W. P. Gamble,

Dressing Leather.

No. 14,606. Patented Apr. 8, 1856.

Fig 1.

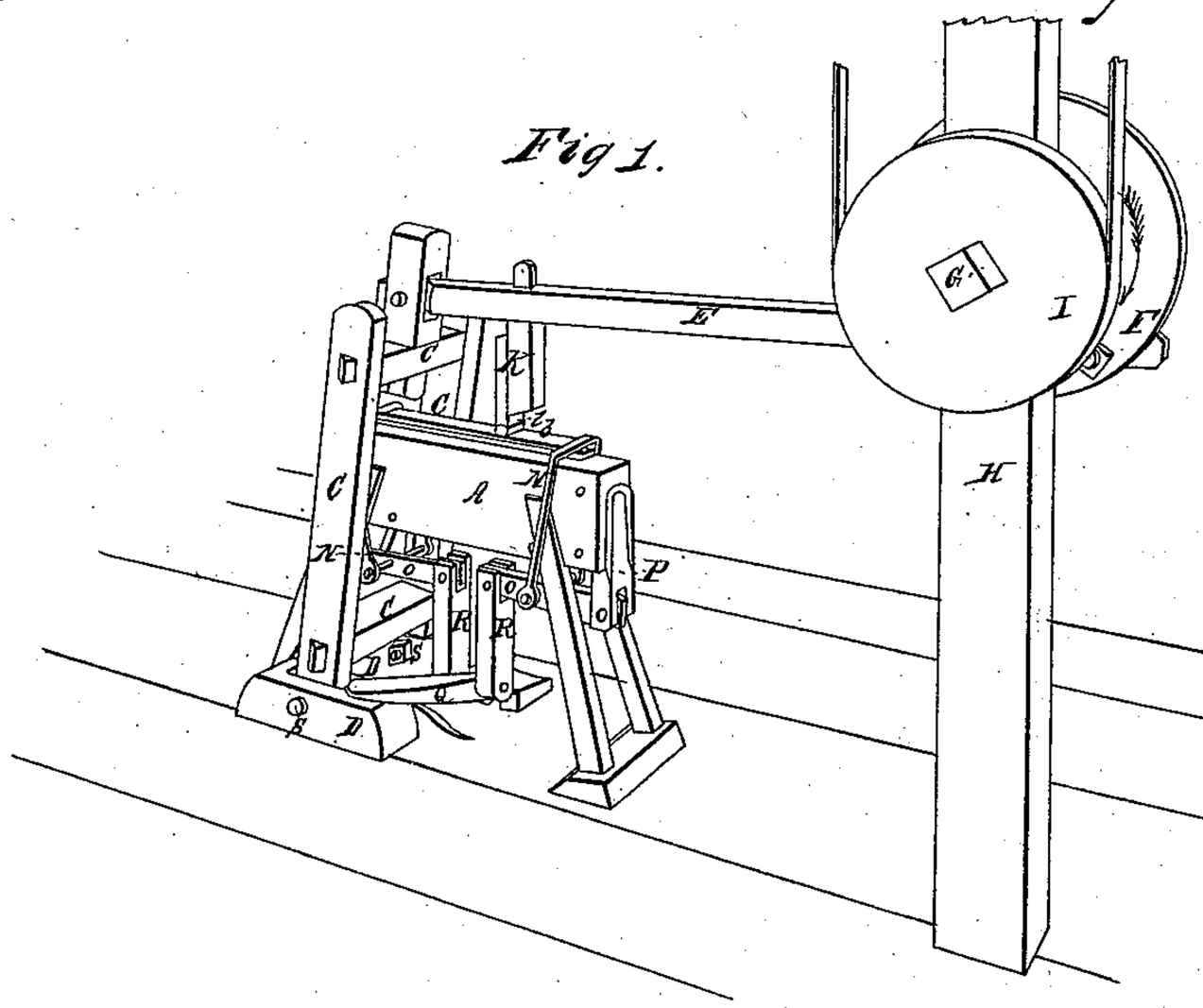
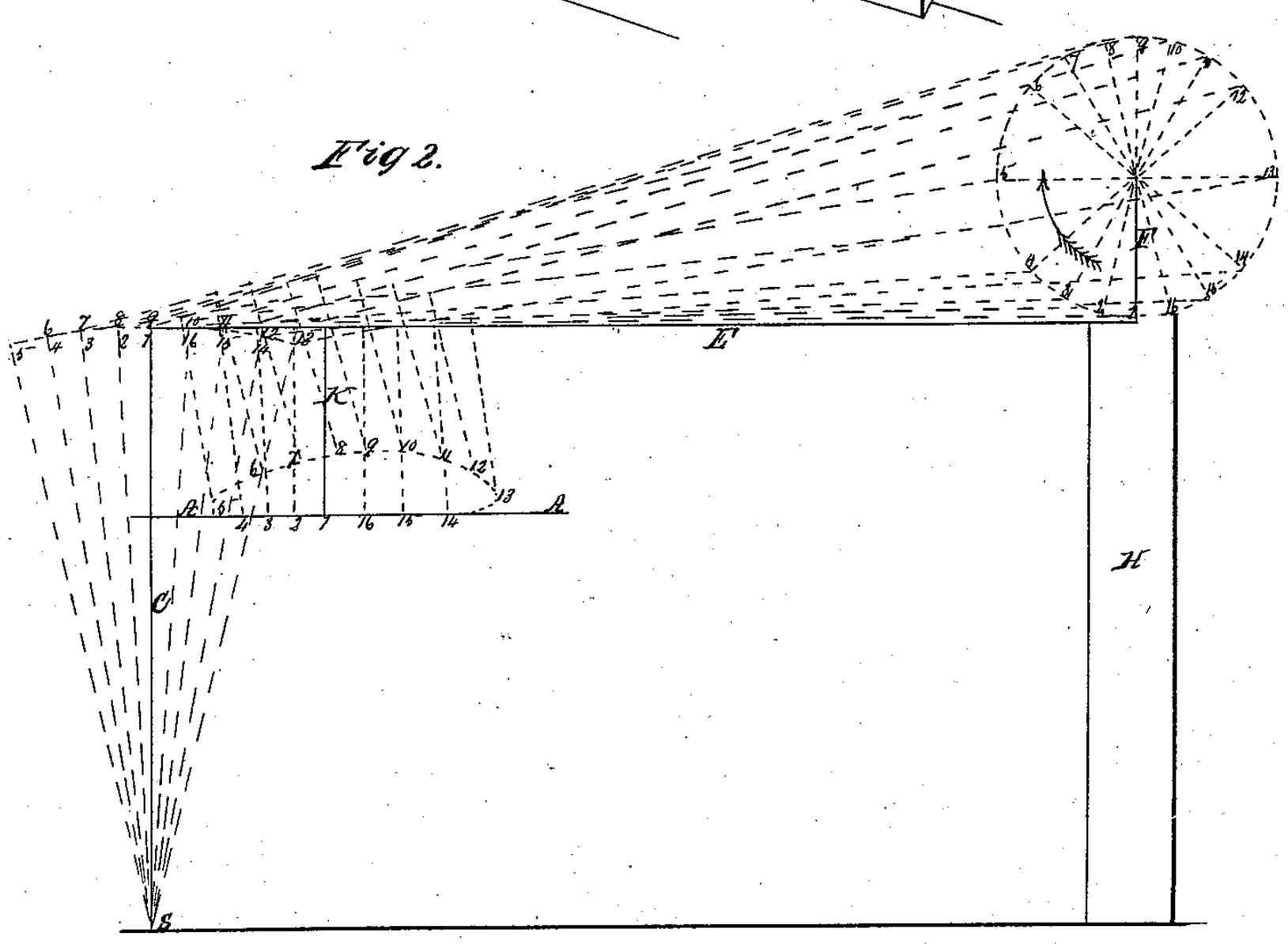


Fig 2.



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UNITED STATES PATENT OFFICE.

WILLIAM P. GAMBLE, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR POLISHING LEATHER.

Specification of Letters Patent No. 14,606, dated April 8, 1856.

To all whom it may concern:

Be it known that I, WILLIAM P. GAMBLE, of the city of Philadelphia and State of Pennsylvania, have invented a new and Improved Machine for Finishing Leather; 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 accompanying drawings, forming a part of this specification, in which—

Figure 1, is a perspective view of the machine, and Fig. 2, a diagram illustrative of the construction and operation of the same—like letters in both figures indicating the same objects.

The nature of my invention consists in so constructing, arranging and combining together a rocking frame, and levers, that when they are put in motion over the "buck," by a rotating shaft, the polishing point, called the "flint" or "glass," which is usually fixed to the lower end of the "handle" of all leather polishing machines, shall move forward in a rectilinear direction, parallel with the "strap," while the said point is in contact with the leather which is placed in the usual manner upon the 'buck" for polishing, and return in a curvilinear direction, or out of contact with the surface of the leather, at every rotation of the operating shaft.

Referring to the drawings—A, is the "buck," constructed in the usual manner, consisting of a bench supported upon four legs fixed to the floor of the room, and containing a "strap" (*b*), resting upon springs, upon which (strap) the leather is held by hand when it is being polished.

C, is a rocking frame, which is placed in an upright position, and so as to be capable of being moved forward and backward, turning upon the pins or bolts (*s*, *s*,) which secure it in the mortises of the blocks (D, D,) attached to the floor of the building in which the machine is placed.

E, is a lever connecting the rocking frame (C) with a crank, or to the rim of a wheel (F), by means of a wrist pin, in a well known manner. The wheel F, is fixed upon a shaft (G) which rotates upon any substantial fixture or post (H), receiving its motion through a pulley (I), and band. The lever (E) has what is usually called the handle", (K) fixed to and projecting downward therefrom at a right angle, so as to bring its "flint" or "glass" end (*l*) in contact with the strap (*b*) when the said lever (E) is placed in a horizontal position. The object of this construction and arrangement of the levers and rocking frame is to effect thereby a rectilinear motion of the flint or glass (*l*), when in contact with the leather, by means of a rotary mover; and hence the crank, lever, and rocking frame must be proportioned and arranged so as to act in compensation of each other.

I have found the following proportions suitable for the purpose—viz: length of rocking frame (C), 4½ feet; connecting lever (E) 7½ feet; distance of handle (K) from the rock frame, fifteen inches; length of crank (F) 12 inches. By reference to Fig. 2, the arrangement and operation of this combination will be readily perceived.

The crank pin, moving in the direction of the arrow from 1 to 2, 3, 4, &c., moves the lever and flint, with the rocking frame, through corresponding horizontal distances in the order of the numbers, the "flint" passing over the "strap" in a perfectly rectilinear parallel direction from 1 to 5, thence in a curve upward and downward to 14, thence rectilinearly and parallel again to the place of starting. It will also be observed that the approach of the flint from 13 to 14 is very oblique, or at an acute angle to the strap, which is especially desirable, as the leather when being finished is in consequence much less liable to be injured by the first touch of the "flint" or "glass"—and the flint or glass also is much less likely to be injured or broken.

The second part of my invention relates to the manner of depressing the "strap." The device for this purpose consists of two saddle pieces (N, N, Fig. 1,) which rest, one upon each end of the "strap" (*b*) and connect respectively with the levers (O, O,) and pieces (P) which are fixed at each end of the "buck," and also connect with the treadle lever (2) by means of the respective vertical connecting pieces (R, R,)—all being jointed at their connections as shown in the drawing. The usual spring beneath the strap bed affords the proper support for he strap during the operation of the machine upon the leather—but when the leather is removed, it is important, without stopping the machine, to prevent all contact of the "flint" directly with the "strap," and also at times, suddenly to relieve the leather

also from contact therewith, to prevent "burning," &c. This result is readily attained by the workman's placing his foot upon the treadle (2) and pressing it downward—thus overcoming the springs with slight effort, and bringing down the strap sufficiently to allow the flint to pass over it without contact.

All the machines for dressing or finishing leather hitherto invented for the especial purpose of dispensing with the excessive labor required for working the hand machines, have failed to accomplish the finishing as perfectly as by the hand machines, mainly because they require a curved strap and bed for the leather; or, rigid guides, requiring to be kept well oiled, at the risk of ruining the leather for finishing. A rectilinear parallel motion of the "flint" or "glass" upon the surface of the leather, entirely free from oil, is the only mode found capable of producing good work. By means of my invention, these important points are perfectly attained, while the excessive labor required to work the hand machines is also avoided.

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

Effecting the rectilinear motion of the "flint" or "glass" when in contact with the leather upon the "strap", by means of the compensating devices herein set forth and described—the said devices being constructed, arranged and operating substantially in the manner described.

WM. P. GAMBLE.

Witnesses:
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