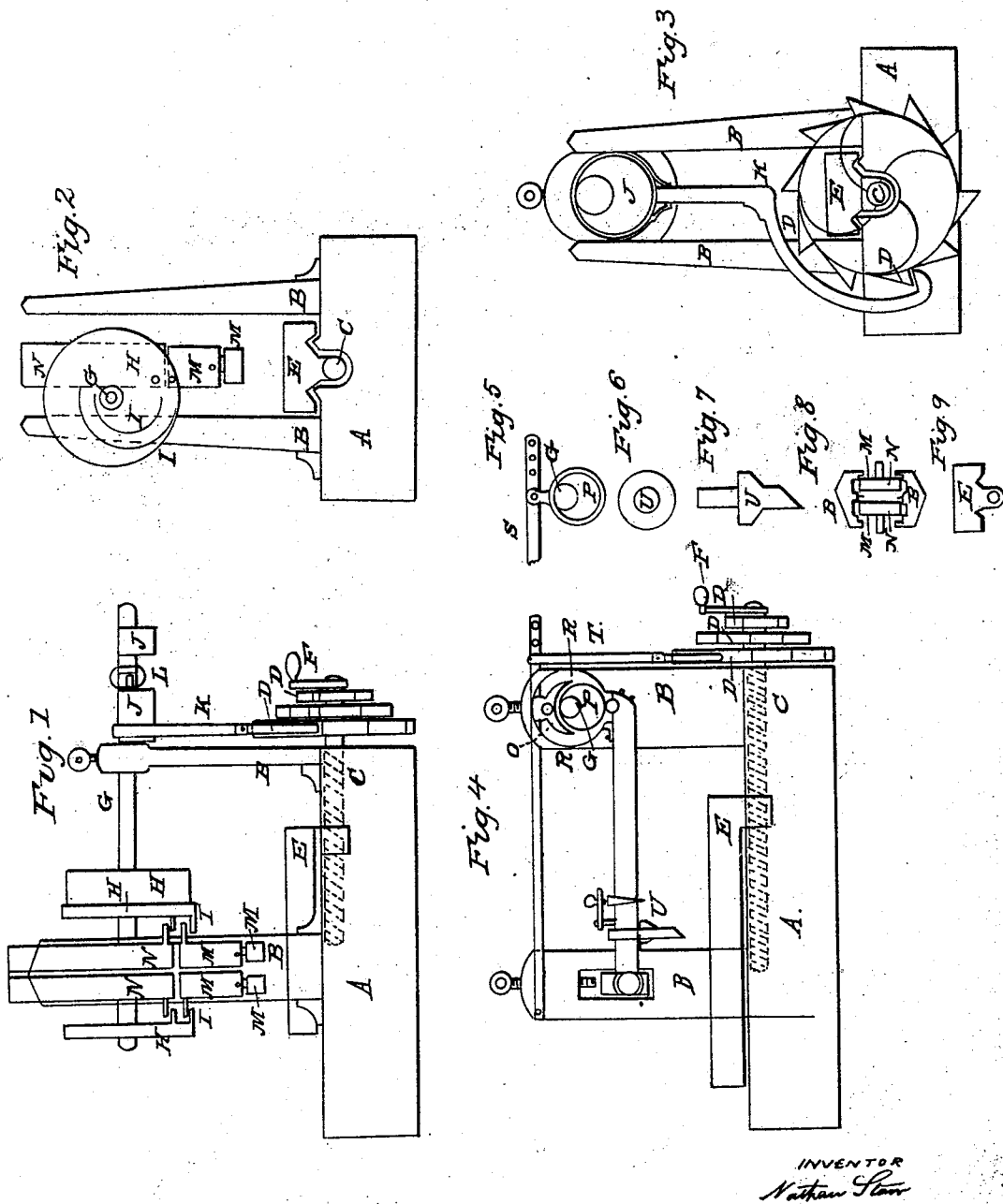


N. STARR.
File Cutting Machine.

No. 5,869.

Patented Oct. 17, 1848.



INVENTOR
Nathan Starr

UNITED STATES PATENT OFFICE.

NATHAN STARR, OF MIDDLETOWN, CONNECTICUT.

ENGINE FOR CUTTING FILES.

Specification of Letters Patent No. 5,869, dated October 17, 1848.

To all whom it may concern:

Be it known that I, NATHAN STARR, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Engine for Cutting and Finishing Files; and I do hereby declare the following specification and the annexed drawings, making a part thereof, are a full and exact description of the same, which is subject, however, to variations of the proportions and angles of any part.

To enable others skilled in mechanics to make and use my invention, I will proceed to describe its construction and operation, viz: To a shaft I attach a pulley and wheels, on the sides of which, I secure circular planes, one for lifting a cutter, and one for lifting a drop to give the blow, or as many of each as may be desired to give cuts in each revolution. These planes take in under friction rolls on the drops and cutters (of wood or metal) and by the revolution of the wheels driven by the pulley are raised up to the desired height, when the planes leave them to give the cut and blow, in the lower drop the cutter is firmly secured. On the other end of the shaft is fixed an eccentric wheel, around which is an eccentric ring attached to the arm of a ratchet pawl that slides and takes into the ratchet wheels which are fastened on a screw feeder, and connected with a female screw in the slide on which the work is placed. The eccentrics are so placed and adjusted that the ratchet arm takes in and moves the ratchet wheel only when the movement of the drops or lever are upward, and after the cut is made, and when the drops or lever descend the ratchet arm also descends to take into the next notch in the ratchet wheel, the ratchet wheels to be of various sizes, and as many in number as is desired to cut the different files or other work.

The slide on which the file or other work is secured, is moved forward or backward

on rails in the bed plate, by the crank or feeding screw of the ratchet connecting with it in a female screw on the under side and between the rails; the cutters have a round shank, that they may be placed at any desired angle, and reversed so as to finish the cut at one passing under, and are secured by thumb screws, and wedges or in any other way.

To mend any defect that may happen I have a finisher attached by a coupling shaft, on which there is an eccentric, working on the top of a lever; in this lever there is a long mortise to receive the shank of cutter, so that it may be moved to or from the fulcrum, to suit the work. The end of the lever has a yoke around the eccentric, with a vibrating saddle on top to keep it in place, then an arm from the fulcrum column extending over the eccentric with a yoke around it, and with a movable ratchet arm as before described. I also claim the right of placing the slide, ratchet wheel, and ratchet hand at any angle with the drops and cutters, and also the eccentric above described to give the cut by acting directly on the cutter or lever.

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

1. The combination of the cutters M and drops N with the revolving planes J by means of which the file blank is cut as it is advanced by means of the feeding apparatus, composed of an eccentric, hand, ratchet wheel and screw substantially as described.

2. I also claim the combination of the lever O, adjustable cutter U, eccentric P, hand T, and ratchet wheel and screw, the whole forming a machine for cutting and finishing a file.

NATHAN STARR. [L. S.]

Witnesses:

AARON G. PEASE,
JOHN BAILEY.