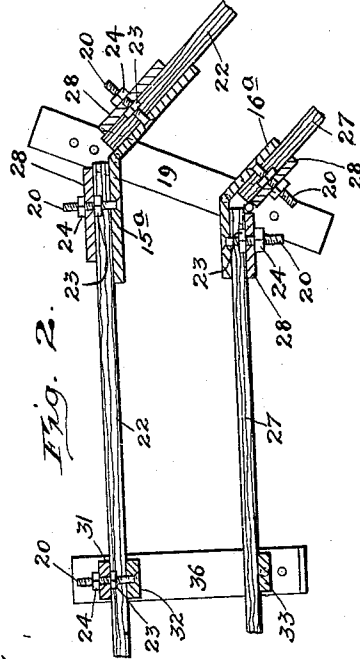
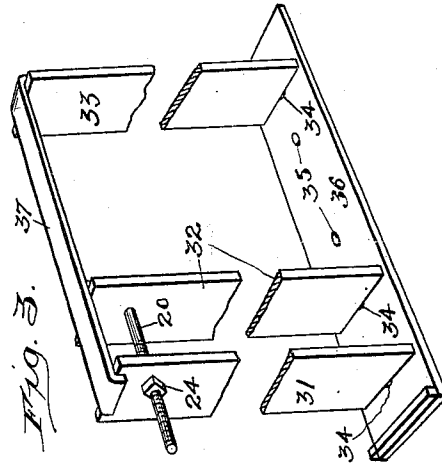
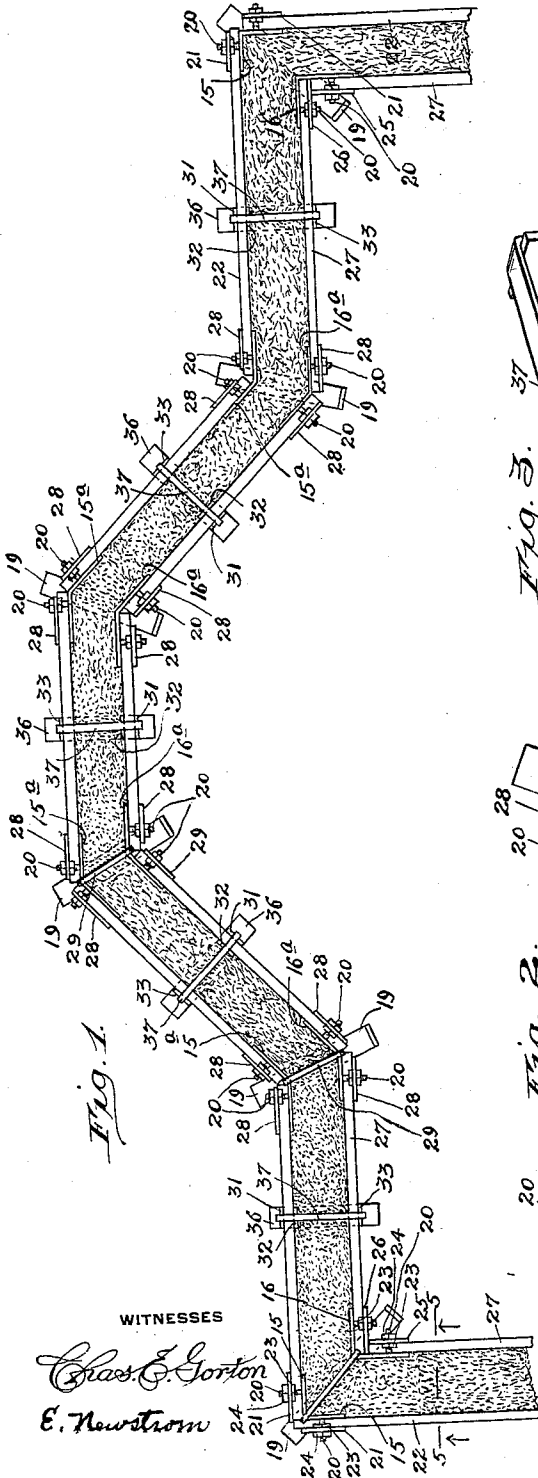


A. C. NIELSEN.
MOLD FOR CONCRETE WALLS.
APPLICATION FILED FEB. 15, 1911.

Patented May 9, 1911.
2 SHEETS—SHEET 1.

991,635.



WITNESSES

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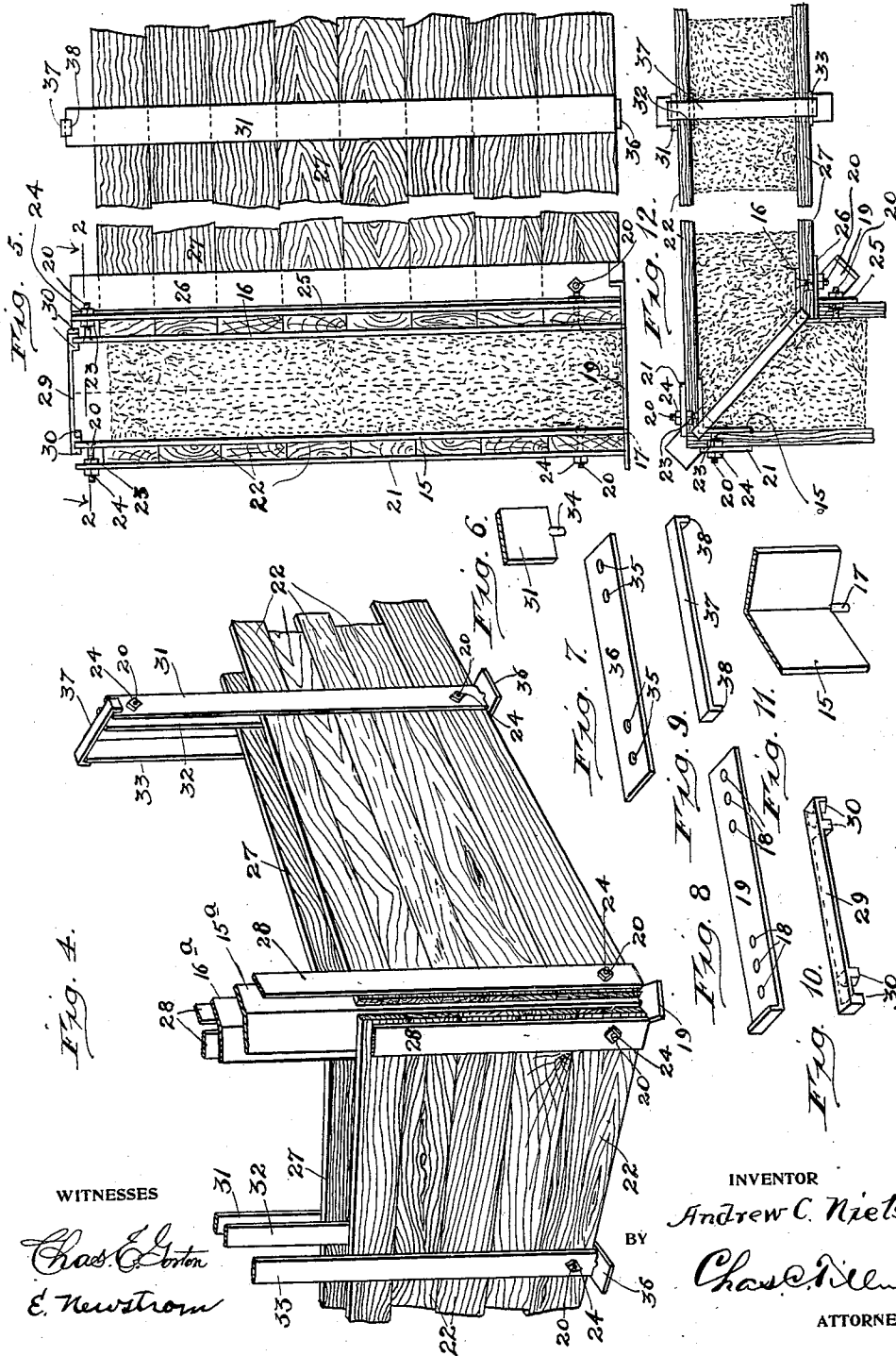
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UNITED STATES PATENT OFFICE.

ANDREW C. NIELSEN, OF CHICAGO, ILLINOIS.

MOLD FOR CONCRETE WALLS.

991,635.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed February 15, 1911. Serial No. 608,744.

To all whom it may concern:

Be it known that I, ANDREW C. NIELSEN, subject of the King of Denmark, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Mold for Concrete Walls, of which the following is a specification.

This invention relates to improvements in a collapsible mold for use in the construction of building-walls formed of concrete, cement, or other plastic material, and while it is more particularly intended to be employed for the construction of foundation walls, yet it is applicable for use in the construction of other walls, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a mold for foundation walls and the like which shall be simple and inexpensive in construction, strong, durable, and effective in operation, and so made that it can be readily set up or taken down after the wall is formed and the parts thereof again used for molding or forming other walls.

Another object of the invention is to provide a mold of such construction that the walls can be cast or formed with great facility and of any desired thickness for the construction of buildings of all kinds.

Still another object of the invention is to provide means for forming the corners of the walls and the foundation walls of bay windows, and the like, with the desired angles.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it referring to the accompanying drawings in which—

Figure 1, is a plan view of a portion of a mold embodying the invention showing the concrete or plastic material in position between the sides of the mold and illustrating the parts in position to form the corners and an angular shaped foundation wall with walls intervening between said corners and angular portion. Fig. 2, is a fragmental plan view taken on the plane indicated by line 2—2, of Fig. 5, showing parts of the wall with the concrete or plastic material

omitted. Fig. 3, is a perspective view shortened for the convenience of illustration of portions of the uprights used for sustaining the sides of the mold. Fig. 4, is an outer perspective view of a portion of the mold as used at one of the corners of the foundation wall. Fig. 5, is a view partly in section and partly in elevation taken on line 5—5, of Fig. 1, looking in the direction indicated by the arrows. Fig. 6, is a detached perspective view of the lower portion of one of the intermediate uprights. Fig. 7, is a similar view of one of the tie or base plates for said uprights. Fig. 8, is a like view of one of the tie or base plates for the corner or angle forming uprights. Fig. 9, is a perspective view of one of the detachable clasps for the intermediate uprights. Fig. 10, is a similar view of one of the clasps for the corner or angle forming uprights. Fig. 11, is a like view of the lower portion of one of the angle or corner forming uprights, and Fig. 12, is a plan view of a portion of the mold used for forming a corner and the walls leading therefrom showing it shortened for the convenience of illustration.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The reference numerals 15 and 16, designate, respectively, the outer and inner uprights used for forming the right-angled corners of the foundation, and each is formed angular in cross section as is clearly shown in Figs. 1, 5, 11 and 12, of the drawings. Each of the uprights 15 and 16, is provided at its lower end and at the apex of the angle thereof with a pin or projection 17, to fit in openings 18, in the base plates or ties 19, each of which ties or plates is provided with a series of said openings as is shown in Fig. 8, so that the uprights 15 and 16, may be adjusted thereon with respect to one another. One of these ties 19, is employed at each of the angles of the foundation wall and is placed horizontally on the ground and transversely of the foundation wall as is shown. Each of the uprights 15, has adjustably secured at the outer surface of each of its faces by means of screw bolts 20, an upright 21, which are spaced from the angular formed uprights 15, to receive between them boards 22, which are horizontally located one on the other and form the outer portion of the mold. The bolts 20, which secure the uprights 21, to the

uprights 15, are located near the upper and lower ends of said members and each of said bolts has mounted thereon between the uprights 21, and the faces of the uprights 15, a nut 23, which can be adjusted so as to dispose the uprights at the proper distances apart for boards or planks 22, of different thicknesses. Each of the bolts 20, has on its outer portion a nut 24, used for securing the uprights 21, against the nuts 23. Each of the uprights 16, has adjustably secured at its outer faces by means of screw bolts 20, and nuts 23 and 24, like those above described, and similarly located, a pair of uprights 25 and 26, between which and the faces of the angular uprights 16, are horizontally located one on the other a series of boards or planks 27, which form the inner portion of the mold. By reference to Fig. 1, it will be seen that each of the uprights 25, intersect each of the uprights 26, thus bracing each other and forming a strong support.

For forming that portion of the foundation wall for bay windows, or for forming angles in the wall for other purposes which angles are not right angles, a series of uprights 15^a, and 16^a, for the outer and inner portions of the wall and mold are employed, which uprights are angular in cross section and practically of the same construction as the angular uprights 15 and 16, used for the right angled corners of the foundation, and are supported on tie or base plates 19, in a similar manner to the first named angular uprights. Each of the uprights 15^a, and 16^a, has adjustably mounted at its outer faces by means of screw bolts and nuts like those above described and similarly located, a pair of uprights 28, which are disposed in parallelism with the outer faces of the uprights 15^a, and 16^a, so that boards or planks 22, and 27, forming the outer and inner portions respectively, of the mold may be placed between the uprights 28, and the uprights 15^a, and 16^a, in which position they will be firmly held so that concrete, cement, or other plastic material may be placed between the walls 22, and 27, of the mold, and held until it becomes set or hardened. The upper ends of each pair of the angular uprights 15, and 16, are held together by means of a detachable tie bar 29, see Fig. 10, each of which has on its lower surface near each of its ends spaced apart angular projections 30, between which the upper ends of the uprights 15 and 16, will fit so as to prevent any outward movement of said uprights. For detachably securing the upper portions of each pair of the uprights 15^a, and 16^a, bars of similar construction as that shown in Fig. 10, and above described may be employed.

That portion of the walls of the mold between the corners or angular portions are

supported by means of a series of uprights 31, 32 and 33, arranged in groups, see Figs. 2, 3, and 4, of the drawings, which views more clearly show the construction and arrangement thereof. Each of the uprights 31, 32, and 33, is provided on its lower portion with a pin 34, to engage openings 35, in tie plates 36, one of which plates is located horizontally on the ground and transversely of the mold at the point where it may be desired to support the inner and outer portions of the mold between the corners or angles thereof. The uprights 31, and 32, of each of the intermediate groups of uprights, are adjustably connected together near their upper ends by means of screw bolts 20, and nuts 23, and 24, like those used on the angular uprights, and above described. In Fig. 1, of the drawings, I have shown one only of these intermediate groups of uprights located between the angles of the wall or mold and with the adjustable members 31, and 32, thereof, located alternately on opposite sides of the mold, but it is apparent that where the distances between the angles or corners of the mold are sufficient to require splicing of the boards or planks 22 and 27, which constitute the outer and inner portions respectively, of the mold, one or more of the groups of intermediate uprights may be employed, and if desired alternately disposed as above described. This construction of the groups of intermediate upright supports is particularly advantageous for splicing the boards 22 and 27, for it will be understood that the meeting ends of such boards may be located between the uprights 31, and 32, of each of said groups where they will be firmly held one on the other by means of said members of the group. To detachably connect the uprights 31, and 33, of each group a bar 37, having at each of its ends a downturned portion 38, to engage the outer upper portions of said uprights is employed, as is clearly shown in Figs. 3, and 9, of the drawings.

From the foregoing and by reference to the drawings, it will be readily understood and clearly seen, that by employing a mold of the above described construction, its members can be readily placed in position and adjusted to form walls of plastic material such as concrete, cement, and the like, of different thicknesses, and that after the material has become set or hardened the detachable fastenings or bars 29 and 37, may be removed from the uprights on which they are used, when by removing the nuts 24, from the bolts 20, the outer uprights can be detached from those to which they have been secured, thus permitting the boards or planks 22, and 27, to be removed, after which the inner uprights 15, 15^a, 16, 16^a, and 32, can be removed from their tire or

base plates thus leaving the concrete or cement wall free of lateral obstructions, when of course it is obvious that the parts of the mold may again be used if desired.

5 Having thus fully described my invention, what I claim as new and desire to secure by Letters-Patent is—

1. In a mold for concrete walls, the combination of outer and inner uprights adapted to be located at the angles of the mold, each of said uprights being angular in cross section and provided at its lower end with a downwardly extended pin, a supplemental upright located outwardly from each of the outer faces of said angular uprights and each having on its lower end a downwardly extended pin, screw bolts extended through said angular uprights and the supplemental uprights near the upper and lower ends thereof, nuts engaging each of said bolts, one between each of the faces of the angular uprights and each of the supplemental uprights, and the other nut engaging the outer portion of said bolt, an apertured base plate located transversely and below each group of said uprights to engage the pins on the lower ends thereof, boards or planks horizontally located with their ends extended between the faces of the angular uprights and the supplemental uprights, and a detachable bar having means near its ends to engage the upper ends of the angular uprights.

2. In a mold for concrete walls, the combination of outer and inner uprights adapted to be located at the angles of the mold, each of said uprights being angular in cross section and provided at its lower end

with a downwardly extended pin, a supplemental upright located outwardly from each of the outer faces of said angular uprights and each having on its lower end a downwardly extended pin, screw bolts extended through said angular uprights and the supplemental uprights near the upper and lower ends thereof, nuts engaging each of said bolts, one between each of the faces of the angular uprights and each of the supplemental uprights, and the other nut engaging the outer portion of said bolt, an apertured base plate located transversely below each group of said uprights to engage the pins on the lower ends thereof, boards or planks horizontally located with their ends extended between the faces of the angular uprights and the supplemental uprights, a detachable bar having means near its ends to engage the upper ends of the angular uprights, an intermediate support for the walls of the mold adapted to be located between the angles thereof and consisting of three uprights, each having on its lower end a downwardly extended pin, two of said uprights being adjustably connected together, an apertured base plate located transversely with respect to the walls of the mold and below the intermediate uprights to engage the pins on the same, and a detachable bar having means at its ends to engage the upper ends of the outer uprights of the said intermediate support.

ANDREW C. NIELSEN.

Witnesses:

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E. NEWSTROM.