

J. SCHMUCK.
 PLASTIC FORM FOR VAULTS.
 APPLICATION FILED AUG. 22, 1918.

1,292,093.

Patented Jan. 21, 1919.
 2 SHEETS—SHEET 1.

Fig. 1.

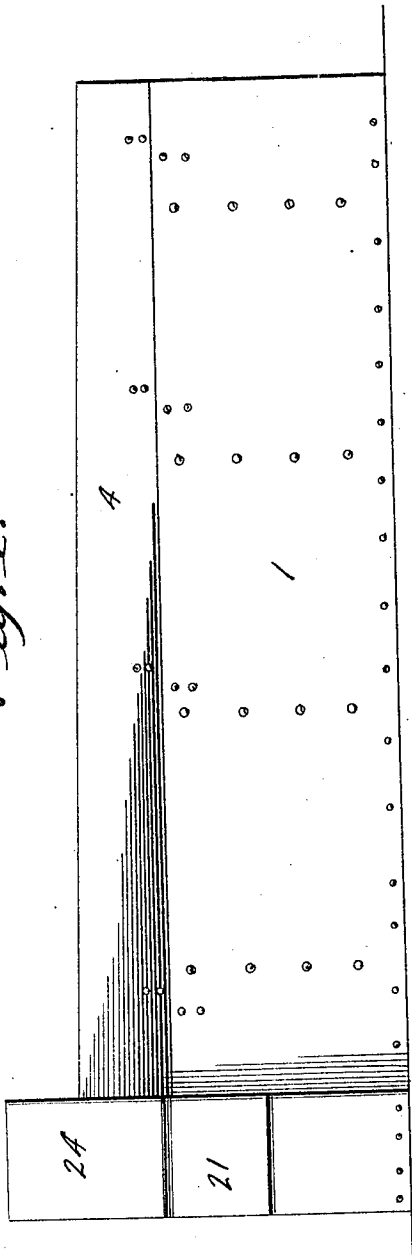
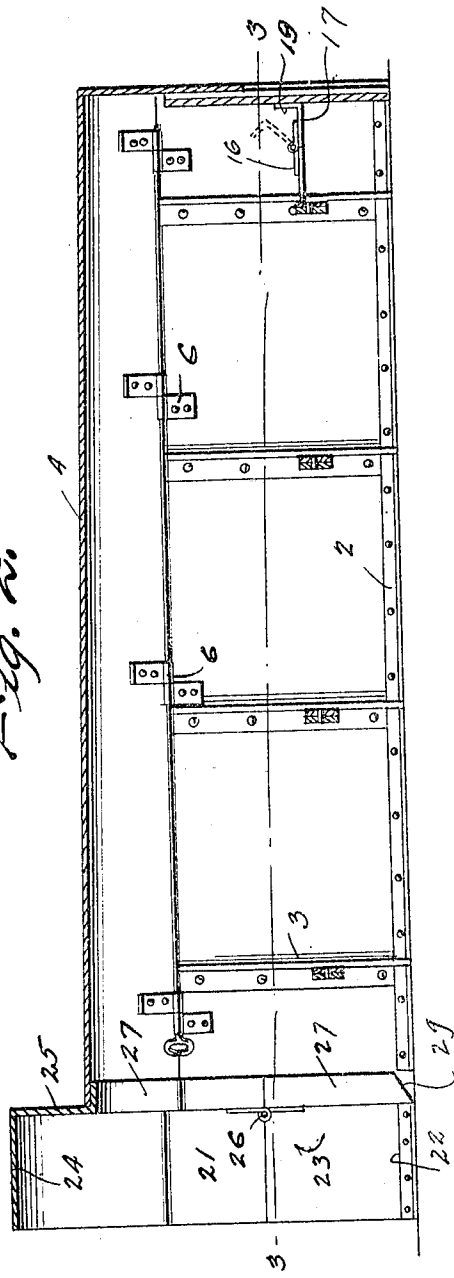


Fig. 2.



WITNESSES:

Glenn
N. L. Collamer

34

Inventor
Joe Schmuck

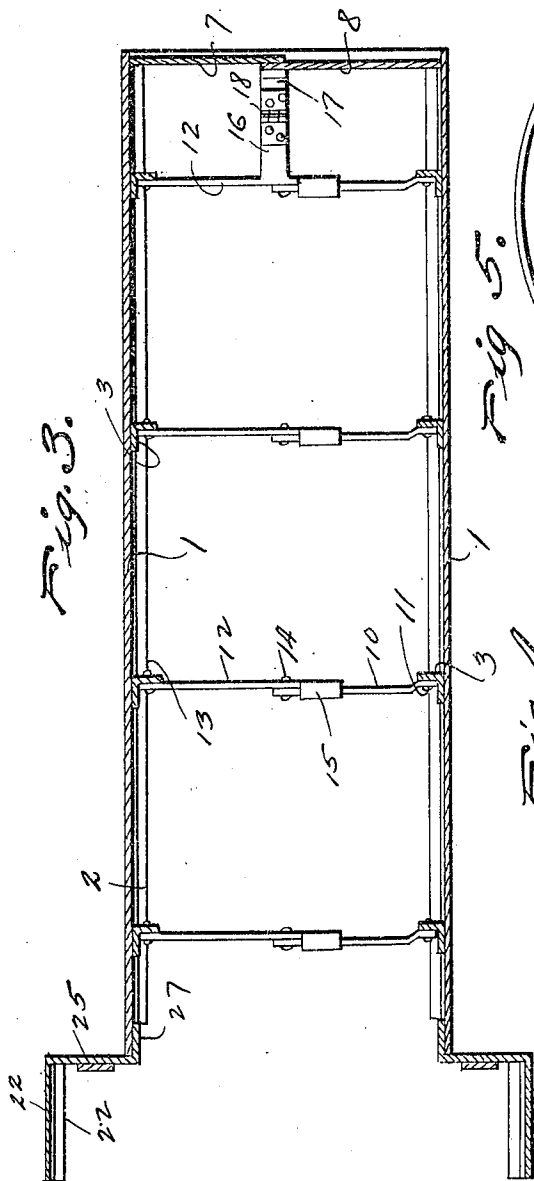
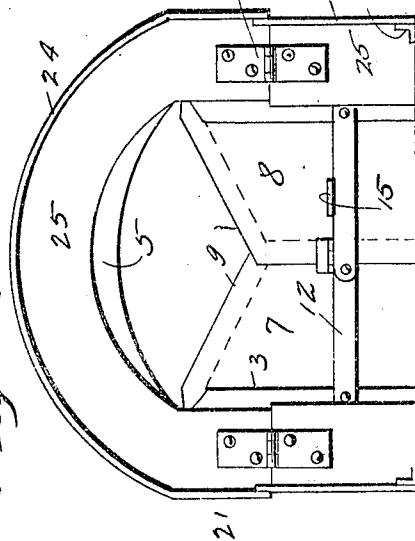
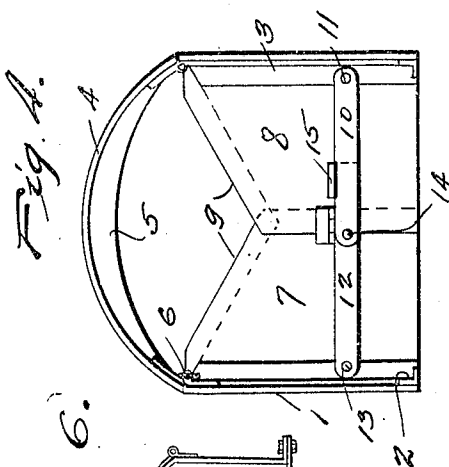
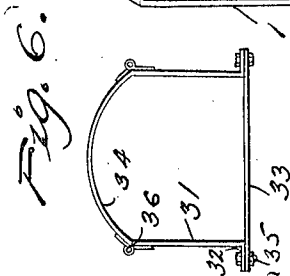
Richard Blum
 Attorney

J. SCHMUCK.
PLASTIC FORM FOR VAULTS.
APPLICATION FILED AUG. 22, 1918.

1,292,093.

Patented Jan. 21, 1919.

2 SHEETS—SHEET 2.



WITNESSES:

G. Walling
W. L. Colman

334

Inventor:
Joe Schmuck
Richard Bliven,
Attorney

UNITED STATES PATENT OFFICE.

JOE SCHMUCK, OF PITTSBURG, KANSAS.

PLASTIC FORM FOR VAULTS.

1,292,093.

Specification of Letters Patent.

Patented Jan. 21, 1919.

Application filed August 22, 1918. Serial No. 251,017.

To all whom it may concern:

Be it known that I, JOE SCHMUCK, a citizen of the United States, residing at Pittsburg, in the county of Crawford and State of Kansas, have invented certain new and useful Improvements in Plastic Forms for Vaults, of which the following is a specification.

This invention relates to plastic apparatus, and more especially to molds; and the object of the same is to produce a sheet metal core capable of being collapsed from the interior after the plastic sets around its exterior. The invention contemplates the production of a vault such as those in which the dead are buried, which will be described hereinafter, but it is quite possible to use this collapsible mold for forming culverts and the like, although in that case there would be no door.

The primary object of the invention is to construct a core in several members hingedly connected with each other in such manner that they may collapse inwardly, although each member may be of itself rigid.

A secondary object is the provision of the means for holding said members in distended position while the plastic sets, the distending means or struts being collapsible from within.

Details are set forth in the following specification and claims, and attention is invited to the drawings in which:

Figure 1, is a side elevation.

Fig. 2, is a central longitudinal section of this complete core mold set up ready for use.

Fig. 3, is a horizontal section taken on the line 3-3 of Fig. 2.

Fig. 4, is a front elevation of the body portion of the mold.

Fig. 5, is a front elevation of the entire mold.

Fig. 6, is a plan view of the mold for forming the door of the vault, the same being on a reduced scale.

The body portion of this mold is made up of two side walls and a top. Each side wall 1 is constructed of sheet iron as long and as wide as it is desired to have the inside dimensions of the vault being built, and each plate 1 is by preference braced along its lower edge by angle iron as shown at 2 and also at suitable intervals by upright right angle iron strips 3. The top or cover 4 is arched as illustrated in Fig. 4 and may

be braced at intervals as shown at 5, and its edges are connected by hinges 6 to the upper edges of the walls 1. This member is of a length equal to that of the walls, and of a width desired, and by preference it tapers slightly toward the rear as best seen in Figs. 1 and 2.

The rear or inner end of the structure is closed if employed for building a vault or other receptacle whose rear end is to be closed, although if this mold core is employed for building a culvert, the rear may be omitted. The same is shown herein as made of two plates 7 and 8 lapping each other at their inner edges as shown in Fig. 4 and connected at their outer edges in any suitable manner with the side walls 1, and the upper edges of these plates are cut away as indicated at 9 in Fig. 4 for a purpose yet to appear.

For holding the parts distended I make use of toggle-like pieces or struts connecting the side walls as best seen in Figs. 3 and 4. Each strut is made up of a short link 10 connected at its outer end at 11 to one of the upright braces 3, and a long link 12 similarly pivoted at 13 at its outer end to the opposite brace 3, a pivot 14 connecting the two links at about the center of the structure, and an overhanging lip 15 on the inner end of the long link which rests upon the short link 10 when the two links are in alinement as shown in Fig. 5. This prevents the sagging of the intermediate pivot 14 below a horizontal line between the end pivots 11 and 13, while yet permitting the strut to be collapsed by having its intermediate portion moved upward suddenly, as by a blow of a hammer. Carried by the long link of the endmost strut is a longitudinal brace comprising two members 16 and 17 hingedly connected as at 18 so that the rearmost member 17 may be raised as shown in dotted lines in Fig. 2. Its rear end preferably has a foot 19 which contacts with the plate 8 when this brace is straightened out, and it is obvious that by lifting the member 17 the foot is brought out of contact with the rear end wall and the latter may be collapsed.

When this core is used for the formation of a vault which should have a rear end and a formal entrance at its front end, use will be made of the structure shown in Figs. 1, 2 and 3, and in elevation in Fig. 5. This is made up of two side walls 21 rigidly con-

nected at their upper edges by an arched
 top or cover 24 which preferably parallels
 the curvature of the body. But the side
 walls are carried only part way down as
 5 shown in Fig. 5, or in other words each side
 wall is made up for an upper plate 21 and
 a lower plate 23 whose upper end laps the
 inside of the upper plate and whose lower end
 has an angle iron 22. These elements 21,
 10 23 and 24 have right angular flanges 25 at
 their inner edges reducing them to about
 the size of the body portion, and from the in-
 ner edges of said flanges project lips 27
 which slip inside the front end of the body
 15 member as shown in Figs. 2 and 3. These
 flanges are connected by hinges 26 between
 the upper and lower sections of the walls 21
 and 23, so that the lower section 23 with its
 flanged portion 25 may swing in the direc-
 20 tion indicated by the arrow in Fig. 2, carry-
 ing with it the angle iron 22 and the lower
 portion of the lip 27 whose lower extremity
 is preferably cut off oblique as indicated at
 29 in Fig. 2. On account of the right an-
 25 gular disposition between the flanges and
 the several elements of this portion of the
 structure, I find it not usually necessary to
 employ a strut or brace to hold the parts dis-
 tended.

30 In Fig. 6 is shown an outside mold which
 may be employed for forming the door or
 closure to the mouth of the vault. Upright
 side walls 31 are hinged at 36 to an
 arched top wall 34, and a flat bottom plate
 35 33 is connected by bolts 35 with lips 32 at the
 lower edges of the walls 31. I have dis-
 closed this structure as being upright, but
 in use it may be laid on a board or other flat
 surface and the plastic poured into it and
 40 allowed to set, after which the bolts 35 may
 be removed and the walls swung outward on
 their hinges so as to take the mold off of the
 hardened finished product. The latter will
 then be used as a door or closure the device
 45 previously described.

The use of my improved core mold is as
 follows:—

The parts are set up as shown in the draw-
 ings, and an outside structure will doubtless
 50 be fixed around the core and across the rear
 end of the core to hold the plastic cement as
 it is poured. After the plastic has set, an
 operator may pass into the core if the latter
 be large enough, or may reach into it with a
 55 suitable tool, and may trip the rear brace by
 moving its member 17 as shown in dotted
 lines in Fig. 2 and then trip the struts by
 knocking their centers upward in a manner
 which will be clearly understood. The
 60 lower portion of the walls 23 of the front of
 this mold are swung forward as far as the
 hinges 26 permit and the entire front piece
 drawn out of the front end of the body piece.
 Said body piece now having had its braces or
 65 struts tripped collapses a little as its side

walls swing inward around their hinges 6,
 and immediately the top 4 may drop a little
 as the altered position of the side walls per-
 mits. The entire structure can now be
 drawn out of the vault, and especially if the
 70 top tapers toward the rear as shown in Fig.
 2, and with it will come the rear end mem-
 bers 7 and 8 if they are permanently at-
 tached to the walls 1. My invention is not
 concerned with the outside treatment of the
 75 plastic structure made by the use of this
 mold, and therefore the same is not shown
 and described. It will be obvious that a
 culvert or the like can be set with this core
 mold, in which case it might be desirable to
 80 permit the rear end and the front end to be
 open. I propose and intend to use the struc-
 ture for building vaults, and in that case a
 front door will be needed. The same can
 be made with the mold illustrated in Fig. 5,
 85 and after the door is finished it may be fitted
 and applied to the mouth of the vault in a
 manner not necessary to describe.

The foregoing description and the draw-
 ings have reference to what may be consid-
 90 ered the preferred, or approved form of my
 invention. It is to be understood that I
 may make such changes in construction and
 arrangement and combination of parts, ma-
 terials, dimensions, etc., as may prove ex-
 95 pedient and fall within the scope of the ap-
 pended claims.

Having thus described my invention, what
 I claim as new and desire to secure by Let-
 100 ters Patent is:—

1. A collapsible core for molding vaults
 and the like, comprising a pair of upright
 side walls, an arched top wall hingedly con-
 nected at its edges with the upper ends of
 said side walls, collapsible struts for hold-
 105 ing the latter distended, a rear wall made in
 two members, each of which is connected at
 its outer edge with one of the side walls and
 the members lapping each other at their in-
 ner edges, and a brace composed of a front
 110 member carried by one of said struts and a
 rear member hinged to the front member
 and having a foot adapted to lie against the
 innermost member of the rear wall, as de-
 115 scribed.

2. A collapsible core for molding vaults,
 consisting of a pair of upright side walls,
 a top hinged to their upper edges and taper-
 ing throughout its length, means for hold-
 120 ing the side walls distended, a two-part rear
 wall consisting of plates connected at their
 outer edges with the side walls respectively
 and lapping each other at their inner edges,
 their upper edges being cut away, and brac-
 125 ing means for holding said plates when the
 walls are distended.

3. In a core for molding vaults, the com-
 bination with a body member comprising
 side walls and a top and means for holding
 these parts distended, and a two-part rear
 130

5 wall with means for holding it in place, of
a structure for the front end comprising
two-part side walls overlapping each other,
an arched top rigidly connecting the upper
edges of the upper parts, flanges at right an-
gles to all of said parts, lips formed at the
inner edges of the flanges and adapted to
pass inside the front end of the body, and
hinge connections between the upper and
10 lower parts, for the purpose set forth.

4. In a core for molding vaults, the com-
bination with a body member comprising
side walls and a top and means for holding
these parts distended, and a two-part rear
15 wall with means for holding it in place, of a
structure for the front end comprising two-
part side walls overlapping each other, an
arched top rigidly connecting the upper
edges of the upper parts flanged at right-

angles to all of said parts, lips formed at 20
the edges and adapted to pass inside the
front end of the body, and hinges connecting
the flanges of the upper and lower parts at
each side so as to permit the lower parts to
swing forward, the lower ends of the lips 25
being cut away, as described.

5. A core for vault molds comprising a
collapsible body, a collapsible rear end, and
a collapsible enlarged front end member
having lips slidably fitting within the front 30
end of the body, the whole as described.

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

JOE SCHMUCK.

Witnesses:

HORTENSE R. QUIGLEY,
CARLYLE M. PERKINS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."