July 19, 1932. C. JACKSON 1,868,169

CONCRETE MOLDING APPARATUS

Filed Dec. 20, 1929

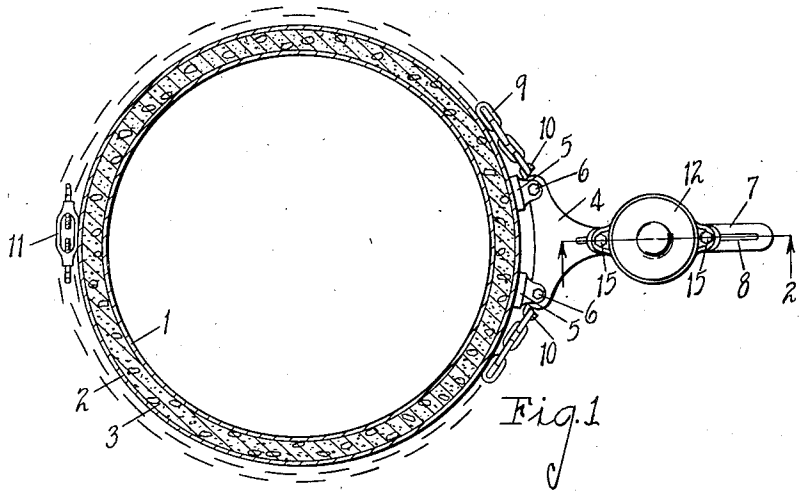


Fig. 1

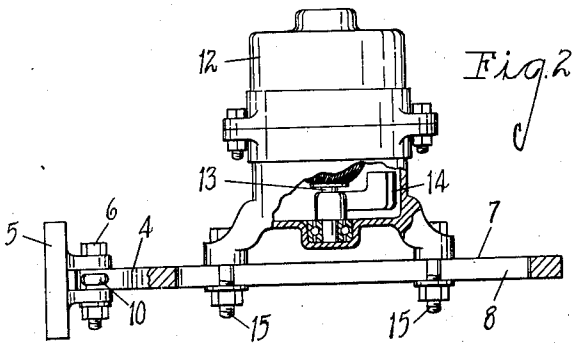


Fig. 2

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UNITED STATES PATENT OFFICE

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CONCRETE MOLDING APPARATUS

Application filed December 20, 1929. Serial No. 415,382.

My improved molding apparatus is especially designed for the practice of the method of molding concrete disclosed and claimed in my application for Letters Patent filed January 10, 1929, Serial No. 331,668, which contemplates the use of dry or harsh mixtures of concrete and reducing to a flowing or molding condition by high frequency vibrations. This application is in part a division or continuation of the molding apparatus of that application.

The objects of this invention are:

First, to provide a simple apparatus for use in molding concrete by means of which the method of my said application for Letters Patent may be practiced.

Second, to provide an apparatus of the character described in which the intensity of high speed vibrations may be very considerably varied without varying the frequency of the vibrations, and at the same time an apparatus which may be quickly and easily applied to the mold and readily adjusted to the particular conditions.

Third, to provide an apparatus of this character which is very simple and economical, and may be used and adjusted by comparatively unskilled workmen without likelihood of injury.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a horizontal section through a conduit or column mold apparatus embodying my invention.

Fig. 2 is a fragmentary view partially in section on line 2—2 of Fig. 1.

In the embodiment illustrated in Figs. 1 and 2, 1 represents an inner form, 2 an outer form, and 3 the concrete mixture therein.

The support 4 comprises a base portion having form engaging feet 5 mounted thereon by means of the pivots 6. The support is provided with an arm portion 7 of substantial length having a longitudinal slot 8 therein.

The support is clamped upon the form by means of a cable or chain 9 which is engaged with the hooks 10 on the support so that connection thereto is independent of the form engaging feet. It will be understood that in practice the clamping cable is provided with a tensioning or tightening means such as a turn buckle conventionally illustrated at 11. On the arm of the support I mount a vibrating unit, preferably a motor 12 having its shaft 13 disposed in a plane parallel to the longitudinal axis of the form. This shaft is provided with an unbalancing weight 14.

The motor is adjustably secured to the support by means of the bolts 15 engaging the slot 8 so that the motor may be adjusted readily relative to the form or to and from the form. This adjustment is effective in varying the intensity of the vibrations without affecting the frequency thereof.

The advantages of my apparatus in the placing of concrete are quite fully stated in my above mentioned application, of which this is in part a continuation, and are therefore not repeated herein.

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

1. The combination of a support provided with pivotally mounted form engaging feet, a cable attached to said support independently of said feet and adapted to embrace a form for clamping the support thereon, and a vibrating unit adjustably mounted on said support.

2. The combination of a support provided with pivotally mounted form engaging feet, a cable attached to said support independently of said feet and adapted to embrace a form for clamping the support thereon, and a motor mounted on said support provided with a shaft disposed in parallel relation to the longitudinal axis of the form and provided with an unbalancing weight.

3. In an apparatus of the class described, the combination of a vibrating unit support having a longitudinally slotted arm provided with pivoted spaced form engaging feet, a cable attached to said support independently of said feet and constructed to embrace the

form for clamping the support thereon, and a motor provided with an unbalancing weight adjustably mounted on said support to be adjusted to and from the form whereby the character of the vibrations imparted thereto may be varied.

4. In an apparatus of the class described, the combination of a vibrating unit comprising a support provided with pivoted form engaging feet, and a clamping element attached to said vibrating unit support and constructed to be passed around the form for clamping the vibrating unit to the form so that the form constitutes the support therefor, the vibrating unit being mounted on said support for adjustment to and from the base thereof.

5. In an apparatus of the class described, the combination of a vibrating unit comprising a support having pivoted form engaging members, and a clamping element attached to said support independent of said form engaging members and constructed to be passed around the form for clamping the support thereto so that the form constitutes a support for the vibrating unit.

6. The combination of a support, form engaging members pivotally mounted on said support, a clamping element constructed to be passed around a form for clamping said support thereto, and a vibrating unit carried by said support.

7. In a molding apparatus, the combination of a vibrating unit comprising a support provided with pivotally mounted form engaging feet, and a cable attached to said support independently of said feet and adapted to engage the form for clamping said support thereon so that the same constitutes a support for the vibrating unit.

In witness whereof I have hereunto set my hand.

CORWILL JACKSON.