

(No Model.)

F. RAYNOR.  
BREAST COLLAR AND TRACE.

No. 578,772.

Patented Mar. 16, 1897.

*Fig. 1.*

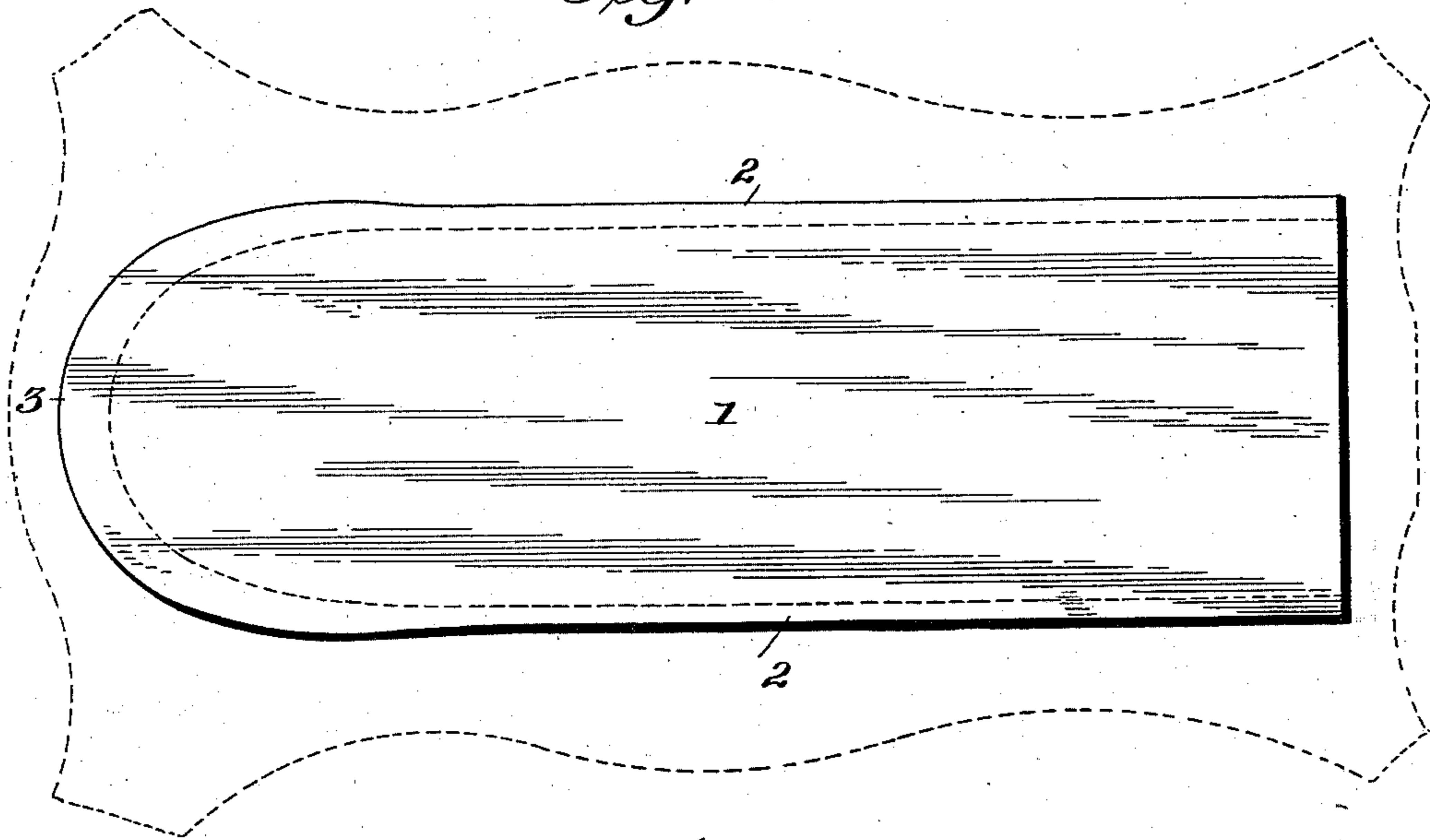


Fig. 2.

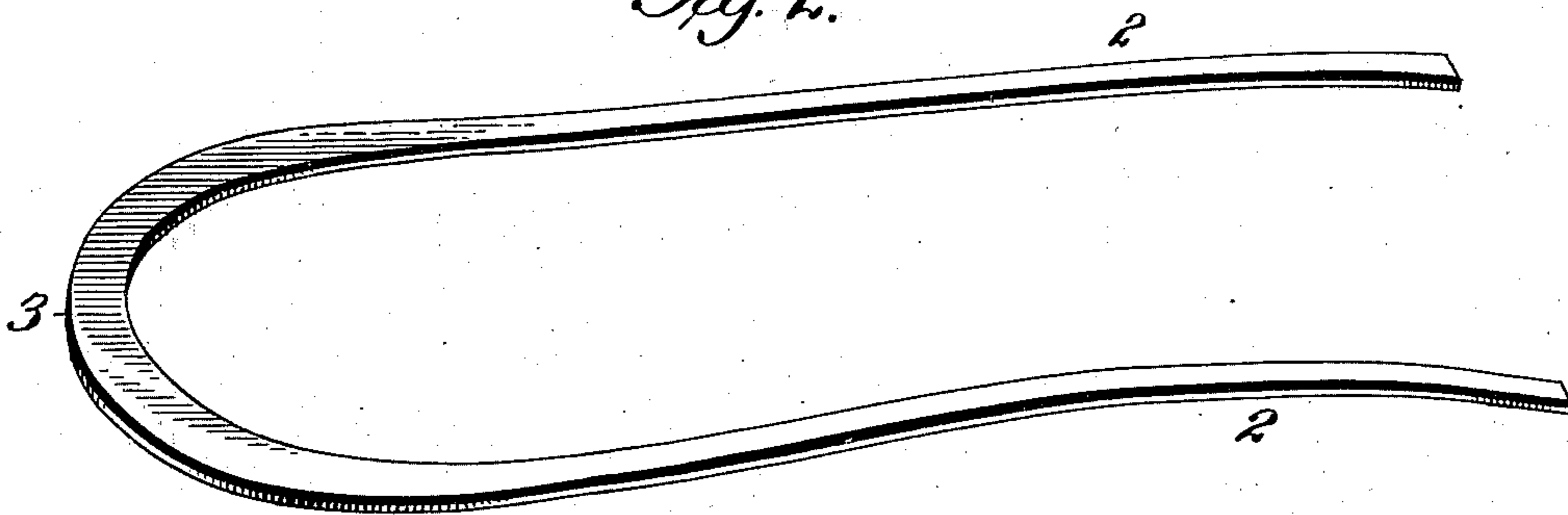


Fig. 3.

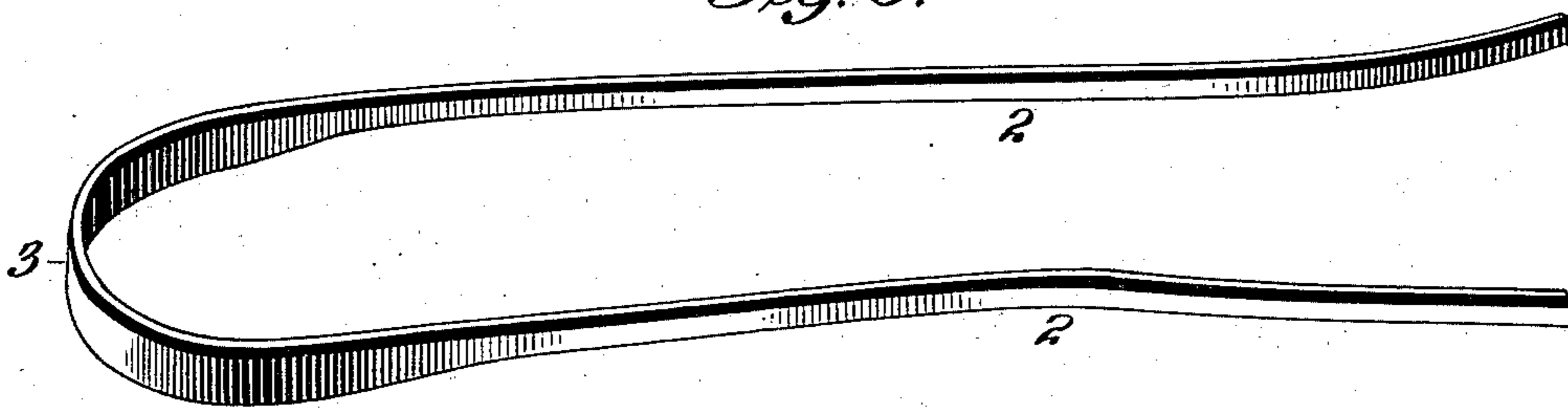
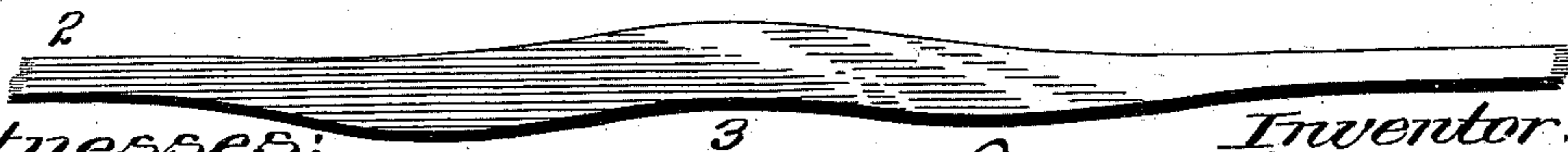


Fig. 4.



*Witnesses:*

L. C. Hills  
Alfred T. Sage.

*Inventor:*

In witness whereof  
I have hereunto set my hand and seal at New York  
this 10th day of June 1867.

Frederick Douglass

For Rent Raymond,  
By H. K. [unclear] atty.

# UNITED STATES PATENT OFFICE.

FRANK RAYNOR, OF STRYKER, OHIO.

## BREAST-COLLAR AND TRACE.

SPECIFICATION forming part of Letters Patent No. 578,772, dated March 16, 1897.

Application filed February 3, 1896. Serial No. 577,898. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK RAYNOR, a citizen of the United States, residing at Stryker, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Breast-Collars and Traces; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to harness breast-straps and tugs. It has for its object, primarily, to form a breast-strap and tugs in one piece by cutting a section of leather so that the tugs will be formed by the strip severed from the opposite sides of the section of leather and the breast-strap by the portion cut from the ends of the section of leather, the strips forming the tugs and the portion forming the breast-strap being in one piece, the portion of the leather thus severed from the main section being then stretched so as to make a practically straight strip of leather, thus depriving it of its curved form resulting from cutting it, as specified, and bringing it into such shape that the breast portion will bear with its flat side or face against the breast of the horse, while the tugs will extend to the rear thereof and bear the same relation to the breast-strap as under ordinary constructions. As heretofore made, it has been the practice to form the breast-strap and the tugs in separate pieces and then sew the parts together, because it is rarely if ever possible to get a section of leather long enough to cut it so as to form the breast-strap and tugs in one piece, but under my invention I can take a section of leather of ordinary size and by cutting strips from the opposite sides and continuing the cut around the end obtain a strip of leather of sufficient length to form the tugs and breast-strap in one piece. This strip thus cut from the section of leather is, however, without further manipulation open to some objections for use as a breast-strap and tugs for the reason that the strip is of an oblong form with the breast-strap portion curved at a right angle to the tug portions, and if it should be ap-

plied in that form for use as a breast-strap and tugs the breast-strap portion would bear with its inner edge against the breast of the animal instead of presenting the flat face of the strap to the breast, and consequently great discomfort would be given to the horse; but after cutting the strip in the manner described and then stretching the leather so as to make a practically straight strip of leather, or, in other words, a strip in which the tugs will extend in practically diametrically opposite directions from the breast-strap portion, I get the strip in such shape that the breast-strap portion will bear with its flat side instead of its edge against the breast of the animal and the tugs will extend directly to the rear thereof. The advantage of a breast-strap and tugs thus made in one piece is greater strength and also cheapness in production, as well as economy in manufacture.

My invention therefore consists in the hereinafter-described breast-strap and tugs, which will be hereinafter particularly described, and then sought to be specifically defined by the claim, reference being had to the accompanying drawings, illustrating the invention, and in which—

Figure 1 represents a section of leather from which the breast-strap and tugs are cut in one piece. Fig. 2 represents the strip of leather as cut from the main section of leather. Fig. 3 represents the breast-strap and tugs in their finished state, and Fig. 4 is a plan view of a portion of the complete breast-strap and tugs.

In the drawings the numeral 1 designates a section of leather of sufficient dimensions that when a strip is severed from its opposite sides and around its end a strip of sufficient length will be obtained to constitute both the breast-strap portion and the tugs made in one piece. From this section is cut, by any suitable instrument, a strip which will consist of two parallel portions 2 and the curved connecting portion 3, the portions 2 being taken from the opposite sides of the section of leather and the portion 3 from one end, thus producing a strip which has the shape illustrated in Fig. 2 of the drawings, the same being what may be termed an "oblong" shape with a curved end portion connecting the two parallel portions. The strip thus formed is

then subjected to a stretching operation which takes out the end curvature at the portion 3 and forms practically a continuous straight and flat strip of leather of sufficient length to  
5 constitute both the breast-strap and the tugs in one piece. This strip when folded will cause the portion 3 to bear with its flat face against the breast of the horse in the same manner as ordinary breast-straps will bear,  
10 while the portions 2 will extend directly to the rear in parallel lines, the same as ordinary tugs.

In cutting the strip from the end section of leather I prefer to cut it so that the curved  
15 or breast-strap portion 3 will be of greater width than the two parallel or tug portions 2, as illustrated, thus obtaining the requisite width to the breast-strap proper to afford the greatest ease and comfort to the horse by  
20 reason of the broad bearing-surface thus provided. When the breast-strap portion is thus cut and the leather has been stretched to take out the curvature, the top and bottom edges of the breast-strap portion will have substan-  
25 tially the curved lines illustrated in the drawings, thus presenting an attractive outline to the breast-strap portion.

While in ordinary practice the entire length of the two tugs will be in one piece with the  
30 breast-strap portion, still it is not desired to restrict the invention to that, because if the strip should be cut from the main section, so as to form the tugs somewhat shorter than re-

quired for actual use, and the additional length be supplied by stitching or otherwise  
35 securing supplemental strips to the tugs, my invention would to some extent still be practiced, because the breast-strap portion will have the tugs formed in one piece therewith, although shorter than they need be, the  
40 breast-strap portion being cut with the curve, as described, with the tugs in one piece therewith and the breast-strap portion stretched so as to take out the curve, in order that the flat side of the breast-strap may bear against  
45 the breast of the horse.

Having described my invention and set forth its merits, what I claim is—

As a new article of manufacture, a harness breast-strap and tugs made in one piece and  
50 formed by severing from a section of leather a strip comprising two parallel portions and a connecting curved end portion, said strap being then stretched to eliminate the curve and change the plane of the strip so that the  
55 breast-strap portion may lie with its flat side instead of its edge against the breast of the animal, substantially as and for the purposes described.

In testimony whereof I affix my signature  
60 in presence of two witnesses.

FRANK RAYNOR.

Witnesses:

R. L. STARR,  
ROSE RAYNOR.