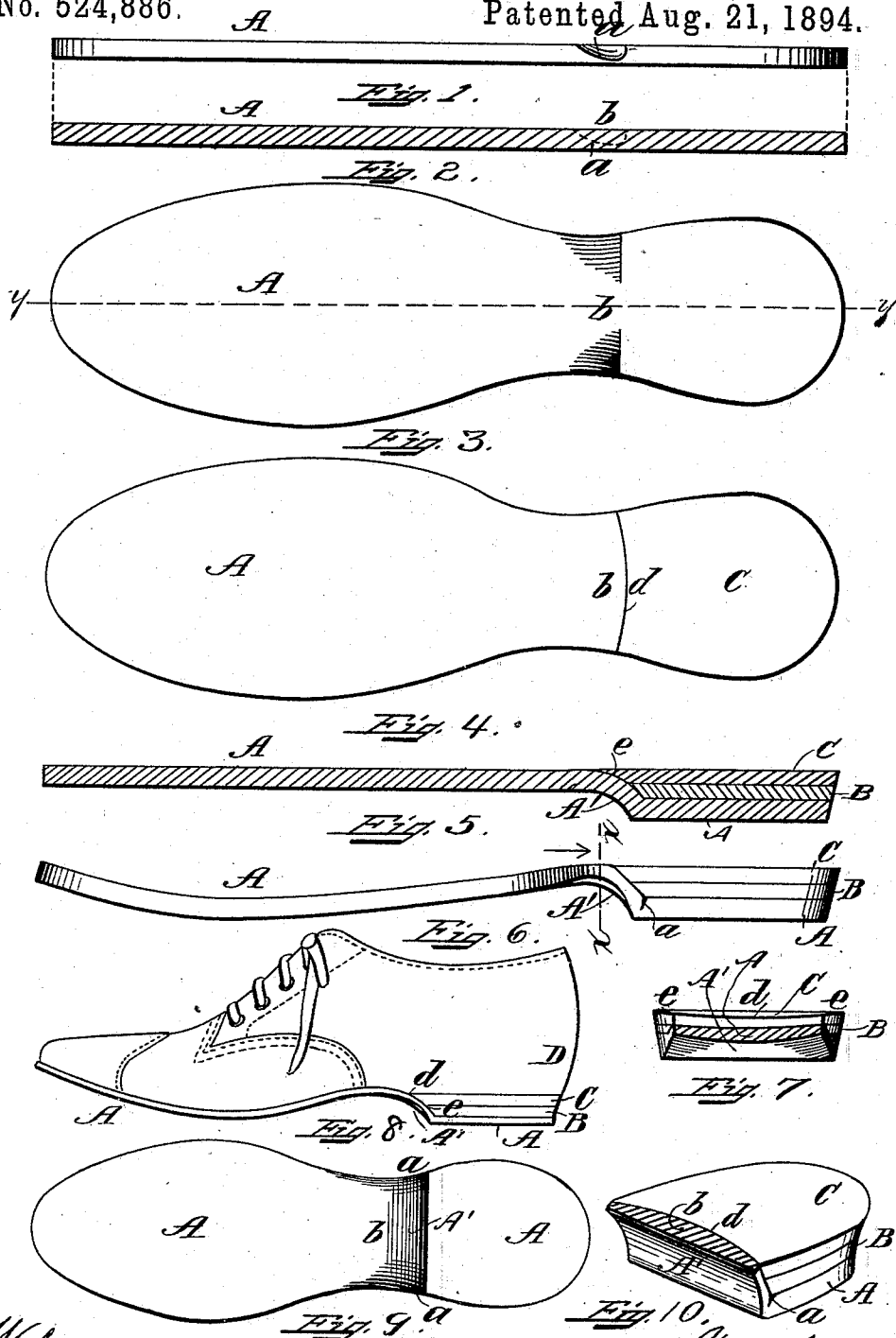


(No Model.)

A. A. COLLINS.  
BOOT OR SHOE.

No. 524,886.

Patented Aug. 21, 1894.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

ALFRED A. COLLINS, OF DANVILLE, NEW HAMPSHIRE.

## BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 524,886, dated August 21, 1894.

Application filed June 7, 1894. Serial No. 513,766. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED A. COLLINS, of Danville, in the county of Rockingham and State of New Hampshire, have invented a new and useful Improvement in Boots or Shoes, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claim.

My invention relates to an improvement in boots or shoes of the variety known as "spring-heel" shoes in which the sole extends the entire length of the shoe in one piece, under both heel and toe, and also is bent upward to form the breast of the heel and the arch of the shank. And the invention consists in the peculiar construction of the shank portion of the sole by which the edges thereof are notched and thinned by cutting or compressing, and in the adaptation of the heel lifts thereto by recurving the front edges thereof as hereinafter fully described, so that the completed shoe is increased in strength and firmness in the arch of the shank and rendered much more durable at the bend of the sole along the lower edge of the breast of the heel, where such shoes are usually weakened by the customary channel cut across the sole at a uniform depth.

In the drawings: Figure 1. is an edge elevation of a sole notched and thinned at the edges in accordance with my invention. Fig. 2. is a vertical section taken longitudinally through the center of Fig. 3, and as on line *y, y*. Fig. 3. is a plan or top view of the sole shown in Fig. 1. Fig. 4. is a similar view of the same with the addition of a heel lift thereon. Fig. 5. is a vertical section taken longitudinally through the center of Fig. 3. Fig. 6. is an elevation of the sole and heel lifts thereon the sole being bent into shape as when forming a part of a completed shoe. Fig. 7. is a transverse section taken as on line *x, x*, Fig. 6, and viewed from the left of said line. Fig. 8. is a side elevation of a completed shoe embodying my invention. Fig. 9. is a view of the bottom of the same. Fig.

10. is a perspective view of the heel showing the sole in section at the upper turn of the same in the shank.

The sole A is notched and thinned, by cutting or compression, on its edges near the heel portion thereof as shown at *a* Fig. 1, which notches or depressions *a* are formed deeply at the extreme edges, but diminish in depth and gradually fade out toward the center, leaving the middle portion *b* at full thickness as shown.

Lifts B and C are interposed in the usual manner between the heel portion of the sole and the upper D, and the lifts are not only under cut or beveled on their front edges as is usual, but, as a part of my improvement, they are recurved on their edges *d*, to allow the thick central part *b* of the sole to be bent back far enough to bring its thinner outer edges *a, a*, into proper contact with the corresponding outer portions of the heel lifts at *e, e*, thus conforming to the transverse configuration of the adjacent face of the sole, and securing a firm bearing of the same against the breast of the lifts from one side to the other as clearly shown in Fig. 10, and without distorting the sole from its proper shape or weakening it by the usual cross-channel cut at uniform depth therein under the breast of the heel.

The sole thus constructed with edge depressions or notches and full central thickness, in conjunction with recurved lifts into which the sole is upturned as described and shown in Fig. 10, constitutes the essential feature of my invention. When the sole is thus bent into position relatively to the heel lifts, and into conformity with the bottom of the last, and is secured to the upper in the usual manner, a shoe is produced of unusual firmness in the arch A' of the shank, and of a more substantial and durable heel tread, and one more capable of maintaining its good form under the tread of the wearer. The convexity of the bottom of the last on which the shoe is made bends the sole so that the bottom thereof is correspondingly convex

in the shank A' as shown in Fig. 9 and the forward edge of lift C as shown in Fig. 7 is slightly depressed thereby.

I claim—

- 5 In a shoe of the described spring-heel variety, the combination of a sole formed with notched or thinned edges, as at *a, a*, and full center, as at *b*; with a heel lift, or lifts, interposed between the sole and upper, and

having their front edges *d* recurved to conform to the transverse configuration of the face of the upturned sole which bears against them; substantially as and for the purposes specified.

ALFRED A. COLLINS.

Witnesses:

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