

(No Model.)

L. GREENWALD & M. R. HOPKINS.  
PORTABLE MINE AWNING.

No. 471,217.

Patented Mar. 22, 1892.

FIG. 1.

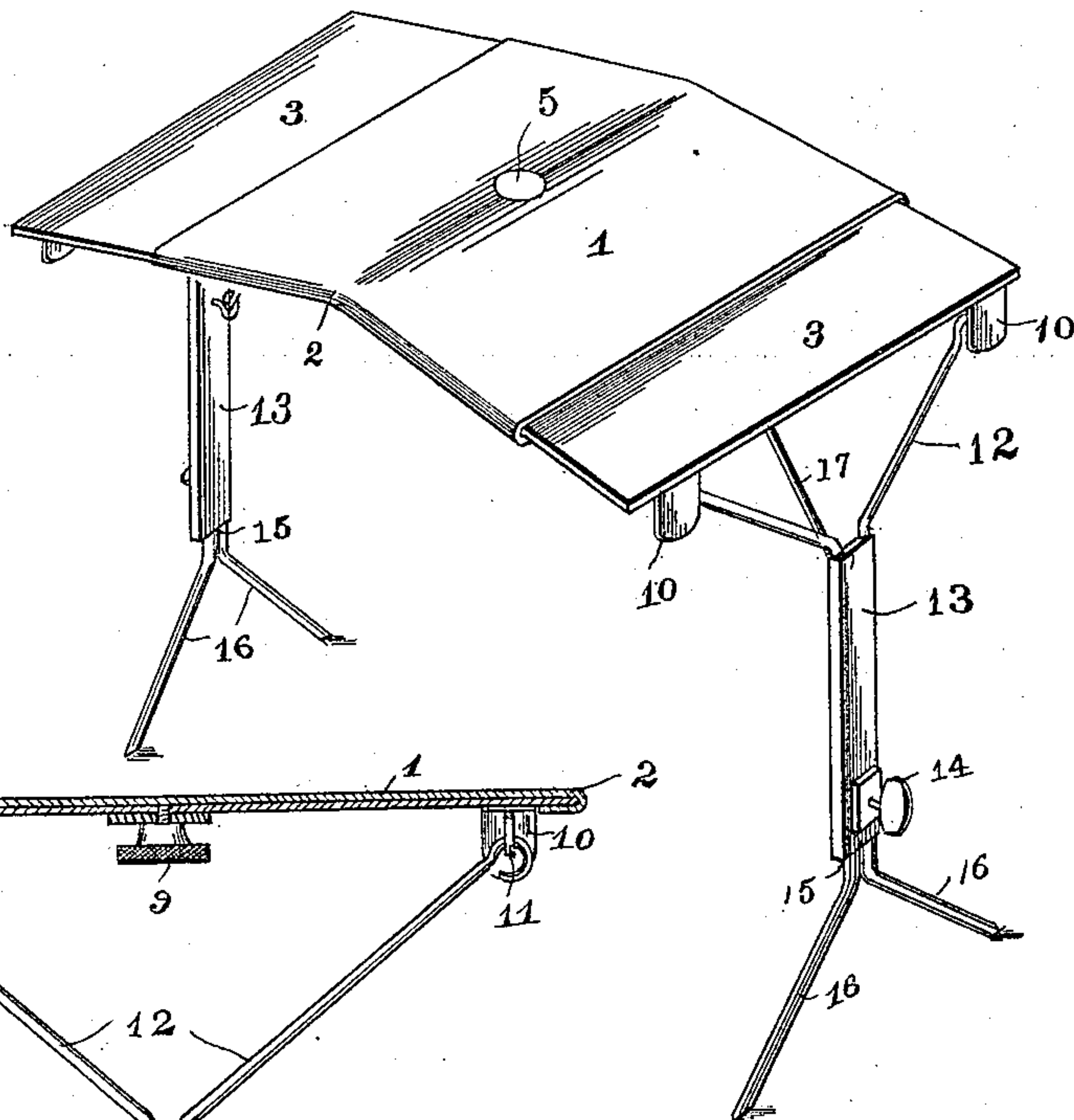


FIG. 2.

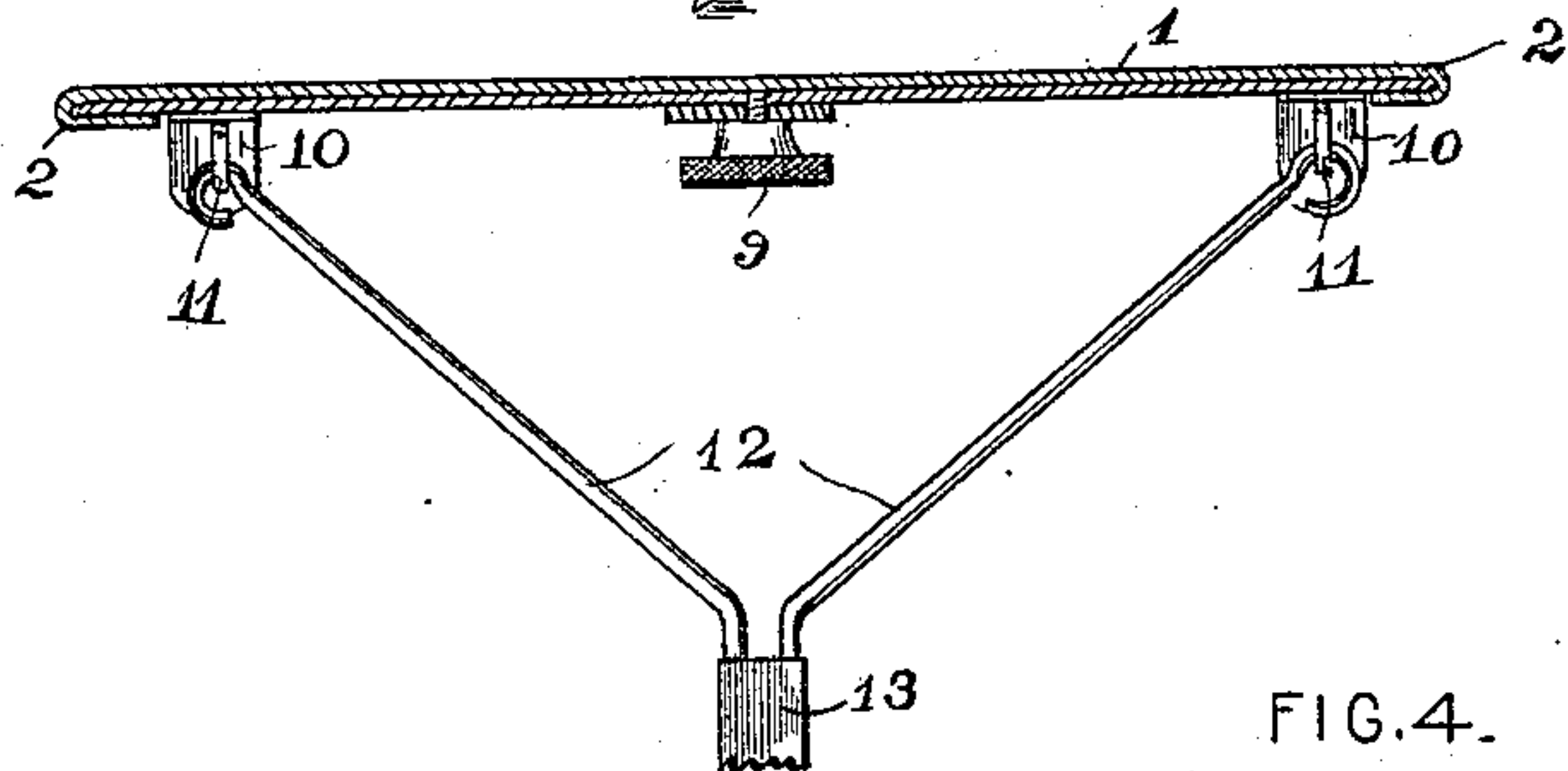


FIG. 4.

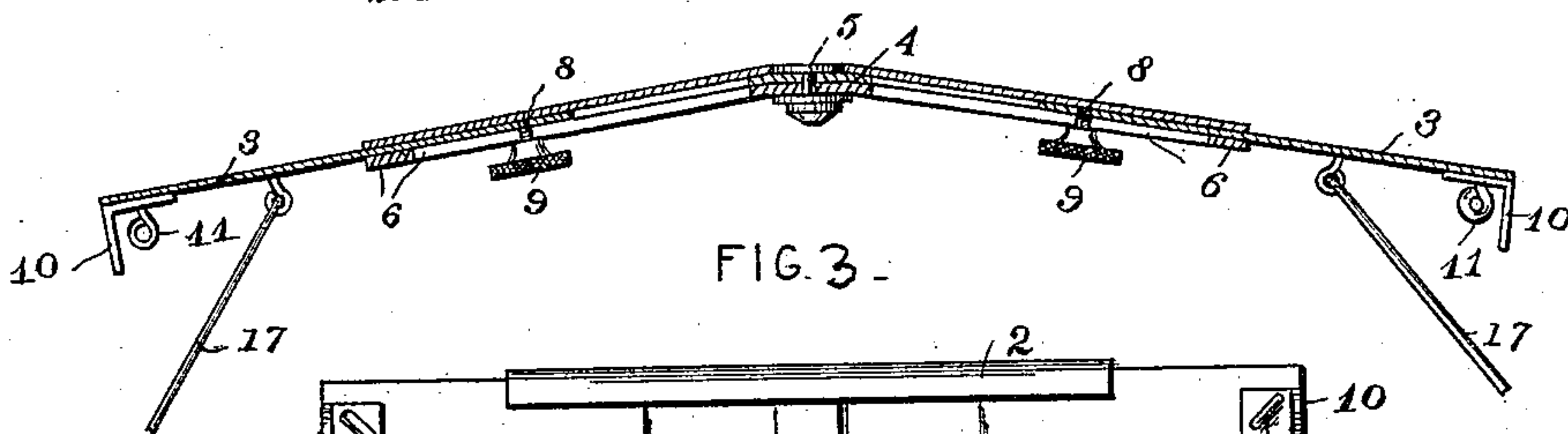
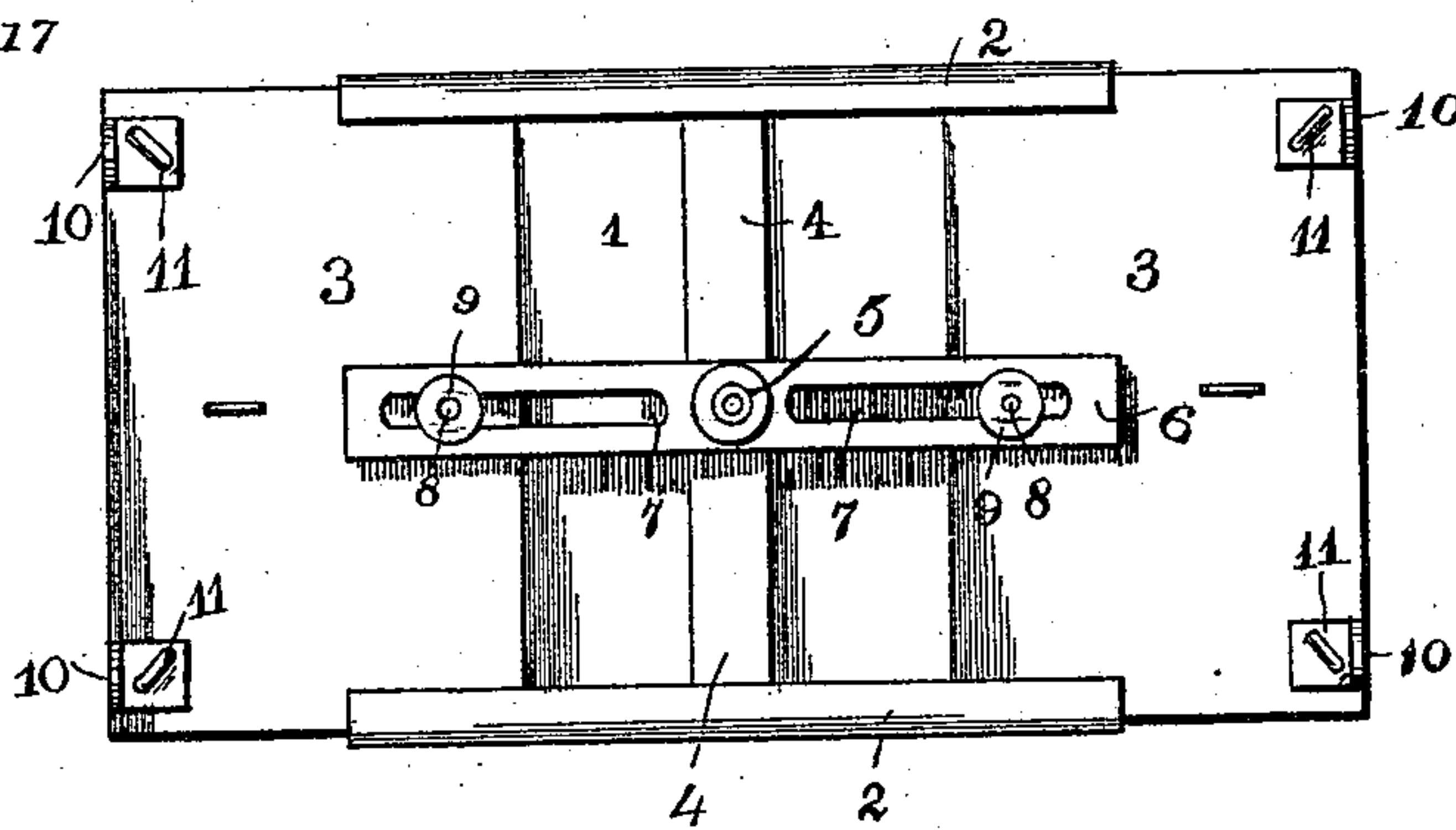


FIG. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

LOUIS GREENWALD AND MICHAEL R. HOPKINS, OF LEADVILLE, COLORADO.

## PORTABLE MINE-AWNING.

SPECIFICATION forming part of Letters Patent No. 471,217, dated March 22, 1892.

Application filed May 9, 1891. Serial No. 392,164. (No model.)

*To all whom it may concern:*

Be it known that we, LOUIS GREENWALD and MICHAEL R. HOPKINS, citizens of the United States, residing at Leadville, in the county of Lake and State of Colorado, have invented a new and useful Portable Mine-Awning, of which the following is a specification.

This invention relates to a portable awning or roof.

The objects in view are to provide a cheap, simple, extensible, folding, and portable awning adapted for use by miners, outdoor workmen, and laborers, or for other purposes where it is desirable to provide a temporary shelter from rain, snow, and sleet, or the sun's rays.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a perspective of an awning constructed in accordance with our invention. Fig. 2 is a transverse section. Fig. 3 is a bottom plan of the roof, the supports removed. Fig. 4 is a longitudinal section.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practice we construct the entire device preferably of light metal, though, as will be hereinafter apparent, certain portions of the same may be formed of other materials.

1 designates the central section of the roof, and the same is rectangular in plan and provided across its transverse center with a ridge, from which the opposite halves of the roof-section decline. The opposite edges of the section are bent over upon themselves to form folds or ways 2, and in each pair of the same there are mounted for adjustable movement wings or extensions 3, which may be slid up under the central section 1 or continued beyond the same to form extensions. The opposite bent edges 2 of the central section are connected by a cross-strip 4, which answers as a ridge-pole to the roofing, and connected to the center of the same by means of a rivet 5, and disposed at an angle thereto is a longitudinal strip 6, which at each side of the ridge-strip 4 is provided with a longitudinal slot 7. Stud 8 depend from the under side near the inner edges of the wings 3 and pass

through the slots 7 of the strip 6, and under the strips have threaded on the studs nuts 9. It will be obvious that the extension-wings may be moved in and out on the ways and adjusted in any of the positions by means of the nuts, which serve to clamp the strip 6 between their upper edges and the under sides of the wings.

Each of the wings is provided at its outer corners with a pair of L-shaped brackets 10, and from the horizontal portions of the same depend eyes 11, and to said eyes are connected the upper ends of a Y-shaped or bifurcated standard 12. The standard 12 terminates at its lower end in a tubular sleeve 13, in which is mounted a set-screw 14.

15 designates the lower standard-section, the upper end of which enters the tubular standard and is adjustable through the medium of the set-screws, while the lower end is bifurcated to form feet 16.

It will be obvious that by adjusting the standard-sections the loose supporting-standards as a whole may be increased or decreased in length, and thus the roof raised or lowered accordingly.

The L-shaped brackets 10 serve to prevent the standards from becoming spread too far, or, in other words, answer as stops.

From the above description it will be apparent that we provide a convenient, adjustable, temporary shelter for protecting laborers from exposure to the elements.

It will be obvious that by collapsing the wings—that is, decreasing the size of the roof and also the standards and swinging the latter upon the former—the structure as a whole will occupy but small space, and may be conveniently transported, stored, or carried about.

In order to prevent any swaying, brace-rods 17 may be loosely connected to the standards 13, and at their upper ends removably to eyes 18 in the wings 3.

The special object of the invention is to provide a metallic awning for use in a mine as a protection from wet drifts and tunnels.

Having described our invention, what we claim is—

The combination, with the central bent section having opposite folded edges forming ways, the ridge-strip connecting the edges of the ways under the bend of the section, the

extensible wings mounted for movement in  
the ways, the longitudinal strip 6, slotted at  
opposite sides of and connected to the ridge-  
strip, the threaded studs depending from the  
5 wings through the slots in the longitudinal  
strip, and the nuts mounted on the studs, of  
the Y-shaped standard-sections loosely con-  
nected at their upper ends to the ends of the  
wings and terminating at their lower ends in  
10 tubes having set-screws, and the lower stand-  
ard-section adjustably mounted in the tubes

and terminating at their lower ends in feet,  
substantially as specified.

In testimony that we claim the foregoing as  
our own we have hereto affixed our signatures 15  
in presence of two witnesses.

LOUIS GREENWALD.  
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Witnesses:

M. A. BROWN,  
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