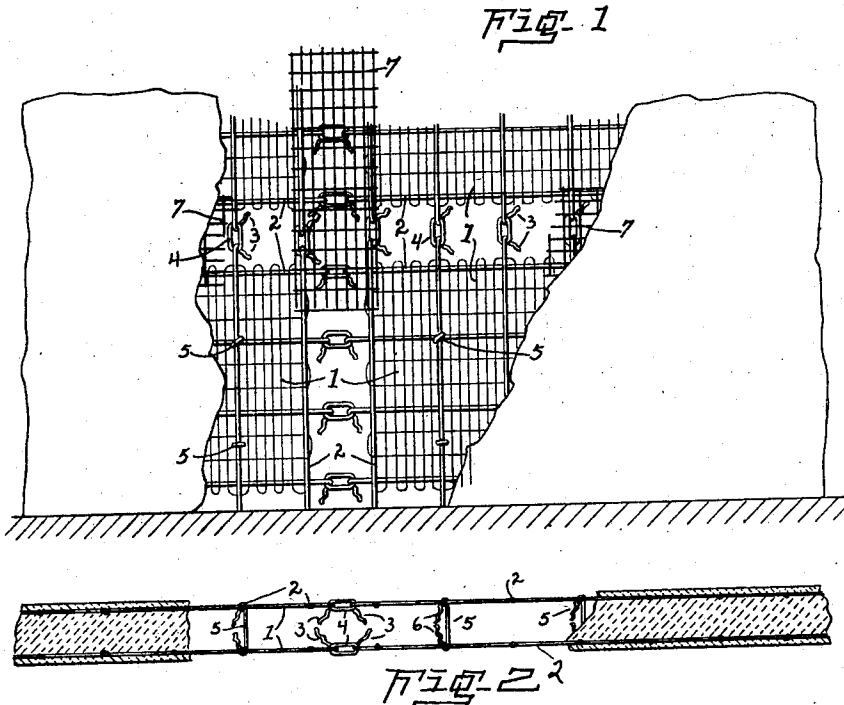
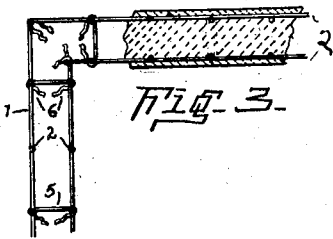
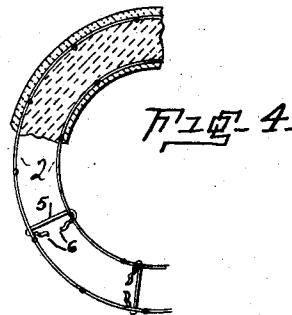
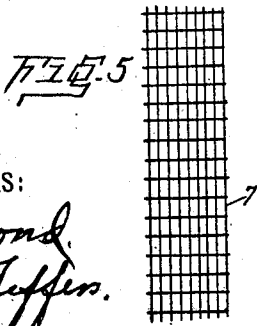
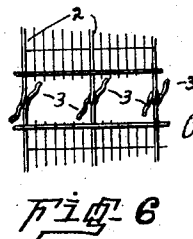


No. 732,535.

PATENTED JUNE 30, 1903.

A. A. FIRESTONE.
CONCRETE STRUCTURE.
APPLICATION FILED FEB. 28, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ADRIAN A. FIRESTONE, OF NEW PITTSBURG, OHIO.

CONCRETE STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 732,535, dated June 30, 1903.

Application filed February 28, 1903. Serial No. 145,617. (No model.)

To all whom it may concern:

Be it known that I, ADRIAN A. FIRESTONE, a citizen of the United States, residing at New
Pittsburg, in the county of Wayne and State
5 of Ohio, have invented certain new and useful
Improvements in Concrete Structures; and I do
hereby declare that the following is a full,
clear, and exact description of the same, reference
being had to the annexed drawings,
10 making a part of this specification, and to the
figures of reference marked thereon, in which—

Figure 1 is a side elevation showing a portion
of the concrete in place and illustrating
15 the arrangement of the skeleton sections connected
together. Fig. 2 is a transverse section showing
portions of the concrete in place and illustrating
the bond or binding links properly placed. Fig. 3
is a view showing a corner connection. Fig. 4 is a
20 transverse section showing my invention applied to
circular work. Fig. 5 is a detached view showing a
portion a filling-strip. Fig. 6 is a slight modification
used or employed in connecting two
25 adjacent edges of the gauze sections together.

The present invention has relation to concrete
structures in which two or more parallel gauze
concrete-holding skeletons are employed; and it
consists in the novel arrangement hereinafter
30 described, and particularly pointed out in the
claims.

Similar numerals of reference indicate corresponding
parts in all the figures of the drawings.

In the accompanying drawings, 1 represents
the parallel gauze sections which are formed of
metal, and for the purpose of giving the proper
strength to hold the concrete in proper position
while in a plastic state and at the same time
40 assisting in strengthening the structure and
binding the two parallel gauze skeletons together,
so that they will not spread or bulge, heavy
wires or bars 2 are woven or otherwise attached
to the gauze sections proper, and for the purpose
45 of properly connecting two adjacent edges, either
horizontal or vertical, the heavy wires or bars 2
should be arranged so that they will be located
near or at the selvage of the gauze sections. For
50 the purpose of providing for properly connecting
the horizontal or vertical edges of the gauze
skeletons any desired number of the

heavy wires or bars 2 may be extended beyond
the selvage edge of the section and the extended
ends provided with the hooks 3, 55 which hooks
may be connected to the links 4. For the purpose
of preventing any displacement of the hooks 3
their angled ends should be corrugated, as
illustrated in the drawings, and said corrugated
hooked ends placed in a 60 plane with the gauze
skeleton sections or turned so that they will extend
into the space between the two parallel gauze
skeleton sections.

It will be understood that by my peculiar 65
arrangement a concrete structure can be formed
of any desired length and of any desired height,
owing to the fact that the lower sections of the
gauze skeletons can be placed in proper position
at a point where a wall or 70 other structure is to
be located and that the concrete can be placed in
the space between the two lower gauze skeleton
sections until a sufficient amount is so placed
that the concrete will properly fill the space
75 between the two lower sections, after which other
sections of the gauze skeleton can be attached to
the lower sections which have been properly filled
with concrete.

It will be understood that by extending the 80
heavy wires or bars 2 beyond the edges that they
will be exposed and that the bottom edges of the
next upper section can be easily attached without
any inconvenience and without disturbing the
concrete already placed in 85 position.

It will of course be understood that the space
between the two side gauze skeleton sections is to
be varied, owing to the thickness of the wall
designed to be constructed—that 90 is to say, in a
wall four inches in thickness the space between
the two parallel gauze skeleton sections should be
practically four inches apart, or thereabout.

For the purpose of bonding the two paral- 95
lel sections together links, such as 5, are employed
and are connected to the wires or bars 2 at the
points where said wires cross each other. These
links 5 should be formed of a length to correspond
with the thickness of the 100 wall designed to be
constructed, and for the purpose of preventing the
links from becoming displaced the hooked ends 6
should be corrugated, so that the concrete will
better

hold said links after the same has become hardened.

In Fig. 4 is illustrated a transverse section of a segment of a circle wall, which may be used in case it is desired to construct a wall for use circular, and of course the same general construction is used that is used in the formation of straight walls, the gauze skeletons being curved to give the proper diameter or to give the diameter needed. This formation may be used in the construction of cisterns, tanks, and for any other purpose in which it is desirable to employ a circle structure.

It will be understood that as the concrete is placed in the space between the gauze sections a portion of the concrete while in a plastic state will extend through the meshes, and in order to properly complete a wall or other structure the sides should be properly smoothed, this operation being done in any convenient and well-known manner.

It will be understood that the structure herein described can be used for various purposes, and I do not desire to limit the present invention to any particular use.

If desired, the links 4 may be dispensed with and the hooked ends of the heavy wires or bars 2 hooked together, as illustrated in Fig. 6.

For the purpose of filling in the spaces between two adjacent gauze skeleton sections a gauze structure 7 may be placed between the adjacent edges, so as to hold the concrete in proper relative position with reference to the wall proper; but if in the event the adjacent edges are brought near enough together to

properly hold the concrete these strips may be dispensed with.

It will be understood that the heavy wires or bars 2 may be located any desired distance apart, by which arrangement a greater or less number will be employed, as it will be understood that in some structures it will be of importance to increase the number of heavy wires, while in other structures a less number will answer the purpose designed.

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

1. In a concrete structure, gauze skeletons having woven therein or attached thereto wires or bars of greater strength than the body of the gauze, and the gauze skeletons connected together at their adjacent ends and sides, two skeletons spaced from each other and the spaced skeletons located parallel one with the other and secured in parallelism by means of hooked links, and the hooked links bent or extended inward between the parallel skeletons, substantially as and for the purpose specified.

2. In a concrete structure, gauze sections, transverse links connected to the parallel gauze sections and provided with corrugated hooked ends, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ADRIAN A. FIRESTONE.

Witnesses:

JOHN S. ADAIR,
D. R. FIRESTONE.