

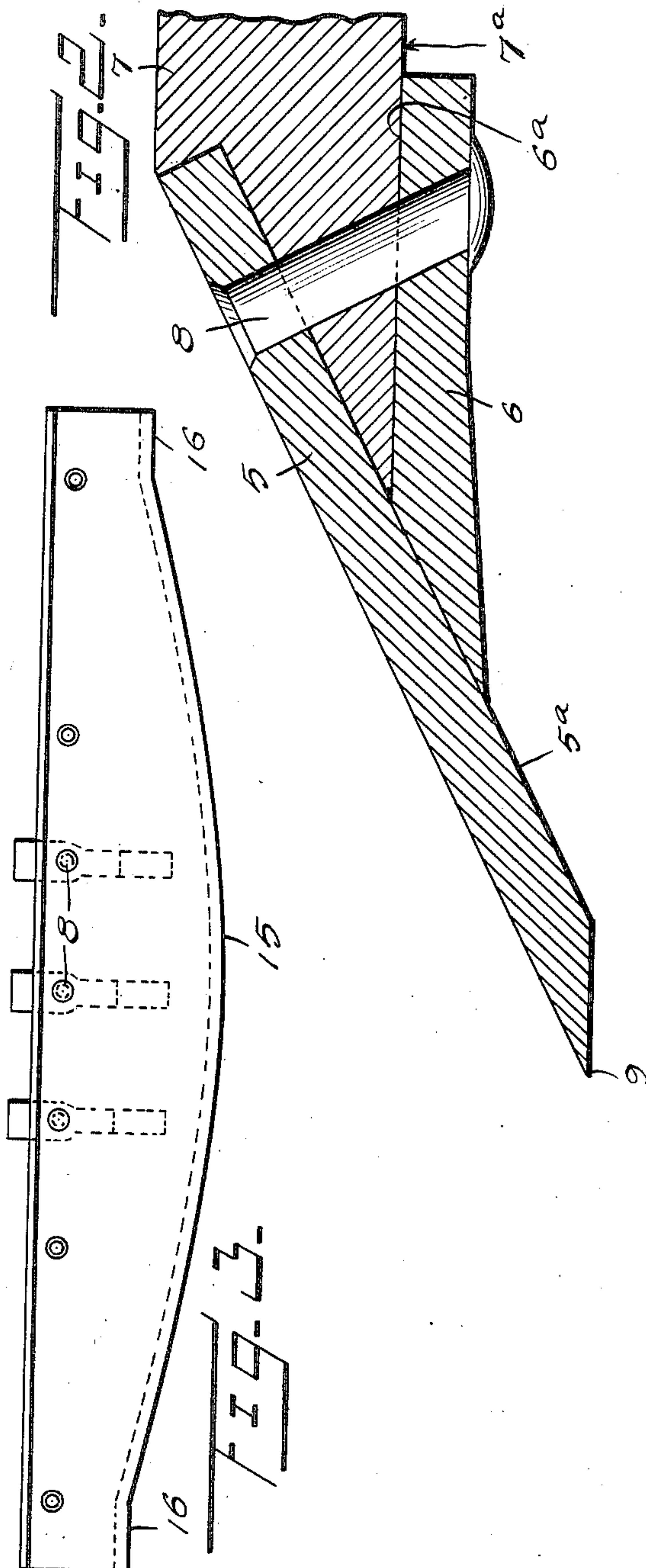
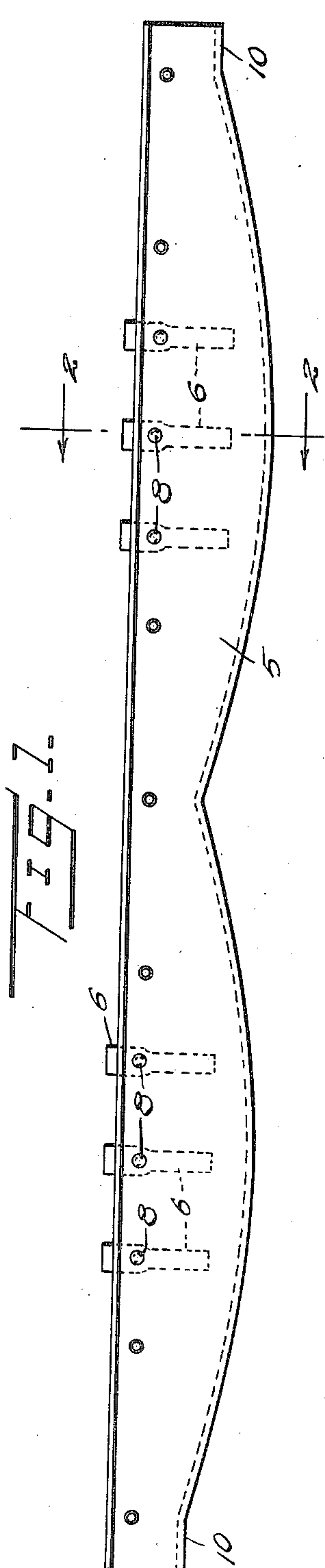
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C. L. JEFFREY

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CUTTING BLADE

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Inventor  
*Clarence L. Jeffrey*  
By *Victor J. Evans & Co.*  
Attorney



## UNITED STATES PATENT OFFICE

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## CUTTING BLADE

Clarence L. Jeffrey, Fairfield, Ill., assignor of  
one-half to W. P. Mautz, Lebanon, Ill.

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4 Claims. (Cl. 37—141)

My invention relates to cutting blades or lips and more particularly to that class adaptable for use on scoops of excavating machines or the like.

One of the principal objects of my invention is to provide a lip for the scoop of an excavating machine and so constructed and arranged wherein the cutting edge of said lip will offer a minimum amount of resistance when penetrating excavating material or the like.

Another object of my invention is to provide a device of the above described character which is simple in construction, durable in use, efficient in operation and economical in manufacture.

Other objects and advantages will be apparent from the following description, appended claims and annexed drawing.

Referring to the drawing wherein like reference characters designate like parts throughout the several views:

Figure 1 is a top plan view of my invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a top plan view of a modified form.

In practicing my invention I provide a lip fashioned on the bottom face 5a thereof with a plurality of angularly extending spaced arms 6 cooperating with the upper section of the lip to secure said lip to the front end of an excavating scoop 7 by means of rivets 8 as clearly illustrated in Figure 2. The upper face 6a of the arm 6 engages the lower face 7a of the scoop 7 and positions the lip 5 in a downwardly and outwardly inclined position relative to the scoop as clearly illustrated in Figure 2.

The lower section of the lip 5 is fashioned with a cutting edge 9 extending transversely relative to said scoop and said cutting edge is scalloped or of a cycloidal configuration between the ends thereof and provided with straight sections 10 for said ends. Said lip is also provided with a bevel surface, adjacent said edge 9, extending in a parallel plane relative to the upper face 6a of the arm 6. Upon operation of the scoop, in the ordinary manner, the scalloped cutting edge effects easy insertion of the lip into the ground or excavating material due to the fact that the initial points of contact are relatively narrow. As the lip gradually penetrates the ground or material, the curvature of the cutting edge serves to move the material within the scoop towards the axes of the scallops, thereby effecting a quicker loading of the scoop by precluding the material from being moved towards the sides of the scoop and without the latter.

The bevel of the cutting edge effects an easier

operation of the scoop because the drag created by the angle thereof has a tendency to feed the edge into the ground, hence less pressure is exerted in the excavating operation.

In the modified form illustrated in Figure 3 the lip is shown as provided with a cutting edge fashioned with a single scallop 15 terminating in straight parallel extending end sections 16. This form is particularly adapted for use in connection with relatively narrow scoops or the like.

What I claim is:

1. A device of the character described, comprising, a lip adapted for attachment to an excavating scoop and having inner and outer ends, said outer end fashioned with an under face and a beveled cutting face formed with a scalloped cutting edge whereby to effect progressive penetration of said edge into material to be excavated, an arm fixed to said lip between said ends and extending from and at an angle relative to said under face, said arm terminating a sufficient distance away from said lip to provide a seat between said under face and said arm for receiving the outer end of said scoop whereby to present said lip at an angle relative to said outer end of said scoop for effecting cutting operation.

2. A device of the character described, comprising, a lip adapted for attachment to an excavating scoop and having upper and lower end sections, said lower end section fashioned with a beveled cutting face formed with a scalloped cutting edge whereby to effect progressive penetration of said edge into material to be excavated, and an arm secured to said lip intermediate said upper and lower end sections and disposed in anti-parallelism with said lip and in substantial parallelism with the plane of said cutting face and coacting with said upper end section to provide a cuneiform seat between the latter and said arm for the outer end of said scoop whereby to present said lip at an angle relative to said outer end of said scoop for effecting cutting operation.

3. A cutting blade, comprising, a lip having upper and lower end sections, one of said sections fashioned with an invected cutting edge for effecting progressive penetration of said edge into material to be excavated, and an angularly disposed arm fixed to said lip between said sections and coacting with one of said sections to define therebetween a seat for receiving the outer end of an excavating scoop whereby to present said lip at an angle relative to said outer end of said scoop for effecting cutting operation.

4. A cutting blade, comprising, a lip having upper and lower end sections and an under face, 55

said lower end section fashioned with a cutting  
face formed with an invected cutting edge where-  
by to effect progressive penetration of said edge  
into material to be excavated, and an angularly  
5 disposed arm fixed to said under face between said  
sections and coacting with said upper end section

to define therebetween a seat for receiving the  
outer end of an excavating scoop whereby to pre-  
sent said lip at an angle relative to said outer end  
of said scoop for effecting cutting operation.

CLARENCE L. JEFFREY.