

W. MEISCHKE-SMITH.
FERROCONCRETE CONSTRUCTION.
APPLICATION FILED DEC. 16, 1918.

1,349,901.

Patented Aug. 17, 1920.

Fig. 1.

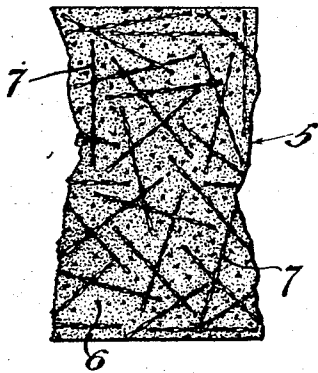
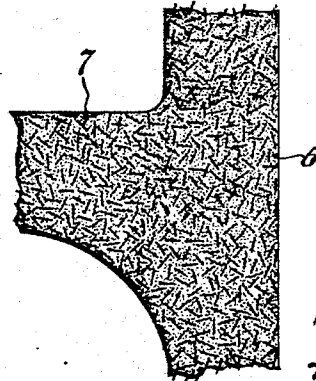
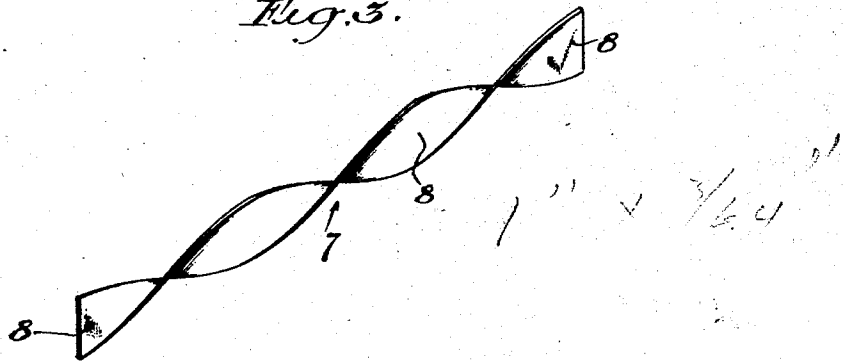


Fig. 2.



- 1. Short pieces of
- 2. Cement

Fig. 3.



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1,349,901.

Specification of Letters Patent. Patented Aug. 17, 1920.

Application filed December 16, 1918. Serial No. 267,036.

To all whom it may concern:

Be it known that I, WILLIAM MEISCHKE-SMITH, a subject of the King of Great Britain, residing in the city and county of San Francisco, State of California, have invented a new and useful Ferroconcrete Construction, of which the following is a specification.

My invention relates to a ferro concrete building material consisting of a homogeneous mixture of cement and short pieces of wire of such dimensions and proportion that the wire may be readily mixed with the cement and will not sink in the cement body but will remain distributed throughout the mass of cement until the cement has set. Further I have determined that by so using steel wire of proper proportion and dimension that the strength of the mass is materially increased so that the material so produced may be used in all kinds of construction in which the common reinforced concrete is now used thereby changing the nature of the work now required in such construction, that is, by using my invention the rods ordinarily used are dispensed with and a great amount of time and skilled labor required to fabricate the reinforcement as now used is done away with, resulting in a great saving in the cost of construction.

I am aware that short pieces of round wire have been placed in a form and concrete poured thereon and that fine particles of wire have been distributed in a concrete mass, but my invention is not to be confused with such construction as the form of wire used by me is essential and necessary to obtaining the results desired. The wire used and which I have determined as being essential consists of flat metal strips twisted either wholly or partially throughout their length and having faces of sufficient area to sustain the weight of the strips in the cement.

Referring to the drawings which are for illustrative purposes only,

Figure 1 is a sectional view of a portion of a block of material made according to my invention, the reinforcement being shown of approximately the proper size.

Fig. 2 is a sectional view of a portion of a wall and arch showing the distribution of the reinforcement therein, and

Fig. 3 is an enlarged perspective view of one of the reinforcing members shown in the preceding figures.

5 represents a block of material consisting of a cement body 6 having suspended therein and distributed throughout the mass of cement reinforcing units consisting of wire members 7. These members 7 each consist of a flat twisted wire having flat faces 8. It is to be understood that an important feature is that the metal shall have sustaining surfaces, that is, flat surfaces as shown at 8 which permit the cement to hold the reinforcement in suspension in the body of concrete during the setting of the cement. Best results have been attained by using such metal units of approximately one inch in length, one one-hundredth of an inch in thickness and a width of three sixty-fourths of an inch.

In using my invention the metal units are placed in the cement during its course of preparation and thoroughly mixed throughout the mass after which the mixture is poured into forms such as are commonly used in reinforced concrete construction and allowed to set.

As illustrated in Figs. 1 and 2 of the drawing the members 7 arrange themselves in all directions in the mass forming a reinforcement which, due to the tensile strength of the metal of which the members 7 consist, strengthens the structure sufficiently to permit the disuse of the long bars and ties ordinarily used.

A strong bond between the reinforcing units and the cement is made by the twist of the wire forming the units and the flattened wire forms faces or surfaces which offer resistance to the mass before setting so that the reinforcing units remain distributed during the setting operation thereby strengthening the structure throughout.

I claim as my invention:

1. A ferroconcrete construction comprising a body of cement and metal reinforcing units distributed throughout the cement body consisting of disconnected pieces of

flat wire so formed as to form a mechanical bond with the cement.

2. A ferroconcrete construction comprising a body of cement and reinforcing units
5 distributed in indiscriminate directions throughout the cement body consisting of

disconnected pieces of twisted flat steel wire having flat faces.

In testimony whereof I have hereunto set my hand at the city and county of San 10 Francisco, this 6th day of December, 1918.

WILLIAM MEISCHKE-SMITH.