

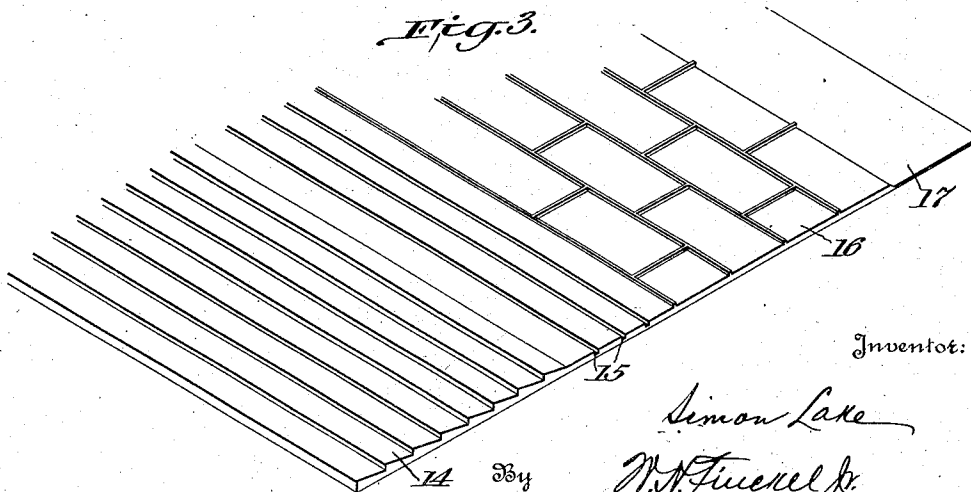
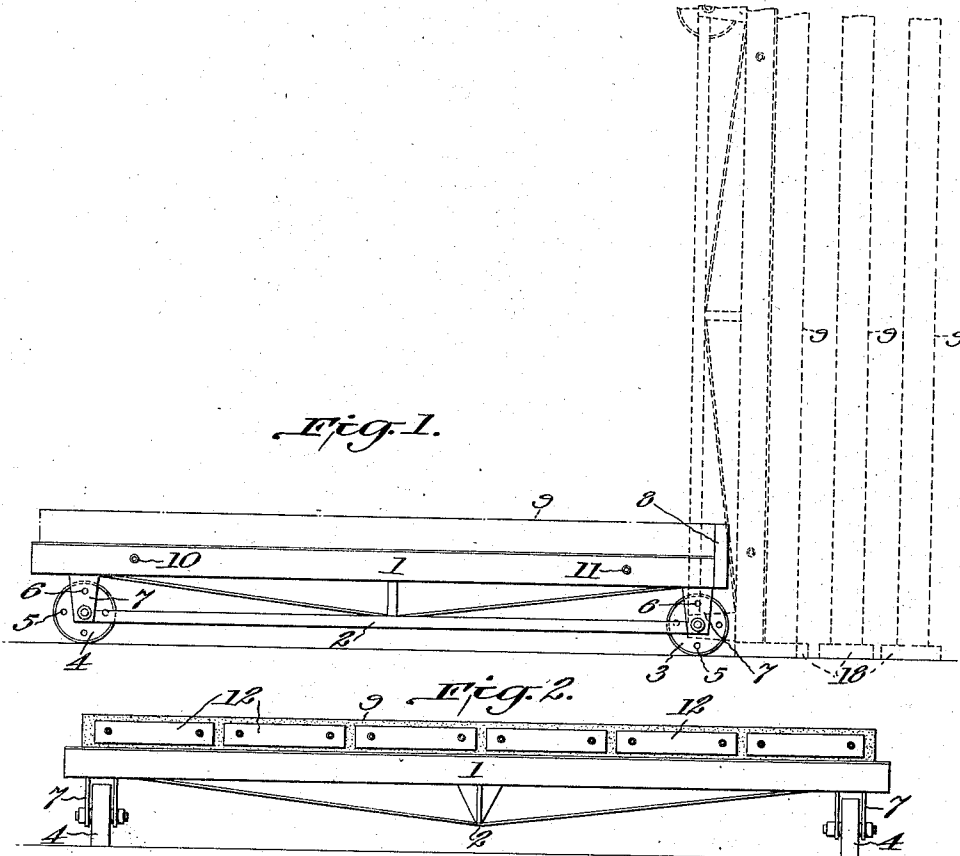
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S. LAKE

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CONCRETE MOLDING APPARATUS

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Inventor:

Simon Lake
W. H. Turner & Co.

Attorney.

UNITED STATES PATENT OFFICE.

SIMON LAKE, OF MILFORD, CONNECTICUT.

CONCRETE-MOLDING APPARATUS.

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In quantity production of concrete slabs and the like elements for building purposes, especially where the slabs or the like are of large sizes such as would be used for wall, floor and roof construction, a great deal of ground space is required for molding same; and, inasmuch as the space used for molding any individual slab cannot ordinarily be re-used until the slab has acquired sufficient set to retain its shape while being handled, much time is consumed during which that space is idle so far as its early use for subsequent molding operations is concerned.

The object of my invention is to provide apparatus for molding concrete slabs and the like, whereby an economy in space is attained, so that the output of a molding plant may be materially increased without increasing the space used.

The invention consists in apparatus for molding concrete comprising essentially a platform adapted to receive and support the forms of the mold and upon which the slabs or the like are cast, this platform being so constructed and arranged as to be raised upon one of its sides to discharge the molded slab in an upright position upon one of its edges, whereupon the platform is almost immediately available for use in casting another slab. And the invention consists, further, in means for hastening the initial set of the concrete so that the slab may be handled without injury a short time after the molding operation is completed, as I will proceed now to explain and finally claim.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is an end view of my apparatus, and indicating, in dotted lines, the platform in discharging position, and a number of finished slabs in position as discharged by the platform. Fig. 2 is a side view of the device with a slab thereon. Fig. 3 is a fragmentary perspective view of a form of pallet which may be employed to produce a design upon the outer face of a slab.

In carrying out my invention, I employ a platform 1 having, preferably, an under-frame 2 mounted upon pairs of wheels 3 and 4 at opposite sides of the platform, respectively. These wheels are provided in

their webs with holes 5 arranged to register with complementary holes 6 in the brackets 7 which carry the wheel bearings, and pins or bars, not shown, may be inserted through the holes in the brackets and through registering holes in the wheels for the purpose of preventing movement of the platform.

One side of the platform 1 is provided with a plurality of spaced feet 8 against which the slab 9 may abut and which serve to prevent the slab from sliding when the platform is tilted.

The platform is preferably made of hollow construction and into the interior of same steam or other heating fluid may be introduced and exhausted through pipes 10 and 11, for the purpose of heating the platform to thereby assist in and hasten the drying of the slab thereon.

If the slabs are of the cored type, steam-heated cores 12 of the general type shown and described in my co-pending application, Serial No. 409,370, filed September 10, 1920, may be employed. When these cores are used the drying of the concrete is still further hastened.

When it is desired to provide an ornamental surface upon the face or faces of the slab a pallet 13 (Fig. 3) may be used upon the platform. The pallet shown has designs upon it which will, in the finished slab, simulate clapboards (14), moldings (15) and stonework (16), the remainder of the pallet being formed (17) to simulate an ordinary footing.

My device is operated as follows:—The platform is rolled to the location in which it is desired to cast the slabs and the wheels are locked by passing pins or bars through the holes in the brackets and wheels. Then, if a pallet is used, the pallet is placed upon the platform and is treated in any appropriate manner, as by applying to its surface paraffine, soap or oil, to prevent it from adhering to the concrete of the slab. Then suitable forms are set up upon the platform and the concrete poured therein and manipulated in such a manner as to produce the type of slab desired. After the concrete has been poured and tamped, the heating fluid is introduced into the hollow interior of the platform, and, if cores are employed, into the cores, and the concrete of the thus cast slab is rapidly dried out to the point at

which it acquires its initial set and may be handled without injury. The forms are then removed, the cores (if used) withdrawn, and the platform tilted to the position indicated by dotted lines in Fig. 1. blocks 18 having been previously arranged upon the ground so as to lie between the feet 8 of the platform, which now rest upon the ground, and support the slab. The platform may thereafter be rolled away from the thus deposited slab, after unlocking the wheels 3, until its feet 8 are withdrawn from beneath the slab, when it may be returned to normal horizontal position for repetition of the casting operation.

As will be seen, slabs may thus be cast rapidly, and, being deposited in upright position, as shown by the dotted lines in Fig. 1, require very little ground space while they complete their drying.

I am thus enabled to utilize the space in a casting plant to much greater advantage, and can thus provide a greater output relatively to the space available than is possible where the slabs are allowed to dry flat upon the ground.

Moreover, the slabs having attained their initial set while supported flat upon the platform, are in no way injured by being thereafter deposited in upright position to complete their drying.

Obviously, in large types of slab, reinforcing means will be incorporated during the process of molding, and such reinforcement aids in supporting the slab upright when it is discharged from the platform, but I do not wish it to be understood that such reinforcement is essential to the practical use of my device.

Various changes are contemplated as within the spirit of the invention and the scope of the following claims.

What I claim is:—

1. In a concrete molding apparatus, a platform upon which the concrete may be cast in appropriate forms to produce an article, said platform having a hollow interior into which a heating medium may be introduced to hasten the setting of the concrete, a core around which the concrete is cast and into which a heating medium may be introduced to further hasten said setting, and supporting means for said platform upon which it may be tilted to discharge the completed article from it after said article has attained a set sufficient to make it self-supporting.

2. In a concrete molding apparatus, a platform upon which the concrete may be cast in appropriate forms to produce an article, said platform having its interior arranged to receive a heating medium to effect the hastening of the setting of the concrete, and a wheeled carriage for said platform whereby it is rendered mobile, the wheels of said carriage affording means whereby the platform may be tilted to discharge said article after the concrete has attained sufficient set under the influence of said heating medium to be self-supporting.

3. In a concrete molding apparatus, a platform upon which the concrete may be cast to produce an article, wheels upon which said platform is carried and by which it is rendered mobile, said platform being tiltable for the purpose of discharging the completed article therefrom, and means for locking said wheels relatively to said platform, whereby movement of the platform is prevented during the tilting of same.

In testimony whereof I have hereunto set my hand this 5th day of May A. D. 1924.

SIMON LAKE.