

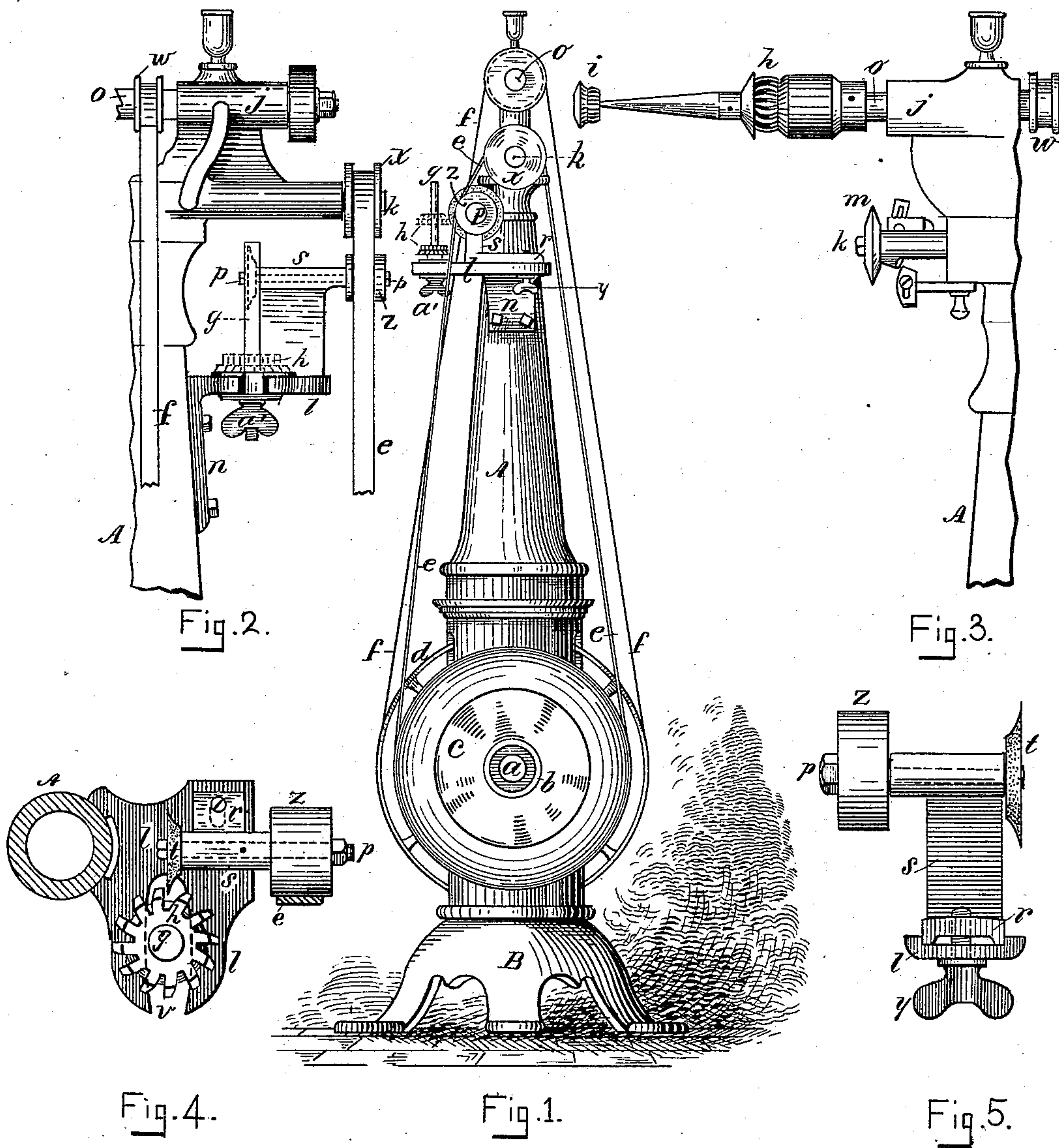
(No Model.)

S. N. CORTHELL.

COMBINED SOLE EDGE TRIMMER AND TRIMMING TOOL GRINDER.

No. 253,911.

Patented Feb. 21, 1882.



Witnesses.
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UNITED STATES PATENT OFFICE.

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COMBINED SOLE-EDGE TRIMMER AND TRIMMING-TOOL GRINDER.

SPECIFICATION forming part of Letters Patent No. 253,911, dated February 21, 1882.

Application filed November 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL N. CORTHELL, of Quincy, State of Massachusetts, have invented a Combined Boot and Shoe Edge Trimmer and Trimming-Tool Grinder, of which the following is a specification.

This invention relates to that class of machines which are adapted to finish, by means of a rapidly-rotated toothed cutter, the edges of the soles of boots and shoes; and in connection with the annexed drawings the invention will be hereinafter fully described, and specifically defined in the appended claims.

Figure 1 is a side elevation of a machine embodying my improvement, and taken as viewed from the right in Fig. 2. Fig. 2 shows in front elevation (taken as from the left hand in Fig. 1) the right-hand portion of the machine, being that portion principally shown in Fig. 1. Fig. 3 is an elevation taken from the same standpoint as Fig. 2, but showing the left-hand portion of the machine. Fig. 4 is a top plan view of the grinder as secured to the supporting-pillar of the machine, which pillar is shown in transverse section. Fig. 5 is a detached view of the grinder, taken as viewed from the right in Fig. 1 and from the rear in Fig. 2.

In said views, A represents a standard on which the operative parts are mounted, the same being supported by its base B. A short arbor, *a*, is journaled in suitable bearings formed upon or secured to said standard, and upon said arbor is secured a small pulley, *b*, which receives the driving-belt leading down from the counter-shaft. On said arbor, outside of said standard, is secured a speed-pulley, *c*, on which is placed belt *e*, which at the top engages pulley *x* on arbor *k*, which carries the rotary rand cutter or tool *m*. A pulley, *d*, is also secured on arbor *a*, centrally in standard A, and through its belt *f*, which engages pulley *w* on arbor *o*, serves to rotate the edge-trimming cutter *h* and shank-cutter *i*, which are carried by said arbor *o*, said arbors *k* and *o* being journaled in head *j*, the essential parts thus far described being the same as in my former Letters Patent No. 236,145, dated January 4, 1881; but the said driving parts may be varied from the foregoing, and the rand-

cutter *m* and edge-cutter *h* may both be mounted upon the same arbor; but I prefer the arrangement described and shown.

The toothed edge-cutter *h* (clearly shown in Fig. 4 as arranged to be sharpened) requires frequent sharpening, both by reason of its necessary high working velocity and the gritty and abrading nature of the leather on which it acts; and in order that said cutter may be thus sharpened with the least possible loss of time and at the minimum of expense, both in regard to the machine on which such sharpening is effected and the facilities thereby afforded, I have invented my present improvement.

A shelf or bed-plate, *l*, is secured to standard A by its bracket-arm *n*, Figs. 1 and 2. Said plate *l* is formed with guiding side ledges, as shown in Fig. 3, and between said ledges the supplemental bed *r* is arranged to be linearly adjusted, and is secured in position by its locking-screw *y*. Upon said bed *r* is formed the standard *s*, in which is journaled the arbor *p*, on which is mounted the solid emery grinding-disk *t* and the pulley *z*, which latter, by means of the lineal adjustment of plate *r*, may be brought into contact with belt *e* (or the belt that drives the edge-cutter) with such degree of force as shall insure the rotation of arbor *p* by the contact of the belt with pulley *z*.

In plate *l* is formed an opening, *v*, Figs. 2, 4, in which is secured the vertical standard *g*, the shank whereof is of less diameter than the width of said passage, whereby said standard may be adjusted not only at the requisite distance from disk *t*, but also in the desired position either to the right or left thereof, as the form of the teeth of edge-cutter *h* may render necessary, a broad collar on said standard *g* bridging across opening *v*, and an equally broad washer between bed *l* and set-nut *a'* serving to seat said standard in said opening. When standard *g* is thus properly adjusted relatively to disk *t*, and cutter *h* requires sharpening, the same is removed from its arbor *o* and placed on standard *g*, as shown in Figs. 1, 2, and 4, and pulley *z*, by the means described, is brought into contact with its actuating-belt, when, by the proper manipulation of the cut-

ter on the standard *g*, its teeth are successively brought in contact with the grinding-disk, and may be not only ground to the desired sharp cutting-edge, but the plane or face of each
5 tooth is ground parallel with the axis of the cutter.

When not in actual use for grinding pulley *z* is retired from contact with its belt, and at such times the grinder is inactive and exempt
10 from wear.

I claim as my invention—

1. In a rotary belt-driven edge-trimming machine, a rotary cutter-grinder arranged to

be brought into contact with, to be separated from, and to be actuated by, the cutter-driv- 15 ing belt, when so brought into contact therewith, by means substantially as specified.

2. The combination of the adjustable stand- 20 ard *g*, the standard *s*, carrying the arbor *p*, with its pulley *z*, and disk *t*, and adjustable 20 relatively to the driving-belt, substantially as specified.

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Witnesses:

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