

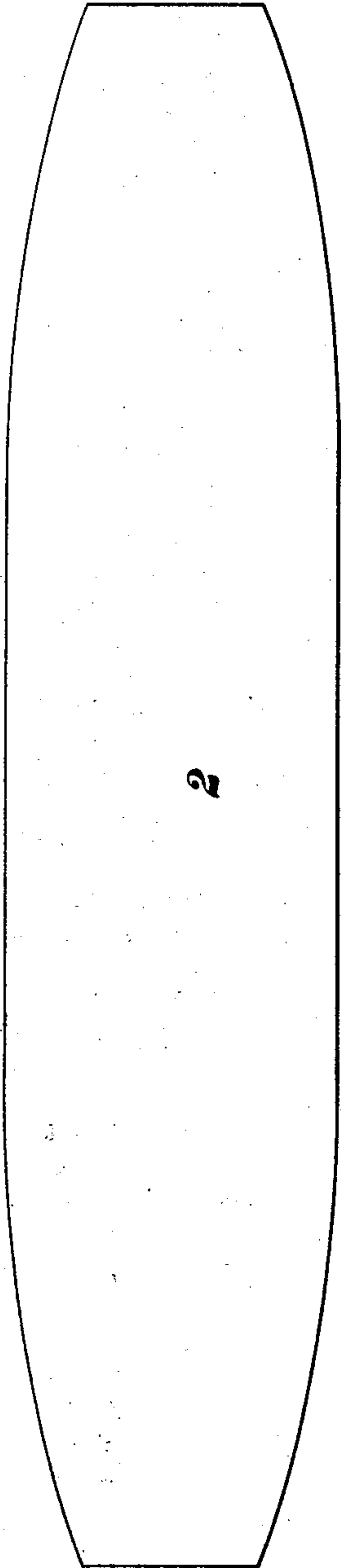
(No Model.)

R. R. SINGER.  
BLANK FOR VEHICLE TONGUES, &c.

No. 507,176.

Patented Oct. 24, 1893.

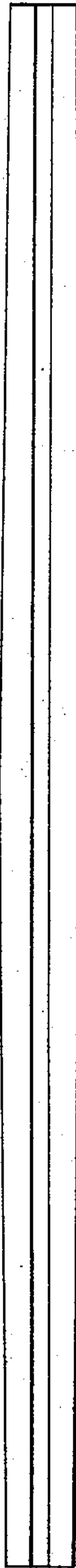
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES

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INVENTOR

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# UNITED STATES PATENT OFFICE.

ROBERT R. SINGER, OF PITTSBURG, PENNSYLVANIA.

## BLANK FOR VEHICLE-TONGUES, &c.

SPECIFICATION forming part of Letters Patent No. 507,176, dated October 24, 1893.

Application filed January 28, 1893. Serial No. 460,068. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT R. SINGER, of  
Pittsburg, in the county of Allegheny and  
State of Pennsylvania, have invented a new  
5 and useful Improvement in Blanks for Ve-  
hicle-Tongues, &c., of which the following is  
a full, clear, and exact description, reference  
being had to the accompanying drawings,  
forming part of this specification, in which—  
10 Figure 1 is a plan view of my improved  
blank, showing one of the forms employed  
for a singletree or doubletree. Fig. 2 is a  
longitudinal section of the same; and Fig. 3  
is a top plan view of the finished article.  
15 My invention relates to the manufacture  
of hollow metallic articles of sheet metal, such  
as vehicle tongues, double-trees, whiffle-trees,  
brake-beams, &c., and is designed to afford an  
improved blank which, when bent into form,  
20 will afford a much stronger and more service-  
able article than has been possible heretofore.  
To that end it consists in a blank which ta-  
pers longitudinally in thickness toward the  
ends, but whose cross-section throughout is  
25 of uniform thickness, and also in the article  
formed therefrom.

In the drawings, 2 indicates a blank, in this  
case designed for a double-tree or single-tree,

the blank being thickest at the point 3, and  
tapering thence toward each end, as shown 30  
in Fig. 2. In the case shown of a whiffle-tree,  
the thicker portion is approximately at the  
center of its length, and in each case the  
greater amount of metal is used at the point  
where the greatest strain is brought to bear 35  
thereon.

The advantages of my construction are ob-  
vious, since a much lighter and cheaper con-  
struction is attained, while the same strength  
is present as in a blank of a uniform thickness 40  
throughout.

Many variations may be made in the gen-  
eral form of the blank without departure  
from my invention, since

What I claim is—

A tubular metal article, having a thickened 45  
portion in its length, and tapering lengthwise  
from such portion toward each end; substan-  
tially as described.

In testimony whereof I have hereunto set 50  
my hand.

ROBT. R. SINGER.

Witnesses:

H. M. CORWIN,  
W. B. CORWIN.