

T. V. DIMON.
MOLD HANDLING APPARATUS.
APPLICATION FILED JUNE 14, 1909.

952,789.

Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

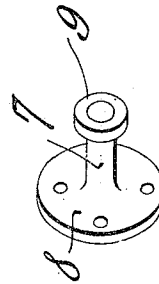
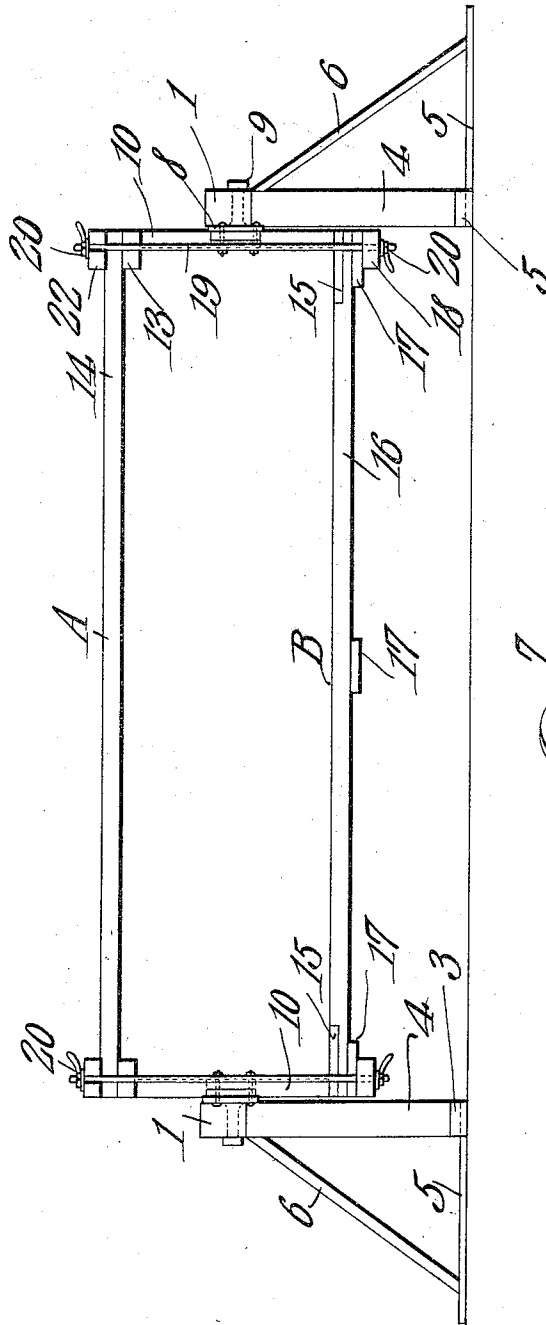


Fig. 4.

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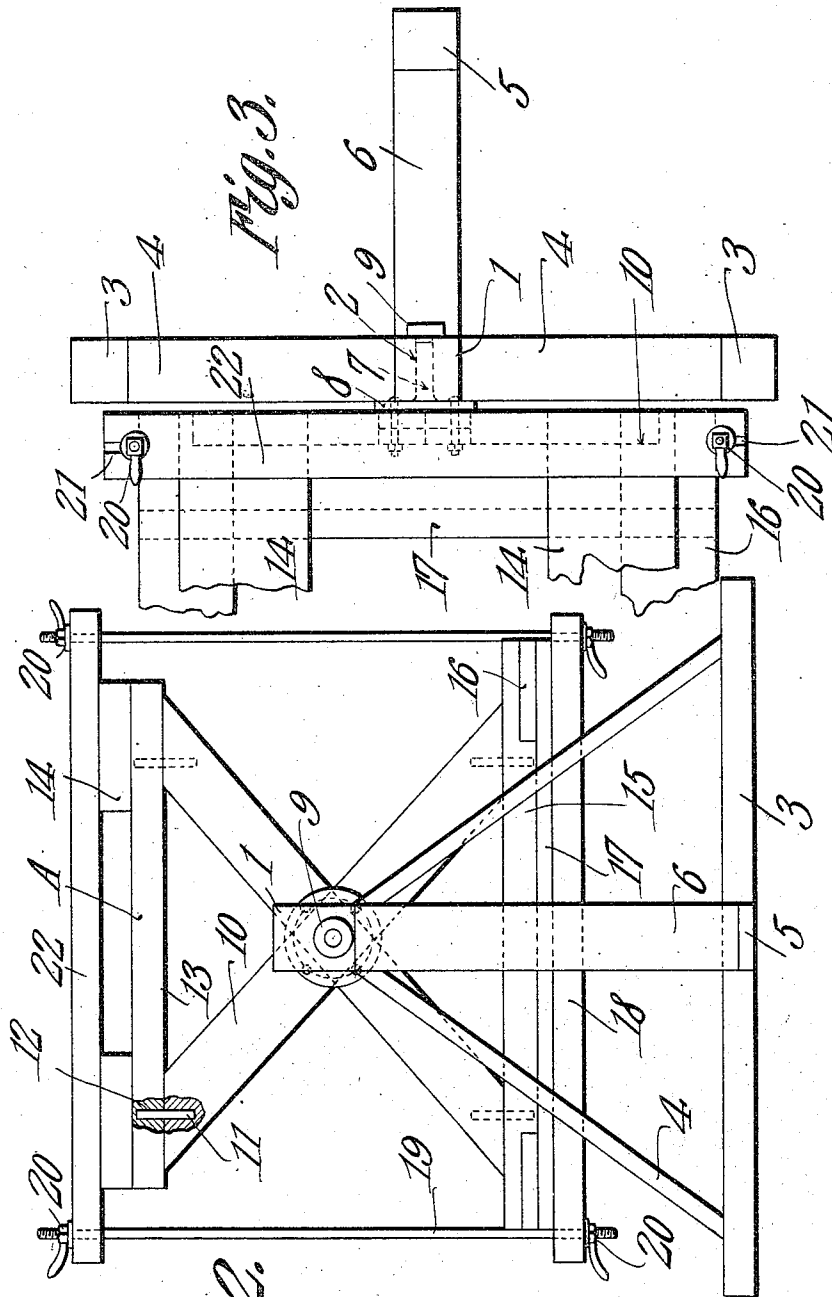
Attorneys

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

THOMAS VOLNEY DIMON, OF NORWALK, OHIO.

MOLD-HANDLING APPARATUS.

952,789.

Specification of Letters Patent.

Patented Mar. 22, 1910.

Application filed June 14, 1909. Serial No. 502,102.

To all whom it may concern:

Be it known that I, THOMAS VOLNEY DIMON, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented a new and useful Mold-Handling Apparatus, of which the following is a specification.

This invention relates to apparatus for handling large molds and is more particularly designed for inverting molds such as used in the manufacture of concrete vaults.

Heretofore in the manufacture of large concrete vaults and the like, the services of several men have been necessary in order to invert the mold so as to permit it to be removed from the molded object. It has also been necessary to wait until the molded object has thoroughly set before removing the mold, as otherwise it has been practically impossible to remove the mold without injuring the object to some extent.

One of the objects of the present invention is to provide simple means whereby a very heavy mold can be inverted by one person and removed from the molded object, before such object has fully set and without injuring such object, it being thus possible to greatly increase the capacity of the mold, because it can be used oftener.

Another object is to provide apparatus of the class described which can be readily applied to molds of different forms after the same have been filled.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a side elevation of apparatus embodying the present improvements. Fig. 2 is an end elevation thereof, portions being broken away. Fig. 3 is a plan view of one end portion of the apparatus. Fig. 4 is a detail view of one of the trunnions.

Referring to the figures by characters of reference 1 designates a standard having an opening 2 extending transversely within the upper portion thereof, the lower end of the standard being secured to the middle portion of a base strip or sill 3, the end portions

of the standard by means of inclined braces 4. Another base strip 5 extends at right angles from the middle portion of the sill 3 and is connected to the upper portion of the standard 1 by means of an additional inclined brace 6. Each opening 2 has a trunnion 7 mounted for rotation therein, said trunnion extending from the center of a disk 8 and being provided at its free end with a collar 9, whereby longitudinal movement of the trunnion within the opening 2 is limited. The disks 8 are bolted or otherwise secured to the intersecting or middle portions of crossed strips 10 constituting the head of the apparatus, the terminals of these strips being provided with dowels 11 extending at right angles to the planes occupied by the ends of the strips 10. The upper dowels 11 are designed to project into sockets or recesses 12 formed in end strips 13 which are designed to rest upon the upper ends of the strips 10 and are secured to the ends of the side strips 14 of the top frame A of the apparatus. The lower dowels 11 are designed to project into end strips 15 which are connected by side strips 16, there being end and intermediate reinforcing strips 17 secured to the side strips 16, all of said strips 15, 16 and 17 forming the bottom frame B of the apparatus.

Clamping strips 18 are arranged transversely upon the end portions of the bottom of the frame B, and the ends of these clamping strips project beyond the sides of the frame B and have openings therein for the reception of clamping rods 19, the ends of which are screw-threaded for engagement with nuts 20, preferably in the form of levers. The upper ends of the rods 19 are designed to extend through slots 21 formed in the ends of clamping strips 22, said strips being located upon the upper face of the frame A at the ends thereof.

In using the apparatus herein described the bottom frame B is mounted on blocks and the mold is then placed thereon. When the concrete within the mold has set sufficiently to allow the mold to be removed the apparatus herein described is assembled about the mold, the top frame A being placed thereon and the two frames A and B tightly clamped upon the mold by means of the strips 18 and 22 and the rods 19.

It is of course to be understood that the frames A and B are first placed in engage-

ment with the dowels 11 extending from the ends of the crossed strip 10. After the parts have thus been assembled the blocks are knocked out from under the mold, whereupon the standards 1 and the parts connected to them will properly support the mold. Said mold can then be readily inverted by turning the structure upon the trunnions 7, thus bringing the inverted mold in position upon a truck or other structure provided for it. The nuts 20 can then be loosened and the rods 19 removed from the clamping strip 22, thus releasing the apparatus from the mold and permitting the mold to be removed from the object contained therein. After the molded object has been placed upon the truck or other object provided for it, it can be conveyed to a drying room or the like, so as to properly harden.

It will be obvious that by providing apparatus such as herein described very large molds can be handled by a single person, and it is not necessary to wait the customary four days or more for the concrete to fully set. Instead, it has been found that where large objects, such as vaults, are manufactured, the same can be removed from the mold within two days, when apparatus such as herein described is employed. This is due to the fact that the concrete can be easily handled without danger of injury, before it has completely set.

It is of course to be understood that various changes may be made in the construction and arrangement of the parts without

departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. Apparatus of the class described including separate spaced supporting structures, a trunnion mounted for rotation within each structure, a head secured to each trunnion, each head consisting of crossed strips, removable frames detachably engaging the ends of said strips and constituting the sole connections between the heads and between the supporting structures, and clamping means for binding the frames upon the heads.

2. Apparatus of the class described including standards, a base secured to each standard, a trunnion journaled within each standard, intersecting strips secured at intermediate points to each trunnion, said strips constituting heads, projecting devices upon the ends of the strips, top and bottom frames detachably engaging said projecting devices and constituting the sole connection between the heads and between the standards, clamping strips extending transversely of the frames, and clamping rods engaging the ends of the strips for binding them upon the ends of the head strips.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THOMAS VOLNEY DIMON.

Witnesses:

W. R. PRUNER,
C. L. FRENCH.