

No. 897,539.

PATENTED SEPT. 1, 1908.

F. C. KEIGHLEY.  
METALLIC BEAM.

APPLICATION FILED MAR. 28, 1908.

Fig. 1.

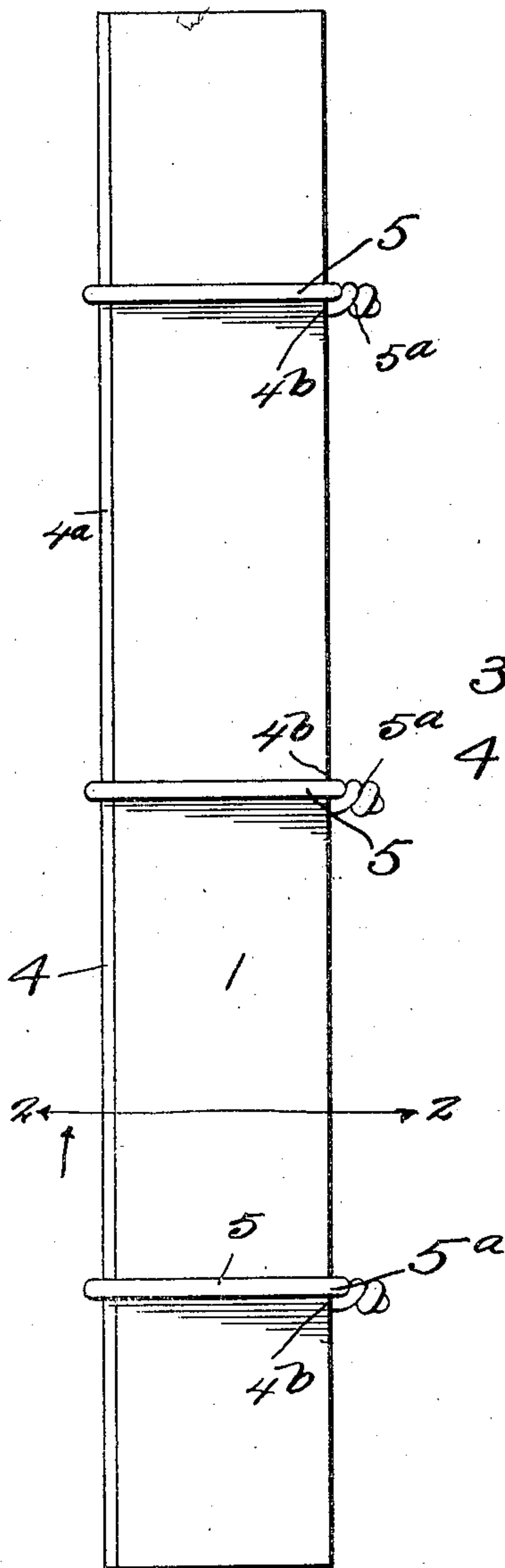
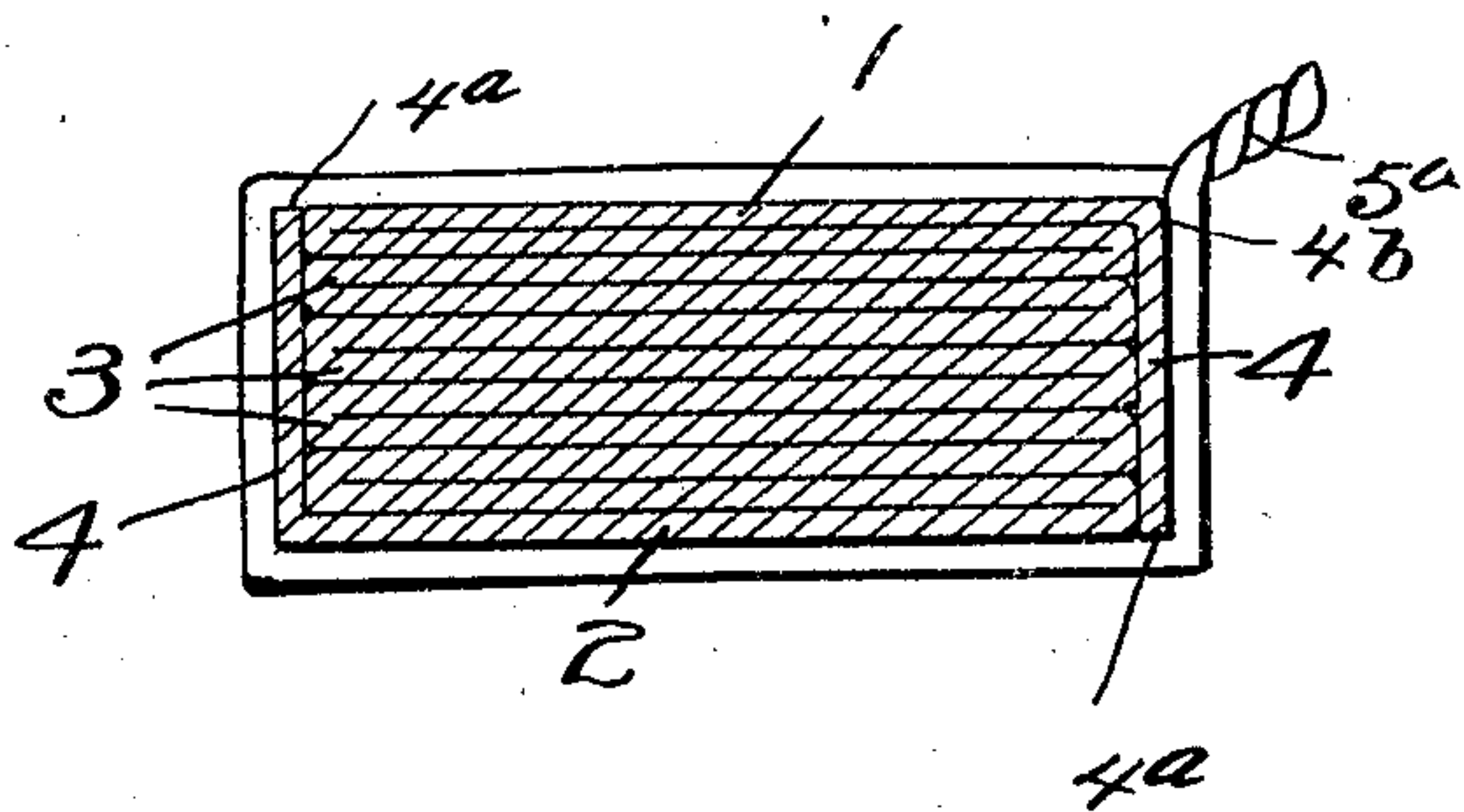


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

FREDERICK C. KEIGHLEY, OF UNIONTOWN, PENNSYLVANIA.

## METALLIC BEAM.

No. 897,539.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed March 28, 1908. Serial No. 423,896.

*To all whom it may concern:*

Be it known that I, FREDERICK C. KEIGHLEY, a citizen of the United States, residing at Uniontown, in the county of Fayette and State of Pennsylvania, have invented a new and useful Metallic Beam; and I do hereby 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.

The invention about to be set forth and claimed pertains to new and useful metallic beams, and the invention in its fundamental principle directs as its primary object to provide a beam of this character embodying great strength and durability, and designed for use in constructing skeleton frames for office buildings, trestle works, bridges, ship building, and similar structures.

The invention aims as a further object, that is to say, specifically, to provide a beam of this design, constructed from a single piece of sheet metal folded about itself several times, the number of folds being determined by the strength required for the structure, the design of which is a medium for also determining the number of folds required. The folds are designed to be compressed tightly together by high pressure and when the sheet metal is being folded, the same is subjected to intense heat but not enough to cause a weld, that is, when high pressure is applied thereto, so that a compact mass of metal forming a beam is provided, and embodying the strength and durability and other characteristics of a solid metal beam.

The invention comprises further objects and combination of elements which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

In the drawings forming part of this specification and in which like numerals of reference indicate like parts in the several views Figure 1 is a plan view of the beam constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the same, on line 2—2 of Fig. 1.

In regard to the drawings wherein similar reference characters indicate corresponding parts in the several illustrations, by figure, 1 and 2 designate a portion of the beam which forms an outer casing for the same, said beam is constructed by folding a piece of sheet

metal upon itself several times so as to form folds 3. The portions 4 of the sheet metal form extended portions which extend or are disposed in opposite directions, and in such wise as to cover the said folds 3, as shown. The extreme edge portions 4<sup>a</sup>, as seen in Fig. 2 are disposed flush with the opposite faces of said beam.

It will be understood that the number of folds may be varied according to the size of the beam required and also the thickness of the metal out of which the beam is formed may be varied according to the strength required of the beam.

In order to hold the parts firmly together, a plurality or binders 5 are employed which may be of wire or other suitable material, the ends of which are twisted together as at 5<sup>a</sup> and are positioned at the point 4<sup>b</sup>, as shown clearly in Fig. 2 of the drawings. If desired, rivets may also be employed as the nature of the case may require.

This beam is adapted to be used in the steel work of tall buildings, ships and the like, and it will be seen that the same is economically made and that great strength is embodied in its construction.

What I claim is:—

1. In a metallic beam, a single piece of sheet metal folded upon itself several times so that the folds thereof may be compressed tightly together and adjacent one another, said sheet metal being so folded as to provide extended portions extending in opposite directions and designed to overlap or cover said folds and binding means so that the said folds and extended portions are held in a compact mass.

2. A metallic beam comprising a single piece of sheet metal folded upon itself several times so that the folds thereof may be compressed tightly together and adjacent one another said sheet metal being so folded as to provide extended portions designed to overlap or cover said folds, wire binders encircling said beam so that said folds and extended portions are held as a compact mass.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK C. KEIGHLEY.

Witnesses:

JNO. BOYLE,  
J. E. CARROLL.