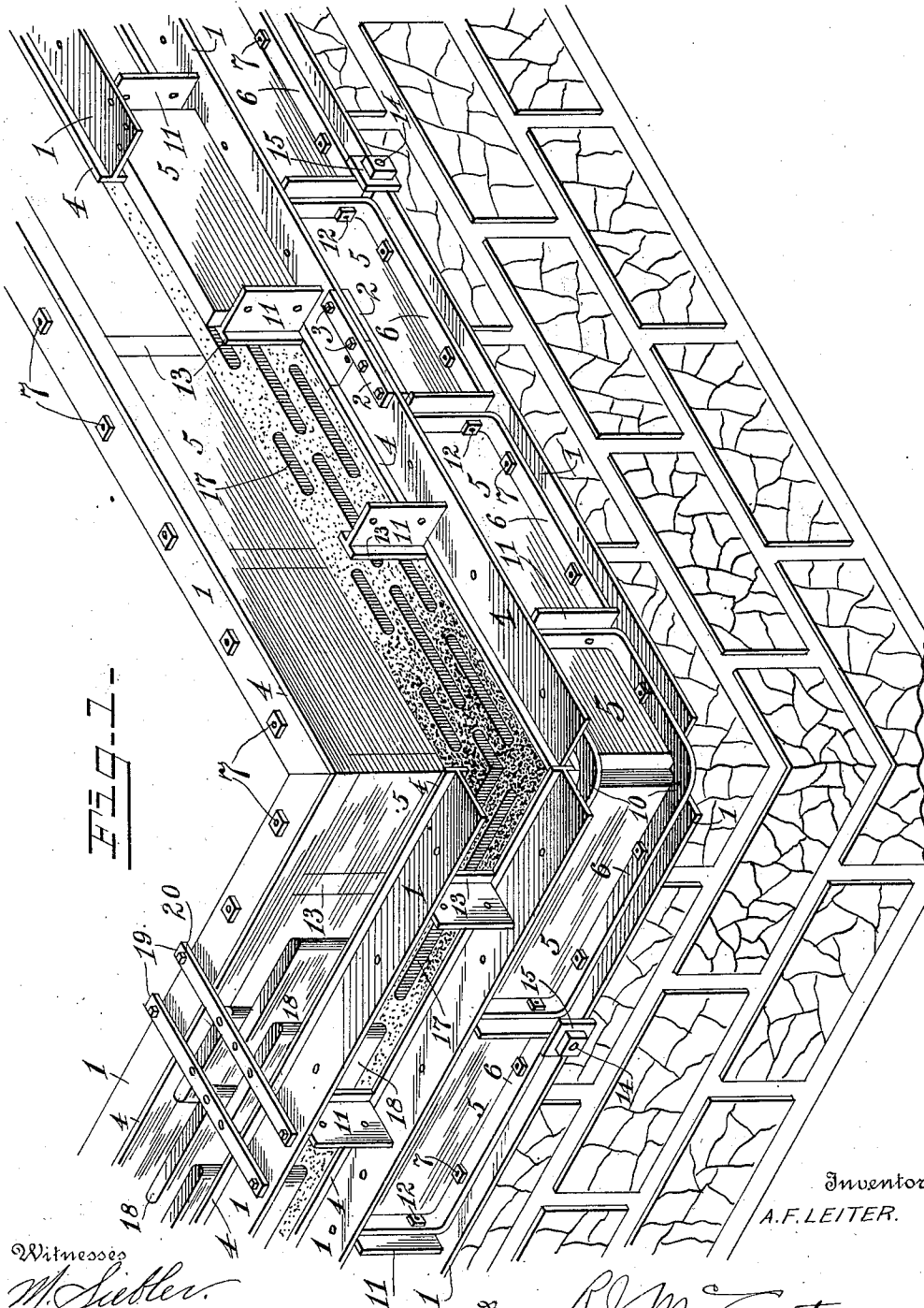


A. F. LEITER.
MOLD FOR CONCRETE CONSTRUCTION.
APPLICATION FILED MAY 16, 1910.

1,047,254.

Patented Dec. 17, 1912.

2 SHEETS—SHEET 1.



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Witnesses
M. Seidler.
Edward S. Smith

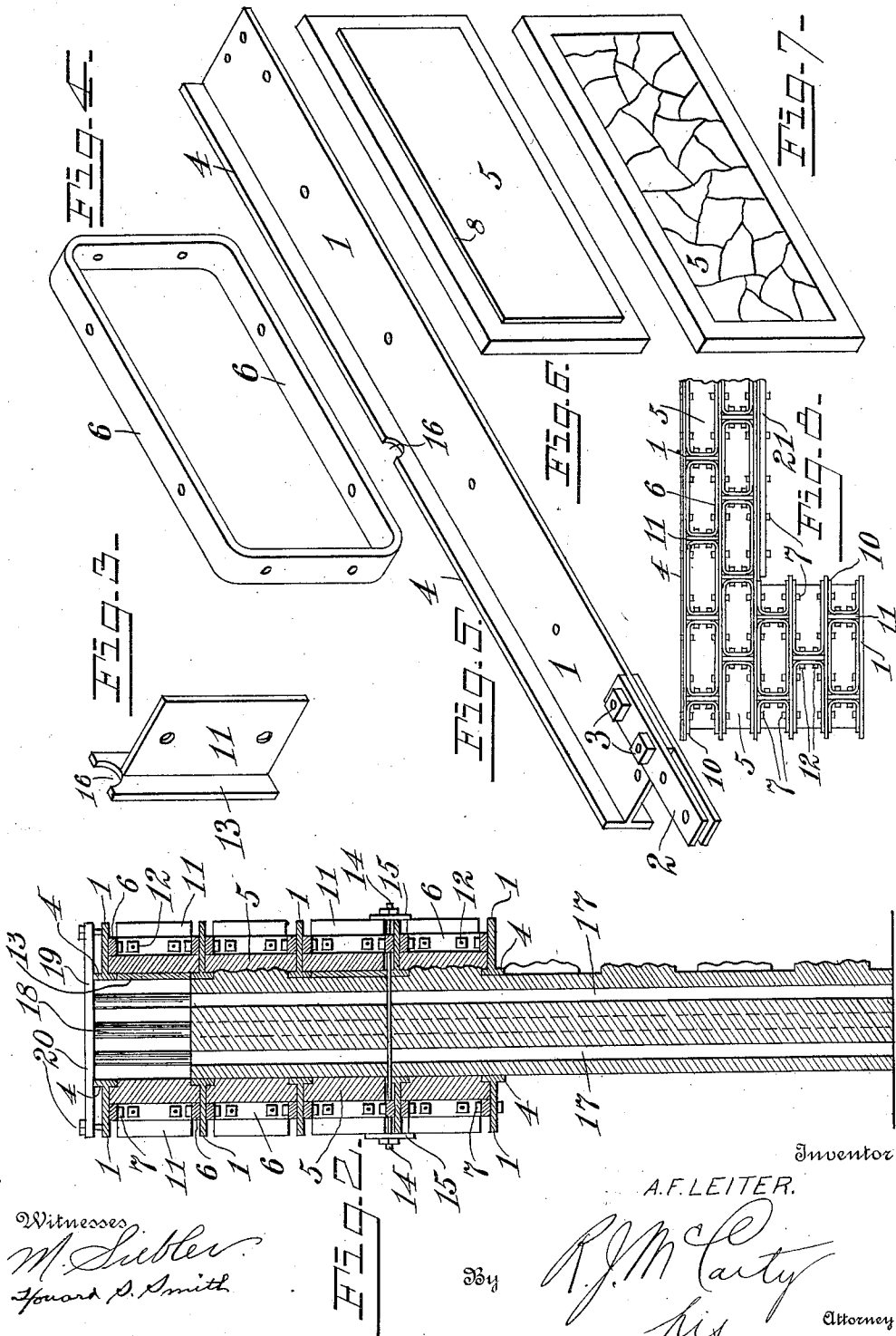
By *R. M. Carty*
his Attorney

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UNITED STATES PATENT OFFICE.

AARON F. LEITER, OF DAYTON, OHIO.

MOLD FOR CONCRETE CONSTRUCTION.

1,047,254.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed May 16, 1910. Serial No. 561,612.

To all whom it may concern:

Be it known that I, AARON F. LEITER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Molds for Concrete Construction; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in molds for concrete construction.

The object of the invention is to provide a mold of this character which has a desirable amount of flexibility and which is adapted for all kinds of concrete work such as outside, partition and retaining walls, columns, beams, joists, etc., as hereinafter more fully described.

Referring to the annexed drawings, Figure 1 is a perspective view of the complete mold for both sides of a wall, showing the same partially assembled, and a portion of a completed wall from which the mold is removed. Fig. 2 is a vertical section through an uncompleted wall, showing the mold applied thereto. Fig. 3 is a perspective view of one of the division plates. Fig. 4 is a perspective view of one of the holding frames. Fig. 5 is a perspective view of one of the horizontal tie bars. Fig. 6 is a perspective view of a face plate such as is used for the inside of a wall or where it is desired that the wall may present a smooth surface. Fig. 7 is a perspective view of a face plate such as is used for the outside of a wall where it is desired that the wall may present a finished surface such as broken stone or rough faced stone. Fig. 8 is an elevation showing the invention as applied to a column and beam mold.

In the drawings 1 represents horizontal tie bars, preferably of a standard length, but which may be made of any length to accommodate a wall of uneven or irregular dimensions. These tie bars 1 are joined at their ends by fish plates 2 and bolts 3, and are provided with flanges 4 which form false mortar joints in the completed wall, and which assist in retaining face plates 5 in po-

sition. The face plates 5 lie between the tie bars 1, and in addition to the flanges 4, are secured in position by holding frames 6, said frames being bolted to the tie bars 1 by bolts 7. The face plates 5 when coöperating to form the mold for the outside of the wall, are provided with any ornamental configuration such as cut stone, as shown in Fig. 7, brick or dressed stone (not shown). When the face plates form the mold for the inside of a wall, and it is desired that the same be smooth, said face plates are provided with a reinforcement 8 which lies flush with the flanges 4, as is shown in Fig. 6. The face plates 7 are preferably placed in staggered positions; and in order to secure a true vertical line at the end or corner of a wall, face plates of half size may be provided. To securely hold the tie bars 1 at the proper angle at a corner, the holding frames 6 are bent at the proper angle as is shown at 10 in Fig. 1. When it is desired that the completed wall shall show vertical false mortar joints, there is provided between the vertical sides of the holding frames, division plates 11 attached between the ends of said holding frames by bolts 12. The division plates 11 are provided with flanges 13 similar to the flanges 4 of the tie bars 1. The mold for the inside of the wall is identical with that for the outside, with the exception of the face plates above described. The inside and outside parts of the mold are held in position in relation to each other, by a suitable number of bolts 14 (see Figs. 1 and 2) which project through the mold frames and are provided with washers and nuts 15. At the points where these bolts project through the mold frames, the flanges 4 and 13 are recessed as at 16 (see Figs. 3 and 5). In lieu of the bolts 14, twisted wire may be used as is well known in concrete work.

In some buildings it is desirable that the walls be provided with air spaces to obviate dampness. Such air spaces are shown at 17 in Fig. 1 of the drawings, and are formed by means of cores 18. These cores 18 are of suitable shape and size and are attached to cross pieces 19 which are held to the tie bars 1 by means of bolts or screws 20.

The mold is used as follows: When it is desired to build a wall, rows of tie bars 1 for the inner and outer frames of the mold are laid on the foundation and are

joined at their ends by means of the fish plates 2. The holding frames 6 are then bolted to the tie bars 1 already laid, and when false vertical mortar joints are desired the vertical division plates 11 are bolted to the ends of the frames 6. The proper face plates 5 are then placed in position between the flanges 4 of the tie bars 1 and the holding frames 6. The bolts 14 are then placed in position at suitable intervals to hold both sides of the mold rigidly. When it is desired that the finished wall be provided with air spaces, the cores 18 are placed in position as above described. This completes one course or section of the mold and this course or section is then filled with concrete. After the first course or section of the mold has been filled with concrete, a second course or section of the mold is built upon the first and then filled with concrete. When the lowermost course of concrete has become sufficiently seasoned, its respective course or section of the mold may be removed and reused. After the mold has been removed, the exposed concrete may be covered with damp burlap or the like, to protect the green concrete from the weather and to more thoroughly season it. The mold for a column and joist are built up substantially the same as for a wall with the exception of the bottom of the joist mold, where a plank 21 may be attached to the mold by means of the bolts 7 (see Fig. 8).

Without limiting myself to the precise arrangement shown and described, I claim:

1. In a mold for concrete construction, the combination of double flanged tie-bars arranged in parallel relation, a series of holding frames uniting and supporting said tie-bars, and face plates mounted between said tie-bars and said frames and held in position by the tie-bar flanges on one side and the holding frames on the other side.

2. In a mold for concrete construction, the combination with upper and lower flanged tie bars, flanged division plates mounted between said tie bars, face plates mounted between said tie bars, and hold-

ing frames attached to said tie bars and division plates and in conjunction with said flanges adapted to hold said face plates in position, substantially as specified.

3. A mold for concrete construction, comprising a series of rectangular holding frames, a series of tie bars T-shape in cross section secured to the longitudinal sides of said holding frames, a series of division plates to which the ends of said holding frames are attached, and a series of face plates forming the sides of the mold and held in position between the tie bars and the holding frames, substantially as specified.

4. In a mold for concrete construction, the combination of a series of rectangular holding frames and united at their ends, a series of division strips held between the ends of said frames, said division strips having laterally extended flanges lying on the outside of the end portions of said frames, a series of longitudinal tie bars secured to the sides of said frames and having laterally extended flanges lying on the outside of the side portions of said frames, and a series of face plates held in position between the frames and the flanges of the division strips and tie bars, substantially as described.

5. In a mold for concrete construction, the combination of tie bars, each of which is double flanged at one of the longitudinal edges thereof, a series of division plates each of which has one of its longitudinal edges provided with double flanges which engage the flanges of the tie bars, said division plates being arranged transversely between adjacent ends of said tie bars, face plates engaging the flanges of the tie bars and the division plates, and a series of holding frames engaging said face plates and attached to the tie bars and the division plates, substantially as specified.

In testimony whereof I affix my signature, in presence of two witnesses.

AARON F. LEITER.

Witnesses:

R. J. McCARTY,
HOWARD S. SMITH.