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E. R. JEWASINSKI ET AL

PLATE SETTING TOOL

Filed May 31, 1924

Fig. 1.

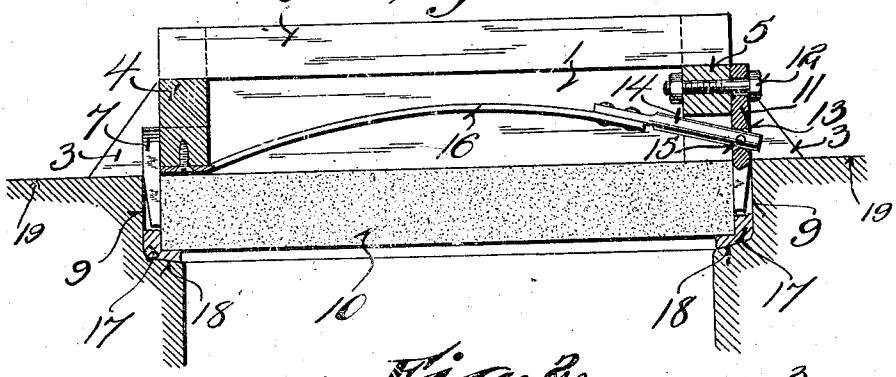


Fig. 2.

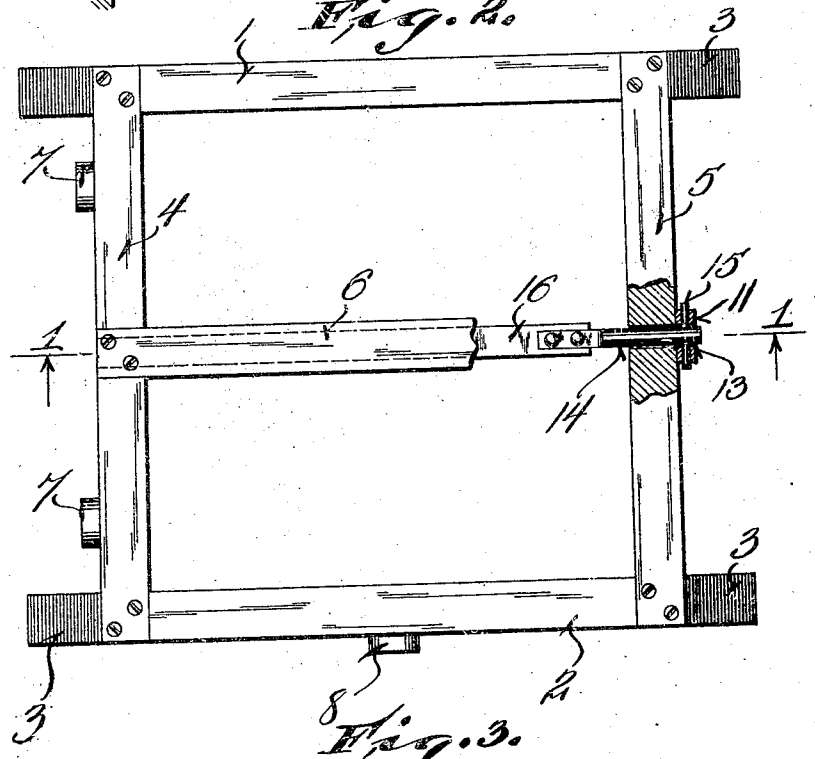
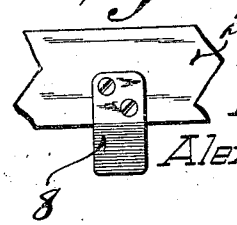


Fig. 3.



Inventors:
Edwin R. Jewasinski
Alexander E. Frederick
By
Attorneys.

Witness:
Erwin B. Eiring

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UNITED STATES PATENT OFFICE.

EDMUND R. JEWASINSKI, OF MERTON, AND ALEXANDER E. FREDERICK, OF MILWAUKEE, WISCONSIN.

PLATE-SETTING TOOL.

Application filed May 31, 1924. Serial No. 717,132.

To all whom it may concern:

Be it known that we, EDMUND R. JEWASINSKI and ALEXANDER E. FREDERICK, both citizens of the United States, and residents of Merton, county of Waukesha, State of Wisconsin, and of Milwaukee, in the county of Milwaukee and State of Wisconsin, respectively, have invented certain new and useful Improvements in Plate-Setting Tools; and we do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to plate setting tools.

In certain kinds of masonry work it becomes necessary to set relatively fragile flat plates in constricted places and to evenly position the plate on fresh cement or mortar without any irregularities occurring. This work, when done solely by manual means, is extremely difficult and is laborious and slow, and in addition to this, it is almost impossible under these conditions to secure an absolutely perfect positioning and joining of the plate to adjacent portions of the structure. An instance of this work is found in certain types of filtration plants in which the fragile ceramic plates commonly known as "filtros" plates are employed. These plates have to be set within a very small channel like space and upon a fresh layer of soft cement. In view of their fragile nature, of the limited space, and of the air tight setting of the plates upon the cement, this work is found to be very difficult and frequent breaking of the plates and improper fitting occurs.

This invention is designed to overcome the above noted defects, and objects of such invention are to provide a plate setting tool which is adapted to handle fragile plates and to seat such plates in the restricted place, and to accurately gauge the setting of the plate so as to secure an air tight joint and a uniform positioning of the plate with reference to the fresh cement.

An embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a longitudinal sectional view through the plate setting tool, such view corresponding to a section on the line 1—1 of Figure 2, and showing the tool in relation to the plate and channel within which such plate is set.

Figure 2 is a plan view of the structure shown in Figure 1.

Figure 3 is a detail of one of the guide and spacing ears.

The tool comprises a rectangular frame provided with side bars 1 and 2 which preferably extend beyond the ends of the frame and are beveled or otherwise finished to provide projecting portions 3. End members 4 and 5 are mortised or otherwise set into the side bars 1 and 2 and are rigidly secured thereto. A longitudinally extending handle 6 is secured to the end bars and is preferably set therein, as illustrated in Figures 1 and 2. This frame is provided with a pair of positioning lugs or fingers 7 carried by the end 4 and with a further positioning finger 8 of similar construction carried my the side bar 2. These fingers, as will be noted from Figure 1, are preferably tapered at their lower ends so as to easily enter the space between the vertical walls 9 of the channel and ends of the plate 10, as shown in Figure 1. Further than this, the tapered construction of the fingers insures the accurate positioning of the device within the channel and with respect to an adjacent plate as the finger 8 is adapted to contact with the next succeeding plate and to properly space the plate being laid.

In order to grip the plate 10 (see Figure 1) a movable finger 11 is carried by the end bar 5 in any suitable manner. For example a bolt 12 may be passed loosely through an aperture in the finger 11 and through the end bar 5 to permit limited motion of such finger. This finger is further provided with an aperture 13 preferably having rounded edges, as shown in Figure 1, and a pin 14 is passed through such aperture and pivotally attached to the finger 11 by any suitable means as for example by means of the pivot pin 15. This pin has its inner end riveted or otherwise secured to a flexible metal strap of spring like material, as indicated at 16 in Figures 1 and 2, the other end of such strap being secured to the end bar 4. The strap 16 is preferably positioned, as shown in Figure 2, directly beneath the handle 6 so as to be readily gripped by the operator.

In using this device, fresh mortar or cement 17 is placed upon the curved slanting shoulders 18 of the channel (see Figure 1). Thereafter, a plate 10 is positioned between

the finger 7 and the finger 11 and against the finger 8. Thereafter, the operator grips the handle and slips his finger beneath the strap 16 and draws upwardly upon such strap. This rocks the clamping finger 11 inwardly and grips the plate securely. The operator may then lift the frame and plate into position with reference to the channeled masonry, or support, as shown in Figure 1, and may lower the device into position. During this operation, the operator causes the finger 7 to contact with one of the walls 9 of the support or channel and causes the finger 8 to contact with an adjacent previously laid plate. The frame and plate are lowered until the projections or members 3 rest upon the upper surface 19 of the channel masonry, as shown in Figure 1, and thus accurately position the plate with reference to such upper surface, and insure the correct positioning of the corner and edges of the plate within the fresh cement 17. Thereafter, the operator loosens his grip upon the strap 16 which disconnects the frame from the plate, and then withdraws the frame.

It will be seen that this operation may be most readily performed and that it will result at all times in an accurately laid plate both with reference to the depth to which the plate is set and also to the exact location of the plate with reference to the adjacent channel masonry.

It will further be seen that this plate setting tool may be most cheaply manufactured, may be rapidly used and may be employed by an unskilled laborer.

From actual competitive tests between the speed and accuracy of the setting of the plates when this tool was used and the setting of the plates in the usual manner, it has been found that the use of this tool both improves the accuracy of setting and also vastly increases the speed. It has been found that a single workman equipped with this tool can lay as many plates as five or six ordinary workmen, and that the laying of the plates with this tool is a great deal more accurate and certain than with the methods heretofore employed.

Although the invention has been described in considerable detail, it is to be understood that the invention may be variously embodied and is, therefore, to be limited only as claimed.

We claim:

1. A plate setting tool comprising a frame having downwardly extending fingers securely attached thereto at one end and having a movable finger pivotally associated with said frame at the other end, said frame having a transversely extending manipulating handle, and a flexible member extending across said frame below said handle to said pivotally mounted finger, whereby when said flexible member is manipulated, said finger is moved into plate clamping position.

2. A plate setting tool comprising a frame having downwardly extending fingers at its ends, one of said fingers being movably associated with said frame, a flexible strap like member extending transversely of said frame and having one end secured to said movable finger, a manipulating handle secured to said frame above said flexible member, and gauging projections extending outwardly from said frame and adapted to regulate the depth of setting of said plate.

3. A plate setting tool comprising a frame having downwardly extending fingers at its ends, one of said fingers being movably associated with said frame, a flexible strap like member extending transversely of said frame and having one end secured to said movable finger, a manipulating handle secured to said frame above said flexible member, gauging projections extending outwardly from said frame and adapted to regulate the depth of setting of said plate, and a positioning finger secured to the side of said frame, all of said fingers having tapered lower portions.

In testimony that we claim the foregoing we have hereunto set our hands at Milwaukee, in the county of Milwaukee and State of Wisconsin.

EDMUND R. JEWASINSKI.
ALEXANDER E. FREDERICK.