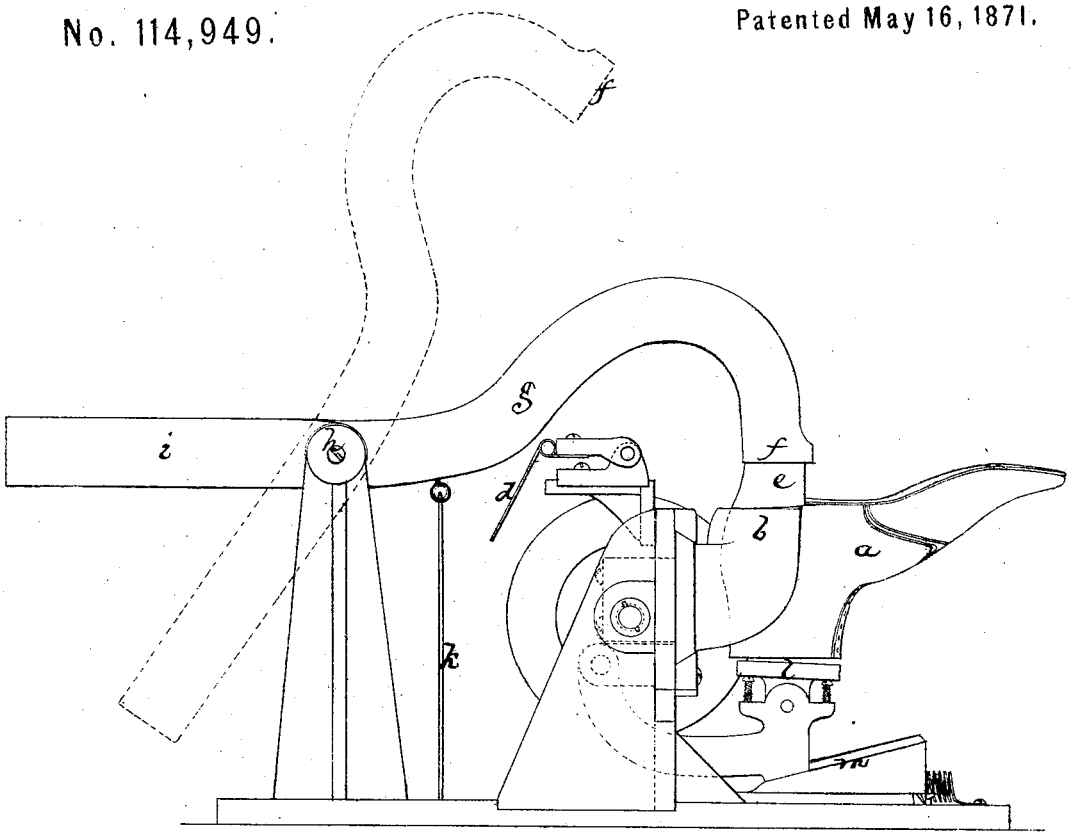
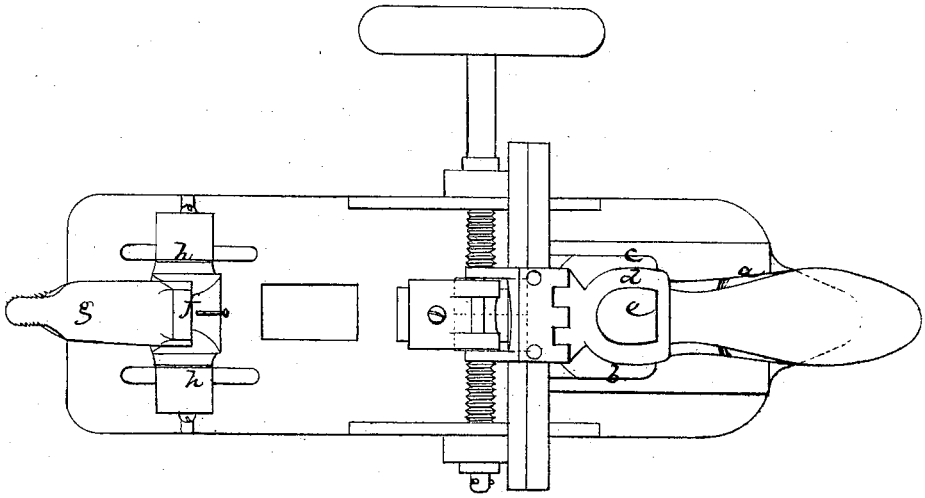
A. B. KEITH.

Improvement in Machines for Leveling Boot-Heel Treads.

No. 114,949. Patented May 16, 1871.





Witnesses.
S. B. Kidder.
H. C. Gatimer.

A. B. Keith
by his attys.
Crosby & Gould.

UNITED STATES PATENT OFFICE.

ARZA B. KEITH, OF BRAINTREE, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR LEVELING BOOT-HEEL TREADS.

Specification forming part of Letters Patent, No. **114,949**, dated May 16, 1871.

To all whom it may concern:

Be it known that I, ARZA B. KEITH, of Braintree, in the county of Norfolk and State of Massachusetts, have invented an Improved Machine for Leveling the Heels of Boots and Shoes; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

United States Letters Patent No. 109,756 were granted to T. K. Reed and myself on the 29th day of November, 1870, for an improvement in heeling boots and shoes, the invention shown in said patent relating to a method of locating a heel in proper position or properly upon the sole with relation to the contour or surface of the rear of the boot to be heeled.

My present invention relates, particularly, to the combination, with such a mechanism, of a pivoted leveling-hammer so arranged that the path of movement of the hammer-head is in a vertical plane running through the center of the heel, and that the face of the hammer, when at a distance above the rear part of the shoe equal to the thickness of the heel, shall be in a horizontal plane parallel to the bottom of the rear part of the shoe, or in the plane which the heel-tread is to possess in the finished boot.

More broadly, however, the invention consists in a leveling-hammer combined with a nailing-jack or other mechanism furnished with gaging-jaws formed to so grasp or embrace the rear part of the shoe that the surface to which the heel is to be or is attached, shall be in a definite plane with relation to the mechanism, and so that the blow of the hammer at a given point or upon the top of the heel shall bring the surface of the heel to a plane having a definite relation to the body of the shoe.

The drawing represents, in side elevation and in a plan, a machine embodying the invention, and embracing also the invention shown in the aforementioned patent.

a denotes the shoe, placed on a last, which may be mounted on a nailing-jack or other suitable last-supporting mechanism.

b c denote the pair of calipering-jaws which grasp the rear of the shoe and gage its position laterally, and the position of the upper surface of the rear part of its sole which is to receive the heel.

d denotes the hinged heel-locating plate.

e is the heel, after location and tacking of which the plate *d* is swung back and the heel nailed.

After the nailing is finished the heel is ready for the hammering or leveling operation, which shall solidify the heel-lifts and bring the tread to a proper surface or plane.

f denotes the hammer-head, preferably made of steel or steel-faced, and placed at the end of a long arm, *g*, pivoted to two posts, as seen at *h*, this arm having a weighted tail piece, *i*, descent of which throws up the hammer-head.

The arm *g* is connected by a rod, *k*, to a suitable pedal or foot-operated mechanism, and after the heel has been nailed the hammer-head is brought down by the pedal in such manner as to give a hard blow, a succession of which blows soon brings the heel-tread to a proper surface or to a proper relation to the sole or rand-crease of the boot.

When the last is mounted upon a nailing-jack, the jack itself will furnish sufficient support for the last under the blows of the hammer; but when a gaging and clamping mechanism is used without such a jack an anvil piece or bed, *l*, may be thrown up against or under the last by a sliding wedge *m*.

I claim—

In combination with a mechanism organized to grasp a boot or shoe and gage it in position to receive the heel, or with relation to the line between the heel and sole, a leveling-hammer arranged and operated substantially as described, so that the face of the hammer brings the heel-tread to a definite plane with relation to the sole or the rear part of the boot or shoe upper.

Witnesses: ARZA B. KEITH.

FRANCIS GOULD,

S. B. KIDDER.