Aug. 26, 1958 E. P. RIPLEY Re. 24,527

METHOD OF FABRICATING ORNAMENTAL CONCRETE BLOCKS

Original Filed Sept. 16, 1952 2 Sheets-Sheet 1

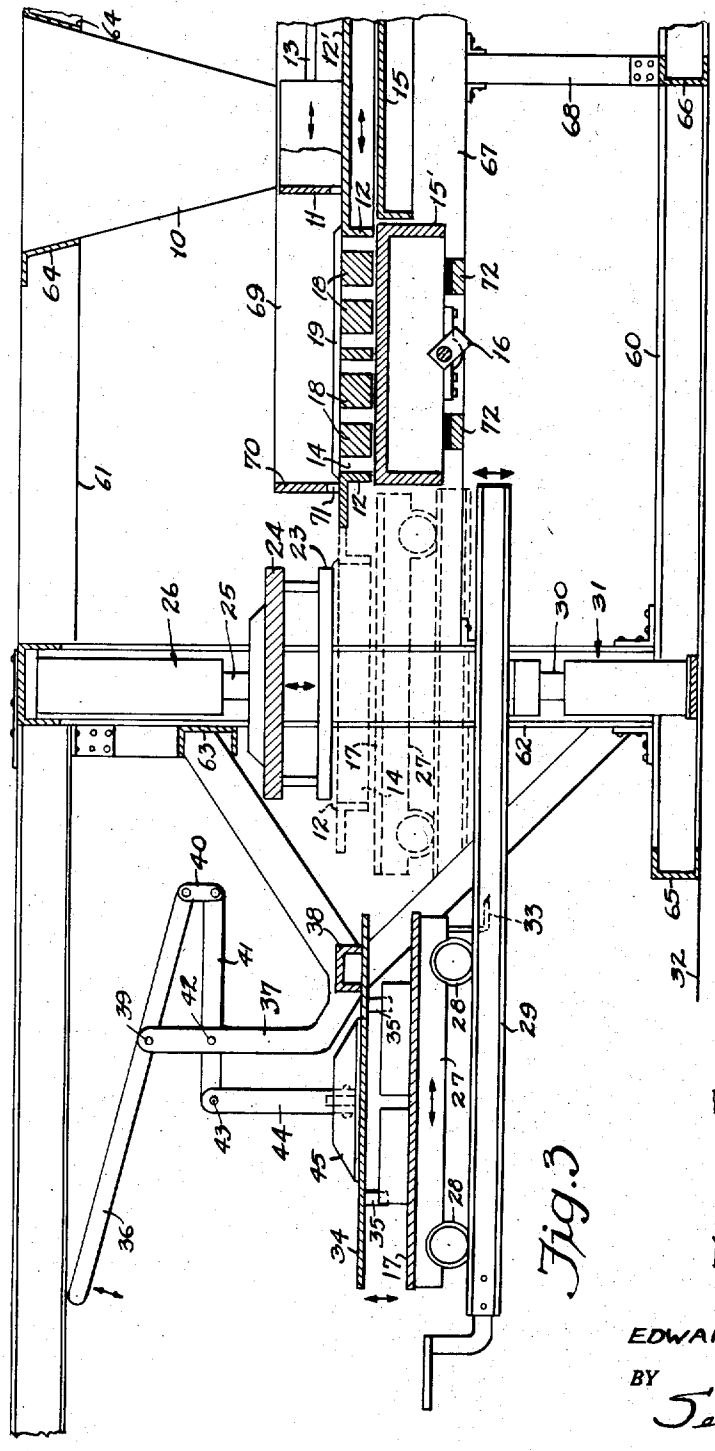


Fig. 3

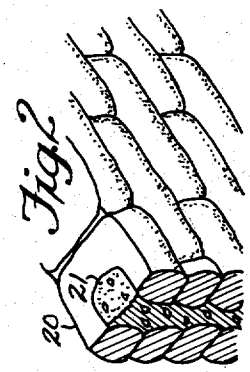


Fig. 2

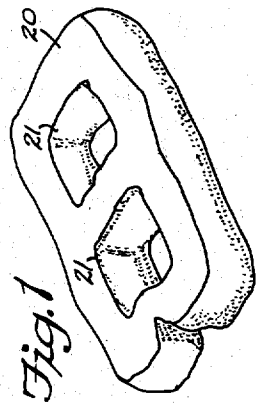


Fig. 1

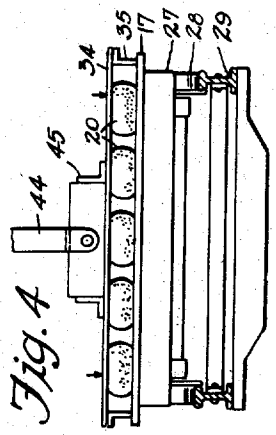


Fig. 4

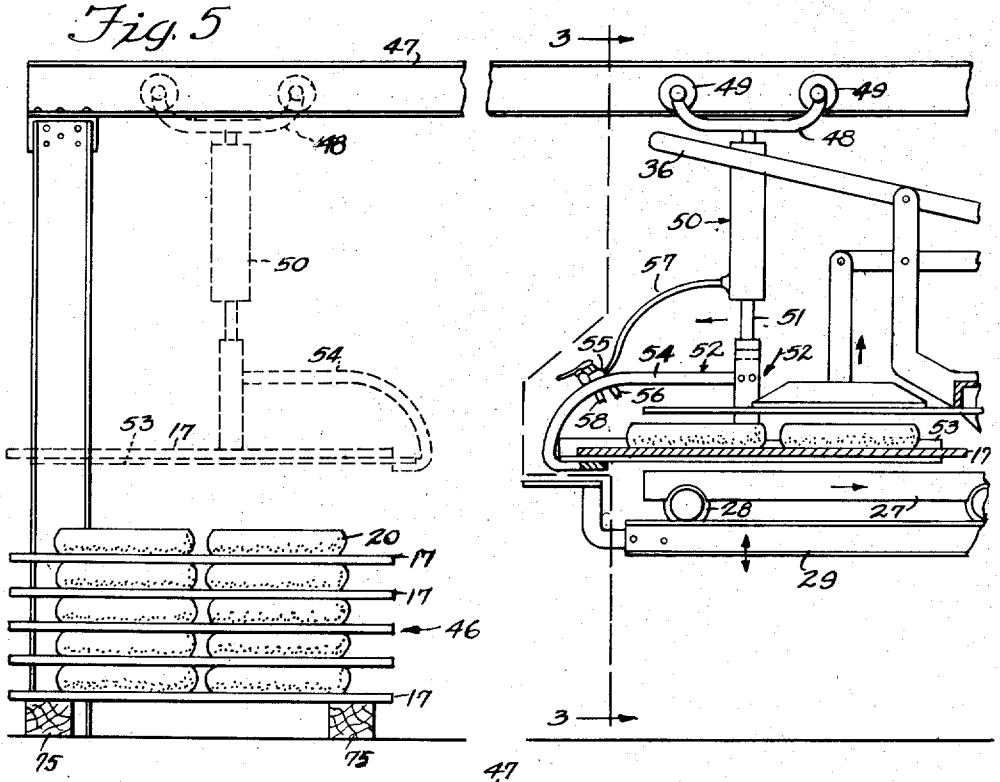
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Original Filed Sept. 16, 1952 2 Sheets-Sheet 2

Fig. 5



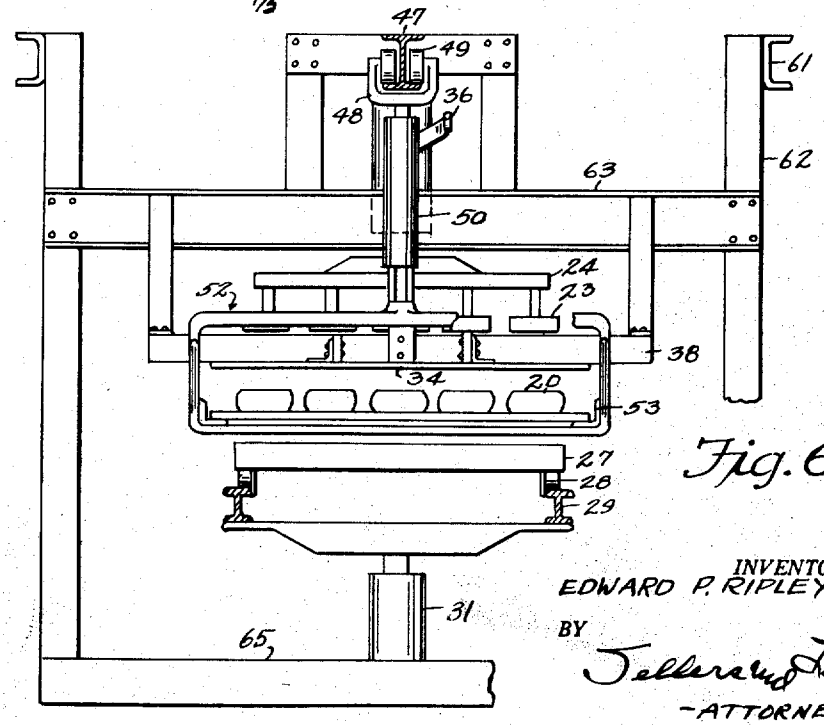


Fig. 6

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METHOD OF FABRICATING ORNAMENTAL CONCRETE BLOCKS

Edward P. Ripley, Van Nuys, Calif.

Original No. 2,708,783, dated May 24, 1955, Serial No. 309,757, September 16, 1952. Application for reissue July 28, 1955, Serial No. 525,091

12 Claims. (Cl. 25—155)

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue.

This invention relates to the manufacture of concrete structural blocks. The general object of the invention is to provide an improved method for fabricating a block having a lateral surface of irregularly bulging contour. Like stone with a chipped finish, such blocks provide a soft, pleasing surface effect in a building wall constructed therefrom, as contrasted to the hard, unattractive finish presented by a conventional flat sided concrete block wall structure.

One of the important objects of the invention is to provide a method for fabricating such structural blocks inexpensively, so that they may be sold competitively. Another object is to provide a method for rapid quantity production of such structural blocks.

Another object is to provide a method whereby such blocks may be fabricated from a wet mix.

A further object is to provide a method for fabricating such blocks, wherein the bulged surfaces produced thereby are irregular and varied so as to avoid any monotonous regularity of recurrence of details of surface design.

In general, the invention contemplates a method for fabricating structural blocks of the type indicated, wherein the blocks are first cast in flat sided rectangular mold cavities, and immediately after removal from the cavities and while the concrete is still green, are slightly compressed between parallel horizontal flat surfaces, down to a reduced thickness of predetermined [, set value] *magnitude,* whereby the blocks are squashed to produce the bulging lateral surfaces thereof.

[The invention contemplates the possibility of delivering the mix directly from a hopper or chute into the mold cavities, eliminating the step of lateral transfer of the mix from the lower end of the hopper to the mold.]

[The invention also contemplates the possibility of molding the blocks directly on a pallet, functioning as the bottom of the mold, with the vibrating action being transmitted through the pallet or through the mold frame.]

Another object is to provide a method and apparatus whereby a series of slumped blocks may be fabricated in a high production operation in which the blocks are molded, slumped and cured.

One of the important aspects of the invention is the provision for molding, slumping, transporting and curing the blocks while they remain in a uniformly upright condition, avoiding any necessity for turning the blocks over between the molding operation and the slumping operation. This provides for high speed, high quantity production in which the molding operation may be carried out on a more or less automatic, high capacity machine, and in which the slumping operation may be immediately performed at the discharge end of such machine, by apparatus which may be either attached to said discharge end of the machine or separate therefrom but located adjacent such discharge end.

Other objects will become apparent in the ensuing specifications and appended drawings in which:

Fig. 1 is a perspective view of a block fabricated through the use of the invention;

Fig. 2 is a perspective view of a wall constructed from said blocks;

Fig. 3 is a side view, partially in section, of the molding portion of an apparatus that can be used in practicing the invention;

Fig. 4 is a detail view of a portion of the apparatus showing the compression operation; partially in section, indicated by line **4**—**4** of Fig. 3;

Fig. 5 is a side view, partially in section, of the delivery end of the apparatus, illustrating the operation of stacking the blocks for curing; and

Fig. 6 is a rear end view of the apparatus, partially in section as indicated by line **6**—**6** of Fig. 5.

THE APPARATUS

The method of the present invention may be practiced by the use of various apparatus. By way of illustration of one apparatus that can be employed in the practice of the method, I have shown an apparatus incorporating certain features of conventional block molding apparatus, which are illustrated somewhat in skeleton form, for the sake of simplicity. The apparatus includes a hopper **10** through which a green concrete mix, "wet" in consistency, is delivered to a feeder **11**. Feeder **11**, travelling on a flat horizontal apron **12'** of a mold frame **12**, is moved back and forth along the longitudinal axis of the machine, by suitable drive mechanism (not shown), movement being transmitted to the feeder **11** by a push rod **13**.

Mold frame **12** is located at one end of apron **12'**, and is offset horizontally from hopper **10**. Mold frame **12** has a series of mold cavities **14** therein, into which the green concrete is deposited by the feeder **11** as the latter moves leftwardly as viewed in Fig. 3. Below the mold frame **12**, and forming a bottom therefor, is a bed **15** having a separate vibrator portion **15'** to which is connected an unbalanced, rotating vibrator **16**. Vibrator **16** is driven by a suitable source of power (not shown) and functions to cause the green concrete to flow into the mold cavities **14** and to be compacted therein.

The mold frame **12** is slidable horizontally over the [vibrator] *bed* **15**, from the receiving position shown in full lines in Fig. 3 in which it is ready to receive concrete from feeder **11**, to a discharge position shown in dotted lines in Fig. 3, in which position it is ready to release the green blocks from mold cavities **14** onto a pallet **17**.

Forming part of the mold frame **12** is a core assembly including a series of core blocks **18** which are supported upon core bars **19** bridging longitudinally across the cavities **14**. The core-blocks **18** function to form in the green blocks **20**, mortar spaces **21** (Fig. 1). Core bars **19**, being located above or flush with the top plane of mold cavities **14**, allow the formation of blocks which are completely closed around the cavities **21**, and do not interfere with the downward discharge of the blocks from the mold frame.

Above the discharge position of mold frame **12** is an ejector unit comprising a series of ejector bars **23** which are mounted on an ejector head **24** in laterally spaced relation corresponding to the spacing of the mold cavities **14**, each ejector bar **23** registering with a respective mold cavity. Ejector head **24** is attached to the lower end of a piston rod **25** forming part of a hydraulic jack **26**, the latter having an overhead suspension in the frame of the apparatus. Ejector head **24** is adapted to be moved vertically by jack **26**, with a downward movement for pushing the green blocks out of the mold cavities **14** onto the pallet **17**; and with an upward movement to withdraw the ejector bars **23** from the mold cavities **14** so as to allow the mold frame **12** to be returned to the receiving position. These

vertical movements are indicated by the double arrow in Fig. 3.

In the molding and ejecting operations, and in the slumping operation which will shortly be referred to, the pallet **17** is carried by a cart **27** having wheels **28** travelling on rails **29** extending longitudinally of the machine. Rails **29** are mounted, for vertical movement, upon a piston rod **30** forming part of a hydraulic jack **31** the lower end of which is supported in the frame of the machine near the ground level indicated at **32** in Fig. 3. Cart **27** is coupled to suitable actuating mechanism (not shown) through a hitch **33**, for movement from the receiving position, in which cart is shown in doted lines to a slumping position, in which the cart is shown in full lines. In the receiving position, the track **29** is elevated so as to present the cart to the lower side of mold frame **12** with the upper face of pallet **17** just clearing the lower side of the mold frame. This elevated position is indicated in dotted lines in Fig. 3. In the lowered position, shown in full lines in Fig. 3, the track **29** provides for movement of the cart **27** longitudinally from the receiving position to the slumping position in which the cart is shown in full lines.

In the slumping position, the blocks **20** are supported, stationary, by the pallet **17** (Fig. 4) while downward pressure is applied to the upper faces of the blocks **20** by means of a horizontal slumping plate **34**, moving downwardly to a level disposed a predetermined small distance below the original plane of the upper faces of the blocks. This terminal level of the slumping plate **34** in its downward movement is accurately determined by the engagement of stop fingers **35** projecting downwardly from the side margins of the slumping plate **34** and engaging against the upper face of pallet **17** in marginal areas thereof outside the area occupied by the blocks **20**. As a result of this slumping operation, the blocks **20** are squashed or slumped to a thickness which may range from ½ to ⅞ of their original thickness, their side faces being bulged outwardly as indicated in Figs. 2 and 3. There will be a corresponding inward bulging of the inner faces of the blocks defining the mortar spaces therein, partially obstructing the spaces but not completely closing them. This inward bulging is not aimed at, but is not undesirable. It is simply an incident of the bulging of the outer faces of the block which is the primary object of the present invention.

For lowering and raising the slumping plate **34**, we provide operating mechanism, which, in the particular apparatus disclosed, is manually operated, and includes an operating lever **36** near the rear end of the main body of the machine. While any suitable linkage for mounting levers **36** and transmitting movement therefrom to the slumping plate **34**, may be employed, we have shown, by way of example a fulcrum bracket **37** attached to a transverse member **38** of the frame of the machine, the lever **36** being pivoted at **39**, intermediate its ends, to the upper end of bracket **37** and its forward end being pivotally connected, through a link **40**, to a walking beam **41** which is pivoted at **42** to bracket **37** somewhat below the pivot **39**; the rear end of walking beam **41** being pivoted, at **43**, to a downwardly projecting link **44** attached to the head **45** of slumping plate **34**. This linkage is such that downward movement of lever **36** will result in downward movement of reduced amplitude, of slumping plate **34**, there being a corresponding leverage multiplication which makes it easy for the operator to execute the slumping operation manually. The raised position of slumping plate **34** may be determined by the engagement of the upper face thereof against the under side of transverse frame member **38**, as indicated in Fig. 3. The vertical up and down movements of slumping plate **34** are indicated by a double arrow in Fig. 3.

Referring now to Fig. 5, which shows the rear end portion of the apparatus including a portion of that which is shown in Fig. 3, each pallet load of blocks, after the slumping operation, is transferred from the track **29** to a stack of pallets which is indicated generally at **46** in Fig. 5. In this connection it may be noted that a pallet **17** while being carried by cart **27**, simply rests loosely thereon, with its side margins projecting laterally beyond the side margins of the cart as indicated in Fig. 5. This makes it possible to engage these projecting side margins of the pallet **17** to lift the same from cart **27** and move it over to the stack **46**.

For thus transferring the pallets from the cart to the stack, we provide the following mechanism: an overhead rail **47**, disposed in the central vertical longitudinal plane of the machine, supports a transfer carriage **48** having rollers **49** travelling on the rail **47**. The upper end of a hydraulic lift **50** is suspended from carriage **48**, piston rod **51** of the lift **50** having its lower end attached to a lifting fork **52**. Lifting fork **52** has a pair of parallel horizontal arms **53** which may be of angle iron as shown, the vertical flanges thereof being spaced sufficiently to freely clear the side margins of pallet **17**, and the horizontal flanges thereof projecting toward each other to engage beneath the side margins of the pallet as indicated in Fig. 6. A pair of hand rails **54** serve as handles which may be grasped by an operator and used for manipulating the transfer mechanism. The rollers **49**, travelling on rail **47**, provide for movement of the transfer unit longitudinally of the machine from the slumping position to a position over the stack **46**, whereas the piston rod **51**, which is rotatable in the cylinder of lift **50**, allows the fork **52** to be swiveled about a vertical axis so that it may be turned to any angular position. Thereby it becomes possible to position the fork facing toward the forward end of the machine so that the arms **53** may be inserted beneath the side margins of a pallet resting on cart **27** in the slumping position, and may subsequently be rotated 180° so as to face toward the rear end of the machine. The fork may then be lowered over the stack **46** until the pallet is brought to rest upon the upper faces of the upper tier of blocks **20** in the stack **46**, and may then be withdrawn toward the forward end of the machine so as to leave the new tier of blocks and its supporting pallet resting on the top of the stack **46**. The lift **50** provides for vertical movement of the fork **52** as indicated by the double arrows in Fig. 5.

Any suitable manual control, convenient to the operator as he manipulates the fork **52**, for controlling the hydraulic actuation of lift **50** may be utilized. For example, there is shown a manually operated valve **55** having a two way action for controlling the flow of fluid through a delivery line **56** from a suitable pressure source (not shown) and thence to a connecting line **57** into the lift **50** for raising the fork **52**; and, in its alternate position, providing for return flow of fluid through connecting line **57** to a return line **58** and thence back to a fluid reservoir (not shown). Thus the operation of the transfer unit is completely under the manual control of the operator at all times.

The frame structure of the machine may include any suitable means for supporting the various parts hereinabove described. The entire frame structure is not illustrated herein, but sufficient structure is shown to indicate in general the connection between the parts. The frame structure may include a pair of bolsters **60**, a pair of head rails **61**, bolsters **60** and head rails **61** being disposed at the respective sides of the machine and extending longitudinally; suitable uprights including a pair of rear posts **62**, connecting the bolsters **60** and the head rails **61**; together with suitable transverse connecting members **63**, **64**, **65**, **66** etc. Hopper **10** is disclosed as being suspended from cross members **64**. Mold frame **12** is slidably mounted on bed **15** which may be supported between intermediate longitudinal bolsters **67** (Fig. 3). The latter may be carried by uprights including rear posts **62** and forwardly disposed posts **68**.

Feeder **11** and mold frame **12** are slidably mounted be-

tween ways **69** which extend downwardly to the level of bed **15** and which project upwardly above mold frame **12** sufficiently to form a retainer wall around the loading space above vibrator *bed* **15'**, to prevent loss of loose excess cement which may be left behind when the mold frame **12** is projected to the delivery position. A strike-off plate **70** extends between the forward ends of ways **69**, its lower edge just clearing the upper surface of mold frame **12** so as to strike off all excess cement as the mold frame leaves the loading space, said excess remaining on apron **12'** until the next charge of cement is delivered to the mold frame.

In the lower side of strike-off plate **70** are a plurality of notches **71** through which the core bars **19** pass as the mold frame is advanced to its discharge position.

Vibrator *bed* **15'** may be mounted with some resiliency so as to be free to vibrate. In Fig. 3, parts **72** are intended to provide such resilient support for the vibrator *bed* **15'**.

It is to be understood that the slumping unit may be modified in various respects. For example, instead of the stop fingers **35**, attached to the slumping plate, it would be possible to incorporate stop means elsewhere in the unit (e. g. in the actuating mechanism above the slump plate). Also, the invention contemplates the possibility of mechanizing the slumping unit for power actuation instead of the manual actuation illustrated.

THE METHOD

My improved method of fabricating structural blocks embodies, in general, the following steps:

1. The utilization, for the molding of the blocks, of a moderately wet, homogeneous mix, adapted to attain a high degree of compactness and density through vibration.

A concrete mix is prepared in a conventional mixing machine, which is not illustrated. Instead of the usual mix employed in the manufacture of concrete blocks, we utilize, for the present process, a mix having a considerably higher content of fines (sand, fine pumice, etc.), and a lower content of the coarser aggregate (gravel, crushed rock, coarse pumice, cinders, etc.) customarily used. For example, the percentage, by volume, of fines may range between 60 percent and 100 percent, while the percentage, by volume, of coarse aggregates, may range from none to 40 percent.

A higher percentage of water than that customarily employed in the manufacture of concrete blocks, is added to the dry ingredients, so as to produce a moderately "wet" mix. The resulting mix has a high degree of homogeneity, plasticity, coherence, and resistance to crumbling during the slumping operation. The mix as thus prepared, is delivered to hopper **10** by any suitable conveyor means (not shown).

2. In the next operational step, the concrete mix is molded, under vibration, in the mold frame which imparts to the blocks their general shape, but with flat, squared sides and ends.

In the operation of the particular apparatus shown herein, to accomplish this step of the method, feeder **11** is moved toward strike-off plate **70** while mold frame **12** is disposed in the retracted, loading position shown in full lines, above vibrator *bed* **15'** which forms a bottom therefor, and the vibrator device **16** being in rotation to vibrate the vibrator *bed* **15'** as the cement is pushed and dropped into the mold cavities **14** by the feeder **11**. After delivering the fresh cement to the mold cavities **14**, and while the vibrating process continues, feeder **11** is retracted back to its starting position shown in full lines in Fig. 3, withdrawing a portion of the excess concrete lying above the level of the upper face of the mold frame **12**.

3. In the next operational step, the blocks are transferred from the mold frame to a pallet upon which they are subsequently transported, further processed and handled, and cured.

While the feeder **11** is being retracted to its starting position, and while the track **29** is in the lowered position shown in full lines in Fig. 3, cart **27** is retracted from the slumping position shown in full lines to a position below the receiving position shown in dotted lines. Track **29** is then raised, by operation of hydraulic jack **31**, to bring the upper face of pallet **17**, on cart **27**, to the level of the upper face of vibrator *bed* **15'**. One end of pallet **17** is positioned closely adjacent the vibrator *bed* **15'**, so that the green blocks may be slid off the vibrator and onto the pallet **17** without crumbling or sagging. As soon as the cart has reached the receiving position, the mold frame **12** is moved rearwardly to its delivery position shown in dotted lines, placing the blocks in a centered position above pallet **17**. The mold frame is then held stationary in this position while the track **29** and ejector units **23**, **24** are simultaneously moved downwardly, the ejector bars **23** pushing the green blocks **20** out of the mold cavities **14**, until the blocks become entirely detached from the mold frame and rest upon the pallet **17**. The downward movement of the track **29** is continued until it reaches the lowered position shown in full lines.

Thereafter, the cart **27** is shifted toward the rear of the machine to the slumping position shown in full lines, and the mold frame **12** is retracted to the loading position shown in full lines in Fig. 3.

4. In the next operational step, the blocks, while still supported upon the pallet, are subjected to controlled pressure from the slumping plate, to squash them into the form in which their sides are rounded, a minimum limit of thickness, arrived at in this slumping operation, being rigidly observed.

When the cart has reached the slumping position, and while a fresh charge of concrete mix is being delivered to mold frame **12**, the operator manually lowers slumping plate **34** against the blocks **20** carried by the cart **27**, as indicated in Fig. 4. The blocks are squeezed downwardly, their thickness being reduced to a pre-determined minimum determined by the engagement of stop fingers **35** against pallet **17**.

5. In the next step of the process, the green blocks, in their slumped form, still supported upon the pallet, are removed from the cart and are placed in a curing stack. Briefly reviewing this operation which has previously been described, the operator manually manipulates the transfer fork **52** to engage the arms **53** thereof beneath the side margins of pallet **17**, lifts the pallet, moves it away from the track **29**, rotates the fork to a position where it may be withdrawn after the pallet has been deposited on top of the stack **46**, then lowers the new pallet upon the upper tier of blocks **20** in stack **46**, and then withdraws the fork **52**.

When the stack **46** has reached a maximum height determined by the maximum height to which fork **52** can be raised, a transport truck with a fork lift (not shown) is moved up to the stack **46**, its fork is inserted beneath the lowermost pallet **17**, and the entire stack is lifted and then transported to a curing yard removed from the block making apparatus. In order to facilitate the insertion of the fork beneath the lowermost pallet **17**, the latter is supported upon spaced blocks **75** in the stack **46**, the blocks **75** remaining to receive the next stack of pallets. In the curing yard, the stack may be lowered upon similar spaced blocks, to facilitate withdrawal of the transfer truck from beneath the lowermost pallet. The blocks are then allowed to cure, in the stack, until they have become set and hard.

The term "structural," as used herein, is intended to have a broad meaning embracing both structural blocks (as the term is conventionally used in the art) and veneer blocks.

In conclusion it may be said that outstanding characteristics of the process of this invention is its ability to produce concrete blocks with an infinite number of variations of surface texture between blocks coming successively out of the same mold, or, to state it somewhat differently, it assures that no two blocks will be identical due to the [combination of wet mix and series of mold cavities with irregularly varying protuberances therein.] *unrestrained bulging of the sides thereof that are to be exposed in the building structure.*

I claim:

1. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: preparing a concrete mix; utilizing said mix in molding a series of green blocks in approximate form but with flat squared sides; placing the green blocks on a flat supporting surface; applying pressure through a flat surface parallel to said supportirng surface, to the upper faces of the blocks while at least one side of each block is unconfined, to reduce the thickness of the blocks and simultaneously cause the unconfined sides thereof to bulge solely as the result of said application of pressure so as to assume the desired irregularly curved contours; and then allowing the blocks to cure.

2. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: preparing a concrete mix of moderately wet consistency and having a high degree of fines so as to maintain a high coherence during the subsequent processing of the blocks; settling a quantity of the mix in a mold to form a series of green blocks having the approximate form of the finished blocks but with flat squared sides; placing the green blocks on a flat supporting surface; applying pressure through a flat surface parallel to said supporting surface, to the upper faces of the blocks while at least one side of each block is unconfined, so as to reduce the thickness of the blocks and cause their unconfined sides to bulge to the desired irregularly rounded contours solely as the result of said application of pressure; and then allowing the blocks to cure.

[3. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; placing the green blocks on a flat supporting pallet; placing the pallet beneath a flat slumping plate parallel to the pallet, and moving the slumping plate downwardly against the blocks while at least one side of each block is unconfined, to reduce their thickness and cause them to slump solely as the result of said application of pressure, and thereby to assume the rounded irregular side face contour; and then allowing the blocks to cure, while continuing to support them upon the pallet.]

4. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: preparing a concrete mix of moderately wet consistency and having a high degree of fines, so as to maintain a high degree of coherence in the green molded blocks; molding the green blocks in the approximate form of the finished blocks but with flat squared sides; placing the green blocks on a flat supporting pallet; transporting the pallet to a position beneath a flat slumping plate parallel to the pallet, and moving the plate downwardly and applying pressure therethrough to the upper faces of the blocks while at least one side of each block is unconfined to reduce the thickness of the blocks to cause them to slump solely as the result of said application of pressure, and thereby to attain the desired irregularly rounded side face contour; and then allowing the blocks to cure while remaining supported upon the pallet.

5. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: preparing a concrete mix of moderately wet consistency

and having a high degree of fines so as to maintain a high coherence in the subsequent processing steps; using said mix to mold a series of blocks each having the approximate form of the finished block but with flat squared sides; placing the blocks on a flat supporting pallet maintained in a horizontal position; transporting the pallet to a position beneath a flat horizontal slumping plate; moving the slumping plate downwardly into engagement with the upper faces of the blocks and applying pressure thereto while at least one side of each block is unconfined, to reduce the thickness of the blocks and cause them to slump solely as the result of said application of pressure, and to bulge the unconfined side faces thereof into the desired irregularly curved contour; lifting the slumping plate from the blocks and transporting the pallet, with the blocks thereon, to a previously established stack of pallets each having a tier of blocks supported thereon, and lowering the new pallet upon the top of the stack so as to rest upon the upper faces of the blocks of the previously top tier of said stack; transporting said stack to a curing area and setting it down; and allowing the blocks to cure in said stack.

6. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: preparing a concrete mix of moderately wet consistency and with a high degree of fines so as to maintain a high coherence during the subsequent processing of the blocks; inserting a charge of said mix into a mold and vibrating the mix in the mold to shape therein a series of green blocks having the approximate form of the finished blocks but with flat squared sides; moving the green blocks from the mold onto a flat horizontal pallet; transporting the pallet to a position beneath a flat horizontal slumping plate and supporting it in a fixed position therebelow; moving said slumping plate downwardly into contact with the upper faces of the blocks on the pallet and causing it to apply compression to the blocks while at least one side of each block is unconfined to reduce [their] *the* thickness *of the blocks* and cause the side faces thereof to bulge solely as the result of said compression and thereby to attain the desired irregularly curved contour; lifting the slumping plate out of contact with the blocks; moving the pallet with the slumped blocks thereon, away from the slumping plate and over a previously deposited stack of pallets each supporting a tier of green slumped blocks thereon; lowering the pallet onto the upper tier of said stack and leaving it supported upon said upper tier; and then transporting said stack of blocks to a curing area, setting it down and allowing the blocks to cure in the stack.

7. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: preparing a concrete mix of moderately wet consistency and having a high degree of fines so as to maintain a high coherence in the ensuing processing operation; delivering a charge of said mix into a mold having a substantially stationary bottom and a horizontally movable mold frame over said bottom; vibrating said bottom so as to settle the concrete into said mold and thereby form a series of green blocks having the approximate form of the finished blocks but with flat squared sides and somewhat greater thickness; moving a supporting pallet, in a horizontal position, up to one end of said mold, on a level with said bottom; moving said mold frame laterally so as to slide the blocks off of said bottom onto said pallet; moving said pallet downwardly and then transporting it horizontally to a position beneath a horizontal flat slumping plate, and supporting it below said plate with at least one side of each block unconfined; moving said slumping plate downwardly into contact with the upper faces of the blocks supported on said pallet and applying pressure thereto to slump said blocks to a reduced thickness, thereby causing the unconfined sides of the blocks to bulge

to the desired irregularly rounded contour solely as the result of said application of pressure; lifting the slumping plate away from the blocks; moving said pallet on to a position above a previously deposited stack of pallets each having a tier of green slumped blocks supported thereon; lowering said pallet and depositing it upon the upper tier of blocks in said stack; moving the stack of blocks to a curing area and setting it down; and allowing the blocks to cure in the stack.

[8. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comrising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the green blocks on a flat horizontal surface with at least one side of each block unconfined; applying controlled, continuous pressure through a flat plate, maintained parallel to said supporting surface; in a single downward movement of said plate, to the upper faces of the blocks as thus supported to reduce the thickness of the blocks and simultaneously cause the unconfined sides thereof to bulge solely as the result of said application of pressure so as to assume the desired irregularly curved contours; and then allowing the blocks to cure.]

9. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the green blocks on a flat horizontal surface with at least one side of each block unconfined; applying controlled, continuous high pressure through a flat plate, maintained parallel to said supporting surface, to the upper faces of the blocks as thus supported to reduce the thickness of the blocks and simultaneously cause the unconfined sides thereof to bulge solely as the result of said application of pressure so as to assume the desired irregularly curved contours; and then allowing the blocks to cure.

[10. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the green blocks on a flat horizontal surface with at least one side of each block unconfined; applying downward pressure through a flat plate maintained parallel to said supporting surface, to the upper faces of the blocks as thus supported, to reduce the thickness of the blocks and simultaneously cause the unconfined sides thereof to bulge solely as the result of said application of pressure and thereby to assume the desired irregularly curved contours; positively stopping the downward movement of said plate at a fixed distance above said supporting surface so as to establish a predetermined thickness in the finished blocks; and then allowing the blocks to cure, while continuing to support them on said supporting surface.]

[11. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the green blocks on a flat horizontal surface with at least one side of each block unconfined; applying controlled, continuous pressure through a flat plate, maintained parallel to said supporting surface, in a single downward movement of said plate, to the blocks as thus supported, whereby to cause the unconfined sides of the blocks to bulge to the desired irregularly rounded contours; positively stopping the downward movement of said plate at a fixed distance above said supporting surface so as to establish a pre-determined thickness in the finished blocks; and then allowing the blocks to cure, while continuing to support them on said supporting surface.]

12. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the said green blocks on a pallet with at least one side of each block unconfined; applying downward pressure through a flat plate, maintained parallel to said pallet, in a single downward movement of said plate, to the upper faces of the blocks as thus supported to reduce the thickness of the blocks and simultaneously cause the unconfined sides thereof to bulge solely as the result of said application of pressure so as to assume the desired irregularly curved contours; and then allowing the blocks to cure.

13. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the said green blocks on a pallet with at least one side of each block unconfined; applying controlled, continuous high pressure through a flat plate, maintained parallel to said pallet, in a single downward movement of said plate, to the blocks as thus supported, whereby to cause the unconfined sides of the blocks to bulge to the desired irregularly rounded contours; positively stopping the downward movement of said plate at a fixed distance above said pallet so as to establish a pre-determined thickness in the finished blocks; and then allowing the blocks to cure, while continuing to support them on said pallet.

14. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding, in a mold, green blocks in the approximate shape of the finished blocks but with flat squared sides; discharging the blocks from the mold upon a pallet; transporting the pallet, with blocks supported thereon, from the mold to a position beneath a flat slumping plate, parallel to the supporting face of the pallet; supporting the green blocks on said pallet in said position with the sides of the blocks unconfined while applying continuous downward pressure to the upper faces of the blocks through said slumping plate, in a single downward movement of said plate, to reduce the thickness of the blocks and to simultaneously cause the unconfined sides thereof to bulge solely as the result of said application of pressure so as to assume the desired irregularly curved contours; positively stopping the downward movement of said plate at a fixed distance above said pallet so as to establish a predetermined thickness in the finished blocks and then allowing the blocks to cure.

15. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green blocks in the approximate shape of the finished blocks but with flat squared sides; supporting the said green blocks on a pallet with at least one side of each block unconfined; applying controlled, continuous pressure through slumping means having pressure applying areas disposed substantially in a common plane maintained parallel to said pallet, in a single downward movement of said slumping means, to the blocks as thus supported, whereby to cause the unconfined sides of the blocks to bulge to the desired irregularly rounded contours; positively stopping the downward movement of said slumping means at a fixed distance above said pallet so as to establish a pre-determined thickness in the finished blocks; and then allowing the blocks to cure, while continuing to support them on said pallet.

16. Steps in a method of fabricating concrete structural blocks with irregularly rounded side faces, comprising: molding green bocks in the approximate shape of the finished blocks but with flat squared sides; supporting the said green blocks on a pallet with the sides of the blocks unconfined; applying downward pressure through slumping means having pressure applying areas disposed substantially in a common plane maintained parallel to said pallet, to the upper faces of the blocks as thus supported to reduce the thickness of the blocks and simultaneously cause the unconfined sides thereof to bulge as the result

of said application of pressure so as to assume the desired irregularly curved contours; and then allowing the blocks to cure.

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