

T. H. FILES.  
ART OF MAKING BOOTS AND SHOES.  
APPLICATION FILED MAR. 19, 1909.

990,248.

Patented Apr. 25, 1911

2 SHEETS—SHEET 1.

Fig. 1.

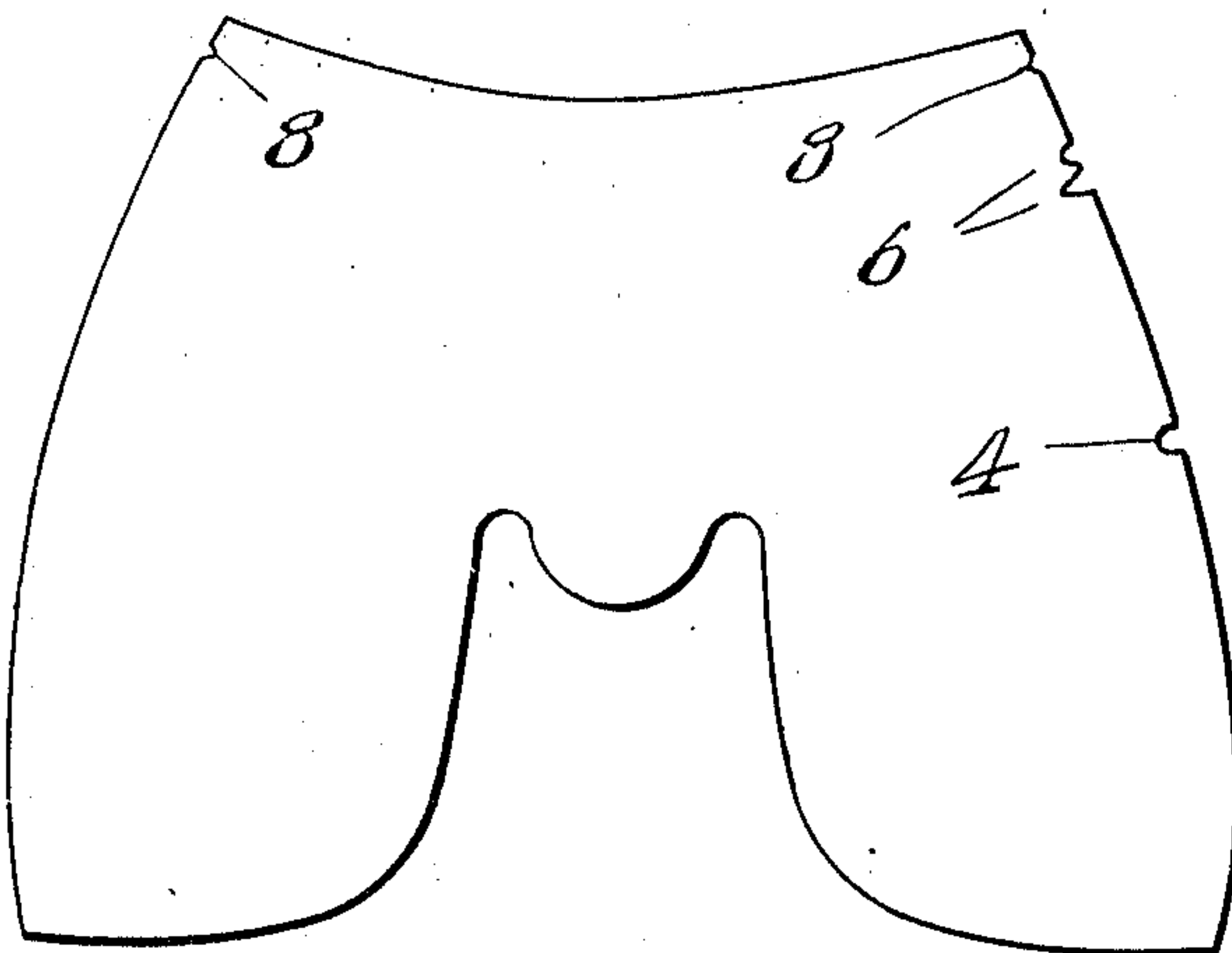
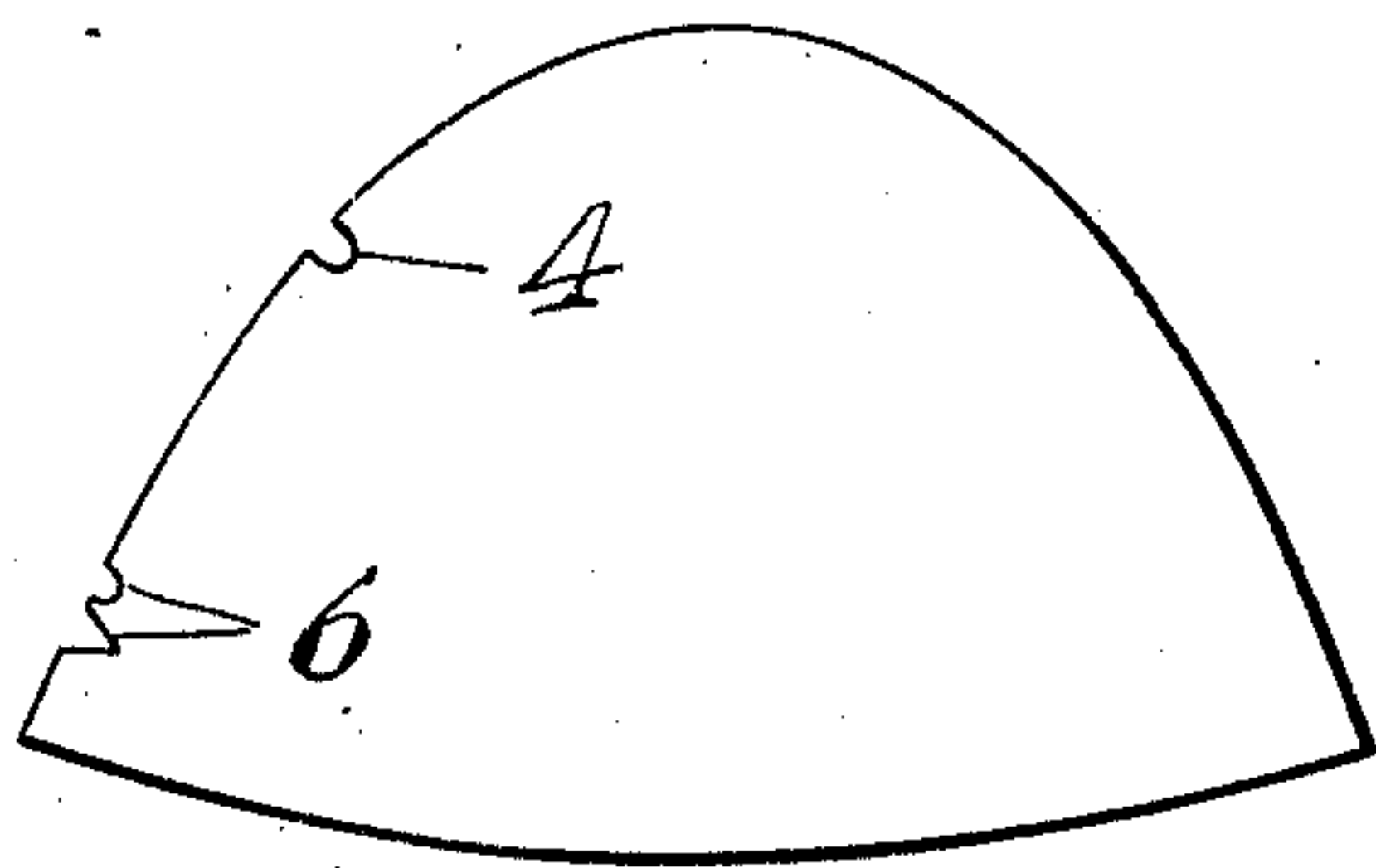


Fig. 2.

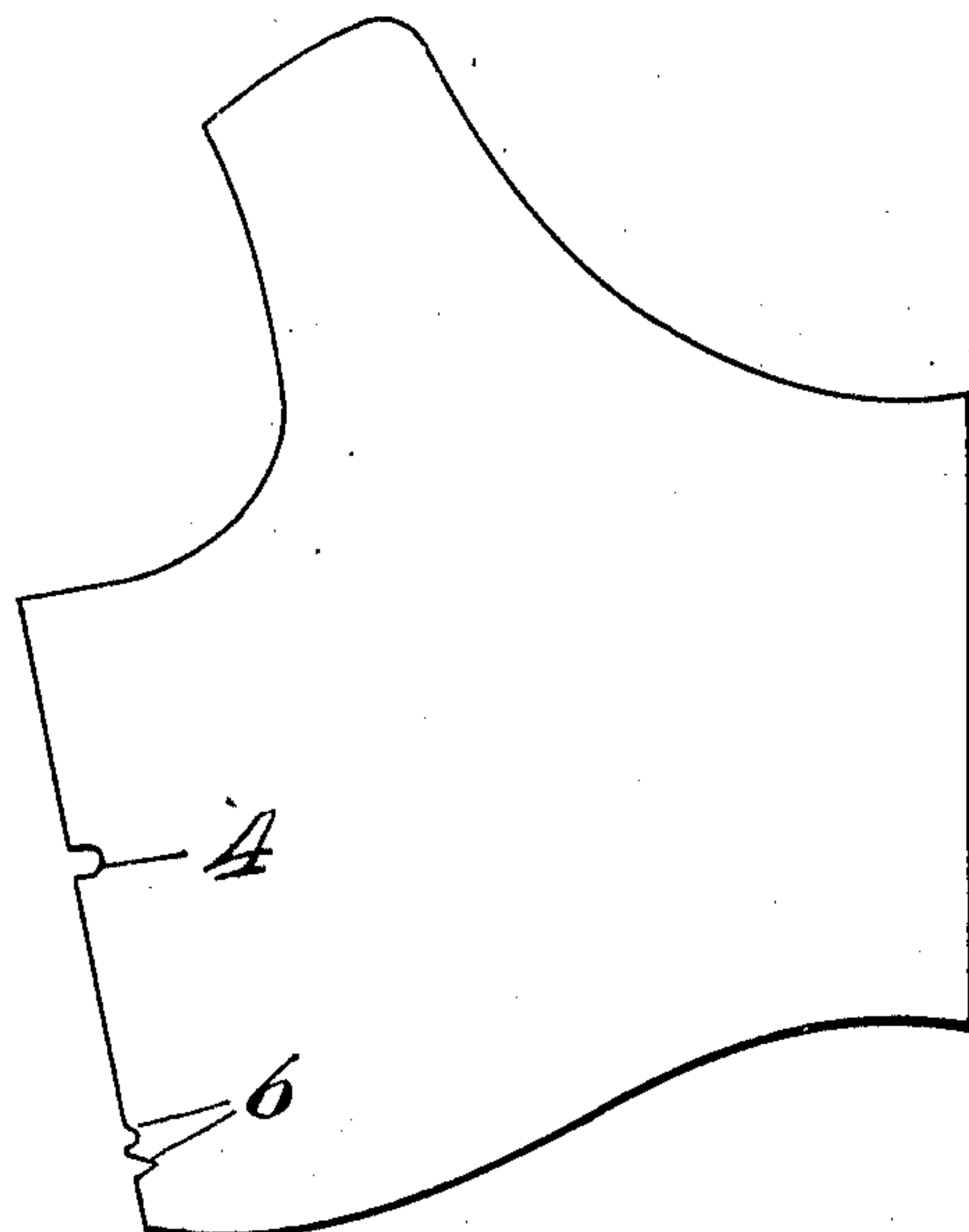


Fig. 3.

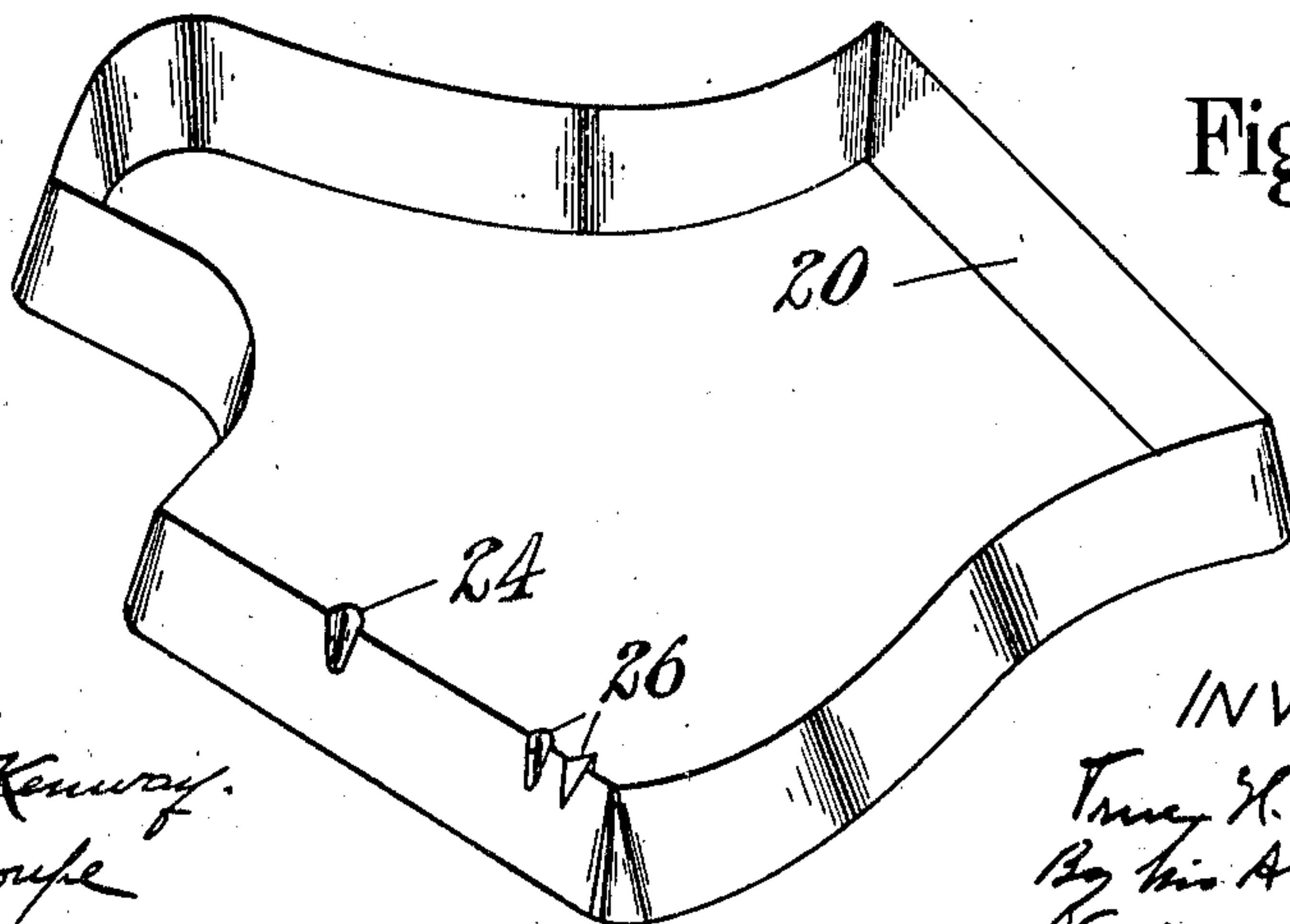


Fig. 4.

WITNESSES.

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2 SHEETS—SHEET 2.

SIZES		SIZES	
1	Π	9½	ΛΛΛn
1½	ΠΛ	10	ΜΛ
2	ΠΠ	10½	ΜΛn
2½	ΠΠΛ	11	ΛΜ
3	n	11½	ΛΜn
3½	nΛ	12	ΛΛΠ
4	nn	12½	ΛΛΠn
4½	nnΛ	13	Πn
5	Λ	13½	Πnn
5½	Λn	WIDTHS	
6	Μ	AA	nnΠ
6½	Μn	AOR 1	Λn
7	ΜΜ	BOR 2	n
7½	ΜΜn	COR 3	Π
8	ΛΛ	DOR 4	Nothing
8½	ΛΛn	EOR 5	Λ
9	ΛΛΛ	FOR 6	ΛΠ

WITNESSES.

Herbert W. Kenway.  
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Fig. 5.

INVENTOR

Thos. H. Files  
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# UNITED STATES PATENT OFFICE.

TRUE H. FILES, OF EVERETT, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## ART OF MAKING BOOTS AND SHOES.

990,248.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed March 19, 1909. Serial No. 484,351.

*To all whom it may concern:*

Be it known that I, TRUE H. FILES, a citizen of the United States, residing at Everett, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in the Art of Making Boots and Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to improvements in the art of making boots and shoes and contemplates a method which is characterized by forming and simultaneously marking in a novel manner the blanks which are to form the various portions of the upper, by which the sorting, matching, assembling and securing together of the blanks is greatly facilitated.

More particularly the invention relates to a method which includes as a step indicating sizes or widths or both sizes and widths in a novel manner upon portions of the blanks which are concealed in the finished shoe.

While in its broader aspect the invention includes as a step indicating sizes or widths, or both, of upper blanks by means of code symbols, the novel method is especially advantageous when practiced in the cutting out of uppers by means of dies and particularly dies used in connection with clicking presses for dying out upper blanks.

The marking of blanks constituting a step in the novel method of this invention is preferably effected by forming in the outlines of the blanks certain indentations or notches, the sizes, shapes and arrangements of which indicate the sizes or widths and preferably both the sizes and widths of the blanks, according to an arbitrary code. It is desirable to form the size and width indicating notches simultaneously with cutting the outline of the blank and as herein disclosed, this end is attained by forming in the cutting edges of upper cutting dies lateral indentations so shaped as to produce the desired notches in the outline of the blank. Among the important advantages of this method is the use of a code consisting of

such symbols as may be formed in the cutting edge of the die easily and accurately and with little expense and such as may also be cut readily and clearly in the outline of a blank so also that the size and width of the latter may be obvious on inspection.

Among the advantages of a code for indicating sizes or widths over a simple numerical system, *i. e.* a system whereby three notches would indicate size 3, nine notches would indicate size 9, etc., are that it necessitates the formation of fewer indentations in the cutting edge of the die, and that since fewer symbols are needed on the blanks the significance of the marking is more readily grasped by the operator than would be the case if the sizes were indicated by a large number of similarly shaped notches, with the result that the time required to sort the blanks is correspondingly decreased.

An important advantage of the present invention in its preferred application is that it obviates the use and consequent expense of separately constructed marking stamps and the complicated mounting required by such stamps, and that on upper dies it is equally effective for all thicknesses and qualities of stock.

A further advantage of cutting code symbols in the outlines of the blanks is that the size and width indications will be visible and conspicuous on both sides of the blanks, the character of the indications being such that the similarity of marking on two blanks will be obvious when it is desired to sort the blanks according to sizes, or when the different blanks to form an upper are being fitted together.

Preferably the code symbols may be formed in a portion of the edge of a blank which is to be concealed in the finished shoe by being lasted in, rather than overlapped by an adjacent blank. An important advantage incident to locating the code symbols at such points is that they are visible after the different parts of an upper have been sewed together, so that if a blank of a wrong size has been inadvertently used this fact may be ascertained readily at any time before the outsole has been attached, whereas otherwise



the size markings would be concealed permanently when the blanks and lining had been sewed together.

Another advantage incident to forming the size indications in the contours of the blanks is apparent in those cases where the blanks of the same size are sorted and tied up in bundles of several dozens. It is possible to ascertain at a glance whether all the blanks in such a bundle are of the proper size, because, as the notches are cut at a predetermined point in the contour of each blank, they form continuous channels in the edge of a bundle and any variation in the arrangement of the notches in a single blank stands out conspicuously.

Notches in the outline of the blanks may be utilized advantageously for other purposes than indicating sizes. In fitting together the various parts of an upper it is a great convenience for the operator to have indicated clearly the extent to which one blank should overlap the adjacent blank. By forming in each edge of a blank a notch, similar to but preferably slightly smaller than the size indicating notches, the position which the edge of an overlapping blank should occupy is clearly and definitely indicated, and a uniform lap in each upper is assured. It is advantageous to form the indentations extending inwardly from the contour of the die rather than extending outwardly because in the latter case the projecting portions would be likely to be damaged as the die is moved about and also because in that case the cutter would have to allow extra stock for each blank in order to include the resulting projection.

In the accompanying drawing which illustrates an application of the method of my invention,—Figure 1 shows a toe tip blank having size and width indicating notches in its outline; Figs. 2 and 3 show vamp and quarter blanks, respectively for the same size shoe as the toe tip blank; Fig. 4 is a perspective view of a quarter die showing the code indentations in the cutting edge; Fig. 5 shows an arbitrary code of size and width indicating symbols.

It is advantageous to select code symbols such that the indentations in the cutting edge of a die required to form them may be of the simplest character. A code comprising V-shaped, U-shaped and square notches is illustrated on Sheet 2 of the drawing. According to this code, size 1 is indicated by a single square notch formed in the outline of a blank; size  $1\frac{1}{2}$  is indicated by a square notch and a small V-shaped notch; sizes 3 to  $4\frac{1}{2}$  by U-shaped and small V-shaped notches; sizes 5 to  $7\frac{1}{2}$  by large V-shaped and small U-shaped notches. Sizes 8 to  $13\frac{1}{2}$  are indicated by various arrangements of square, large and small U-shaped, and large

V-shaped notches. For indicating widths a U-shaped and square notch in proximity to the size notches indicate the narrowest or A—A width; a V-shaped and U-shaped notch indicate an A or 1 width and so on with the exception of a D or 4 width. This width is indicated by an absence of any symbol in the location where the width indication would naturally occur. The width indications of the code, therefore, comprise an interrupted or non-continuous series of symbols. The 4 or D width is one of the most common widths, the B, C and E widths next, and the code is so devised that the simpler symbols indicate the widths and sizes of blanks which are likely to be cut in greater numbers while the more elaborate symbols indicate the blanks cut in smaller numbers.

Figs. 1, 2 and 3 illustrate toe tip, vamp and quarter blanks for forming a part of the upper of a shoe, the sizes and widths of said blanks being designated by code notches according to this invention. The U-shaped and V-shaped notches in the outline of each blank, designated by reference character 6 indicate that the blanks are size No.  $5\frac{1}{2}$ , while the single U-shaped notch 4, in proximity to the size notches, indicates that the blanks are of B or 2 width. For the purpose of locating the tip relative to the vamp and indicating the proper amount of lap, the two notches 8 are formed in opposite edges of the vamp blank. In fitting together the blanks forming an upper, the rear edge of the tip blank is made to coincide with these two notches which assures the correct relation of the blanks in the finished shoe.

As already noted, it is desirable so to locate the size and width indicating notches on the blanks that in the finished shoe the notches shall be concealed. With this end in view the notches for indicating the size and width of a tip or vamp are located upon a part of the blank which is located in after the shoe is assembled. Size indications located at such points will be visible after the boot or shoe has been lasted and until the outsole has been attached and an extended opportunity is thus afforded for detecting errors in sizes of the blanks forming the upper. The code notches on a quarter blank are so located as to be concealed either by being lasted in or by an overlapping portion of the vamp or foxing, according to the style of shoe. In shoes in which a portion of the lower edge of a quarter is concealed by the vamp, the size indicating notches are located preferably in said portion, as by separating the vamp and lining this overlapped portion of the quarter and the size indicating notches may be seen at any time prior to the lasting operation.



The code notches are produced by lateral indentations in the cutting edges of the dies for cutting the blanks, as shown, for example, in the quarter die illustrated in Fig. 4, and extend preferably inwardly from the cutting edge. The die 20 is of the type commonly used with clicking presses and requires no particular description. The indentations are formed in the cutting edge of the die during its manufacture in any desired manner and bear a predetermined relation in their number, shape or arrangement to the size of the die in which they are formed. In the die illustrated indentations 26 form the size indicating notches and indentations 24 the width indicating notches in the outline of the blank.

For carrying out the improved method above disclosed under commercial conditions, a group of workmen may be provided with sets of dies for cutting the different blanks for various styles of shoes, said dies being constructed to form size and width indicating notches in the outlines of the blanks. Tags or tickets are provided for each workman showing the number of styles and the number of each size and width to be cut by him. The blanks forming an upper are afterward sorted, assembled and stitched together according to the code notches in the outlines thereof. This sorting and assembling of the blanks is facilitated by having the code symbols visible on both sides of each blank.

It will be apparent that in sorting and assembling the blanks, and in securing together the parts of an upper, conspicuous and simple indications of the sizes and widths is most advantageous for rapid work and that a code of notches, such as herein disclosed is particularly adapted for indicating the sizes and widths of the blanks.

In manufacturing heavy shoes or brogans, such as those worn by miners, there is commonly but a single width corresponding to each size. For example, a number 10 shoe is made always of a number 6 width. In dealing with such shoes width indications upon the blanks are superfluous and the size or length indications alone need appear.

The expression "sizes" is used in the claims and is therein to be construed where the context permits, as meaning either lengths or widths or both lengths and widths.

Having described my invention what I claim as new and desire to secure by Letters Patent of the United States is:—

1. That improvement in the art of making shoes which consists in cutting in the outline of the various blanks for a shoe upper code notches for indicating sizes, said code comprising square, V-shaped and U-shaped notches, the various blanks for shoes of the

same size having like notches, and thereafter assembling the blanks according to the code notches in the outline thereof.

2. That improvement in the art of making shoes which consists in dying out blanks for the various parts of uppers of shoes of different sizes and widths, at each dying out operation simultaneously forming indentations in the edge of each blank constituting arbitrary code symbols indicating the size and width of the shoe for which the blank is intended, the various blanks for shoes of the same size having like indentations, and thereafter assembling the blanks according to the code indications.

3. That improvement in the art of making shoes which consists in cutting in the outline of the various blanks for a shoe upper notches for indicating sizes and widths according to an arbitrary code, the width indications of said code comprising a non-continuous series of square, V-shaped and U-shaped notches, and thereafter assembling the blanks according to the code notches in the outlines thereof.

4. That improvement in the art of making shoes which consists in cutting blanks for various parts of the uppers and during the cutting operation forming in the blanks size indications comprising code notches cut in the outline thereof and simultaneously forming locating notches, the various blanks for shoes of the same size having like code notches, and thereafter assembling and fitting together the blanks for a shoe according to said code notches, the amount of lap of one part over another being determined by said locating notches.

5. That improvement in the art of making shoes which consists in dying out blanks for the various parts of the uppers and during the dying out operation cutting in portions of the outline of the blanks which are to be concealed by being lasted in the finished shoe symbols of a code indicating sizes, and thereafter assembling and securing together the blanks for an upper according to the code symbols cut therein.

6. That improvement in the art of making shoes which consists in dying out differently shaped parts of shoe uppers and forming in the outline of such parts, simultaneously with the dying out operation, differently shaped size-indicating notches according to an arbitrary code, different parts of uppers for shoes of the same size being provided with the same code indications, and thereafter securing together the parts according to the code indications.

7. That improvement in the art of making shoes which consists in dying out blanks for the various parts of the uppers, and during the dying out operation cutting out of portions of the blanks which are to be con-

cealed in the finished shoe symbols of a code  
indicating sizes, the various blanks for shoes  
of the same size having like symbols, and  
thereafter assembling and securing together  
5 the blanks for each upper according to the  
code symbols cut therein.

In testimony whereof I have signed my

name to this specification in the presence of  
two subscribing witnesses.

TRUE H. FILES.

Witnesses:

FRED W. GUIBORD,  
HERBERT W. KENWAY.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."

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