No. 862,521. PATENTED AUG. 6, 1907.

J. E. STREET.

KNOCKDOWN ADJUSTABLE CONCRETE BLOCK MACHINE.

APPLICATION FILED NOV. 14, 1906.

Fig. 1.

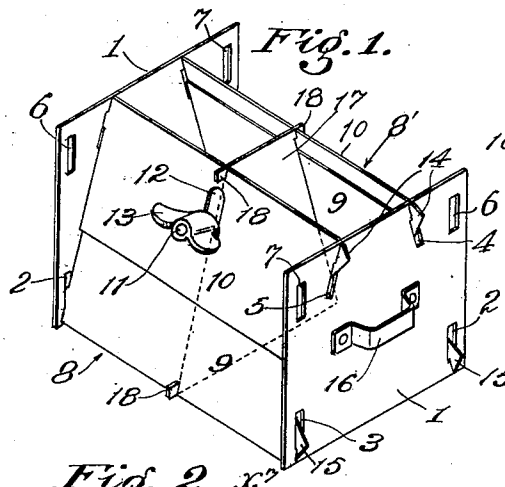


Fig. 8

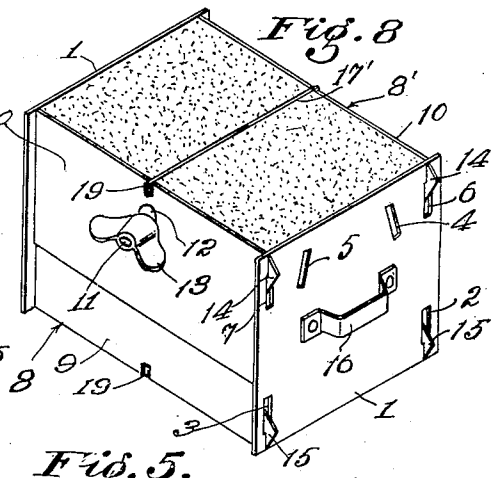


Fig. 2.

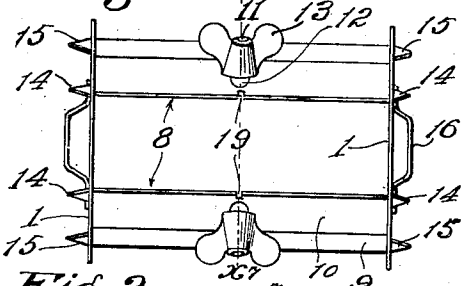


Fig. 5.

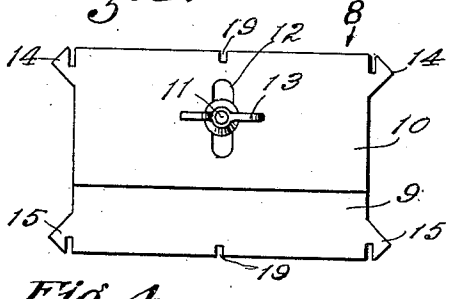


Fig. 3.

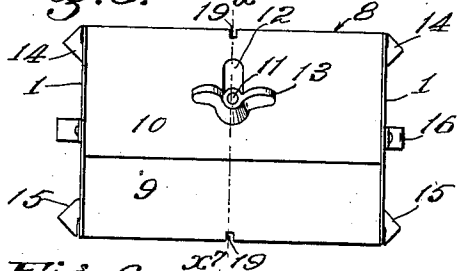


Fig. 4.

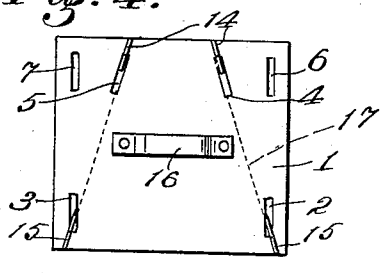


Fig. 6.

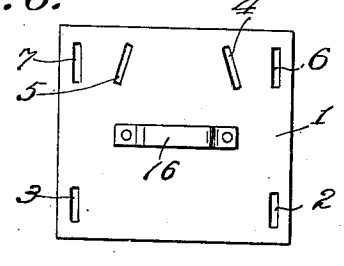
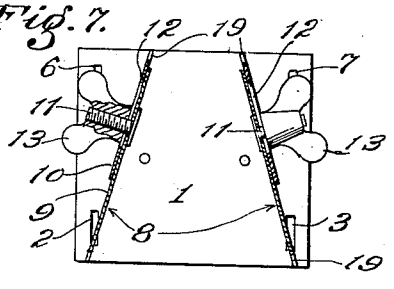


Fig. 7.



Witnesses

C. C. Holly

J. Townsend.

Inventor

Jacob E. Street

by James R. Townsend

his Atty.

UNITED STATES PATENT OFFICE.

JACOB E. STREET, OF SAN FERNANDO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO RICHARD WILLIAM MARTIN, OF LOS ANGELES, CALIFORNIA.

KNOCKDOWN ADJUSTABLE CONCRETE-BLOCK MACHINE.

No. 862,521. Specification of Letters Patent. Patented Aug. 6, 1907.

Application filed November 14, 1906. Serial No. 343,444.

To all whom it may concern:

Be it known that I, JACOB E. STREET, a citizen of the United States, residing at San Fernando, in the county of Los Angeles and State of California, have invented a new and useful Knockdown Adjustable Concrete-Block Machine, of which the following is a specification.

It is of the objects of this invention to provide means for rapidly molding concrete blocks for building arches and other structures, and to knock down, store, and transport the machine in the most satisfactory manner.

Cheapness and simplicity are other objects of the invention; also storage in small space, and a practically indestructible construction. Also to provide simple and convenient means adapted for molding blocks square and tapered in cross-section to form structural blocks for the side walls, springs and crowns of arches.

The invention may be applied in various forms. I shall illustrate and describe it in the form I at present deem preferable, reserving to myself the right to make such changes in form and construction as may be within the skill of those versed in the art, without departing from the spirit of the invention.

The accompanying drawings illustrate the invention in one form in which it may be embodied.

Figure 1 is a perspective view of the invention with parts in position for use for making two short keystones of an arch. Fig. 2 is a plan view of the same omitting the partition so as to mold a long keystone. Fig. 3 is a side elevation of the form shown in Fig. 2. Fig. 4 is an end elevation of the same. Fig. 5 is a view of one of the sides collapsed and detached. Fig. 6 is a view of one of the ends detached. Fig. 7 is a section on line x^7, Figs. 2 and 3, cutting through the clamps. Fig. 8 is a view of the apparatus in use for making single-course rectangular blocks.

1 designates end pieces, each provided with a plurality of openings which may be in the form of notches or holes as 2, 3, 4, 5, 6, 7.

8, 8′ designate sectional side pieces or members adjustable as to width, each comprising two sections 9, 10, slidably connected with each other by clamp means comprising bolts 11 passing through slots 12 and fastened by thumb-nuts 13. The sections 9, 10 of the side pieces are provided at their opposite ends with notched arms 14, 15 which engage the walls of the openings 2, 3, and 4, 5, or 6, 7, as the case may be, whereby the side pieces may be set at varying angles for the purpose of producing blocks, the sides of which may be at one or another determined angle with the base.

In the drawings there are openings 2, 3, in the bottom of the end pieces, and openings 4, 5, 6, 7, at the top, so that the space between the side pieces tapers upward, and therefore when a keystone has been formed in the mold the device may be readily withdrawn upward from the block.

In the preferred form shown, the arms 14 of the side pieces are notched on their upper edges, and the arms 15 are notched on their under edges. The section members 9 and 10 are adjustable by means of the thumb-screws and slots 11, 13 and 12, so that the arms may be engaged with the end pieces and thereby held.

Each of the end pieces 1 may be provided at the bottom with two openings 2, 3, spaced apart a distance to correspond with the required width of one face of the block to be molded, and at the top with two openings 6, 7, spaced apart a like distance, and also with two openings 4, 5, spaced a less distance apart so that the sides 8, 8′ may be set at different angles with the base of the mold, and blocks of rectangular or of taper cross-section may be made at the will of the operator by simply adjusting the sides appropriately.

The arms may be notched on their upper or their lower edges. In the form shown, the upper arms 14 are notched on their upper edges, and the lower arms 15 are notched on their lower edges.

16 designates handles on the outside of the end members for handling the mold.

17, 17′, designate partitions formed with shoulders 18 to fit in the midway notches 19 between the ends of the side members whereby the cavity for holding the concrete may be divided into two compartments, thus to form two blocks at one molding.

In practical operation the mold will be inverted, as shown in Fig. 8, and the concrete or other material to be molded will be inserted from above and be tamped in place. When the block is formed the apparatus will be lifted off of the block by means of the handles 16 and will be placed upon a level space, and thereupon the process may be repeated and another block formed, and so on. In this way each block is allowed to remain exactly where it is formed, and the same should be kept damp until it has thoroughly set.

It is to be understood that the inner faces of the end pieces and side pieces should be as smooth as possible. By reason of the reduced scale of Fig. 7, the proportions of the parts are exaggerated for clearness of illustration; but it is to be understood that in actual practice the inside surfaces of the machine would be made practically smooth so as to shape the block and allow the machine to be removed therefrom readily without detaching or loosening any of the parts after the block has become set.

By reason of the adjustable side pieces the tops and bottoms of said side pieces may be brought flush with the tops and bottoms of the end pieces when said side pieces are set aslant, as shown in Fig. 1, and also when

set upright as shown in Fig. 8. The form of the mold can readily be changed from square to tapered section and vice versa, by simply loosening the thumb nuts sliding the two parts of each of the side members to draw the tongues of each end closer to each other, thereupon withdrawing the tongues from the openers 4 and 5, and inserting them in the openings 6 and 7 to change from taper to square cross section and vice versa.

What I claim is:

1. A concrete block machine comprising end pieces and side pieces the latter being adjustable as to width and adjustable and detachably connected with the end pieces.

2. A concrete block machine comprising end pieces provided with openings and side pieces adjustable as to width and provided with tongues to engage said openings.

3. A concrete block machine comprising end pieces each provided at one edge with two openings and at the other edge with four openings, and side pieces each formed of two parts adjustably connected together and each part provided with two tongues for connecting with said openings.

4. A concrete block machine comprising end pieces each provided at one edge with two openings and at the other edge with four openings, and side pieces each formed in two parts and each part provided with two notched tongues to engage said openings.

5. A concrete block machine comprising two end pieces each provided with two openings at one edge and with four openings at the other edge, two of the openings at said other edge corresponding in location with the two first-mentioned openings, and the other two openings being arranged symmetrically between the other openings, and side pieces having tongues adapted to engage the first-mentioned openings and with tongues adapted to engage in any of the said other openings and means for adjusting the width between the tongues on the opposite edges of each side piece.

6. A concrete block machine comprising end pieces having openings therein, side pieces each formed of two sections, each of said sections being provided at its ends with tongues to engage said openings, and means for adjustably connecting the sections of the side pieces respectively together.

7. A concrete block machine comprising end pieces having openings therein, side pieces detachably connected therewith by tongues on said pieces engaging said openings, and a partition detachably connected with said side pieces.

8. A concrete block machine comprising end pieces having openings therein, side pieces each comprising two parts,—one being slotted, bolts for the unslotted part of said side pieces extending through the slots respectively, notched tongues at the ends of the parts of said side pieces to engage said opening and thumb nuts on said bolts for adjusting the side pieces as to width.

9. A concrete block machine comprising end pieces having openings, side pieces formed in two parts and having tongues for said openings, and means for adjustably connecting the parts of the side pieces respectively.

In testimony whereof, I have hereunto set my hand at Los Angeles California this 8th day of October 1906.

JACOB E. STREET.

In presence of—
JAMES R. TOWNSEND,
M. BEULAH TOWNSEND.