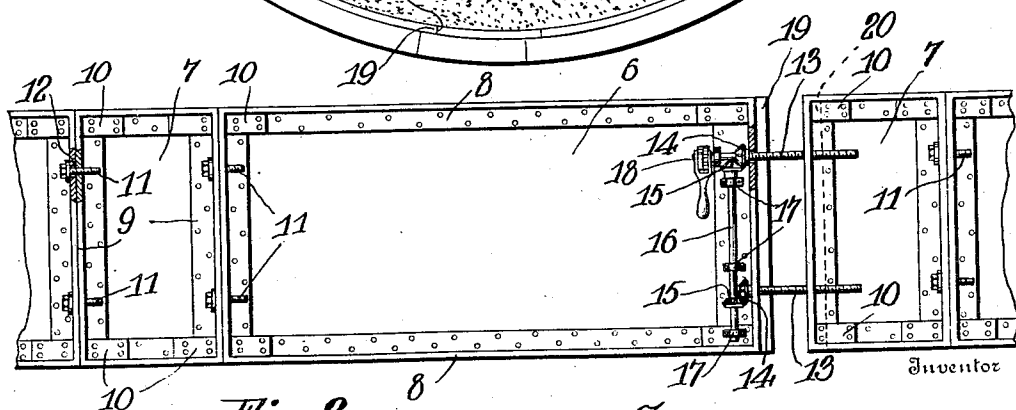
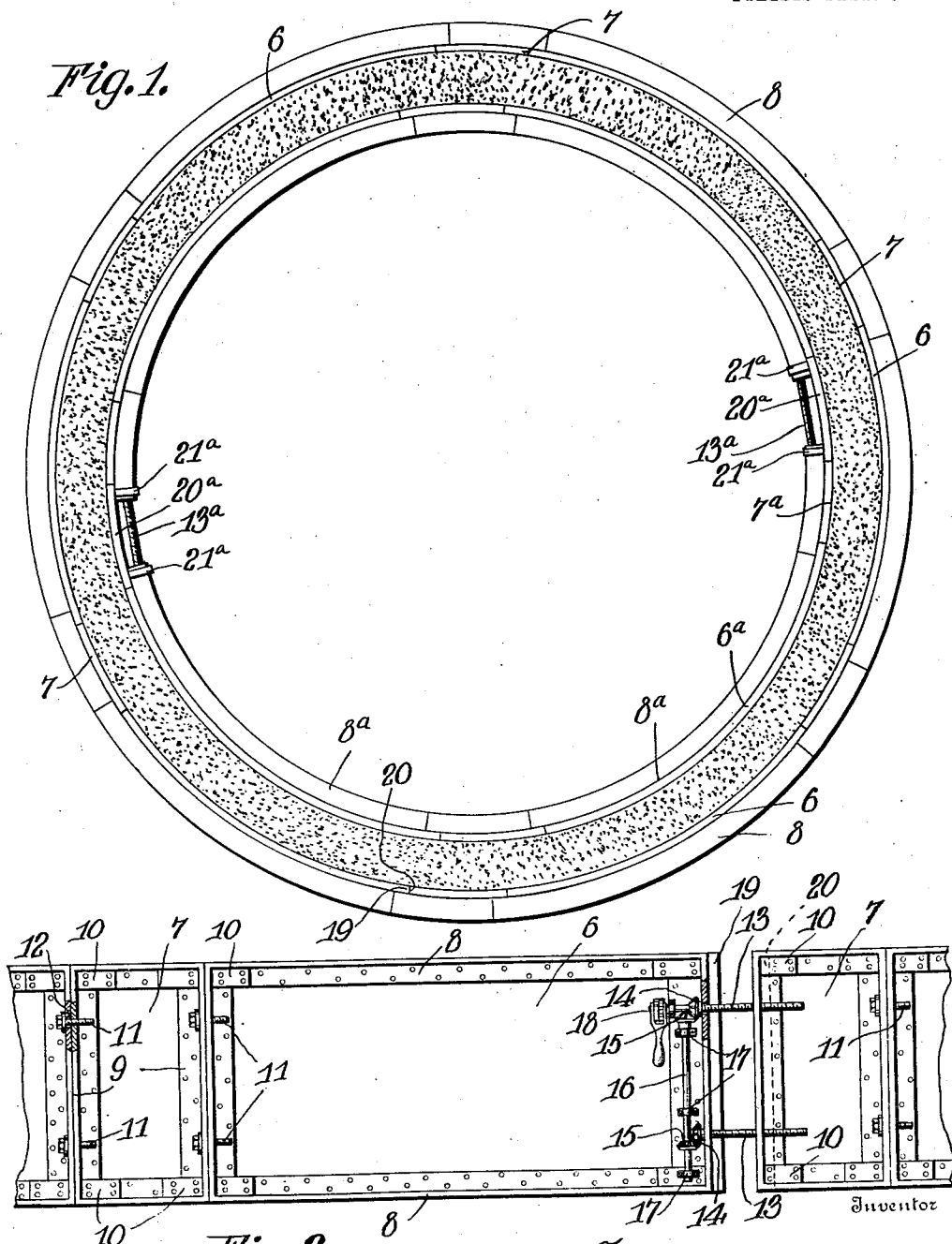


No. 873,138.

PATENTED DEC. 10, 1907.

F. M. STULTS.
MOLD FOR CONCRETE WORK.
APPLICATION FILED APR. 18, 1907..

2 SHEETS—SHEET 1.



Witnesses

Witnesses
C. E. Smith.
Geo. Tew.

Fig.

Frederick M. Stults

Mrs. Lawrence
Attorney &

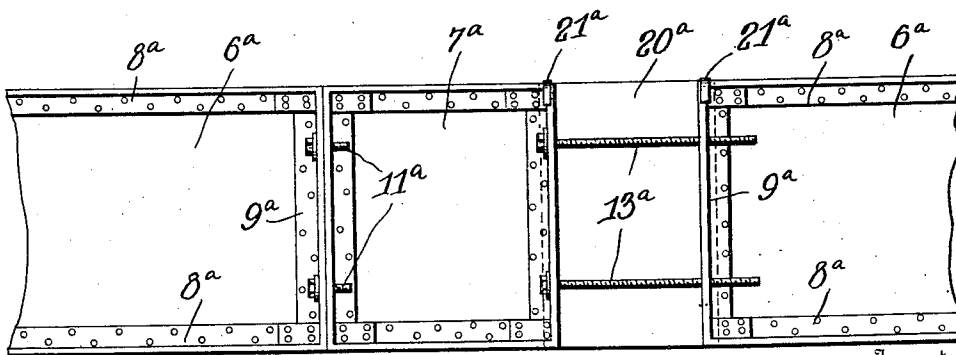
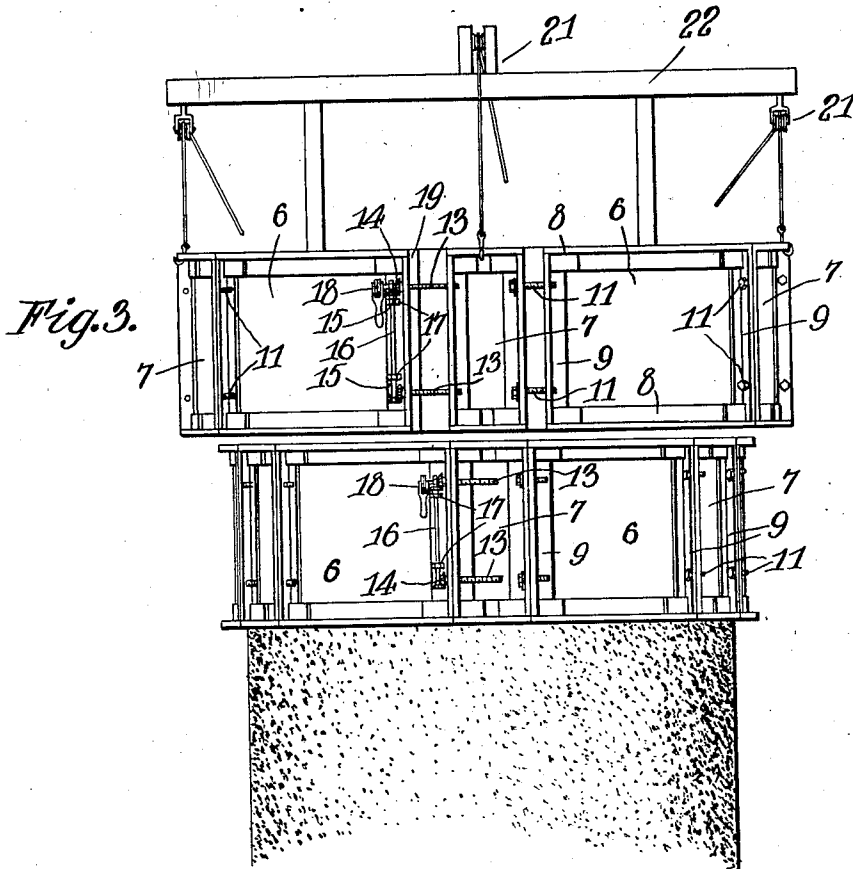
No. 873,138.

PATENTED DEC. 10, 1907.

F. M. STULTS.
MOLD FOR CONCRETE WORK.

APPLICATION FILED APR. 18, 1907.

2 SHEETS—SHEET 2.



Inventor

Fig. 4. Frederick M. Stults.

Witnesses

C. E. Smith.

Geo. E. Jew.

By

Wm. B. Swinford.

Attorney-at-Law

UNITED STATES PATENT OFFICE.

FREDERICK M. STULTS, OF CHICAGO, ILLINOIS.

MOLD FOR CONCRETE WORK.

No. 873,138.

Specification of Letters Patent.

Patented Dec. 10, 1907.

Application filed April 18, 1907. Serial No. 368,975.

To all whom it may concern:

Be it known that I, FREDERICK M. STULTS, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Molds for Concrete Work, of which the following is a specification.

This invention is a mold or form for concrete work, particularly adapted for building concrete chimneys, stand pipes, sewers, culverts, and the like. The mold comprises a plurality of segmental metal sections connected together by screws, more or less of which sections can be used in order to form a structure of any desired diameter.

The invention provides means whereby a plurality of the molds can be used, and one mold can be lifted and placed upon another without complete disconnection of the parts, the screws allowing the sections of one mold to be separated far enough to pass over another mold, without complete disconnection of the parts, whereby the molds can be raised one above the other as the building progresses, and brought together to the proper size to receive the next layer of concrete.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a top plan view of the mold. Fig. 2 is a projection showing several of the outer sections in a flat plane. Fig. 3 is a side elevation showing the manner of using the molds in building a chimney or tower. Fig. 4 is a projection showing several of the inner sections in a flat plane.

Referring specifically to the drawings, the outer mold is built up of a series of long sections 6 and short sections 7, the former being comparatively long and the latter being comparatively short. These sections are segmental in shape, and are preferably made of sheet metal. Each section has at its upper and lower edges angle bars 8, and at its ends has angle bars 9, the parts being bolted together, and strengthened by corner plates 10.

The sections fit together at the ends to produce a circular form. The angle irons 9 at one end are provided with threaded holes to receive connecting bolts 11 which extend through unthreaded enlarged holes at 12 in the flange of the angle iron at the meeting end of the adjacent section. The unthreaded holes are enlarged to allow for slight variation in angles, to produce molds of various diameters. One of the long sections 6 is provided at one

of its ends with long bolts 13 which have bevel gears 14 which mesh with bevel gears 15 on a cross shaft 16 which is held in bearings 17 on the angle iron 9. One of the long bolts 13 is provided at its rear end with a ratchet lever 18, whereby it may be turned, and by means of the connecting gearing both of said bolts are turned at the same time. The angle iron 9 at the said end is set back a few inches from the end of the plate 6, forming a lap 19 which fits in a corresponding rabbet 20 in the end of the adjacent section. The diameter of the mold may be varied by using more or less of the short sections 7, or by omitting one or more of the long sections 6, the bolts and bolt holes being all the same size so as to connect any of the flanges.

In the use of the mold the desired number of sections are joined together to produce a mold of the desired size, and tightened by means of the bolts, the long bolts 13 being tightened last, by manipulation of the ratchet lever 18. And, similarly, the mold may be expanded and loosened from the work by backing the bolts. In the use of the mold for building chimneys and the like, a plurality of the molds are provided. Two or three will usually be sufficient. These molds are placed one upon the other, and the lower mold is moved and placed upon the upper one as the work progresses. While concrete placed in the upper mold is setting the lower mold section is loosened or expanded by means of the bolts, and then by means of block and tackle 21, connected to the frame work 22, the lower mold section is hoisted over the upper mold section, as indicated in Fig. 3, and then the sections are drawn together and placed on top for the next layer. The work may thus progress rapidly, and the sections can be manipulated from the inside or by reaching over the top, without the necessity for outside staging, and thus permitting the raising of one complete form without taking the sections of said form apart. One of the short sections 7 can be removed at any time to decrease the diameter of the chimney or tower.

The parts above described form the outside wall or part of the mold in making chimneys, or will be used alone in making columns or pillars. In hollow work such as chimneys an inner mold or wall is provided, to be used in cooperation with said outer wall. Said inner mold or wall consists of long sections 6 made

of sheet iron or wood and having angle bars 8^a at its top and bottom edges and angle bars 9^a at its ends. There is also provided short sections 7^a, having similar angle bars and these short and long sections are connected together by bolts 11^a. There is also used a plain flexible sheet iron section 20^a which has at the top hooks 21^a arranged to engage over the angle irons 8^a at the top of the other sections, in order to support the plain section 20^a in place. Said section may be of any length desired and is placed to lap the edges of the main sections, the said sections being connected together by long bolts 13^a. The inside wall constructed in this way is located within the chimney, opposite the outside wall above described, and the concrete is placed between said walls. When it is desired to loosen the inner wall, for the purpose of removing the same or lifting the same to the next course, it can be done by turning the bolts 13^a to draw the ends of the main sections together. This reduces the diameter of the circular wall and detaches the parts from the work. The plain section 20 can then be removed and the sides of the circle further reduced until the

inner mold can be hoisted by the same means as above described with respect to the outer mold or wall. One or more sets of the molds or walls shown can be used. Preferably two or three sets may be used which will be mounted one upon the other as fast as the work progresses.

I claim:

The combination of a plurality of molds adapted to be superposed one upon the other, each of which is composed of a plurality of long and short sheet metal sections having angle bars at the upper and lower edges and at the ends, and connected at the ends by screws extensible to enlarge the mold and changeable from one to the other, permitting the removal of one or more of said sections, the screws being provided with connecting means to turn all of them simultaneously.

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

FREDERICK M. STULTS.

Witnesses:

NELLIE FELTSKOG,
H. G. BATCHELOR.