

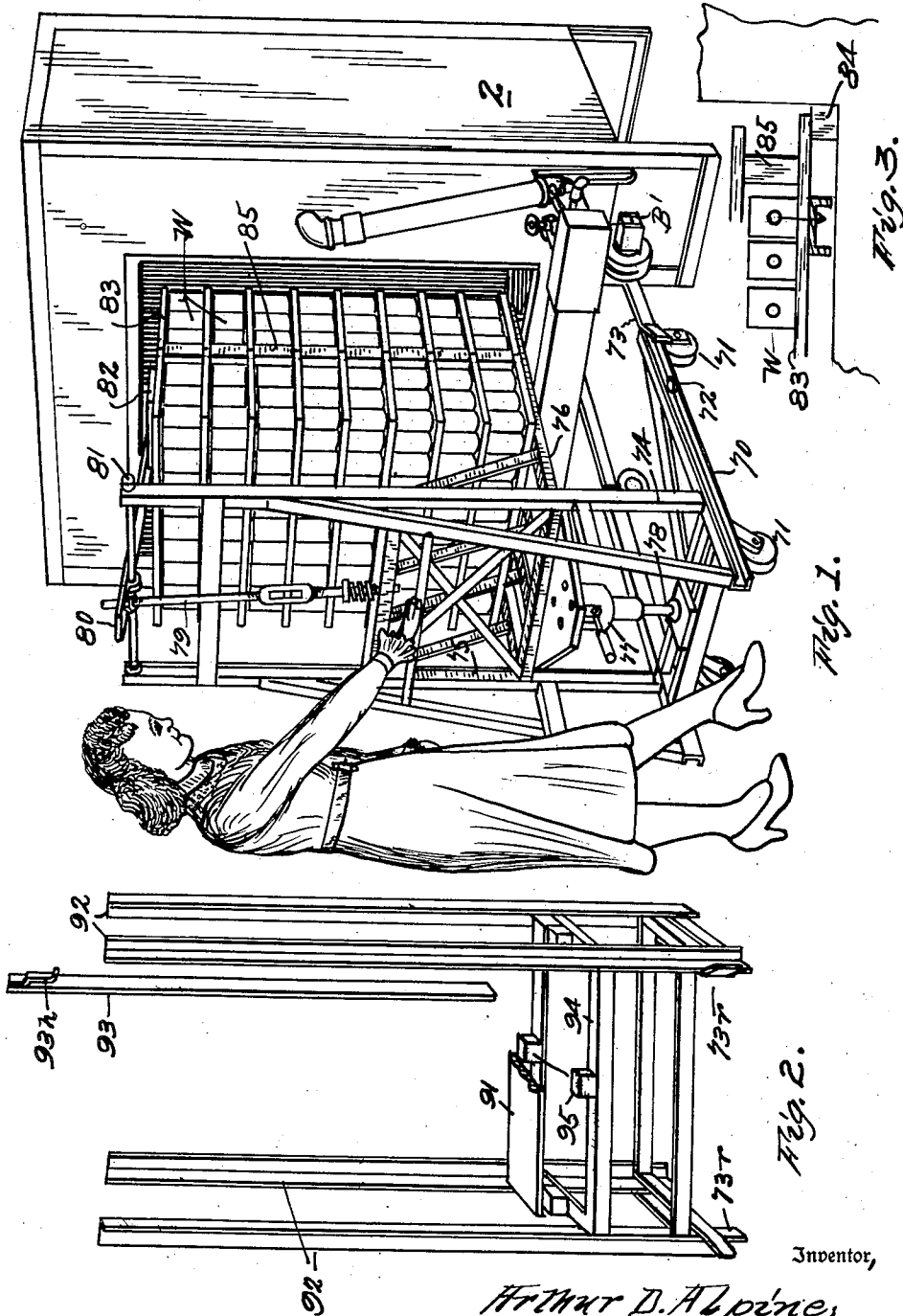
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KILN TRUCK

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KILN TRUCK

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2 Claims. (Cl. 214—18)

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This invention is a truck for use in the art of ceramics.

An intent is to provide a novel apparatus and method for ware stacking, stack transporting and bodily loading of a stack to stations of work and at the kiln, and bodily unloading of a fired stack.

The invention resides in certain advancements in this art as set forth in the ensuing disclosure and having, with the above, additional objects and advantages as hereinafter developed, and whose constructions, combinations, means and details thereof, and whose method will be made manifest in the following description of the herewith illustrative apparatus; it being understood that modifications, variations, adaptations and equivalents may be resorted to within the scope of the invention as it is claimed in conclusion hereof.

Fig. 1 is a perspective of a ware stack handling truck. Fig. 2 is a perspective of a stationary, ware stacking frame. Fig. 3 is a detail of a stack setting down step of the process.

It is a noticeable purpose of this invention to provide the ceramist with an apparatus, system and method whereby he is enabled to stack up, to work, to decorate, to transport from station to station, and finally burn full-kiln lots of the ceramic ware at a time. That is to provide for the building of stacks of full kiln loads at a time and the handling of such stacks progressively through a desired program chart as will be determined by each particular run of ware job, of which, obviously, there is an endless variety.

With this object in mind, Fig. 1 illustrates a kiln-load handling truck whose frame 70 has front and rear wheels 71 and is provided with small lead rollers 72, at each side, which are adapted to cooperate with guide rails 73 fixed complementally to the legs of the kiln 2; the frame 70 of the truck passing under the kiln as the truck is pushed up to the front door of the kiln.

Rigid with the frame 70 are vertical channel posts 74 in which is operative an elevator frame 75 having a set of forwardly projecting bench arms 76 which are adapted to pass readily into the doorway of the kiln as the frame 70 is guided safely under the kiln. Suitable means are provided for lifting or lowering of the bench slide or frame 75 and is here shown as including a hydraulic jack cylinder 77 rigidly fixed to the elevator slide and whose piston rod 78 is fixed to the basal frame 70. As the elevator is gently raised or lowered by the jack a cushioned push rod 79 depresses or raises a lever 80 pivoted at

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81 of the posts 74. The lever is provided with a clamp plate 82 whereby to solidly bear down on the topmost stack slabs 83 constituting a part of the kiln furniture of a stack of ware pieces W supported on the bench arms of the truck.

The bench arms are adapted to just clear the front doorway sill as the load of ware is pushed into the kiln for firing. When in proper position the elevator is carefully lowered until the bottommost refractory slab sets on footing blocks 84 at the sides and at the front and back of the kiln floor. The truck is then rolled away from the loaded kiln; it now being ready for firing.

The furniture of a stack of ware includes the slabs 83 of which two to a level are shown, and sets of spacer studs 85, of refractory material, supporting the said end portions, and the front and back portions of the imposed slabs; the studs being in an arrangement shown in Fig. 2.

A kiln-load stack having been described and its great utility set forth, reference is now made to a practical ceramic system for a method of running pieces of ware W from the molder's bench to the firing kiln, in a suitable number of intermediate steps—according to final product.

A molder works up or assembles a batch or lot of the green ware, arranges the pieces on light weight boards 91 used as shelves spaced above each other as a stack of the ware is built up in a station, stacking stand shown in detail in Fig. 6. Each stand includes a set of corner posts 92, which present side flanges onto which can be detachably hooked vertical gage bars 93, having top end hooks 93h, and which face inwardly so as to correctly locate each set of the stacking shelves 91, Fig. 2, or at other station stands, subsequent to the initial green ware stand.

Each stand has a bed frame 94 on which is fixed a set of footing blocks 95 to support the lowermost board shelf 91 as shown in Fig. 2. A feature is that these footing blocks, of wood for instance, are at such a height that the bench arms 76 can be passed in under the bottommost shelf forming parts of a stack as the truck is pushed to position to pick up, or to load, a stack of the ware at any station.

Also each stack station stand (of posts 92) has a pair of truck guide-in rails 73r to receive the truck frame rollers 72.

After the stacking station has been filled with a stack of the green ware an operator runs in a truck and picks up the entire stack (a kiln load) and transfers the stack to any one or another of work positions or stations.

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It is understood that the truck is not left in kiln place during firing, and that all of the furniture is of refractory nature and will not be injured when in use during the firing of the stack of ware in the kiln.

What is claimed is:

1. A station-to-station transfer truck for handling a stacked, kiln load of pieces to be baked and including a frame structure including a low, horizontal, elongated chassis sill adapted to be rolled under a given kiln and having on its rear end a vertical, guide column by which the truck is manually controlled and propelled, a rigid stack bench mounted and shiftable vertically on said column for picking up a stack load and transferring it into the kiln and vice versa, said bench being vertically arranged over said sill so that the bench load is passed into the kiln as the sill moves under the kiln, and a hydraulic jack interposed between the rear ends of the sill and of the bench for motivating the bench as to the sill, and a horizontal lever pivoted on the head of the column, and means on the elevator bench for automatically setting the lever on a stack on the bench.

2. The truck of claim 1 and in which said means includes a push rod yieldably mounted on the bench and thrustably engaging the rear end of the said lever.

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