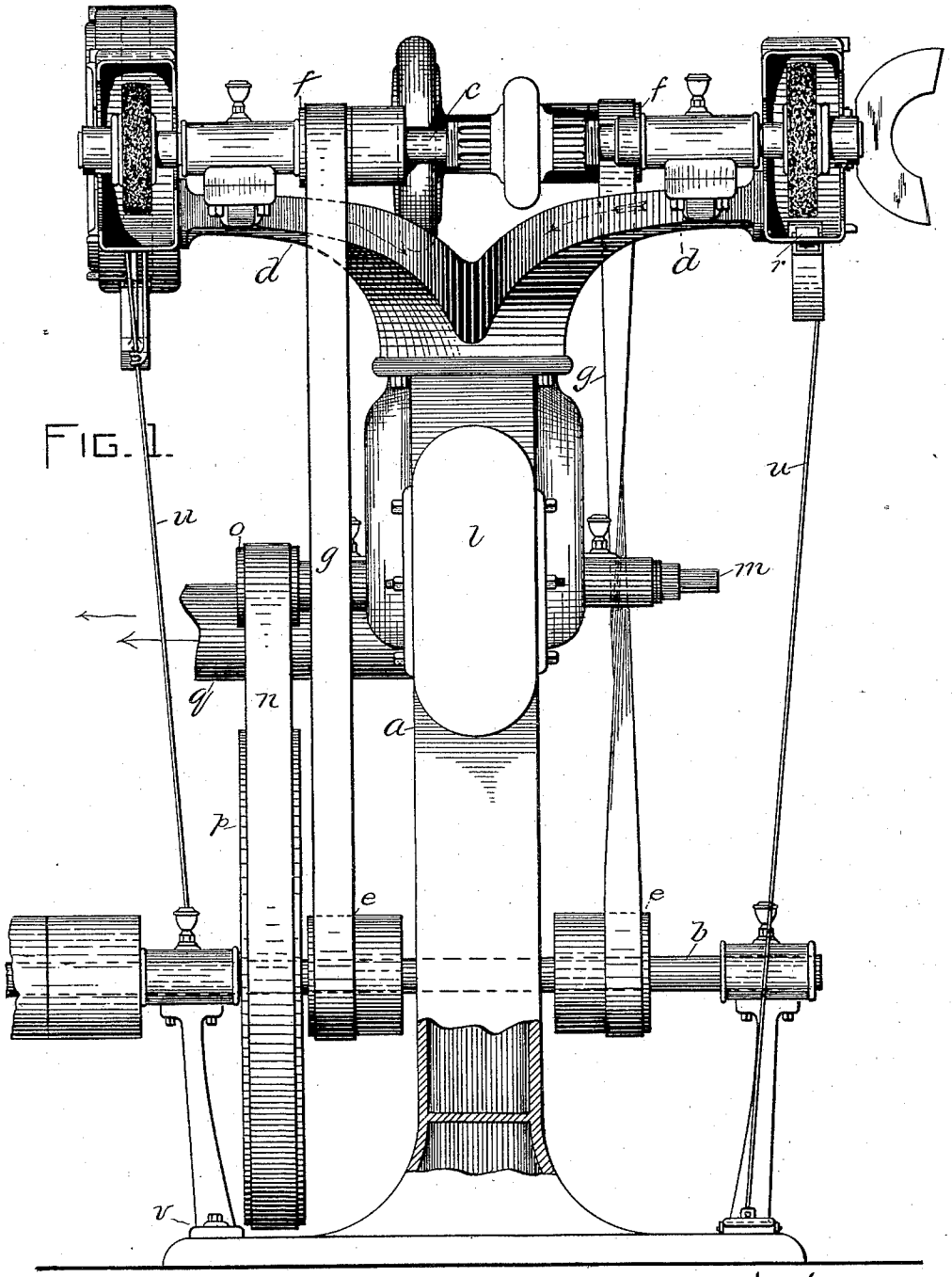
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J. F. SWAIN.

MACHINE FOR FINISHING PARTS OF BOOTS OR SHOES.

No. 469,379. Patented Feb. 23, 1892.

FIG. 1.



WITNESSES.
A. D. Harrison
B. A. McShane.

INVENTOR.
J. F. Swain
by
Wright Brown & Crosley.
Solicitors

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

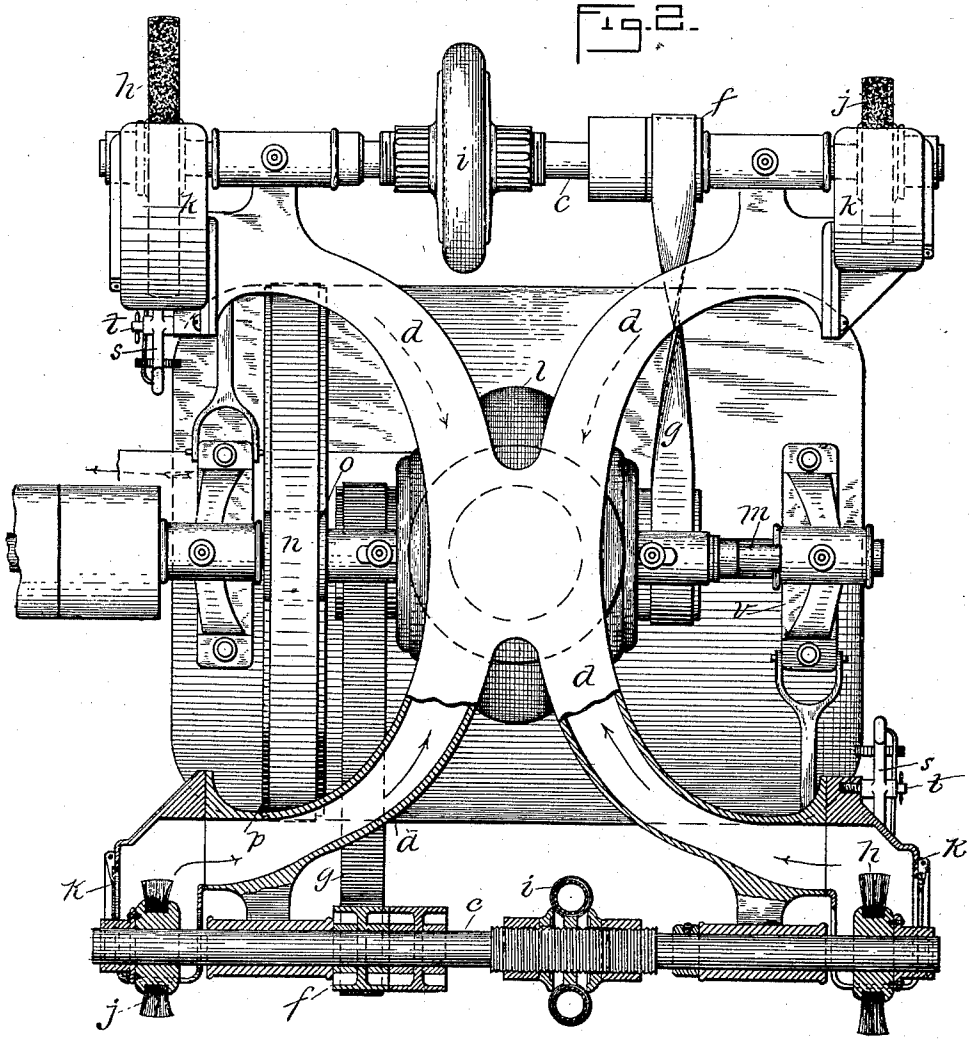
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Fig. 2.



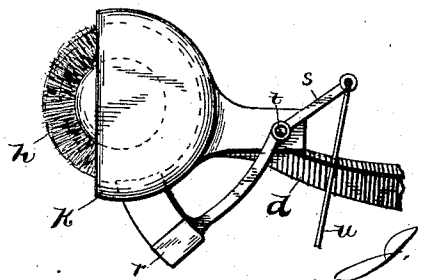


Fig. 3.

WITNESSES.
A. D. Harrison.
D. A. McShane

INVENTOR.
J. F. Swain
by
Mitchell, Brown & Crossley.
Solicitors.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN F. SWAIN, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE ELECTRIC BOOT AND SHOE FINISHING COMPANY, OF SAME PLACE.

MACHINE FOR FINISHING PARTS OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 469,379, dated February 23, 1892.

Application filed July 13, 1891. Serial No. 399,293. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. SWAIN, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Finishing Parts of Boots or Shoes, of which the following is a specification.

The invention relates to means generally for finishing parts of boots and shoes, and it has particular reference to contrivances for polishing heels, soles, shanks, bottoms, &c., of shoes by that mode of procedure which embraces as its steps the application of color and wax or polishing compound to the parts to be treated and the polishing of the said parts by contact with a rapidly-moving yielding surface.

It is the object of the invention to provide a machine which shall be adapted to perform all the acts or series of acts of the method mentioned upon all parts of boots and shoes, and which shall be serviceable and efficient to a maximum degree and simple in and economic of construction to a minimum extent.

To these ends the invention consists in the construction and combination of parts, as hereinafter claimed.

Reference is to be had to the annexed drawings, forming a part of this specification, in which—

Figure 1 is a front elevation of the machine, parts being represented as broken away. Fig. 2 is a top plan view of the same, parts being shown in section. Fig. 3 is a detail side elevation showing the end of one shaft and the wax-transmitter.

Similar letters of reference designate similar parts or features, as the case may be, in both of the views.

In the drawings, *a* designates a hollow standard which, in addition to performing a function to be presently explained, supports the operative parts of the machine.

b is the driving-shaft, journaled in suitable bearings supported by the standard *a* and the brackets or standard *a*.

c c designate driven shafts supported in suitable bearings connected with hollow arms *d d d d*, connected or communicating with the hollow standard *a*. The arms *d* at their outer ends connect with the ends of the shafts *c* and converge at the top of the standard *a*, which is centrally located in the machine.

e e designate pulleys on the driving-shaft, and *f f* are pulleys on the driven shafts *c*, around which pulleys are passed the belts *g g*, whereby the shafts *c* are rotated, one of the belts being straight and the other crossed, in order that both shafts *c* may be driven in the same direction with respect to the center of the machine.

Each shaft *c* is equipped with a wax-applying brush *h*, secured to one end, a polishing medium *i*, consisting of a wheel arranged at or approximately near the longitudinal center of the shaft, the said wheel being provided with a soft or yielding periphery, and a finishing-brush *j*, secured to the other end of the said shaft.

The brushes *h j* may differ in size and grade as to fineness and length of bristles to suit the varying kinds of work to be accomplished by their use, and the wheels *i i* may be likewise graded as to size, softness, and smoothness of surface.

The machine shown in the drawings is organized to finish heels, soles, and shanks and bottoms of boots and shoes, and as a consequence the brushes, as well as the polishing mediums, vary in size and structure. The shaft *c* at the bottom in Fig. 2 is equipped with means for finishing heels and soles, while the other shaft is provided with means well adapted to finish shanks and bottoms, though it is obvious that I may so equip the machine as that both shafts may be adapted to finish heels and soles or both adapted to finish shanks and bottoms. Each of the brushes is met by the open end of one of the hollow arms, and a hood *k* extends partially about the brush, so as to practically house its rear portion in the said open end.

l designates a casing connected with the hollow standard *a*, within which may be arranged an exhaust-fan of any suitable character, which fan may be secured upon a shaft *m*, driven by a belt *n*, passing over pulleys *o p*. An exhaust pipe or tube *q* communicates with the blower-casing.

r designates a "wax-holder" arranged on one end of the lever *s*, fulcrumed on a stud or pin *t*. A wire or cord *u* is connected with the op-

posite end of the said lever and extends down and is connected at its lower end with a treadle *v*, so that the operative by placing his foot upon the treadle may draw or depress the end of the lever *s*, to which the wire *u* is attached, and raise the opposite end carrying the wax-holder and bring the wax into contact with the brush *h* or other suitable wax-transmitter applying wax thereto, which in turn may be applied to a part of a boot or shoe brought into contact with the brush.

It is obvious of course that other substance than what is termed "wax" by shoe manufacturers may be employed on the wax-holder and applied to the brush.

In the use of the machine herein shown the operative depressing the treadle *v*—say on the side shown in Fig. 1—will raise the wax-holder and apply wax to the brush *h*. When applying the heel-edge or sole to the said brush, the part so applied will receive a sufficient supply of the wax, after which the waxed part of the boot or shoe may be brought into contact with the rapidly-moving soft or yielding wheel *i* and polished, and then to complete the work on the part so treated they may be applied to the soft brush *j*, which effects a "rubbing up" or finishing of the polished portion. For the treatment of the shanks and bottoms the shoe may be taken to the opposite side of the machine to be acted upon by the brushes and polishers upon that side. The blower in the casing *l* will operate to draw all dust, fibers, and other particles brushed off by the waxing and finishing brushes away from the machine and apartment in which the machine is operating and discharge the same outside, so as that no harm or discomfort may result therefrom. In this way a machine exceedingly simple in construction and compact in form is provided for finishing all parts of a boot or shoe below the uppers.

While I have shown brush-wheels as the means for transmitting the wax to the parts and finishing or rubbing up the polished parts, any other character or kind of wheel suitable to the purpose may be employed.

Having thus explained the nature of the invention, and described a way of constructing and using the same, I declare that what I claim is—

1. In a machine for finishing parts of boots and shoes, the combination, with the rotary wax-applying wheel *h*, of the lever *s*, fulcrumed on a stud supported by the frame of the machine, a wax-holder *r* on the end of the said lever adjacent to the periphery of the wheel, and means for vibrating said lever to apply the wax to the wheel or withdraw it therefrom, substantially as described.

2. A machine for finishing parts of boots and shoes comprising in its construction a hollow central standard having a blower or suction-fan, two pairs of hollow arms branching from the upper end of said standard, a shaft mounted in bearings carried by each pair of said arms, a brush on each end of each shaft and partially inclosed by hooded extensions of said hollow arms, and a wax-transmitter for one brush of each shaft, the said wax-transmitters consisting each of a lever pivoted to the frame and carrying a wax-holder at one end adjacent to the brush, and means for vibrating said lever, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of July, A. D. 1891.

JOHN F. SWAIN.

Witnesses:
FLORENCE M. LULL,
ALFRED B. JONES.