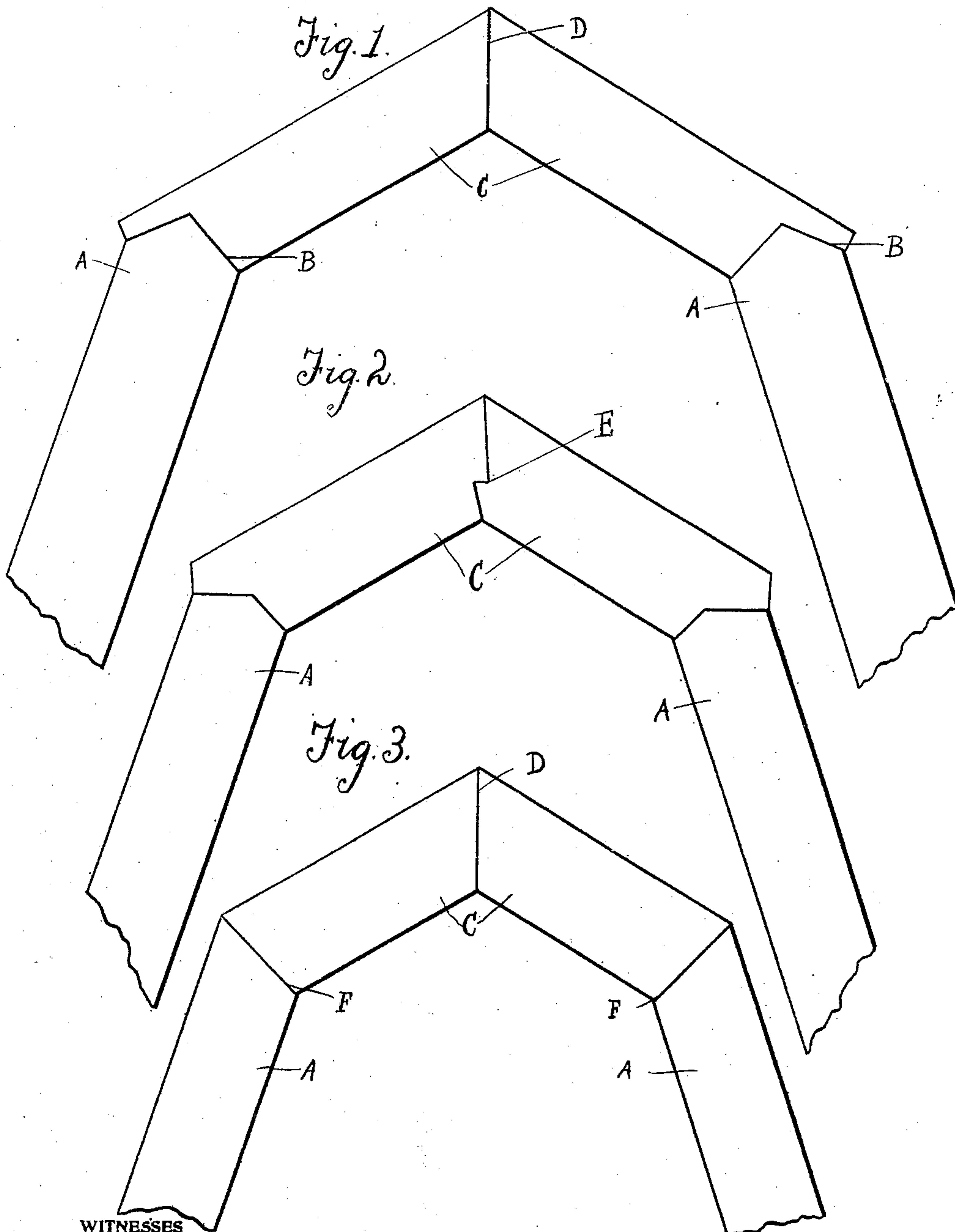


Z. Z. ANSBACH.  
MINE TIMBER.

APPLICATION FILED MAR. 23, 1907.

907,554.

Patented Dec. 22, 1908.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ZACHARIAH Z. ANSBACH, OF SILVER CREEK, PENNSYLVANIA.

## MINE-TIMBER.

No. 907,554.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed March 23, 1907. Serial No. 364,192.

*To all whom it may concern:*

Be it known that I, ZACHARIAH Z. ANSBACH, a citizen of the United States, residing at Silver Creek, county of Schuylkill, and State of Pennsylvania, have invented a certain new and useful Improvement in Mine-Timbers, of which the following is a specification.

My invention relates to a new and useful improvement in mine timbers, and has for its object to so construct such timbers as to increase the sustaining strength thereof and at the same time save lumber by making the cross beams in two sections and matching them together so as to produce the effect of an arch.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1, represents one form of my improved supporting timber; Fig. 2, a similar view showing a slightly modified form of matching the top angle together, and Fig. 3, a simple form of putting such timbers together.

In carrying out my invention as embodied in Fig. 1, A represents the side timbers, the upper ends of which are sawed upon two bevels to form inverted V-shaped projections as indicated at B so as to match corresponding V-shaped notches sawed in the outer ends of the roof timbers C; these roof timbers have their meeting ends sawed on corresponding angles so as to fit together as indicated at D.

In Fig. 2 I have slightly modified this arrangement by sawing the meeting ends of the two roof timbers so as to produce interlocking Z-shaped surfaces as indicated at E.

In Fig. 3 the simplest form of my improvement is shown in which the roof timbers are matched to the side timbers by single bevels as indicated at F.

From this description it will be seen that the roofing timbers may be made of short lengths and when in place will sustain more weight than a single cross beam and thus a great saving of lumber is accomplished since heretofore such short pieces were not used for the roofing of mines but were discarded as waste, thus causing an enormous loss to mine owners and operators.

Having thus fully described my invention, what I claim as new and useful, is—

1. In combination with a pair of opposite side timbers inclined towards one another so as to have the least space therebetween at their upper ends with inverted V-shaped projections on said upper ends, a pair of roof timbers formed with V-shaped notches on their outer ends and their under sides adjacent said outer ends to receive said projections of the side timbers, said roof timbers having their meeting ends beveled and abutting one another.

2. In combination with a pair of opposite side timbers inclined towards one another so as to have the least space therebetween at their upper ends with inverted V shaped projections on said upper ends, a pair of roof timbers formed with V shaped notches on their outer ends and their under sides adjacent said outer ends to receive said projections of the side timbers, one of said roof timbers having its upper end formed with a Z-shaped projection, and the other roof timber at its upper end having a Z-shaped recess to receive said Z-shaped projection.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

ZACHARIAH Z. ANSBACH.

Witnesses:

MOSES A. PURNELL,  
JOHN KENNA.