

(No Model.)

E. N. HATCHER.

AXLE SKEIN.

No. 374,473.

Patented Dec. 6, 1887.

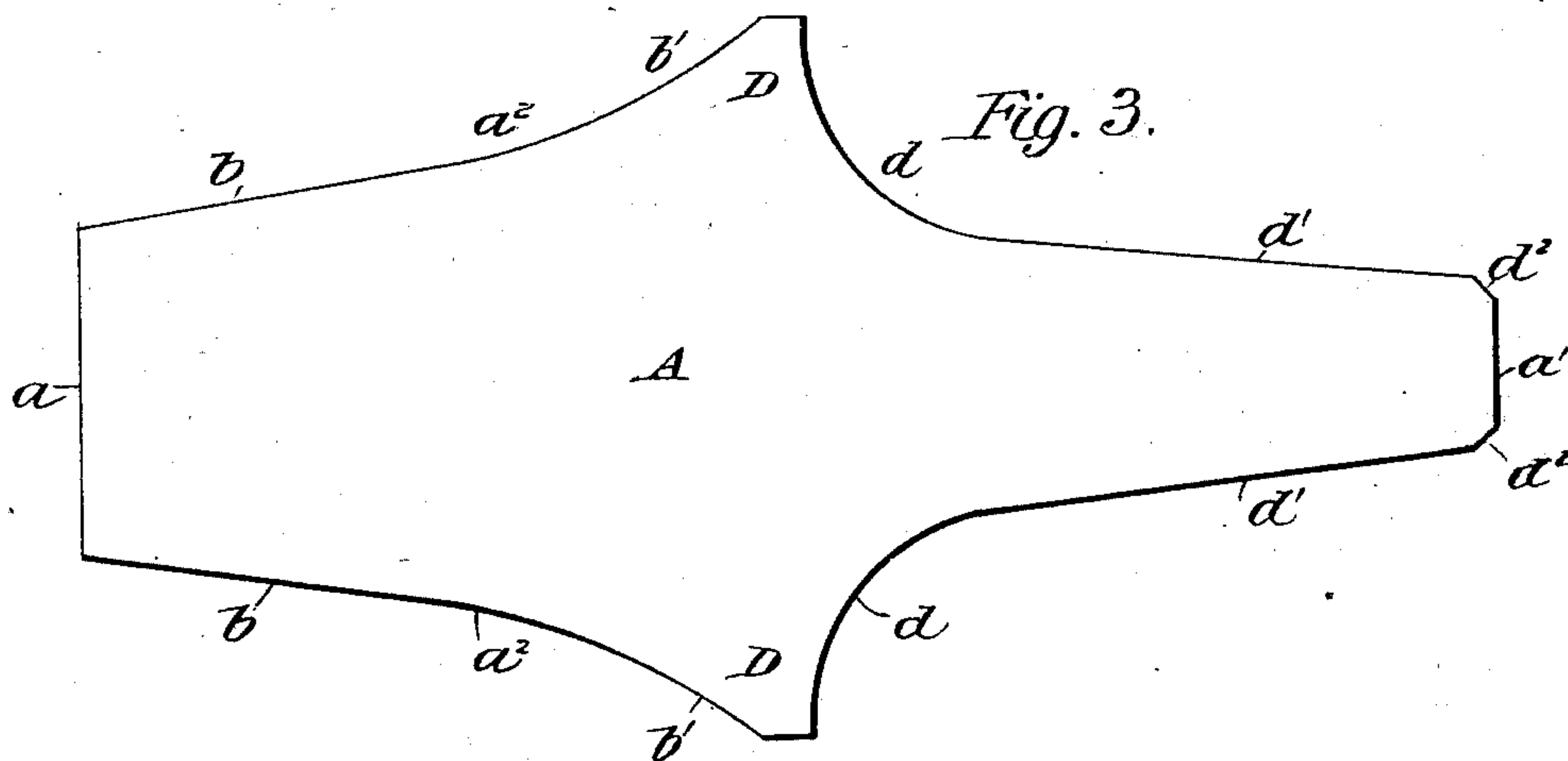
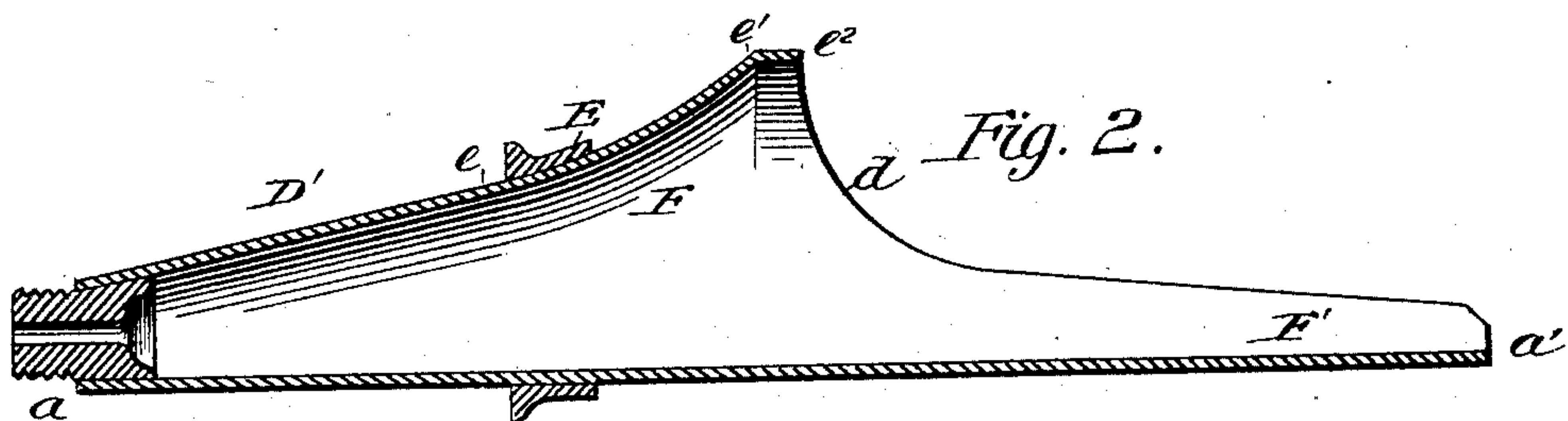
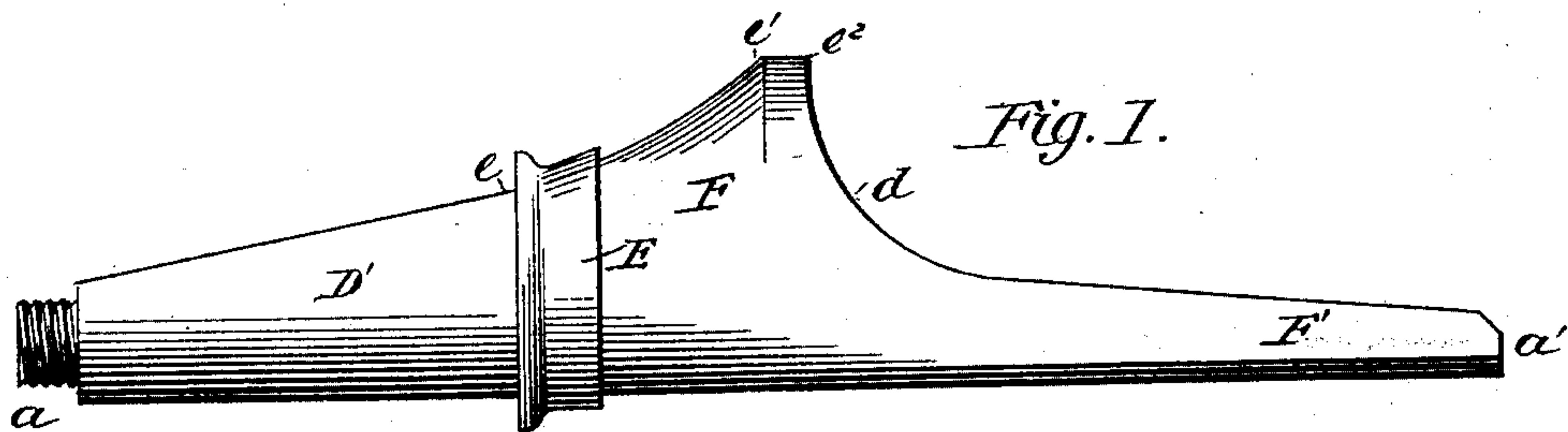


Fig. 4.

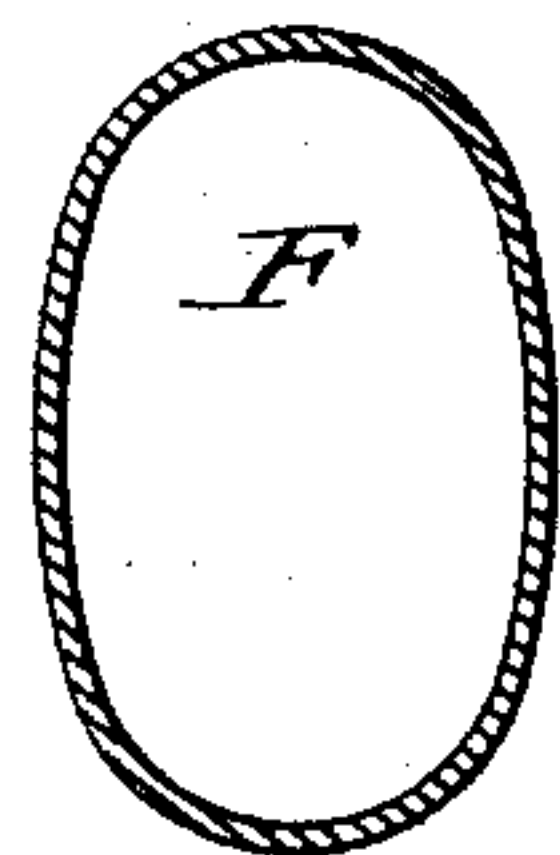


Fig. 5.



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AXLE-SKEIN.

SPECIFICATION forming part of Letters Patent No. 374,473, dated December 6, 1887.

Application filed August 22, 1887. Serial No. 247,566. (No model.)

To all whom it may concern:

Be it known that I, EDMUND N. HATCHER, of Columbus, in the county of Franklin and State of Ohio, have invented a new and Improved Axle-Skein, of which the following is a full, clear, and exact description.

My invention relates to an improvement in axle-skeins, and has for its object to provide a device which may be readily manufactured and in which angular indentures in the edge surfaces are avoided in cutting the blank, thereby avoiding danger of cutting too deep with the ends of the shears and weakening the skein by furnishing a starting-point for a break, and also wherein the skein will take an axle without trimming the same, and fully protect the wood at the point of intersection with the skein and a distance beyond the same.

The invention consists in forming an axle-skein of a single piece of metal and in cutting the blank in such manner that angular recesses in the edges are avoided, and also in the details of construction, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the axle-skein. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a plan view of the blank. Fig. 4 is a transverse section through the enlarged portion of the skein, and Fig. 5 is a transverse section through the inner end.

It is the object of the present invention to so shear the shape or blank as to entirely avoid shearing an L-shaped recess in the same, or any recess wherein the shears' points are liable to start splitting, thereby weakening and rendering possible a snap, split, or break under heavy strain or in trying positions. To that end the blank A is cut square at the ends a and a' , and from the outer edges of the front end, a , the sides are cut in a straight line to a point, a^2 , at the front of the center, the said lines being projected outwardly in opposite directions toward the rear end, whereby the inclined side edges, b , are produced. From the point a^2 the front side edges are curved outward to produce a slight concavity, b' , terminating at or near the center of the blank,

and the metal at the center is cut straight across a short distance, then downward and inward with a full curve, d , and outward to the rear end in a straight line, d' , the said lines d' having an inclination from their point of junction with the curve d inwardly and rearwardly, the corners produced by their union with the rear end being beveled off, as shown at d^2 , Fig. 3. Thus the blank comprises a wide front end, central side wings or extensions, D, and a reduced rear end.

In further carrying out the invention the side edges of the blank are bent upward toward each other and the edges from the outer end of the curve d extending forward are welded or otherwise firmly secured one to the other. As a result of the attachment a round tapered spindle portion, D', is produced, upon which the wheel or hub-box is to revolve. At the butt or inner end, e , of the spindle a metallic collar or band, E, is secured by welding or shrinking, and to the rear of the collar E an upwardly-curved bonnet, F, is formed, extending from the axle-butt e to a point, e' , near the center and horizontal to the extreme upper point, e^2 , as shown in Figs. 1 and 2, the said bonnet commencing round at e and ending at e^2 in an oblong or 0 shape, as illustrated in Fig. 4. The rear end of the skein—that is, from the central point, e^2 , to the end a' —forms an integral truss-extension, F', curving upward to meet the bonnet, and to the rear of the curve the said truss-extension is substantially U-shaped in cross-section, as shown in Fig. 5. The skeins usually break at e^2 ; but my skein, made from a plate or blank having the downward-curved shear d , causes the extension to act as a brace, that cannot do else than greatly re-enforce the weak point and act as a truss between e' and a' .

Curving the bonnet upward, as shown and described, admits of the admission of a greater amount of wood or timber than heretofore, and by reason of the peculiar shape of the truss the axle need not be hewed from its sawed shape, whereby it is weakened, and the oblong shape of the bonnet will cause the use of sufficient timber to make the axle equal to almost any emergency.

By making my skein without a short bevel I avoid cutting notches or making a beveled

hump, and am enabled to make a sheet-metal skein with an extension-sleeve thoroughly braced from end to end and entirely free from angular cuts, which often cause a split or break
5 and weaken the skein more at one point than at another.

The gradual upwardly-extending bonnet commencing at *e* when the collar is made fast enables me to do away with cutting the usual
10 notch or bead, forming a hump to act as a hub or box rest.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 1. The blank A, for a thimble-skein, herein shown and described, having its sides formed with opposing wings D D, inclines *b b d' d'* at opposite ends of its sides, and the curved or rounding portions *b' b'* and *d d* between the
20 wings D D and the inclines *b b* and *d' d'*, respectively, substantially as set forth.

2. An axle-skein formed of a single piece and with a round tapering spindle-section, D', an oblong bonnet, F, curved gradually from
25 the point *e* to the point *e'* and horizontally to the extreme upper point *e''*, and the rear truss-

extension, F, curving upward to the bonnet, as at *d d*, substantially as set forth.

3. An axle-skein made from a single piece of metal and composed of a tapering spindle- 30 section, an upwardly-extending and integral hood circular in cross-section at its intersection with the spindle and oblong at its outer end, and a rear truss-extension U-shaped in cross-section, united with the hood by a curved 35 edge surface, whereby angular recesses are avoided, as and for the purpose set forth.

4. An axle-skein made from a single piece of metal and composed of a tapering spindle- 40 section, an upwardly-extending and integral hood circular in cross-section at the intersection with the spindle and oblong at its outer end, a collar secured to the spindle at the intersection of the hood, and a rear truss-extension U-shaped in cross-section, having its in- 45 ner side edges concaved at their union with the hood, as and for the purpose herein specified.

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Witnesses:

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