

No. 801,342.

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A. A. SCHULTZ.
MEANS FOR LIFTING BUILDING BLOCKS.
APPLICATION FILED DEC. 9, 1904.

Fig. 1.

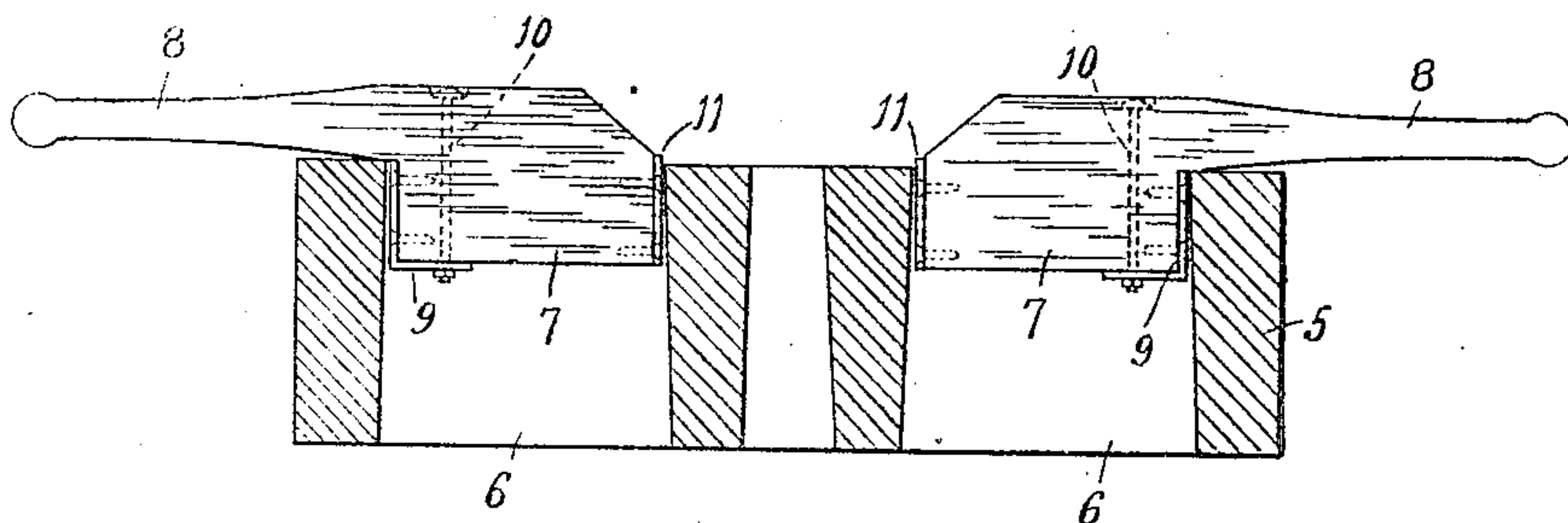


Fig. 2.

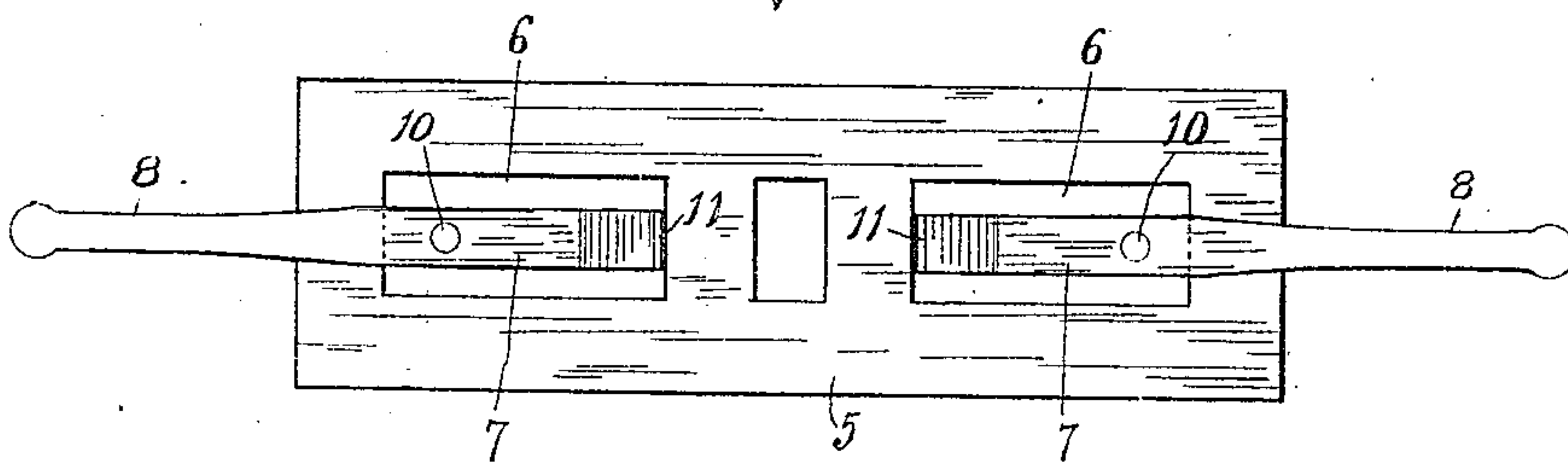


Fig. 3.

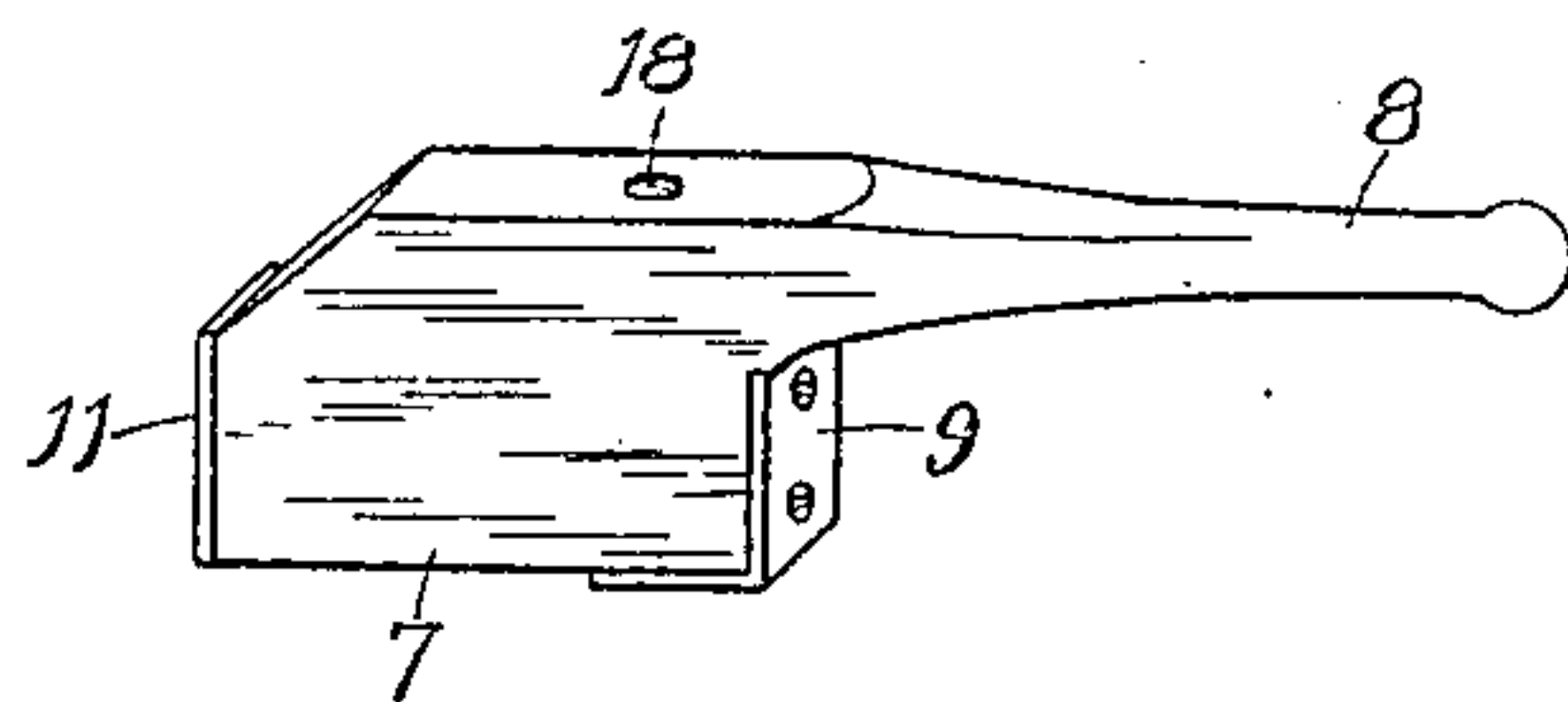
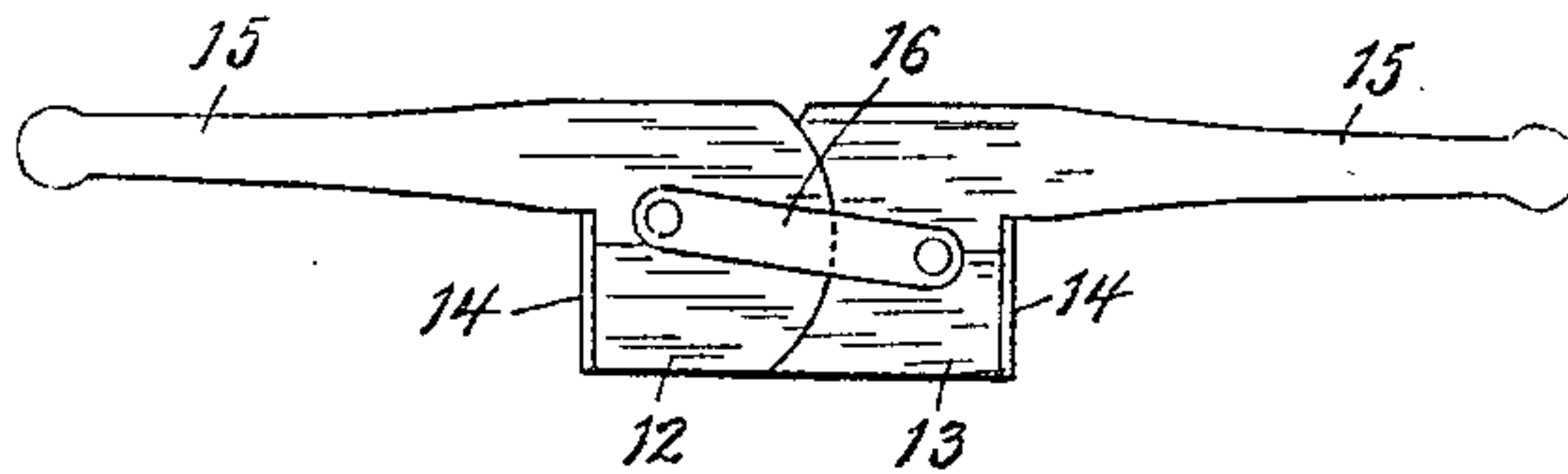


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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MEANS FOR LIFTING BUILDING-BLOCKS.

No. 801,342.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed December 9, 1904. Serial No. 236,176.

To all whom it may concern:

Be it known that I, ALBERT A. SCHULTZ, re-
siding in Appleton, in the county of Outa-
gamie and State of Wisconsin, have invented
5 new and useful Improvements in Means for
Lifting Building-Blocks, of which the follow-
ing is a description, reference being had to the
accompanying drawings, which are a part of
this specification.

10 This invention relates to means for lifting
building-blocks, and has for its object to pro-
duce a simple and effective device for engag-
ing a building-block of the usual hollow con-
crete type and constituting a handle by means
15 of which the building-block may be lifted and
carried from place to place.

Concrete building-blocks are usually
formed with openings therethrough which in-
cidentally afford the only opportunity usually
20 resorted to for grasping the block by the
hands for lifting and moving it from place to
place. These blocks are usually quite heavy,
and as the hands merely grasp the side walls
of the block between these openings and the
25 outside of the block the engagement is inse-
cure and the blocks are liable to slip and fall,
resulting in their injury and other damage.
Furthermore, this means of lifting the block
is quite difficult and trying on the hands.

30 This invention comprises an implement
having an engaging block to be inserted with-
in an opening of the building-block and pro-
vided with a handle which when lifted pro-
duces a tilting of the engaging block to bind
35 it against the walls of the opening and so en-
gage therewith that the further upward move-
ment of the handle lifts the building-block,
and the device becomes a means by which the
block may be easily handled without liability
40 of dropping.

With the above and other objects in view
the invention further consists in the devices,
their parts, and combinations of parts, as
herein set forth with the equivalents thereof.

45 Referring to the accompanying drawings,
in which like characters of reference indicate
the same parts in the several views, Figure 1
is a longitudinal sectional elevation of a build-
ing-block with lifting means applied thereto
50 constructed and arranged in accordance with
this invention. Fig. 2 is a plan view thereof.
Fig. 3 is a perspective view of one of the lift-

ing means shown in Figs. 1 and 2, and Fig. 4
is a side elevation of a modified form of lift-
ing means also in accordance with this inven- 55
tion.

In the drawings, 5 represents a concrete
building-block of a usual form provided with
a pair of rectangular openings 6, passing
therethrough from top to bottom. As shown, 60
these openings 6 are slightly tapered, which
is incidental to the construction of the build-
ing-block and has no particular significance in
connection with this invention, the lifting
means being applicable as well to building- 65
blocks having openings with parallel walls.

An engaging block 7 which is practically
rectangular in form has a length nearly equal
to the length of the cross-section of opening
6 and a width less than the width of the cross- 70
section of said opening, so that it may freely
enter therein. A handle 8 extends from the
top of the engaging block 7 and is preferably
formed integral therewith, as shown, project-
ing in extension of the engaging block and 75
reaching to a considerable distance beyond
one end thereof.

A bearing-plate 9 is secured to the end face
of the engaging block 7 beneath the project-
ing handle 8 and is bent beneath said engag- 80
ing block to receive a bolt 10, which passes
vertically through the engaging block and
handle with its head countersunk in the top
thereof. A bearing-plate 11 is secured to the
face of the other end of the engaging block 7 85
and is adapted to bear against the inner wall
of one of the openings 6 of the building-block,
while the bearing-plate 9 bears against the
outer wall thereof.

The dimensions of the device are such that 90
the engaging block 7 may be freely entered
within the opening 6 of the building-block
from above without either of the bearing-
plates 9 or 11 engaging the respective end
walls of said opening. Now as the handle 8 95
is lifted, the engaging block 7 is tilted until
the upper end of the bearing-plate 11 engages
the inner wall of opening 6 and the lower end
of bearing-plate 9 engages the outer wall
thereof, so as to bind the engaging block 100
within the opening and cause the building-
block to be securely engaged by the lifting
device, so that it may be lifted and moved
from place to place by means thereof. Usu-

ally the lifting devices are used in pairs fitted in the two openings 6 of the building-block with their handles 8 extending in opposite directions, so that two men may carry the building-block between them, the weight of the block serving to preserve the engagement of the lifting means therewith as long as upward pressure is exerted upon the handles.

When it is desired to release the lifting means from the block, it is only necessary to lower the block until it is seated, when the released pressure on the handle enables the engaging block to be straightened within the opening 6, so that its bearing-plates are disengaged from the walls of the opening and it is free to be removed therefrom.

The tendency of the weight of the building-block to break the engaging block 7 away from its handle is overcome by the bolt 10 passing through the end of the engaging block from which the handle extends, no such bolt being necessary at the other end of the engaging block. The bearing-plates besides strengthening the engaging block prevent wear of the device by the repeated engagements with the cement blocks.

In Fig. 4 there is shown a modification of the invention in which the engaging block is formed in two sections 12 and 13, respectively, the former having a convex inner end and the latter having a concave inner end fitting thereon, so that the two have a pivotal bearing relation with each other, both being provided at their outer ends with bearing-plates 14 and oppositely-extending handles 15. The construction as just described is complete in itself and will operate to engage an opening in a building-block by entering the engaging block therein when its bearing-plates 14 are parallel and then lifting upon the handles 15, so that the sections 12 and 13 tilt by each turning on the curved bearing between them until their bearing-plates 14 engage the end walls of the opening, when the building-block may be handled by means of the lifting device, as before. The release of this construction of lifting device is accomplished by seating the building-block and lowering the handles 15 until the sections of the engaging block resume their original positions with the bearing-plates 14 parallel and disengaged from the ends of the opening of the building-block, when the device may be removed therefrom.

The construction as above described may further be provided with a pair of parallel links 16 on the sides of the engaging block connecting the sections 12 and 13 together. The pivotal connections between the links 16 and the sections 12 and 13 of the engaging block are arranged one above the other, so that by raising or lowering either of the sections the distance between them may be va-

ried, and consequently the distance between the bearing-plates 14 will be changed, so that the device may be adjustable for engagement with building-blocks having openings of different lengths. The lifting engagement for the engaging-block sections of this form of device is the same as above described, except that instead of bearing on each other they bear upon their pivotal connections with the links 16.

What I claim as my invention is—

1. A means for lifting a building-block or the like having an opening therein, comprising an engaging block smaller than the opening and adapted to be entered therein, and a handle on the engaging block by which the engaging block may be tilted to bind against the walls of the opening.

2. A means for lifting a building-block or the like having an opening therein, comprising a substantially rectangular engaging block adapted to be entered in the opening, and a handle on the engaging block by which the engaging block may be tilted to bind its edges against the walls of the opening.

3. A means for lifting a building-block or the like having an opening therein, comprising an engaging block, bearing-plates on the ends of the engaging block adapted to fit within the opening, and a handle projecting from one end of the engaging block by which the engaging block may be tilted to cause the bearing-plates to bind against the walls of the opening.

4. A means for lifting a building-block or the like having an opening therein, comprising an engaging block, bearing-plates on the ends thereof adapted to fit within the opening, a handle projecting from one end of the engaging block, and a strengthening means passing through the engaging block and the handle at the end of the engaging block from which the handle projects, said handle serving to tilt the engaging block to cause the bearing-plates to bind against the walls of the opening.

5. A means for lifting a building-block or the like having an opening therein, comprising an engaging block, bearing-plates on the ends of the engaging block adapted to fit within the opening, a handle formed integral with one end of the engaging block and projecting therefrom, and a bolt passed through the engaging block and the handle at that end of the engaging block, said handle serving to tilt the engaging block to cause the bearing-plates to bind against the walls of the opening.

6. A means for lifting a building-block or the like having an opening therein, comprising an engaging block, bearing-plates on the ends of the engaging block adapted to fit within the opening, a handle integral with one end of the bearing-block and projecting therefrom,

the bearing-plate at that end of the engaging
block extending beneath the engaging block,
and a bolt passing therethrough and through
the engaging block and the handle, said handle
5 serving to tilt the engaging block to cause
the bearing-plates to bind against the walls of
the opening.

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

ALBERT A. SCHULTZ.

Witnesses:

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C. H. BAAKE.