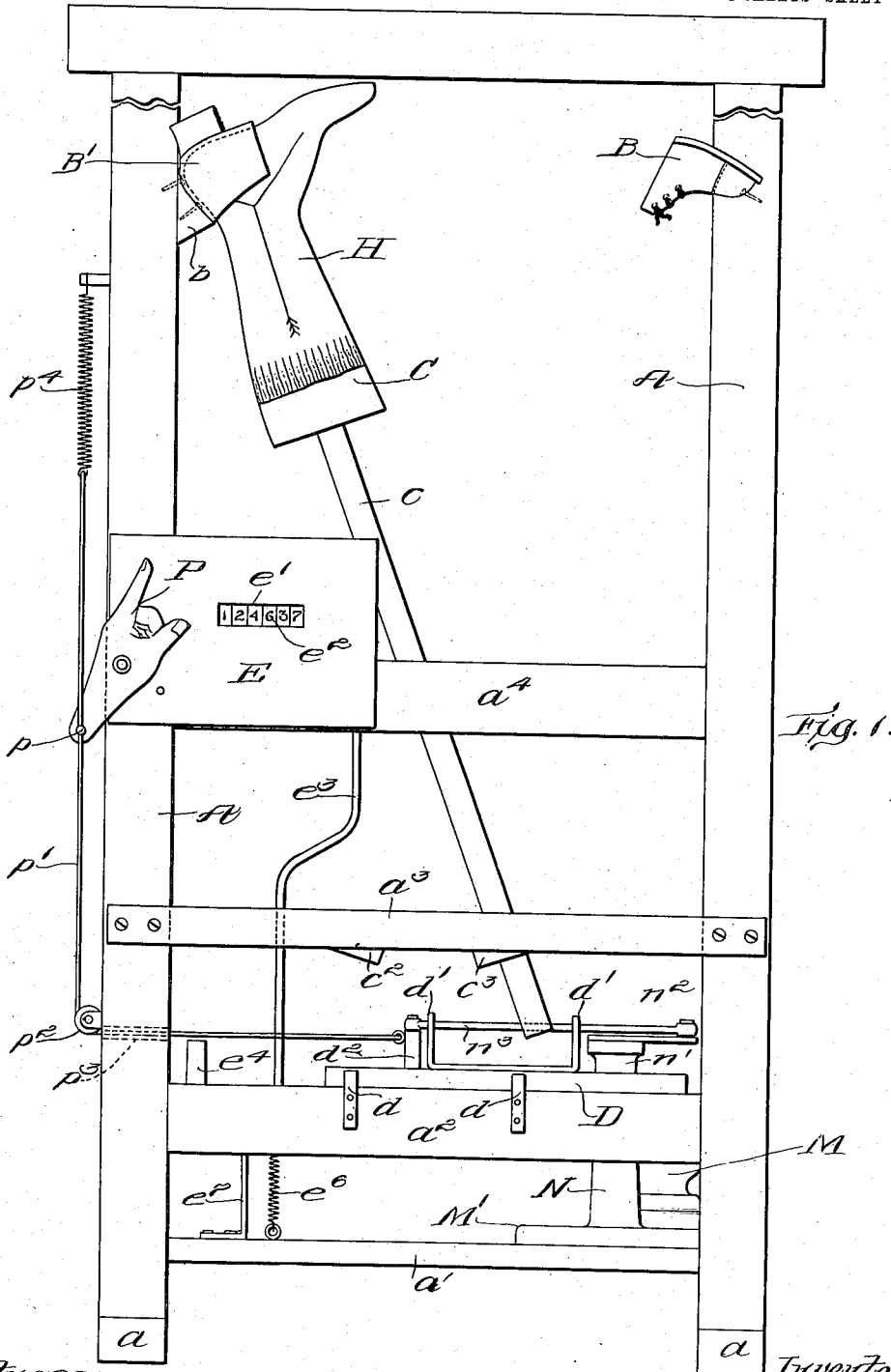


C. D. WHITTREDGE.
EXHIBITING APPARATUS.
APPLICATION FILED MAY 12, 1909.

942,123.

Patented Dec. 7, 1909.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 3.

Fig. 3.

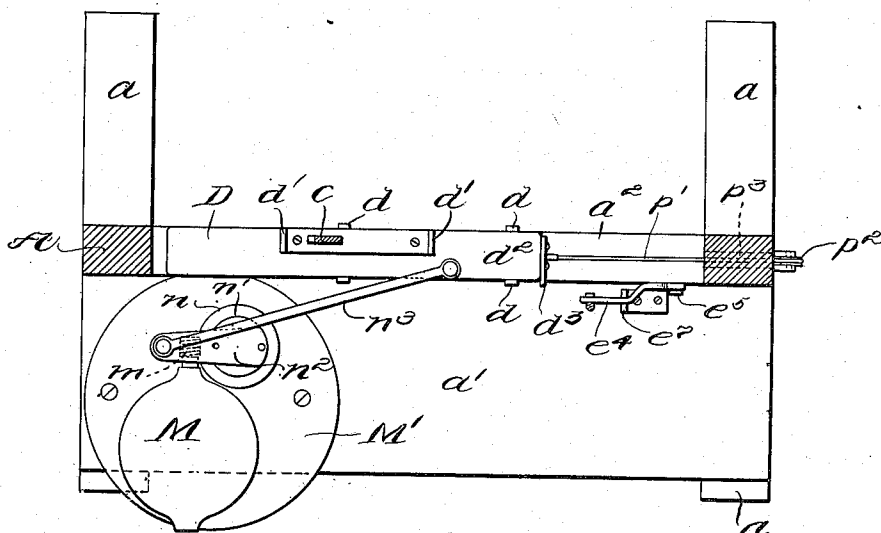
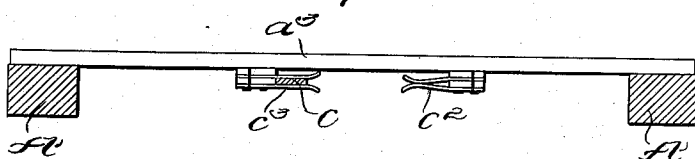


Fig. 4.

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UNITED STATES PATENT OFFICE.

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EXHIBITING APPARATUS.

942,123.

Specification of Letters Patent.

Patented Dec. 7, 1909.

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To all whom it may concern:

Be it known that I, CHARLES D. WHITTREDGE, a citizen of the United States, and resident of Saugus, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Exhibiting Apparatus, of which the following is a specification.

My invention relates to exhibiting or advertising apparatus, and its chief object is to provide an apparatus which will demonstrate the amount of wear an article will endure. This is accomplished in a machine or apparatus having two principal relatively movable parts, one of which carries the article whose wearing qualities are to be exhibited and may be called the holder, and the other of which supplies the surfaces, in contact with which the article carried by the holder rubs, chafes or wears, and may be called the abrading member. Either of said parts may be made stationary and the other movable; or both might be made movable, the essential condition being that they shall move relatively to each other in such manner that the article carried by the holder shall come into and out of chafing or rubbing contact with the abrading member.

Another feature of my invention is the provision of a counter, which may be of any approved form, connected with and actuated by the moving parts of the apparatus to count or indicate the number of the wearing or abrading contacts made between the article being exhibited and the abrading member.

A still further feature of my invention is the provision of a pointer which points alternately to the indicator characters of the counter and the article undergoing wear to attract the attention of the observer to said article on exhibition and to the indicated and constantly increasing record of its endurance.

The invention is susceptible of a great variety of embodiments, and is applicable to the exhibition of a great variety of articles whose wearing qualities are to be indicated. I believe, however, that it will find its chief utility in apparatus designed to exhibit wearing apparel and to indicate the

wearing qualities thereof. As such use and application is sufficiently characteristic of the nature of the invention, and admirably illustrates its principle, I will address my description to an embodiment of the invention designed to indicate the wearing qualities of wearing apparel, and specifically of hosiery. It will be understood, however, that my invention in its broader aspects is not limited to such particular application, but includes apparatus adapted to exhibit the wearing qualities of articles generally, and such general application is contemplated by the claims.

In the accompanying drawings which illustrate one embodiment of the invention,—Figure 1 is a front elevation of an apparatus embodying the invention in a form adapted to exhibit hosiery; Fig. 2 is a rear elevation of the apparatus shown in Fig. 1; Fig. 3 is a cross section on line 3—3 of Fig. 2; and Fig. 4 is a cross section on line 4—4 of Fig. 2.

The working parts of the apparatus, as herein shown, are supported by a rectangular frame A, having the standards a , the support a' for a motor, and the cross bars a^2 , a^3 and a^4 . Secured to the frame A are two stationary abrading members, herein shown as two opposed shoe sections B and B', the former a toe section and the latter a heel section. These two shoe sections are secured in any convenient manner to the uprights of the frame A, as by fitting the toe section into a socket conforming therewith in shape, and securing the heel section to a wedge-like filler block b which holds the heel section in proper position. The shoe sections face inwardly as shown and are placed in the path of the reciprocating form or holder presently to be described.

The holder for the article whose wearing qualities are to be exhibited is herein shown as a foot-form C mounted on the upper end of a lever c , which is pivoted at c' to cross bar a^4 . The foot-form C is adapted to carry hose H to be exhibited. When the foot-form is oscillated between the shoe sections the hose carried thereby is slipped into and out of the shoe sections in a manner simulating the wearing action to which hose is

subjected in ordinary use. The lower end of lever *c* extends alongside of cross bar *a*³ to which are secured two pairs of leaf spring jaws *c*² and *c*³ adapted to embrace the lever 5 as it approaches the ends of its stroke. The chief object of said spring jaws is yieldingly to grip the lever at the ends of its stroke and prevent rebound when the foot-form strikes the shoe sections. They also serve to relieve 10 the shock of the blow.

Mounted on the cross bar *a*² which serves as a slideway, is a reciprocating slide D, held in the slideway by suitable guides *d*. The slide D is provided with a pair of upwardly 15 projecting arms *d'*, one at either side of the end of lever *c* and spaced apart as shown. When the slide D is reciprocated on the cross bar *a*², the lower end of lever *c* is engaged by the following arm *d'*, and the lever 20 and foot-form are thereby swung through the first part of the stroke until the foot-form passes its dead center, whereupon the foot-form and lever will complete their stroke by gravity, the clearance between the 25 arms *d'* being such that the leading arm *d'* will have moved beyond the path of the lever *c* when the foot-form has passed its dead center.

The mechanism for reciprocating the slide 30 D is mounted on the shelf *a'* and consists of an electric motor M, a worm *m* upon the motor shaft engaging a worm wheel *n* mounted on a vertical shaft *n'* journaled in a vertical post or boss N upon the same base M' on 35 which the motor is mounted. The worm wheel *n* carries on its upper side a crank shaft *n'*, and crank arm *n*², the end of which is pivotally connected with one end of a pitman *n*³, the other end of which is pivoted to 40 post *d*² carried by slide D. As will be obvious from the foregoing, the slide D will be positively operated back and forth by the motor M through the worm and worm wheel, crank and pitman, and will cause the foot- 45 form to oscillate as already described.

In order to count and record the number of times the shoe H is slipped into and out of the shoe sections, and visually to demonstrate to the observer the wearing qualities 50 of the shoe, I provide a counter E, which may be of ordinary construction and is operated by a rock shaft *e*. The face of the counter is provided with an aperture *e'* through which the characters *e*² of the 55 counter may be read. Rock shaft *e* is connected by link *e*³ with one end of a bell crank lever *e*⁴, pivoted at *e*⁵ to cross bar *a*². The other end of the bell crank lever *e*⁴ is in the path of a projection *d*³ upon slide D. 60 Each time slide D moves to the right as viewed in Fig. 2, the projection *d*³ engages and operates the bell crank lever *e*⁴ which through link *e*³ and rock shaft *e* operates the

counter and records the stroke. A spring *e*⁶ returns the counter operating mechanism 65 to its normal position after each operation, and a bracket *e*⁷ mounted on shelf *a'* acts as a stop to limit the return movement of the bell crank lever *e*⁴ under the influence of spring *e*⁶. 70

A pointer P, herein shown as a hand, is pivotally mounted adjacent to counter E, and is connected at *p* by a cord *p'* which passes under a pulley *p*² mounted on the frame A, through a hole *p*³ in the frame, and 75 is fastened to post *d*² on slide D. A spring *p*⁴ under tension connects the other end of cord *p'* with the frame. As the slide reciprocates the pointer is oscillated to point alternately to the foot-form and to the read- 80 ings of the counter, being moved in one direction by the slide and in the other direction by the spring *p*⁴. Thus the attention of the observer is called by the moving 85 pointer to the article being exhibited, and to the record of the number of engagements with the abrading members which it has endured.

I claim:

1. In an exhibiting apparatus, a pair of 90 opposed abrading members, and a reciprocating form adapted to carry an article of wearing apparel and to move the same alternately into rubbing engagement with said opposed abrading members. 95

2. In an exhibiting apparatus, a pair of opposed abrading members, and a reciprocating form adapted to carry an article of wearing apparel and to move the same alternately into rubbing engagement with said 100 opposed abrading members, and a motor adapted to reciprocate said form.

3. In an exhibiting apparatus, a shoe section, a foot-form, one of said parts being movable relatively to the other, the form being adapted to enter the shoe section, and 105 means to actuate said movable part.

4. In an exhibiting apparatus, a shoe section, a reciprocating foot-form adapted to enter said shoe section, and means to actuate 110 said reciprocating foot-form.

5. In an exhibiting apparatus, a pair of opposed abrading members, one of which consists of the toe part of a shoe and the other of the heel part of a shoe, a reciprocating foot-form, and means to move said foot-form alternately into said toe and heel parts. 115

6. In an exhibiting apparatus, a frame, a shoe section secured to said frame, a foot-form mounted on a lever pivoted to said 120 frame and adapted to be swung into and out of said shoe section, and means to actuate said pivoted lever and foot-form.

7. In an exhibiting apparatus, a frame, a pair of opposed inwardly facing shoe sections, one a toe section and the other a heel 125

section, secured to said frame, a foot-form mounted on a lever pivoted to said frame and adapted to oscillate between said shoe sections, and means to actuate said pivoted lever and foot-form.

8. In an exhibiting apparatus, a frame, a shoe section secured to said frame, a foot-form carried by a lever pivoted to said frame adapted to enter said shoe section, a slide mounted on said frame adapted to oscillate said pivoted lever and foot-form, and means to reciprocate said slide.

9. In an exhibiting apparatus, a frame, a pair of opposed inwardly facing shoe sections, one a toe section and the other a heel section, secured to said frame, a foot-form mounted on an upwardly extending lever pivoted to said frame adapted to oscillate between said shoe sections, and mechanism to oscillate said lever, comprising a reciprocating member having two arms one on each side of the lever with a clearance therebetween, adapted to move said foot-form through the first part of its stroke in either direction past its dead center, and to permit said foot-form to move through the last part of said stroke by gravity.

10. In an exhibiting apparatus, a frame, a pair of opposed inwardly facing shoe sections, one a toe section and the other a heel section, secured to said frame, a foot-form mounted on an upwardly extending lever pivoted to said frame adapted to oscillate between said shoe sections, and mechanism to oscillate said lever, comprising a reciprocating member having two arms one on each side of the lever with a clearance therebetween, adapted to move said foot-form through the first part of its stroke in either direction past its dead center, and to permit said foot-form to move through the last part of said stroke by gravity, and yielding means to prevent rebounding when the foot-form strikes the shoe section.

11. In an exhibiting apparatus, a frame, a pair of opposed inwardly facing shoe sections, one a toe section and the other a heel section, secured to said frame, a foot-form mounted on an upwardly extending lever pivoted to said frame adapted to oscillate between said shoe sections, and mechanism to oscillate said lever, comprising a reciprocating member having two arms one on each side of the lever with a clearance therebetween, adapted to move said foot-form through the first part of its stroke in either direction past its dead center, and to permit said foot-form to move through the last part of said stroke by gravity, and leaf springs secured to said frame adapted to engage said pivoted lever and prevent rebounding when the foot-form strikes the shoe section.

12. In an exhibiting apparatus, a frame, a

pair of opposed inwardly facing shoe sections, one a toe section and the other a heel section, secured to said frame, a foot-form mounted on an upwardly extending lever pivoted to said frame adapted to oscillate between said shoe sections, and mechanism to oscillate said lever, comprising a reciprocating member having two arms one on each side of the lever with a clearance therebetween adapted to move said foot-form through the first part of its stroke in either direction past its dead center, and to permit said foot-form to move through the last part of said stroke by gravity, and a spring buffer secured to said frame adapted to be engaged by the pivoted lever as the foot-form approaches the end of its stroke.

13. In an exhibiting apparatus, a frame, a pair of opposed inwardly facing shoe sections, one a toe section and the other a heel section, secured to said frame, a foot-form mounted on an upwardly extending lever pivoted to the frame adapted to oscillate between said shoe sections, a reciprocating slide mounted on said frame to oscillate said foot-form, having two arms one on each side of said lever with a clearance therebetween, adapted to move said foot-form through the first part of its stroke in either direction past its dead center, and to permit said foot-form to move through the last part of its stroke by gravity, a motor, and connection between said motor and slide to reciprocate the latter.

14. In an exhibiting apparatus, a frame, a shoe section secured thereto, a reciprocating foot-form mounted on the frame and adapted to enter the shoe section, means to actuate said reciprocating foot-form, a counter, and means actuated by moving parts of the apparatus to operate the counter each time said foot-form enters said shoe section.

15. In an exhibiting apparatus, a frame, a shoe section secured to said frame, a foot-form carried by a lever pivoted to said frame adapted to enter said shoe section, a reciprocating slide mounted on said frame adapted to oscillate said pivoted lever and foot-form, means to reciprocate said slide, a counter, and means to operate said counter comprising a bell crank lever pivoted to said frame, one arm of which projects into the path of said slide and the other arm of which is operatively connected with said counter.

16. In an exhibiting apparatus, a frame, an abrading member, a relatively movable holder for the article whose wearing qualities are to be exhibited adapted to move said article into and out of engagement with said abrading member, a counter and mechanism to operate the counter each time said relatively movable parts make contact, a movable pointer, and means controlled by mov-

ing parts of the apparatus to cause said pointer to point alternately to said counter and to said holder.

17. In an exhibiting apparatus, a frame, a shoe section secured to said frame, a foot-form carried by a lever pivoted to said frame adapted to enter said shoe section, a reciprocating slide mounted on said frame adapted to oscillate said pivoted lever and foot-form, means to reciprocate said slide, a counter, connection between said slide and said

counter to operate the latter, a pointer pivoted adjacent to said counter, and connection between said slide and pointer to cause the same alternately to point to said counter and to said foot-form. 15

Signed by me at Boston, Massachusetts, this 8th day of May 1909.

CHARLES D. WHITTREDGE.

Witnesses:

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ROBERT CUSHMAN.