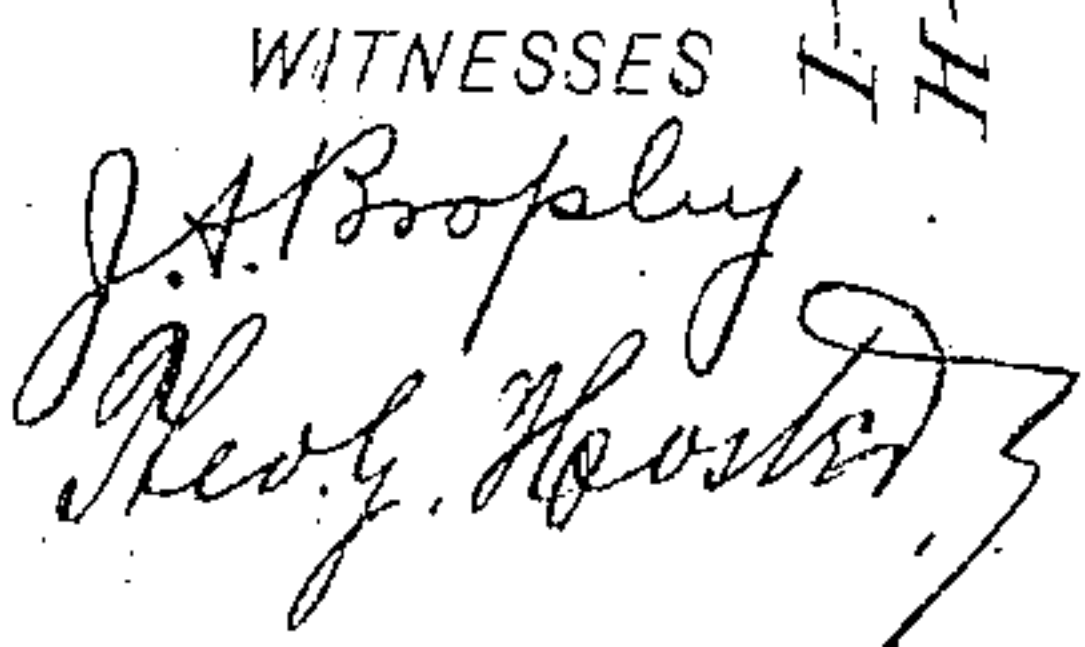


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2 SHEETS—SHEET 1.



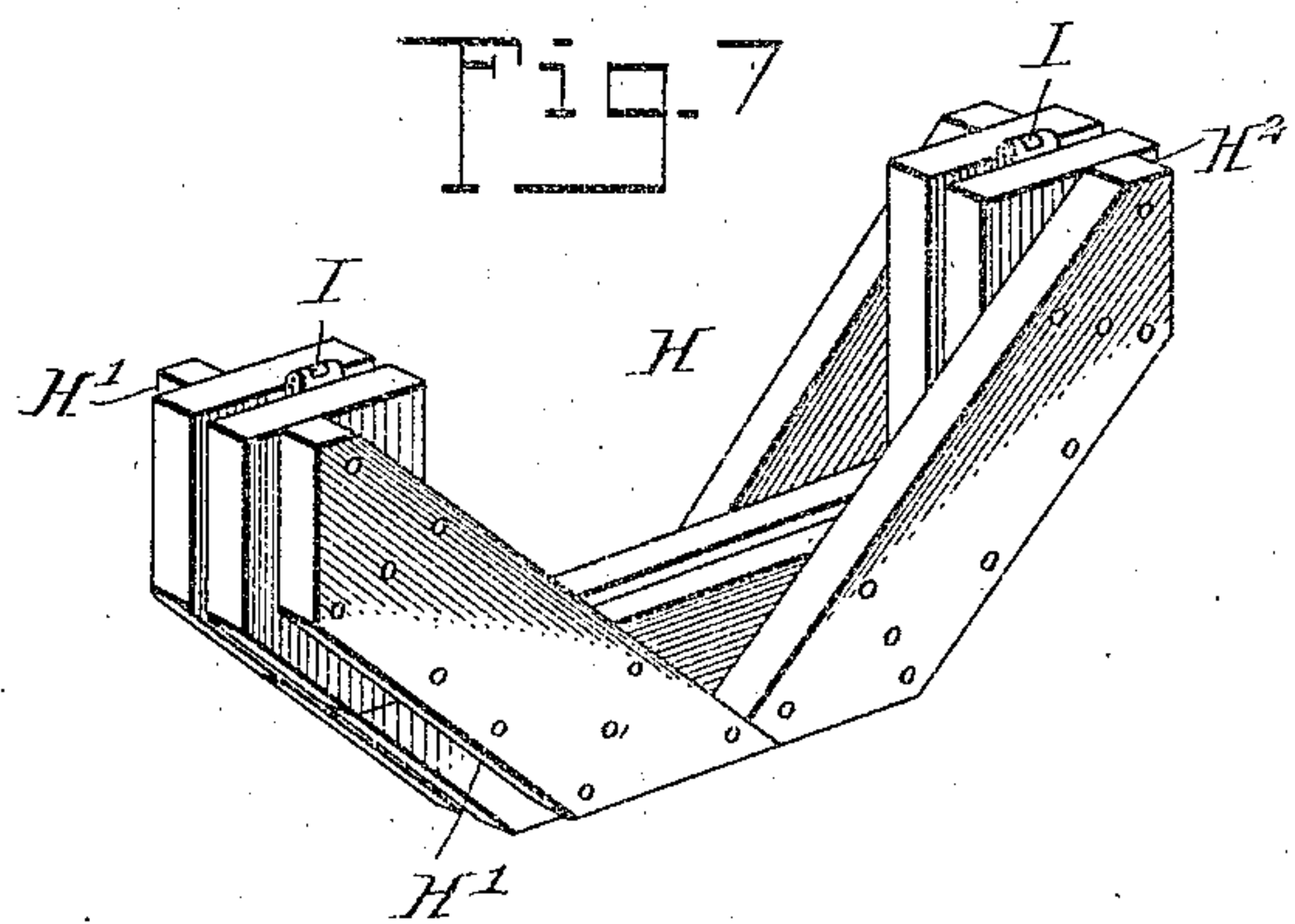
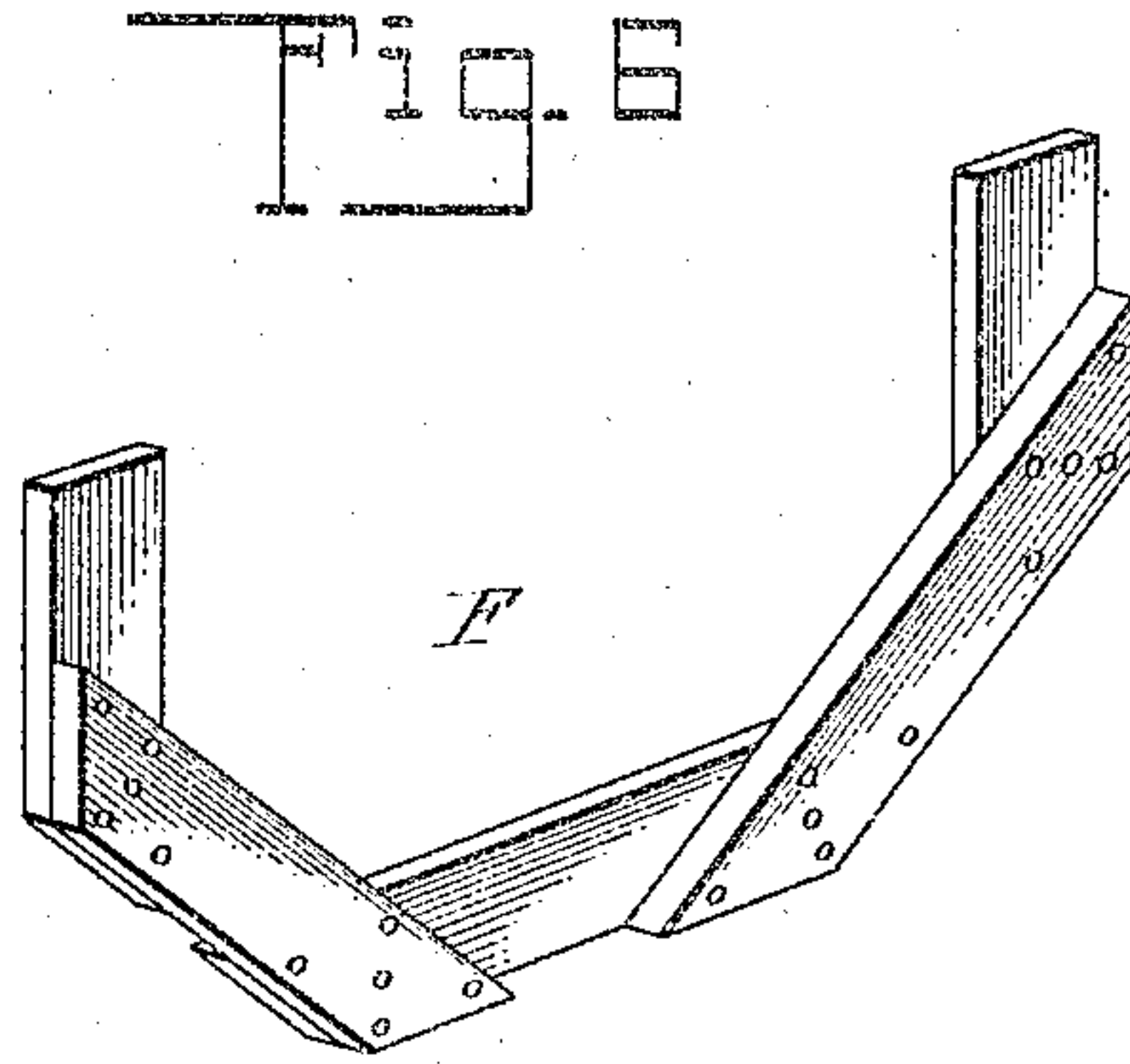
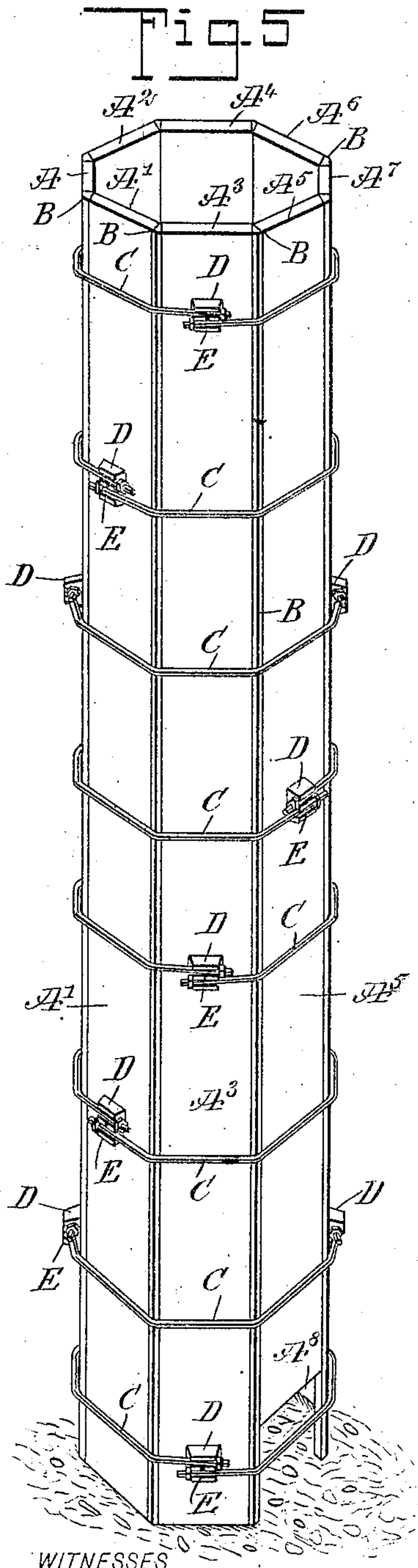
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MOLD AND MEANS FOR MAKING THE SAME.  
APPLICATION FILED DEC. 24, 1907.

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Patented Mar. 16, 1909.

2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

ERNEST ARTHUR CONNER, OF TACOMA, WASHINGTON.

MOLD AND MEANS FOR MAKING THE SAME.

No. 915,555.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed December 24, 1907. Serial No. 407,876.

*To all whom it may concern:*

Be it known that I, ERNEST ARTHUR CONNER, a citizen of the United States, and a resident of Tacoma, in the county of Pierce and State of Washington, have invented a new and Improved Mold and Means for Making the Same, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved mold and means for making the same in a very simple and inexpensive manner, the mold being more especially designed for making concrete columns such as are used in buildings and other structures, and arranged to permit of its being conveniently and quickly built up and each part accurately placed in position and firmly secured one to the other, the parts of the mold being readily removable after the column is built.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement, parts being broken out; Fig. 2 is an enlarged transverse section of the same on the line 2—2 of Fig. 1; Fig. 3 is an enlarged edge view of one of the blocks for the binding bands or rods; Fig. 4 is a front end elevation of the same, part being broken out; Fig. 5 is a perspective view of the finished mold set up for receiving the concrete; Fig. 6 is a perspective view of one of the cradles; and Fig. 7 is a similar view of one of the internal braces.

The mold for making concrete columns is built up of a plurality of planks A, A', A<sup>2</sup>, A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup> and A<sup>7</sup>, preferably set up in polygonal form to provide a concrete column of polygonal shape in cross section. Wedges B are placed in position in the joints between adjacent mold planks, as plainly indicated in the drawings, and the said mold planks and their wedges are securely bound in place by binding bands or rods C encircling the mold planks and wedges, as shown in Figs. 1, 2 and 5. Each binding band or rod C consists, preferably, of two band or rod members engaging a pair of blocks D secured by

nails E or other fastening devices to the outside of a pair of oppositely located mold planks, successive pairs of blocks D being attached to successive mold planks, as plainly indicated in Figs. 1 and 5. Each block D is preferably provided with grooves D' inclined in opposite directions, for receiving the ends of the bands or rods C, the said ends being preferably threaded to receive nuts C' abutting against opposite ends of the corresponding block, to permit of tightening the bands or rods on the blocks D to firmly bind the mold planks and their wedges in position. One of the mold planks (as shown, the mold plank A<sup>5</sup>) is shorter than the other, so that when the mold is set up for receiving the concrete, as shown in Fig. 5, a bottom opening A<sup>8</sup> for cleaning out purposes is provided.

The mold is set up in the following manner, special reference being had to Figs. 1, 2, 6 and 7: Angular cradles F are placed on supporting horses G or like supports, and in the bottom of the said cradles is placed the base plank A, and on the sides of the said cradle are placed the planks A', A<sup>2</sup> and the planks A<sup>3</sup>, A<sup>4</sup>. The corresponding wedges B are also laid in place at the joints of adjacent planks and then braces or supports H, each made in two parts fastened together by hinges I, are set on the inner surface of the planks A, A', A<sup>2</sup>, A<sup>3</sup>, A<sup>4</sup>, as indicated in Figs. 1 and 2, to provide a support for the planks A<sup>5</sup>, A<sup>6</sup> and A<sup>7</sup>, placed in position on the upper members of the said braces H. In a like manner the corresponding wedges B between the adjacent planks A<sup>3</sup>, A<sup>5</sup>, A<sup>5</sup>, A<sup>7</sup>, A<sup>7</sup>, A<sup>6</sup> and A<sup>6</sup>, A<sup>4</sup> are placed in position, and then the several blocks D for the binding rods C are secured in the order previously mentioned of the mold planks, after which the binding bands or rods C are connected with the said blocks, to securely fasten the mold planks and their wedges in position one on the other. When this has been done the braces H are removed from the inside of the mold at the ends thereof and then the mold may be lifted off the cradle F and set up in place, as shown in Fig. 5, to receive the concrete material employed for forming the concrete column. After the column is completed and the concrete material has set, the mold may be removed by removing the bands C, to permit of taking the mold planks from the sides of the column. Thus the parts constituting the mold may be re-used



for forming a mold for another column, in the manner above described.

As indicated in Fig. 1 the braces H are provided with reduced shoulders H' fitting the mold at the ends thereof, so as to provide an exceedingly strong support for the mold planks while fastening the same together by the use of the tying or binding bands or rods C and their blocks D. Sundry of the sides of the braces H are beveled, to allow of readily prying the braces out of the ends of the mold in case a brace is stuck in the mold after the same is finished.

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

1. In combination, a plurality of cradles each having a base and angular sides, shell planks one placed on the said base and others on the said angular sides, internal braces of polygonal form and set on the shell planks in position at the time on the said cradles, the said braces forming a support for the remaining shell planks, and binding means around the said shell planks for securing the same in place.

2. A means for building up a mold employed for making concrete columns, comprising cradles each having a base and angular sides for supporting the mold planks constituting a portion of the mold, and internal braces set up on the said mold planks for securing and supporting the mold planks constituting the remaining portion of the mold.

3. A means for building up a mold employed for making concrete columns comprising cradles each having a base and angular sides for supporting the mold planks constituting a portion of the mold, and internal braces set up on the said mold planks for securing and supporting the mold planks constituting the remaining portion of the mold,

the said internal braces being made in sections hinged together.

4. A means for building up a mold employed for making concrete columns comprising cradles, each having a base and angular sides for supporting the mold planks constituting a portion of the mold, and internal braces set up on the said mold planks for securing and supporting the mold planks constituting the remaining portion of the mold, the said internal braces being made in sections hinged together, sundry of the sections having beveled edges.

5. A mold for making concrete columns comprising a shell made of planks set up in polygonal shape, one of said planks being shorter than the others to provide a bottom opening when the mold is set up, longitudinally extending wedges fitting in the joints between adjacent planks, spaced binding bands passing around the shell and each consisting of two members having threaded ends, a pair of blocks for each band secured to the outside of a pair of oppositely located planks, successive pairs of blocks being secured to successive planks, each block being provided with grooves in its outer face inclined in opposite directions for receiving the corresponding ends of the members of the bands, and nuts on the threaded ends of the members of the bands and engaging opposite ends of the corresponding block to permit of tightening the bands on the blocks to firmly hold the shell planks and their wedges in position.

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

ERNEST ARTHUR CONNER.

Witnesses:

RUSSELL P. PRIEST,  
HARRY W. LOCKWOOD.