No. 858,370. PATENTED JULY 2, 1907.

W. N. CARROLL.

CORE FOR MAKING HOLLOW PLASTIC WALLS.

APPLICATION FILED NOV. 12, 1906.

Fig. 1.

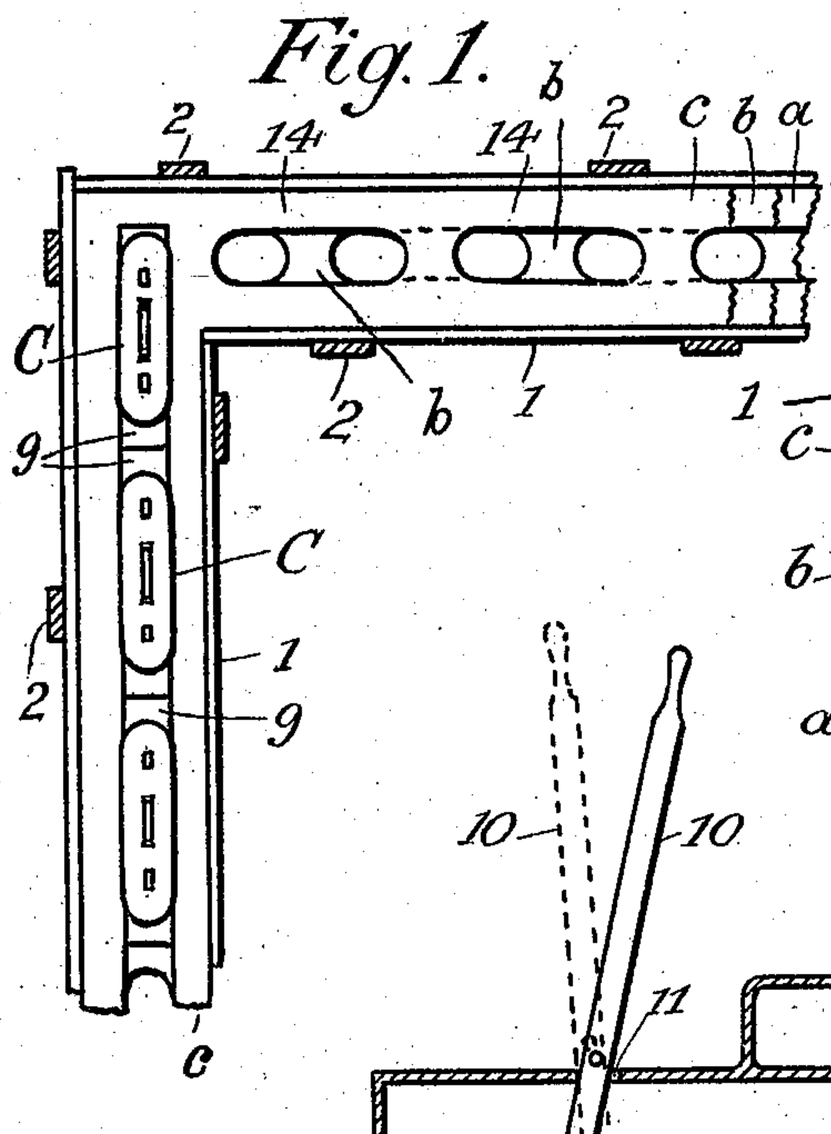


Fig. 2

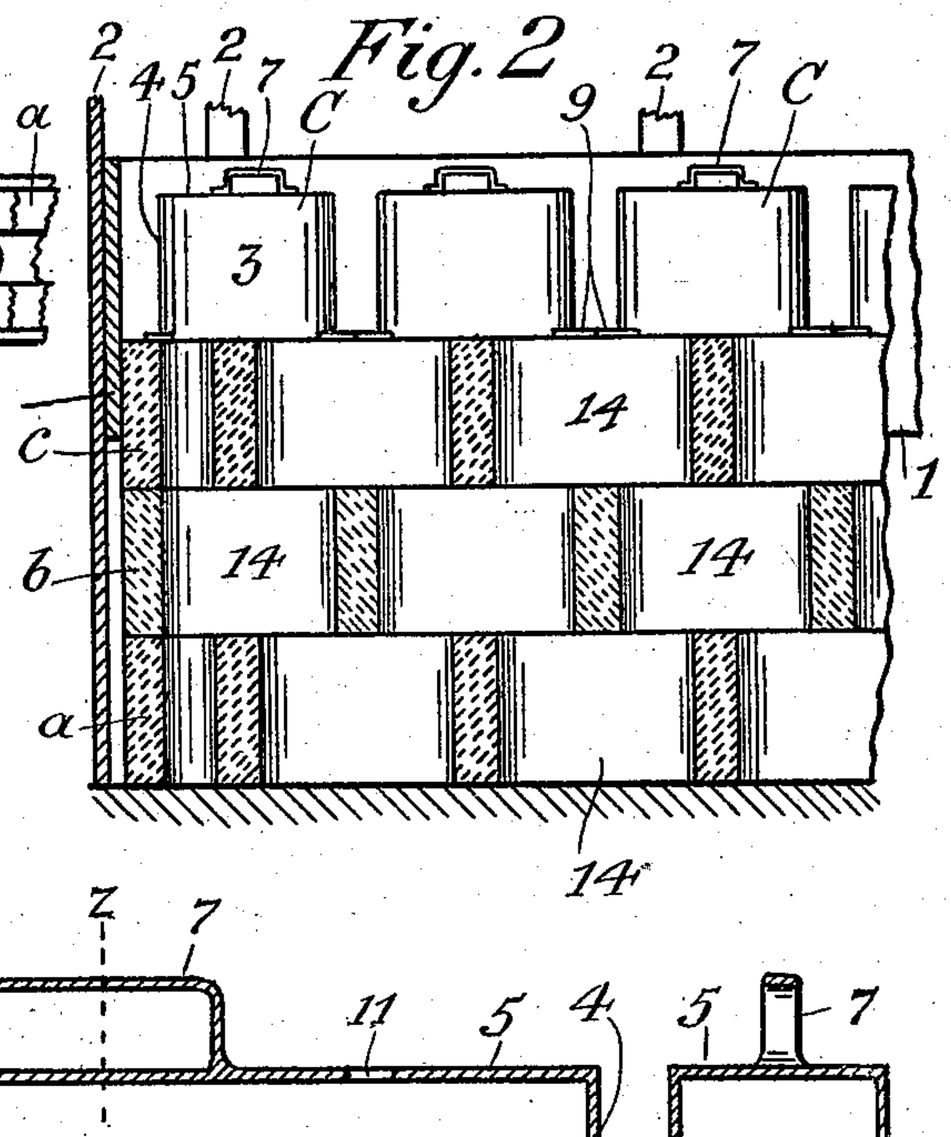


Fig. 3

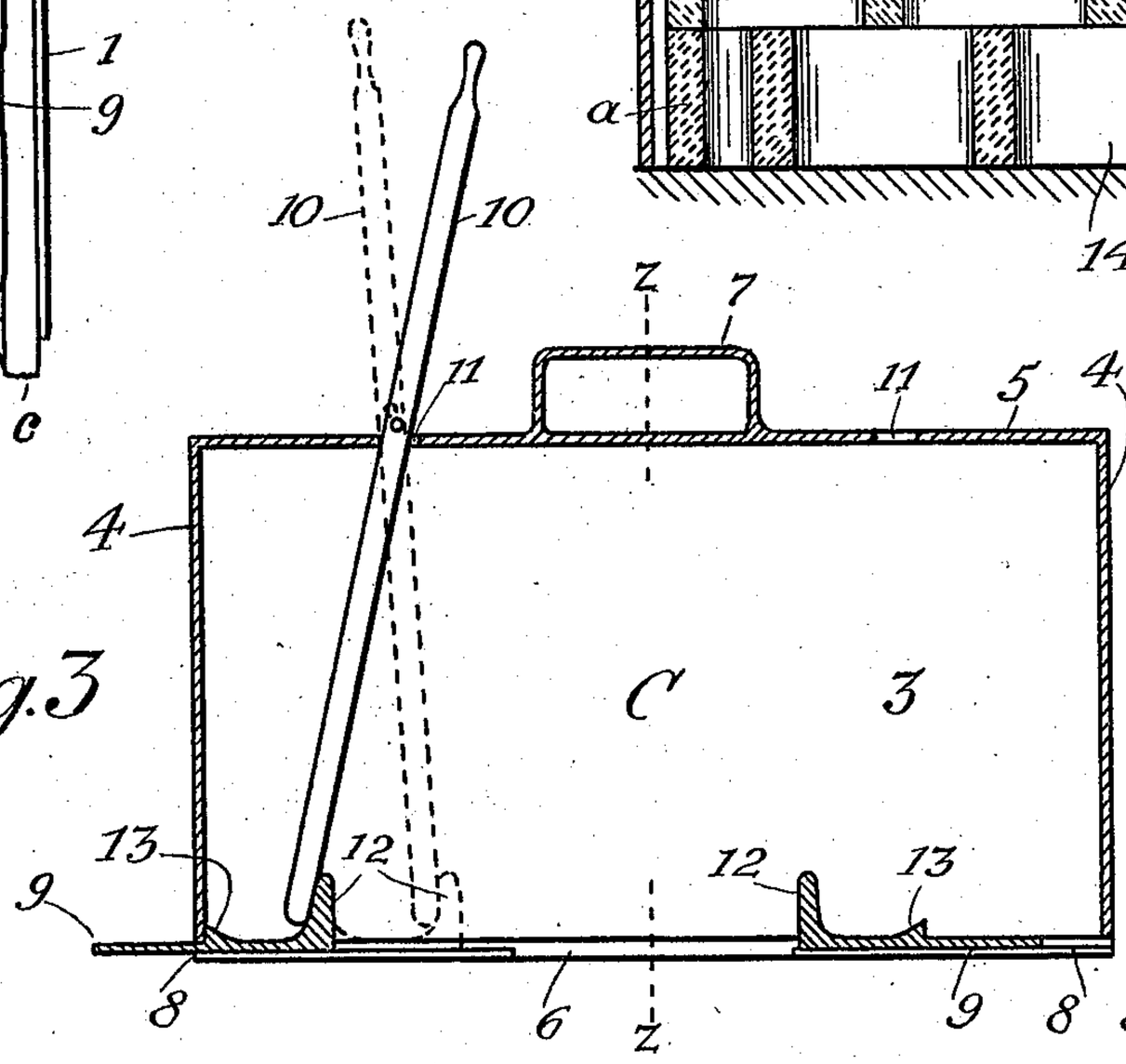


Fig. 4

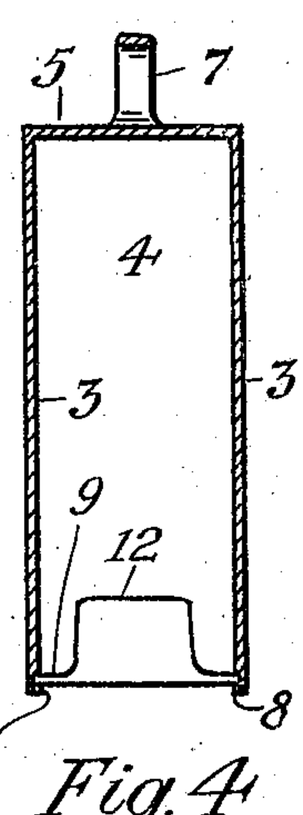
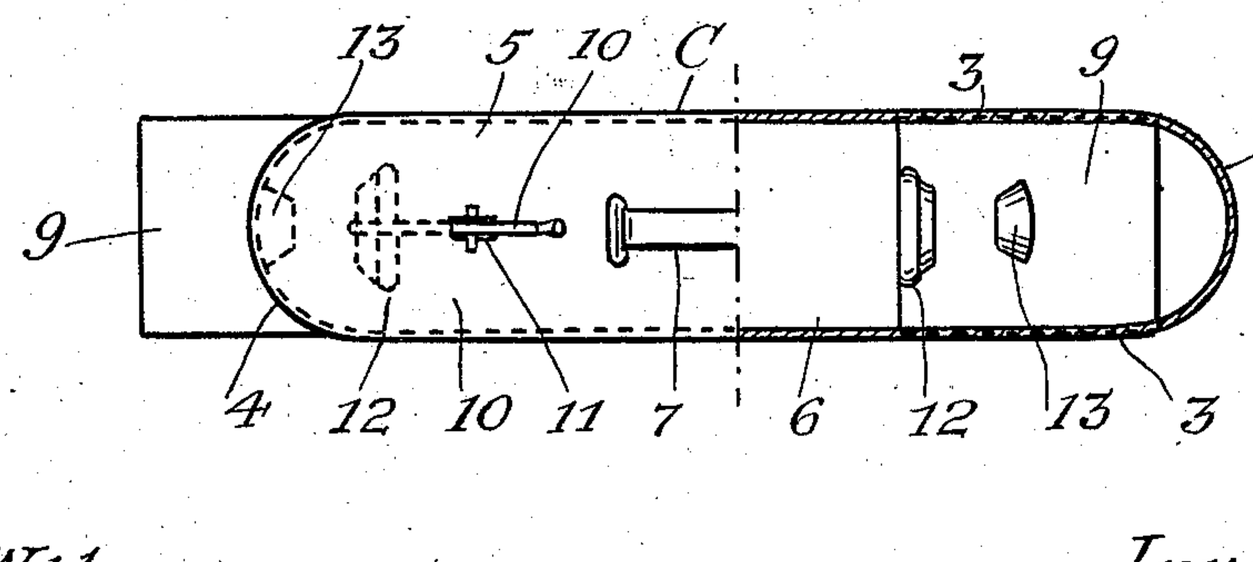


Fig. 5



Witnesses:
Theo. Lagaard
H. A. Bowman.

Inventor:
William N. Carroll.
By P. H. Gunckel
his Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM N. CARROLL, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO JOHN MACK, OF MINNEAPOLIS, MINNESOTA.

CORE FOR MAKING HOLLOW PLASTIC WALLS.

No. 858,370. Specification of Letters Patent. Patented July 2, 1907.

Application filed November 12, 1906. Serial No. 342,991.

To all whom it may concern:

Be it known that I, WILLIAM N. CARROLL, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Cores for Making Hollow Plastic Walls, of which the following is a description.

My invention relates to devices for producing central openings in plastic walls constructed in place.

The object of the invention is to provide cores that are suitable for forming a series of vertical openings in each course of the plastic material as it is placed in the wall molds and which can be conveniently withdrawn after the material has set; and which, furthermore, are adapted to be so placed as to produce openings in the successive courses that register in a way to form continuous flues or passage ways in the wall in both vertical and oppositely inclined directions.

My improvements are illustrated in the accompanying drawings in which—

Figure 1 is a plan view of portions of two joined walls showing cores in place and openings as they appear after removal of the cores; Fig. 2 is a vertical longitudinal section of a portion of a wall showing the openings in the completed courses or layers and cores in position for producing openings in the course to be next laid; Fig. 3 is a vertical longitudinal section of the core; Fig. 4 a transverse section on the line *z*—*z* of Fig. 3; and Fig. 5 a plan view, partly in horizontal section, of the core.

In the drawings, 1 and 2 designate, respectively, mold-boards and standards for supporting them in place. The mold-boards may extend the entire length of the wall that is to be constructed and placed as far apart as necessary to produce a wall of the desired thickness. Any suitable form of mold or cribbing may be employed for the purpose. The height of the mold or cribbing should be such as to adapt it for convenient use in constructing the wall of successively laid courses of the desired thickness. The wall may be constructed of concrete or any suitable plastic material placed in the mold and allowed to harden in place. To produce vertical openings at desired intervals in the successive courses, and also to establish communication not only between the openings that are in vertical alinement but also with adjacent openings, I employ the cores designated by the letter C. Such core consists of an oblong structure, preferably having rounded ends, and of any suitable material. As illustrated, the body is a mere oblong shell, preferably of metal, having side walls 3, rounded ends 4, a flat cover 5, and a partially open bottom 6. A handle 7 is provided on the top for convenience in placing and removing the core.

The lower edges of the sides are provided with guide-ways 8 for the slides 9, which are adapted to be moved outward and inward past the ends 4. The slides may be most conveniently operated by means of a removable lever 10 which can be inserted from above through slots 11 in the cover and caused to engage studs 12 provided on the slides. Stops 13 on the slides limit their outward movement to the extent desired. The purpose of the slides is to cover portions of the openings in a completed course while the next course is being constructed and so prevent material from descending into the openings.

In use, the molds having been set in place for a wall or walls, the cores C are placed at suitable intervals to produce openings 14 at the desired points; and the concrete or other plastic material is then poured into the molds to a depth not greater than the height of the cores to form the first course, designated *a*. After the material has hardened sufficiently the cores are lifted out. For the next course, or layer, *b*, it is preferable to so place each core that it will produce an opening that will register with the adjacent end portions of two openings in the last preceding course; and so on with the succeeding courses *c*, *d*, etc. Thus placing the cores to only partially cover the openings below, necessitates the use of the slides 9 to cover the uncovered portions of the openings and prevent material from falling into them when it is poured into the molds. As illustrated in Figs. 1 and 2, the slides of each core are made to abut those of the adjacent cores, and in this way all of the openings in the completed layer are entirely covered. When the new course is set the slides are moved back into the cores by means of the lever, and the cores are lifted out by their handles. The result of thus placing the cores is to produce openings which register in part not only in vertical direction but also in oppositely inclined directions, as plainly shown in Fig. 2, thus providing passage ways for thorough ventilation throughout the entire wall.

Having described my invention, what I claim and desire to secure by Letters Patent is—

1. A core for making hollow plastic walls, comprising a removable core-body, slides provided at its base, and means for moving them beyond the ends of the core-body and retracting them, for the purpose set forth.

2. A core for making hollow plastic walls, comprising a removable core-body, guide-ways extending lengthwise of its lower edges, and slides therein adapted to be projected from the core ends and retracted, for the purpose set forth.

3. A core for making hollow plastic walls, comprising a removable core-body, guide-ways extending lengthwise of its lower edges, and slides therein adapted to be projected from the core ends and retracted, and means for operating such slides, for the purpose set forth.

4. A core for making hollow plastic walls, comprising a removable core-body, guide-ways extending lengthwise of its lower edges, and slides therein adapted to be projected from the core ends and retracted, and means for operating such slides, and stops for limiting the extent of the slide movements, for the purpose set forth.

5. A series of cores comprising removable core-bodies, slides provided at their bases, and means for moving the slides beyond the ends of the core-bodies and retracting them, in combination with molds for constructing a building wall in place, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses this 8th day of November, 1906.

WILLIAM N. CARROLL.

Witnesses:
P. H. GUNCKEL,
H. A. BOWMAN.