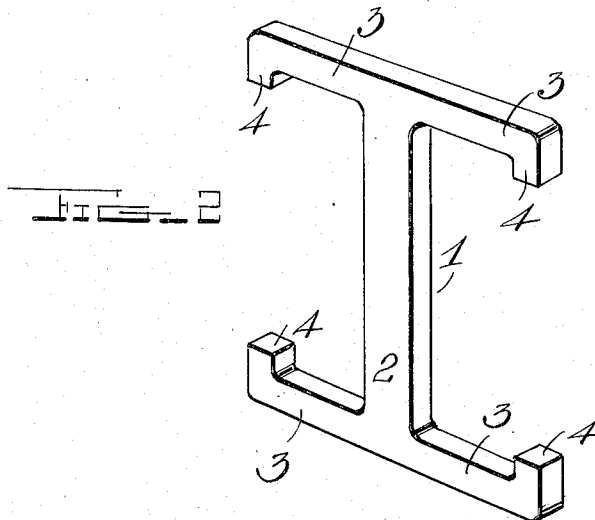
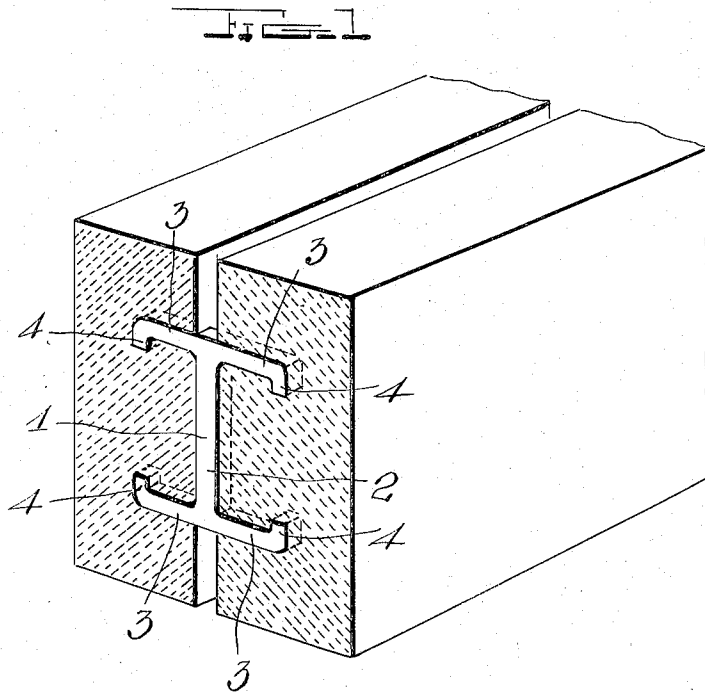


E. CHAPMAN.
METAL TIE FOR CONCRETE CONSTRUCTIONS.
APPLICATION FILED FEB. 9, 1909.

941,616.

Patented Nov. 30, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

ELMER CHAPMAN, OF ARIEL, PENNSYLVANIA.

METAL TIE FOR CONCRETE CONSTRUCTIONS.

941,616.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed February 9, 1909. Serial No. 476,988.

To all whom it may concern:

Be it known that I, ELMER CHAPMAN, a citizen of the United States, residing at Ariel, in the county of Wayne and State of Pennsylvania, have invented certain new and useful Improvements in Metal Ties for Concrete Constructions; and I do 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.

This invention relates to metal ties for concrete construction.

The object of the invention is to provide an improved form of metal tie adapted to be employed in connection with concrete blocks, heads, window sills and other concrete structures and with solid double concrete walls to secure the same in spaced relation to form between themselves an air space or compartment.

A further object is to provide a tie of the character described which will be simple, strong and durable in construction, efficient and reliable in operation and having concrete engaging means whereby the same may be firmly attached to the concrete structures to which the tie is applied.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a sectional perspective view illustrating the application of the tie; and Fig. 2 is a detail perspective view of the tie on an enlarged scale.

Referring more particularly to the drawings, 1 denotes the tie which consists of a central portion, 2, at the opposite ends of which are formed laterally projecting right-angularly disposed arms, 3, on the outer ends of which are formed inwardly turned or projecting retaining lugs, 4.

In the application of the tie to the concrete structures to which the same is applied, the main portion of the tie, 2, is adapted to serve as a spacing member to hold the sections of the concrete structure spaced apart to provide an air space while

the laterally projecting upper and lower portions or arms, 3, are adapted to be engaged with the opposite sections of the concrete structure by being molded or otherwise engaged therewith and the retaining lugs, 4, on the outer ends of the members, 3, are adapted to serve as detents to firmly hold the members, 3, into engagement with the concrete sections of the structures so that the sections will be firmly and rigidly held together in spaced relation as clearly shown in the drawing.

A tie constructed as herein shown and described may be employed in connection with concrete blocks, window sills or heads, solid wall constructions or any form of concrete work in which the sections are intended to be spaced apart and held in position.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent is:

A flat metal tie of uniform thickness adapted to reinforce and hold two concrete members in spaced relation to provide an air space therebetween, said tie comprising a central body portion provided at opposite ends and edges with laterally spaced tie arms provided at their outer terminals with inwardly extending retaining lugs, the tie being designed to fit in position with the opposite side edges of its body portion fitting against the inner or meeting faces of the concrete members and its arms extending into the members.

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

ELMER CHAPMAN.

Witnesses:

WILLIAM PUGH,
CHARLES E. LUTZ.