

J. F. MAKOWSKI.
CLIP FOR FIREPROOF CONSTRUCTION.
APPLICATION FILED FEB. 14, 1908.

1,027,425.

Patented May 28, 1912.

Fig. 2.

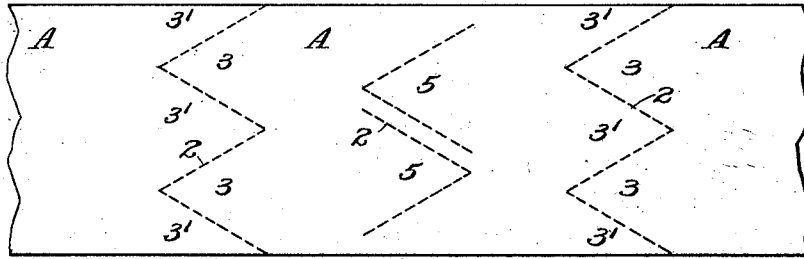


Fig. 3.

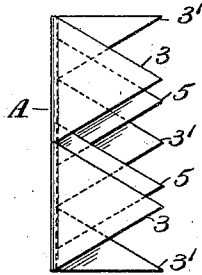


Fig. 4.

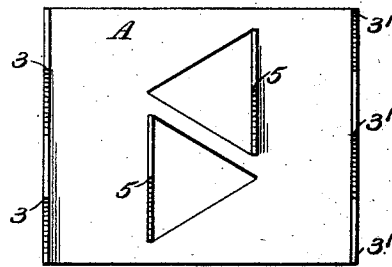
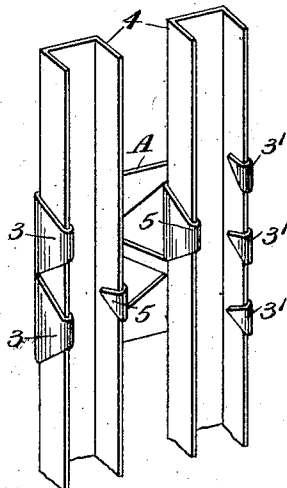
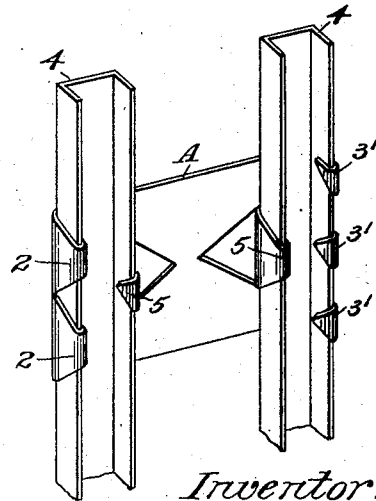


Fig. 1.



Witnesses:
A. E. Heap
R. L. Stevens

Fig. 5.



Inventor:
John F. Makowski
by his Atty.
Geo. H. Strong.

UNITED STATES PATENT OFFICE.

JOHN F. MAKOWSKI, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE ROEBLING CONSTRUCTION COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF NEW JERSEY.

CLIP FOR FIREPROOF CONSTRUCTION.

1,027,425.

Specification of Letters Patent.

Patented May 28, 1912.

Application filed February 14, 1908. Serial No. 415,899.

To all whom it may concern:

Be it known that I, JOHN F. MAKOWSKI, citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Clips for Fireproof Construction, of which the following is a specification.

My invention relates to a combined clip and studding element for use in fire-proof partitions and the like.

The object of this invention is to provide a cheap, simple, and practical clip for bonding channel bars together in a partition or like structure, and particularly to provide a clip which is economical to manufacture, in the matter of the saving of material, and in the ease with which the clips may be stamped out from blank stock.

Further objects and advantages of the invention will hereinafter appear.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the device. Fig. 2 shows the blank. Fig. 3 is an end view of the clip. Fig. 4 is a front view of the clip. Fig. 5 is a view similar to Fig. 1, showing a modification.

In the manufacture of the present improved clip, I take a bendable metallic strip of suitable width and thickness and of any length, and from this strip stamp out, by appropriate means, the sections A, which form the blanks of my improved clip.

The essential feature of cutting out these clip sections is that they are severed on zigzag lines 2 running crosswise of the strip. The length of these sections depends on the size and length of the clip desired, and the character of the partition in which the clip is to be used.

The cutting of the sections on the zigzag lines, as shown, produces the triangular prongs or tangs 3, 3'. In stamping out these clips from a continuous strip without waste, the prongs are necessarily different in number and character at the adjacent ends of successive clips, so that the prongs on one clip are formed from the material between the prongs of the adjacent end of the next clip. When the clips are thus stamped from a continuous strip without

waste, and the successive clips are duplicates of each other, which is preferable, the prongs at opposite ends of the same clip are necessarily different in number and character, the prongs at one end of the clip corresponding to the spaces between the prongs at the other end of the clip, as here shown. Thus, for instance, the clip as shown in the drawings, has two full width prongs 3 at one end, and three prongs 3' at the other; the two outside prongs at the latter end being equal in base width and quantity of material to the central prong. Thus, although the number of prongs at either end of a clip differs from the number of prongs at the opposite end of the same clip, still there is quantitatively the same amount of material in the prongs at each end, so that the strength of the prongs at each end is the same; and these prongs, when folded up to embrace the channels 4, will have a substantial bearing against the channels and embrace the channels so that there is no chance of the turning or loosening of the clip, or pulling it off from the channels.

At suitable intervals between the terminal prongs 3, 3', are stamped out the triangular bendable, inside prongs 5; these prongs being arranged alongside of each other where the clip is short, as in Figs. 1 to 4, or arranged in line, where a longer clip is made as shown in Fig. 5. In either case, the base of the inside prongs or tangs 5 being disposed toward the base end of the terminal prongs 3, 3', the tangs or prongs 5 when bent more or less nearly at right angles to the plane of the body of the clip, will stand parallel with the correspondingly bent terminal prongs or tangs 3, 3', and the channel bars 4 will be adapted to be received between each set of terminal tangs or prongs 3, 3', and their opposed inside prongs 5.

The clips are held in place by placing the clip against the backs of two properly set up channels 4, with the inside prongs 5 passing between the channels, and then bending the pointed ends of the several prongs 3, 3'—5 over the edges of the outside and inside flanges of the channel bars and clenching them. This serves to securely interlock the channel bars to form the studding.

The making of the several prongs 3, 3'—5 triangular, as here shown, is advantageous for a variety of reasons: First, as before stated, it permits of a saving of material,

because a strip of metal can be cut up without any waste, and in the cutting, the bendable terminal tangs 3, 3' will be formed. Secondly, the use of the triangular form of prongs or tangs permits of the easy construction of a die for cutting out the blank sections, because this die may be made in separable triangular sections adaptable for any width of clip. Thirdly, the pointed form of prongs or tangs 3, 3'—5 permits the points to be easily closed in and curled or clenched over the flanges of the channels, and give a snug tight grip on the channels.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A studding element consisting of a pair of channel bars suitably spaced, the bars being in edgewise alinement, and an interlocking clip connecting the bars and composed of a plate engaging the flat side of the bars and having triangular-shaped terminal prongs bent to engage the outer flanges of the bars, and said plate having also intermediate triangular prongs or tangs bent to engage the inner flanges of said bars, and

said inside prongs being struck from the portion of the plate between the bars.

2. A channel bar interlocking clip consisting of a plate having terminal triangular, bendable prongs and intermediate triangular prongs formed by punching out the central portion of the plate, and bendable toward their adjacent opposed terminal prongs.

3. A channel bar interlocking clip having triangular bendable prongs at each end, the prongs at one end corresponding in size and location widthwise of the clip to the spaces between the prongs at the opposite end whereby duplicate clips may be stamped from a single strip of metal without waste, and intermediate triangular prongs formed from the central portion of the clip.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN F. MAKOWSKI.

Witnesses:

C. A. RUFIELD,
PERCY R. STUART.