

J. FISH.
MACHINE FOR CONSTRUCTING HOLLOW CONCRETE BUILDING BLOCKS.

APPLICATION FILED OCT. 19, 1907.

900,272.

Patented Oct. 6, 1908.

2 SHEETS—SHEET 1.

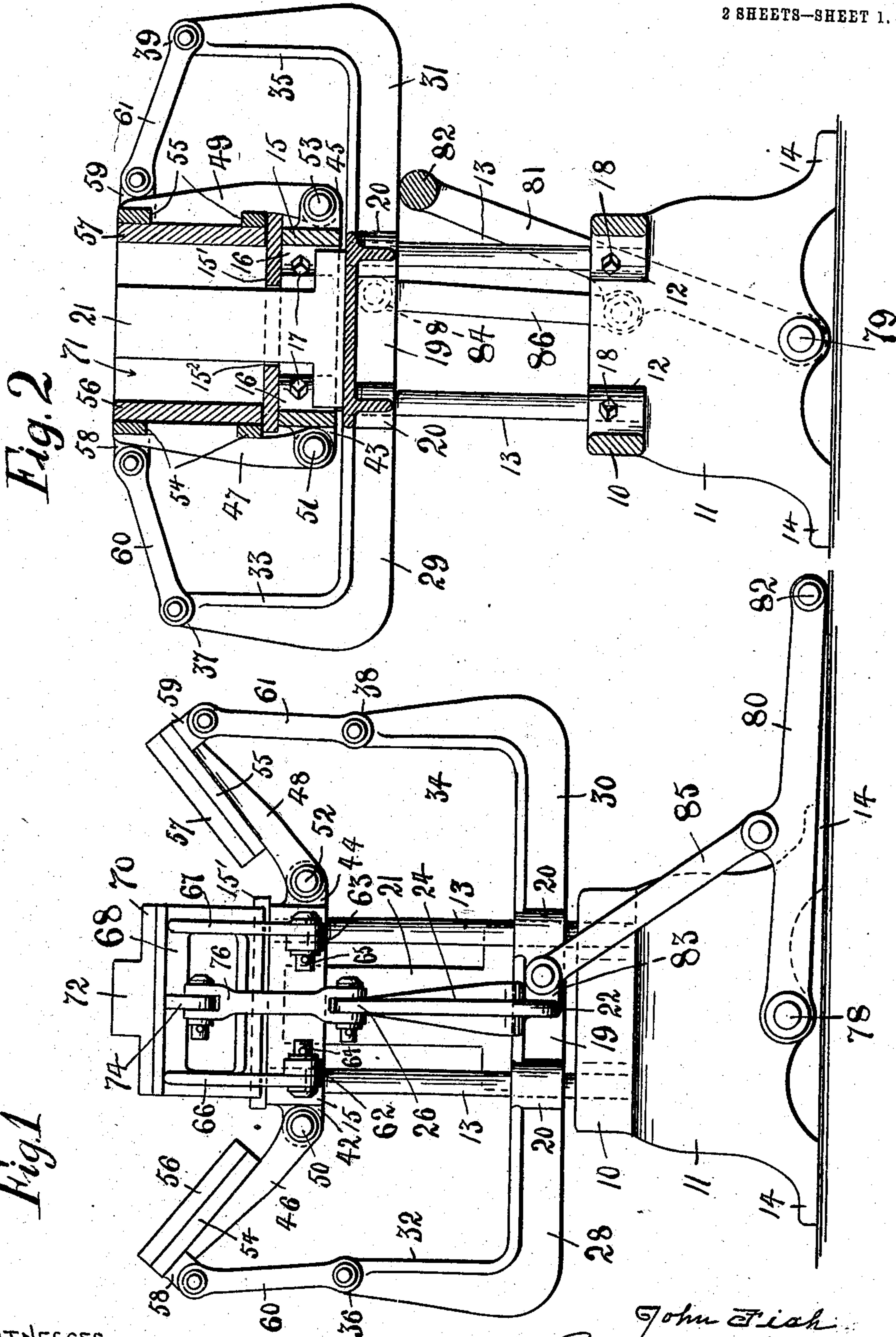


Fig. 1

WITNESSES
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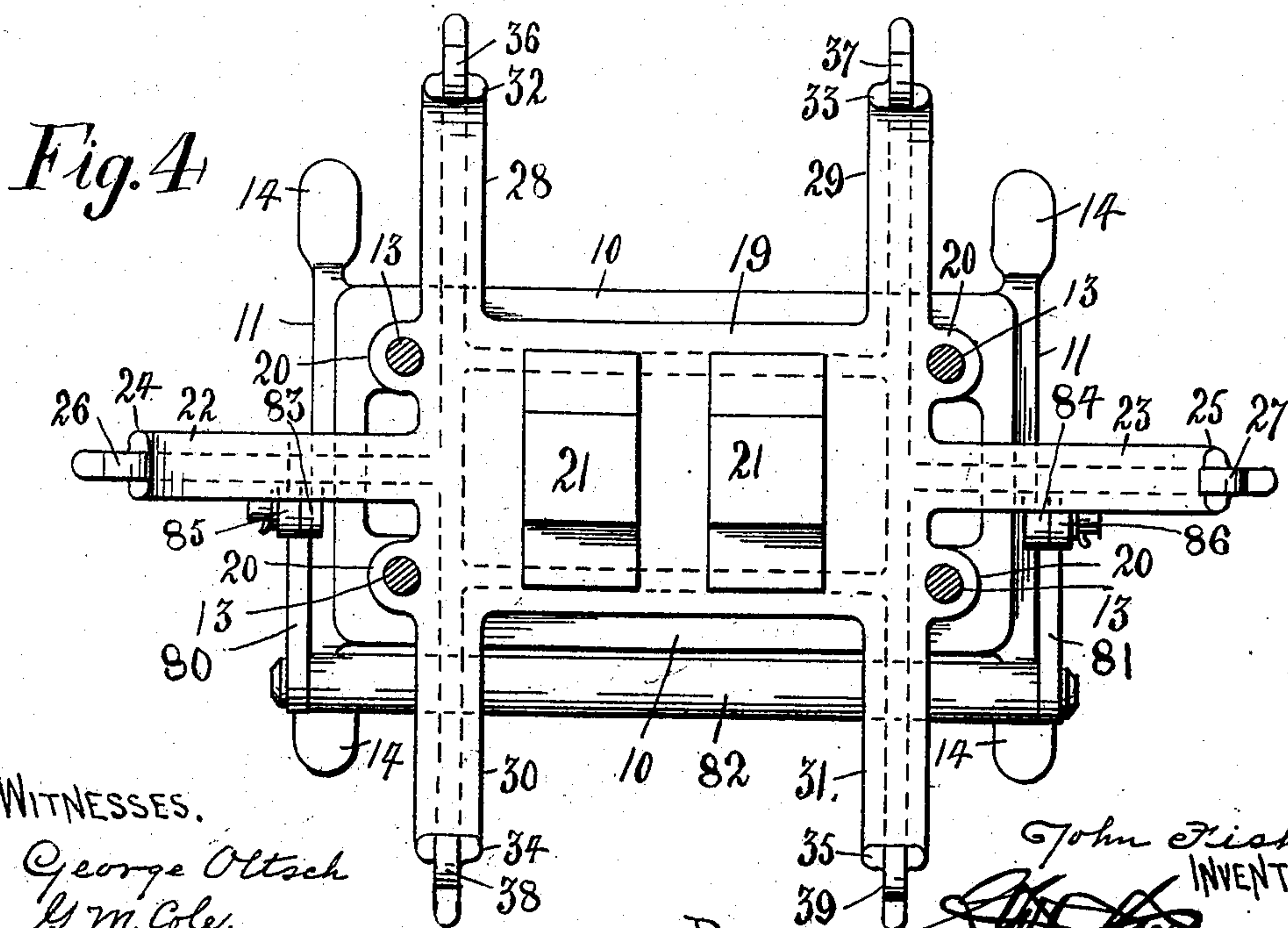
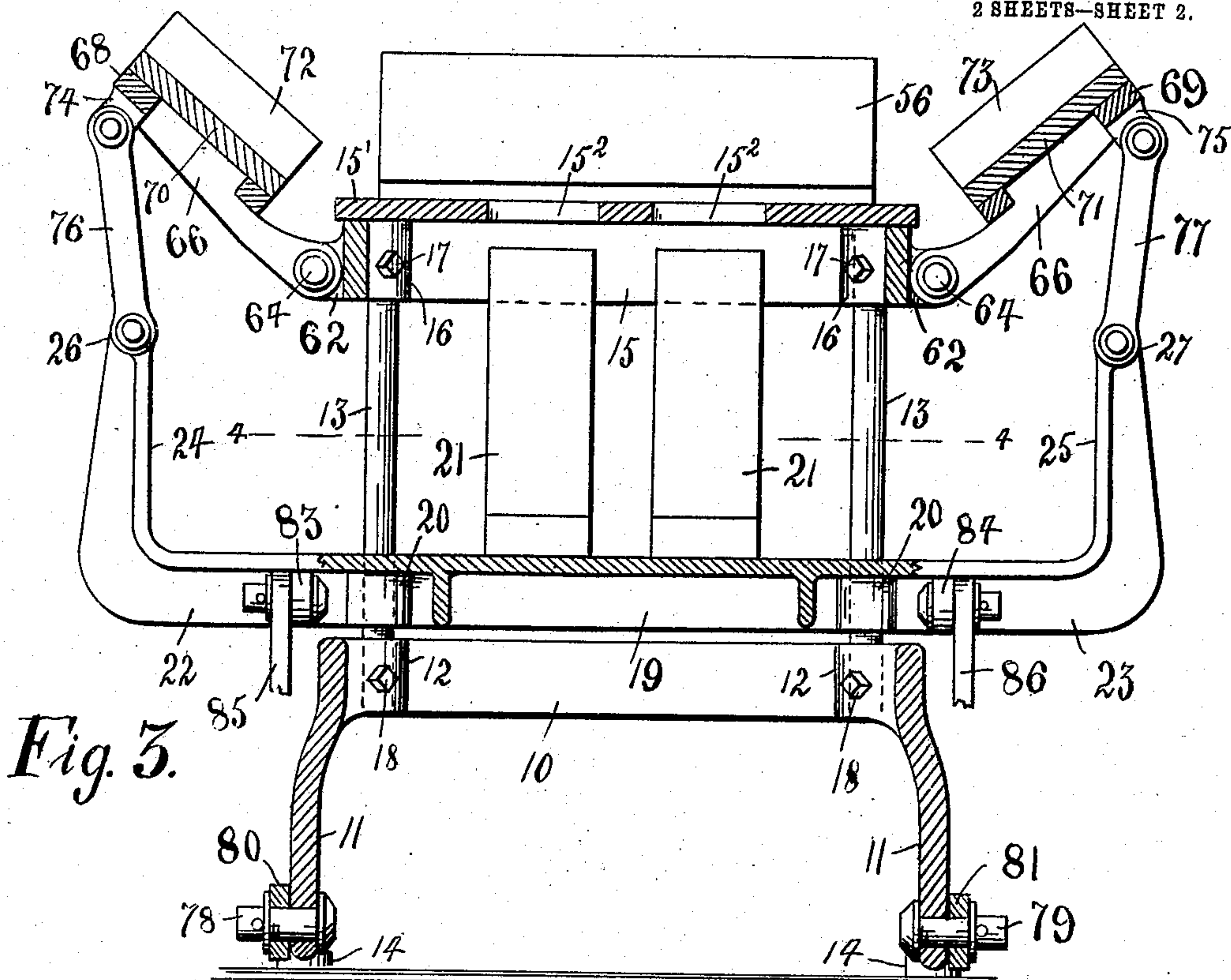
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WITNESSES.

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BY

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UNITED STATES PATENT OFFICE.

JOHN FISH, OF SOUTH BEND, INDIANA, ASSIGNOR OF ONE-FOURTH TO DANIEL DELBERT FRICK, ONE-FOURTH TO CLYDE MELVIN FRICK, ONE-EIGHTH TO CHARLES D. LENNOX, AND ONE-EIGHTH TO MONROE STRICKLER, ALL OF SOUTH BEND, INDIANA.

MACHINE FOR CONSTRUCTING HOLLOW CONCRETE BUILDING-BLOCKS.

No. 900,272.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed October 19, 1907. Serial No. 398,296.

To all whom it may concern:

Be it known that I, JOHN FISH, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Machines for Constructing Hollow Concrete Building-Blocks, of which the following is a specification.

This invention relates to machines for constructing hollow concrete building blocks, and has for its object to improve the construction and increase the efficiency and utility of devices of this character.

In the drawings employed for illustrating the invention is shown the preferred form of embodiment of the same, and in the drawings thus employed:—Figure 1 is an end elevation of the improved machine in open position or with the core members and the mold members withdrawn. Fig. 2 is a transverse sectional elevation with the core members and the mold members in closed position or ready to receive the cementitious material. Fig. 3 is a longitudinal sectional elevation with the core members and mold members in withdrawn position. Fig. 4 is a longitudinal section on the line 4—4 of Fig. 3.

The improved device comprises a rectangular base frame 10 supported by end legs 11 and provided at its corners with sockets 12 in which guide posts 13 are supported in vertical position. The leg members 11 are provided with supporting feet 14 to increase the stability of the base structure.

Disposed at the upper ends of the guide posts 13 is a rectangular frame 15 having sockets 16 in its corners into which the upper ends of the posts 13 extend, and which are detachably secured therein as by set screws 17, the lower ends of the posts being likewise detachably secured within the sockets 12, as by set screws 18. By this arrangement the posts 13 may be adjusted vertically through the sockets 12, to enable the frame 15 to be adjusted relative to the frame 10 to any required extent. Bearing upon the frame 15 is a plate 15' which forms the bottom of the mold, and is provided with apertures 15² through which the core members pass, hereafter explained.

Slidably disposed upon the guide posts 13 is a hollow frame 19 having hubs 20 where the posts 13 pass through, as shown. The central portion of the frame 19 provides a

supporting base for the core members 21 of the building block which is to be molded in the machine, as hereafter explained. Projecting in opposite directions from the frame 19 are arms 22—23 having upturned ends 24—25 terminating in bearings 26—27, and extending from the sides of the frame 19 are similar arms 28—29—30—31 having upturned portions 32—33—34—35 having bearings 36—37—38—39 at their upper ends. Extending from the sides of the frame 15 are bearings 42—43—44—45. Swinging respectively from the bearings 42—43—44—45 are arms 46—47—48—49 as by pivots 50—51—52—53. Integral with the arms—46—47 is a frame 54, and integral with the arms 48—49 is a frame 55, the frames 54—55 forming the supports for the side members of the mold portion of the structure, and bearing against these frames are plates 56—57 which form the side members of the mold. Projecting from the frame 54 are bearings 58 and projecting from the frame 55 are bearings 59, these latter bearings being coupled respectively to the bearings 36—37—38—39 by links 60—61. Projecting from the ends of the frame 15 are bearings 62—63, it being understood that each end of the frame 15 is provided with a pair of these bearings spaced apart, one pair only being shown in Fig. 1. Swinging from the bearings 62—63, as by pivots 64—65 are arms 66—67 having integral frames 68—69, similar to the frames 54, 55, and providing supports for the end members 70—71 of the mold structure, the members 70—71 having the usual projecting lugs 72—73 to form the cavities in the end of the building block, when blocks of this form are to be constructed, as hereafter explained. Projecting from the frame 68 is a bearing 74, and projecting from the frame 69 is a bearing 75, these latter bearings coupled as by links 76—77 to the bearings 26—27, as shown. The members 56—57 and 70—71 are detachably coupled to their respective supporting frames in any suitable manner, preferably by screws or other easily detachable fastenings. By this arrangement it will be obvious that when the frame 19 is in its lower position upon the guide posts, as shown in Figs. 1 and 3, the mold members and the cores will be disposed in their withdrawn positions, and

when the frame 19 is in its elevated position, as shown in Fig. 2 the mold members and the cores will be disposed in closed position, or with the mold ready to receive the cementitious material which forms the building blocks.

Pivoted at 78—79 to the leg members 11 are levers 80 81, the levers connected at their outer ends by a transverse hand bar 82. Projecting from the arms 22—23 are bearings 83—84, and connected between these latter bearings and the levers 80 are links 85—86, the links pivoted at their ends respectively to the bearings 83—84 and the levers 80—81. By this simple means it will be obvious that when the levers 80—81 are in their downward position, as shown in Fig. 1, the frame 19 and its attachments will be in their lower positions, as shown in Figs. 1 and 3, and when the levers are elevated the frame 19 and its attachments will be in their elevated positions, as in Fig. 2 while the transverse connecting member 82 will engage beneath the projecting arms 30—31, and thus firmly lock the follower mechanism in elevated position, while at the same time the "lock" is easily broken by a slight outward pressure applied to the member 82. The follower member 19 is thus maintained when in elevated position against the under side of the frame 15, and by adjusting the post 13 through the medium of the set screws 17—18, the position of the frame 15 may be controlled to enable the "lock" device to operate with precision, and thus cause the proper coöperation of the parts. Thus by moving the levers 80—81 by the end member 82 upwardly and downwardly the mold members will be opened and closed, as required, and the mold members locked in their closed position as above described. The core members 21 are provided with laterally extending bases, as shown, to increase their stability.

It will thus be obvious that a very simply constructed apparatus is provided in which building blocks may be quickly molded, and after the molding operation is completed and the material has sufficiently "set" the mold members and the cores may be quickly withdrawn, leaving the block positioned upon the plate 15', and from which it may be readily removed, and the apparatus arranged for the molding of other blocks, and so on continuously. By providing the side and end members of the mold structure of different thicknesses blocks of different sizes may be constructed, and by providing a plurality of the cores 21 of various sizes, and bottom mem-

bers 15' having apertures 15² corresponding to the various sizes of the cores, blocks of various sizes may be constructed with the same machine, as will be obvious.

By arranging the posts 13 in adjustable relations to the frames 10 and 15, the machine may be separated for shipment or transportation, and likewise for adjustment, as required.

Having thus described the nature of the invention, what is claimed as new is:—

1. In an apparatus of the class described, a supporting base, a stationary frame, guide elements spaced apart and connecting the stationary frame and the base, a follower frame movable upon said guide elements, mold supporting frames swinging from said stationary frame, movable links between said mold supporting frames and follower frame, levers swinging from said base and connected at their free ends by a transverse member adapted to bear beneath the follower frame when in elevated position, and links connecting said follower frame and levers.

2. In an apparatus of the class described, a supporting base having spaced vertical sockets, guide elements movable in said sockets, means for securing said guide elements in their adjusted positions in said sockets, a stationary frame carried by said guide elements, mold supporting frames swinging from said stationary frame, a follower frame movable upon said guide elements, coupling devices between said follower frame and swinging mold frame, levers swinging from said base and connected at their free ends by a transverse member adapted to bear beneath the follower frame when in elevated position, and coupling means between said levers and follower frame.

3. In an apparatus of the class described, a supporting base, a stationary frame spaced from said base, a mold device comprising movable elements and carried by said stationary frame, a follower, connecting means between the elements of said mold and said follower, levers swinging from said base, a transverse member connecting the free ends of said levers and adapted to bear beneath the follower when elevated, and connecting means between said levers and follower.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN FISH.

Witnesses:

GEORGE OLTSCHE,
G. M. COLE.