(No Model.)

J. P. BUCHHOLTZ.

SHOE HEEL.

No. 596,847. Patented Jan. 4, 1898.

Fig. 1.

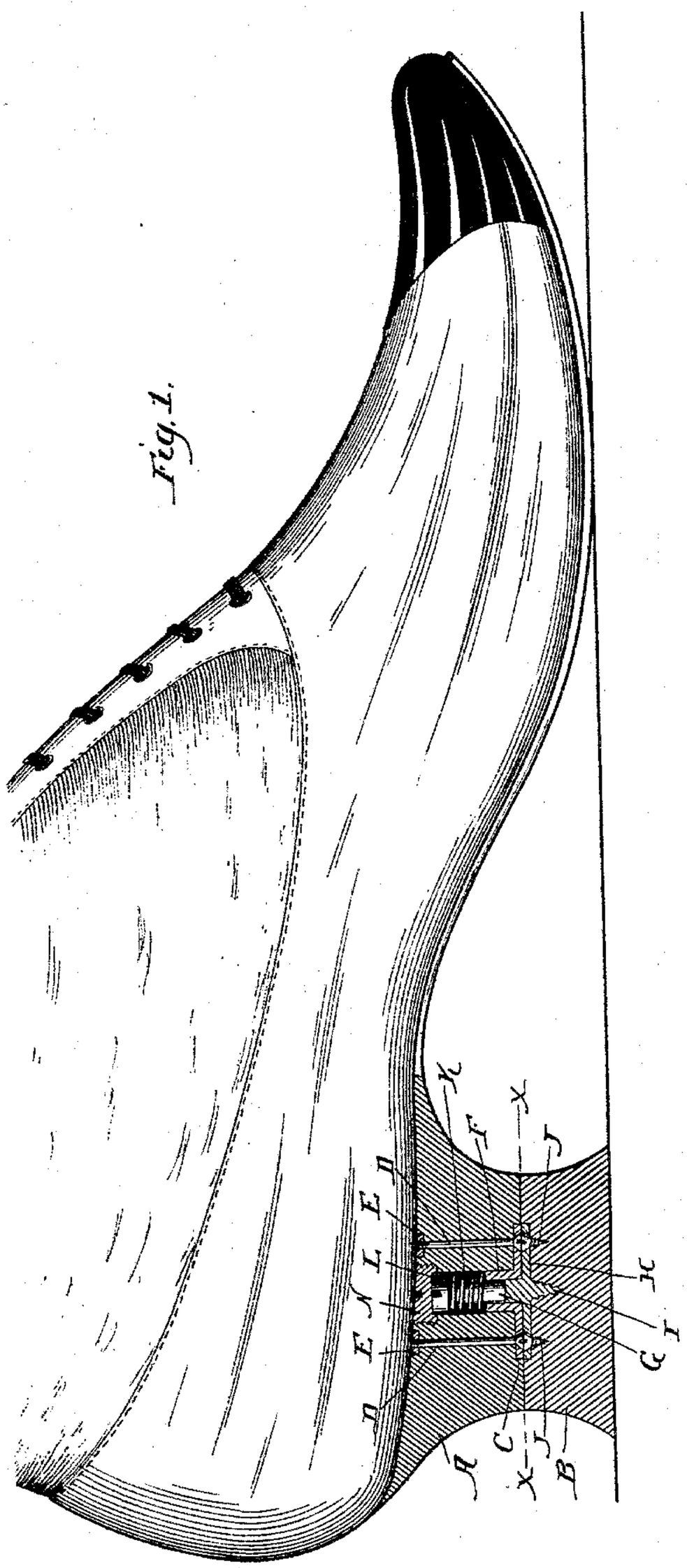


Fig. 3.

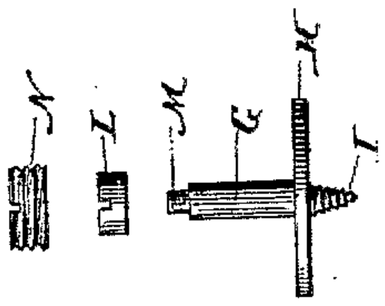
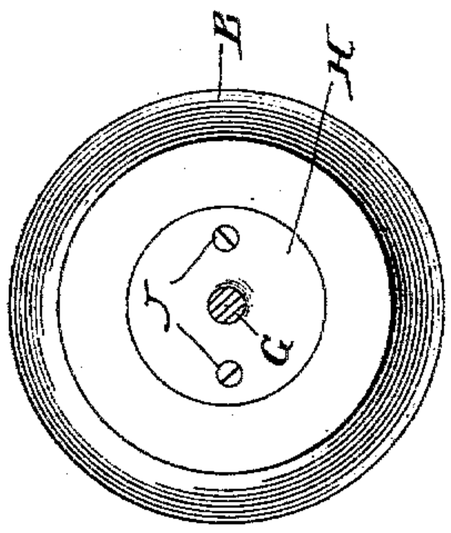


Fig. 2.



WITNESSES

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JOHN P. BUCHHOLTZ, OF PHILADELPHIA, PENNSYLVANIA.

SHOE-HEEL.

SPECIFICATION forming part of Letters Patent No. 596,847, dated January 4, 1898.

Application filed September 9, 1896. Serial No. 605,234. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. BUCHHOLTZ, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Shoe-Heels, of which the following is a specification.

My invention relates to a new and useful improvement in shoe-heels, and has for its object to so construct a heel as to permit the lower portion thereof to revolve independent of the upper portion and thereby overcome the wearing away of the lower surface of the heel by the constant grinding thereof against the ground or floor over which the wearer of the shoe passes.

A person in walking has a tendency, after bringing the heel in contact with the ground, to give the foot a slight rotary motion, using the heel as a center, and this tendency, as well known, invariably wears away the heel of the shoe upon that side which the particular wearer brings the greatest pressure to bear upon. Recognizing this fact I have utilized the same to overcome the wearing away of the heel at any particular point and also to prevent that wear of the heel which is brought about by the grinding thereof against the surface upon which it bears due to the above-named rotary motion by making the heel in two sections and permitting the lower section to remain stationary relative to the surface with which it is brought in contact, while the upper section is free to revolve upon the lower section in accommodating the movement of the foot of the wearer.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, its construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a shoe having a heel made in accordance with my improvement, said heel being in section to illustrate its construction; Fig. 2, a section at the line *x x* of Fig. 1; Fig. 3, a dismembered view of the pivot-plate, pivot, nut, and plug for closing the upper end of the hole in the heel.

In carrying out my invention the upper section A of the heel is so shaped that the lower surface thereof is circular, and the section B of the heel is also circular and the upper face thereof adapted to match and fit against the lower surface of the upper section. A plate C is set flush with the lower surface of the upper section and is secured thereto by means of the screws D, upon the upper ends of which are run the nuts E. The plate C is provided with a tubular extension F, which projects within a hole formed through the upper section of the heel, and within this extension fits the pivot-stud G, the latter being formed with the plate H, which is secured to the lower section of the heel by the center screw I, formed with the plate, and the screws J, which pass through suitable holes therein. This will leave the lower section free to revolve upon the upper section, the bearing between the two being upon the plates C and H, and in order to impart a certain amount of resistance to the free turning of the lower section I place a spring K around the pivot-stud and confine the same by the nut L, which is run upon the upper end of said stud, which latter is threaded, as indicated at M, for that purpose. While this arrangement will permit the turning of the lower section when sufficient strain is brought to bear thereon, it will hold it in place under ordinary circumstances, giving the heel the appearance of being made in one section. The upper end of the hole in which the tubular extension is fitted is preferably closed by a threaded plug N, so as to leave the bottom of the shoe, against which the foot bears, smooth.

From this description it is obvious that a shoe fitted with my improved heel may be revolved upon the lower section when the latter is in contact with the ground without altering the position of said lower section relative to the ground. Thus a person standing with his weight upon one heel may turn completely around, while the lower section of said heel remains stationary, from which it will be seen that no abrasion takes place between the bottom surface of the lower section and the ground, and therefore no wear is occasioned therebetween. Now when a person is walking it is also obvious that when the heel comes in contact with the ground it will

remain stationary as regards any rotary motion, while the remainder of the shoe is free to revolve in following the movements of the foot, as before described, which will prevent the wearing away of the heel by the grinding action which would otherwise take place were the lower section thereof rigid with the upper section.

Regardless of the fact that no wear takes place by the twisting of the heel upon the surface against which it bears, yet there is a wear incident to the bringing of the heel in contact with this surface, and were the heel to remain in the same relative position to the tread of the wearer this constant contact with the surface of the ground would gradually wear the heel at that point where the greatest pressure was brought to bear thereon; but this is compensated for and largely overcome by distributing this wear throughout the surface of the heel, since at every step of the wearer the upper section of the heel is slightly revolved relative to the lower section, so that in time the lower section makes a complete revolution relative to the upper section, from which it will be obvious that instead of any one point of the heel receiving the constant wear incident to its being repeatedly brought into contact with the ground with more force than other portions of the heel all portions of the heel will receive this wear and consequently be acted upon equally, thereby maintaining a level surface for the support of the wearer, and it is well recognized that the life of a shoe at all points is considerably lengthened by the maintenance of a perfectly level heel, which will cause both the heel and the sole to be brought into square contact with the ground, thereby equalizing the wear and strain upon said shoe, and this I fully accomplish by my improvement, while obviating the necessity of having to replace a portion of the heel when becoming worn at not only considerable expense, but annoyance from delays, as well as marring the general appearance of the shoe by patching the heel.

Having thus fully described my invention, what I claim as new and useful is—

In combination with a shoe having the upper section of a heel formed thereon with an opening through said section, a plate secured on the bottom of the section, a tubular extension formed on the plate and projecting upward into the opening, a lower section of a heel, a plate secured on the upper face thereof, a stud formed on the plate and extending upward through the extension, a nut run on the upper end of the stud, a coil-spring surrounding the stud and fitting against the nut at one end and the end of the extension at the other, a screw-plug threaded in the upper end of the opening in the upper section and fitting against the nut on the stud to vary the pressure of the spring, substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN P. BUCHHOLTZ.

Witnesses:
S. S. WILLIAMSON,
MARK BUFORD.