

March 10, 1925.

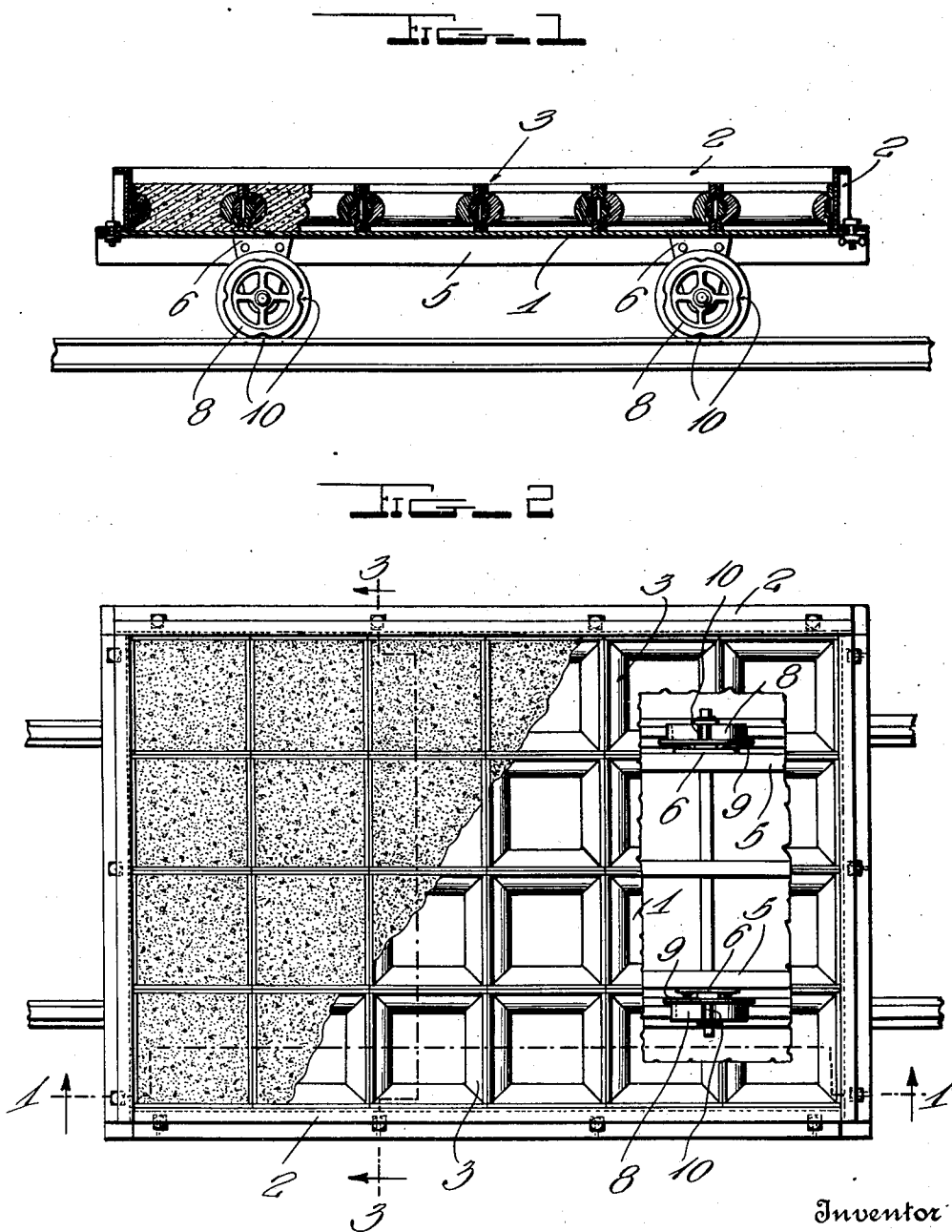
1,529,079

W. E. NELSON

APPARATUS FOR MOLDING CONCRETE BUILDING UNITS

Filed Aug. 28, 1922

2 Sheets-Sheet 1



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FIG. 3

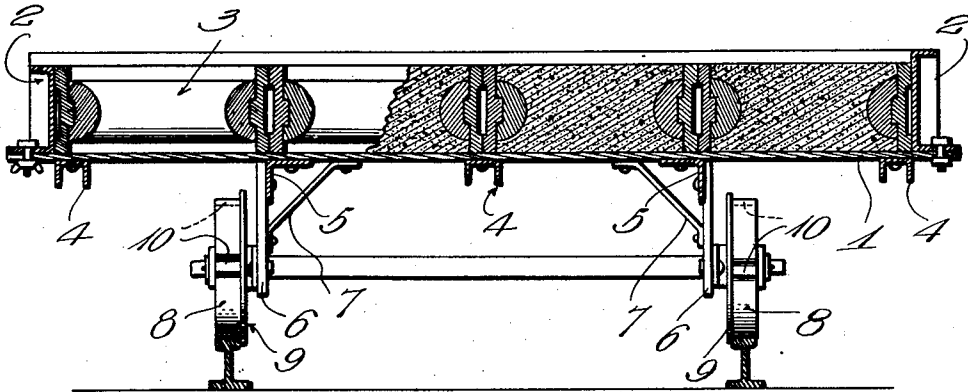


FIG. 4

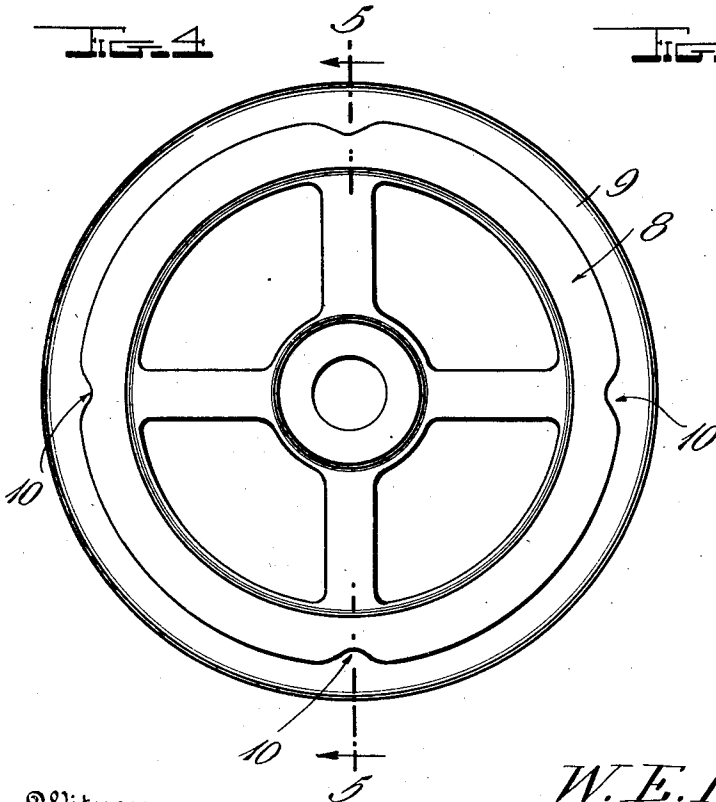
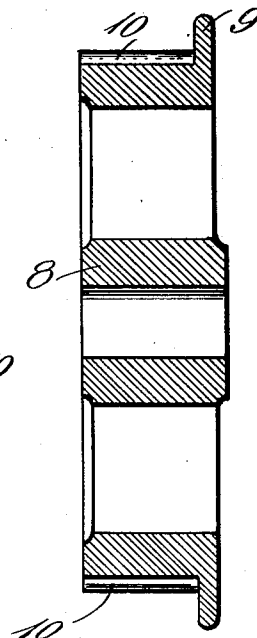


FIG. 5



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UNITED STATES PATENT OFFICE.

WILLIAM E. NELSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

APPARATUS FOR MOLDING CONCRETE BUILDING UNITS.

Application filed August 28, 1922. Serial No. 584,833.

To all whom it may concern:

Be it known that I, WILLIAM E. NELSON, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Apparatus for Molding Concrete Building Units; 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.

The present invention has reference to the manufacture of concrete building units, being an improved apparatus for molding concrete building units.

In molding concrete building and other units, it is expeditious to pack the molds which are used with liquid concrete adjacent the place where the cementitious mixture is made, and then to move the molds packed with liquid concrete to a place where they will be undisturbed until the concrete has set. Heretofore, it has been the custom to pack the molds tightly in the first instance with liquid concrete. This, of course, requires considerable time and the expenditure of labor, all of which can be to a large extent entirely eliminated by putting the present invention into practice, as according to the present invention, the molds may be packed loosely with liquid concrete which will be caused to settle as the molds are moved from the place where they are filled to a place where the concrete may be allowed to set. This simplified method may be carried out by mounting the molds as hereinafter described upon supporting wheels, the peripheries of which are provided with depressions or other means which cause the molds as they are rolled from place to place upon the wheels to be jolted.

The novelty in the invention resides in the various features of construction, and the combination and arrangement of parts, all of which are hereinafter fully described and claimed.

The descriptive matter of this specification is supplemented by the accompanying drawings which are intended for illustrative purposes only, but which incidentally illustrate the mechanical construction of a molding apparatus in which the novel features of the present invention are embodied.

In the drawings:—

Fig. 1 is a longitudinal sectional view of the molding apparatus taken substantially

on the plane indicated by the line 1—1 of Fig. 2;

Fig. 2 is a top plan view of the apparatus, showing it broken away in parts and also partly filled with concrete;

Fig. 3 is a transverse sectional view of the apparatus taken substantially on the plane indicated by the line 3—3 of Fig. 2;

Fig. 4 is a side elevation of one of the wheels upon which the mold proper is supported; and

Fig. 5 is a transverse sectional view of one of the supporting wheels of the mold, said view being taken substantially on the plane indicated by the line 5—5 of Fig. 4.

The apparatus forming the subject matter of the present invention consists essentially of a mold proper and a plurality of wheels for supporting the mold proper and for permitting it to be easily rolled from place to place.

The mold proper is constructed very much on the order of the mold disclosed and claimed in the pending application of William E. Nelson, Serial No. 404,520, filed August 19, 1920, since it consists of a flat substantially rectangular platform 1, around the four edges of which are arranged upstanding ledges 2, and a rectangular-shaped set 3 of interlocking mold members. The set of interlocking mold members rests upon the platform 1 and is arranged within the rectangular frame formed by the upstanding ledges 2. The mold proper illustrated in the drawings is intended to be used in molding a plurality of concrete building units, which in turn are intended to be used in the erection of monolithic concrete building structures similar to the ones disclosed and claimed in the pending application of William E. Nelson, Serial No. 421,139, filed Nov. 1, 1920. It is to be pointed out, however, that the mold proper may be constructed other than as just described and as illustrated in the drawings, since the novelty in the apparatus resides in the combination of a mold and the particular type of supporting wheels for the mold.

The platform 1 is preferably made of metal and is braced by longitudinally extending channel irons 4 and angle irons 5. These members are riveted to the lower side of the platform 1.

Riveted or otherwise suitably secured to the downwardly extending portions or sides

of the angle irons 5 are depending legs 6. The legs 6 are arranged in oppositely disposed or alined pairs, one pair being located adjacent each end of the platform 1. If desired, the legs 6 may be braced by suitable braces 7.

Revolubly mounted upon the lower ends of the legs 6 are wheels 8, upon which the mold proper is supported and upon which the mold proper may be easily moved from place to place. If desired, the wheels 8 may run upon a track, in which case they are preferably provided with rail-engaging flanges 9.

Formed upon the peripheries or tread portions of the wheels 8 are jogging elements. These are arranged in spaced intervals around the peripheries of the wheels, and the portions of the peripheries of the wheels between the jogging elements are smooth and arcuate. Preferably, the jogging elements are in the form of depressions 10, and in the present instance, the periphery of each wheel is provided with four of the depressions 10 which are spaced equal distances apart and the portions of the periphery between the adjacent depressions are smooth and arcuate. The depressions 10 or other jogging elements arranged as they are in spaced relation around the peripheries of the wheels with smooth peripheral portions between the adjacent depressions or elements cause the wheels to impart to the mold a series of sudden jolts of short duration as the mold is rolled upon the wheels from place to place. This jolting, intermittent as it is, causes any liquid concrete that there is in the mold to gradually settle toward the bottom of the mold.

The apparatus described in the foregoing and illustrated in the drawings is intended to be used in a plant where the concrete out of which the building units are made is mixed and poured into the molds at one place and then the molds filled with liquid concrete are moved to kilns or suitable drying places to permit the concrete to set. By the use of the apparatus, the mold proper may be quickly filled at the concrete mixer, and in filling it, it is the intention to only pack the liquid concrete loosely in the mold, since while it is being rolled from the concrete mixer to the dry-

ing kiln or place, the intermittent jolting caused by the depressions 10 in the wheels 8 will cause the concrete to settle in the mold. After the concrete has settled in the mold, the top of the mass may be smoothed and levelled off.

From the foregoing description taken in connection with the accompanying drawings, the construction, use and advantages of the invention will be readily understood.

It is obvious that numerous changes in form, proportion, and in the various details of construction, may be made without departing from the principles of the invention or sacrificing any of the advantages thereof, and hence, it is to be understood that certain changes may be made within the meaning and scope of the appended claims.

What is claimed is:

1. A combined concrete mold and transporting car comprising a mold which includes a platform, wheels mounted on said mold beneath said platform and upon which the mold may be moved from the place where it is filled to a place where the concrete may dry, said wheels having their peripheries provided with depressions, said depressions being disposed at spaced intervals around the peripheries of said wheels and the portions of the peripheries of said wheels between said depressions being smooth and arcuate whereby to intermittently impart sudden jolts of short duration to said mold as it is rolled upon said wheels from place to place.

2. An apparatus for molding concrete building units, comprising a mold, supporting wheels mounted underneath said mold and upon which said mold may be rolled from place to place, and jogging elements formed upon the peripheries of said wheels, said jogging elements being disposed at spaced intervals around the peripheries of said wheels and the portions of the peripheries of said wheels between adjacent elements being smooth whereby to intermittently impart sudden jolts of short duration to said mold as the latter is rolled upon said wheels from place to place.

In testimony whereof I have hereunto affixed my signature.

WILLIAM E. NELSON.