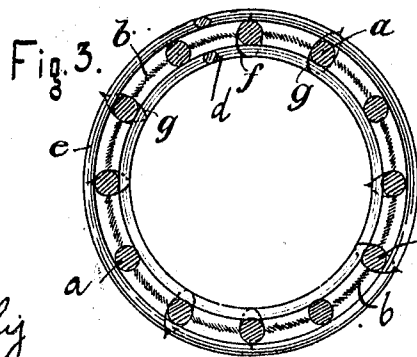
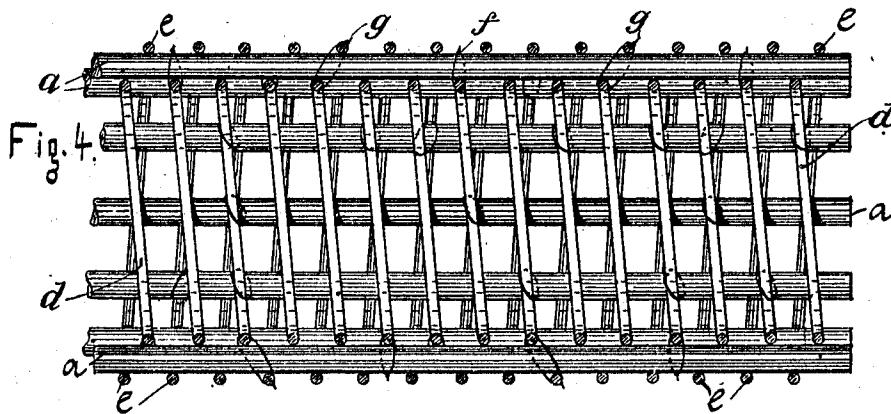
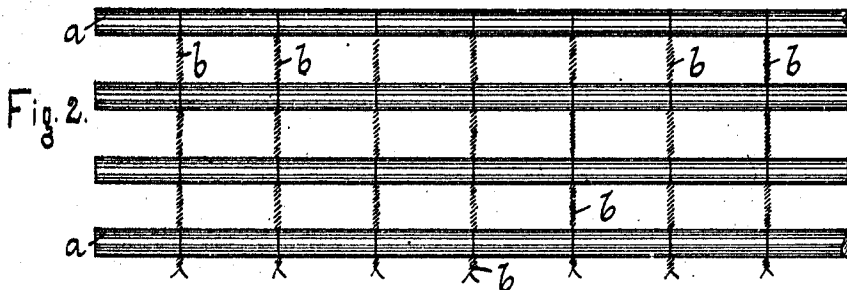
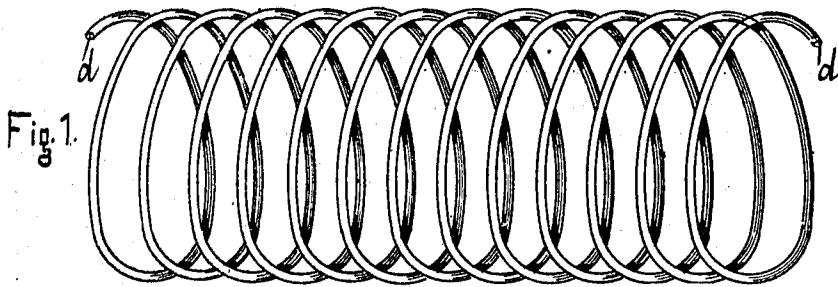


H. EBERLEIN.
 PROCESS OF MAKING METALLIC CORES FOR CONCRETE BODIES.
 APPLICATION FILED AUG. 4, 1910.

982,485.

Patented Jan. 24, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

HEINRICH EBERLEIN, OF MEISSEN, GERMANY.

PROCESS OF MAKING METALLIC CORES FOR CONCRETE BODIES.

982,485.

Specification of Letters Patent. Patented Jan. 24, 1911.

Application filed August 4, 1910. Serial No. 575,477.

To all whom it may concern:

Be it known that I, HEINRICH EBERLEIN, a citizen of the Empire of Germany, residing in Meissen, Saxony, Germany, have invented certain new and useful Improvements in Processes of Making Metallic Cores for Concrete Bodies, of which the following is a specification.

This invention relates to an improved process of making metallic frames or cores on the Monier system which are specially intended for cores in solid or tubular concrete bodies.

The novel feature of the process consists in making a covering lattice-frame, wrapping it around a core that is made of a helically bent wire and then connecting it with said wire core.

As compared with the process heretofore known in which a common covering is stretched over parallel frames located at certain distances from each other, the improved process has the advantage that the helical core is much lighter and considerably cheaper.

It is also known that hollow metal frames were used for reinforcing concrete bodies which frames were made in such a manner that a helically bent wire was firmly connected with an iron lattice-work, but the improved process herein described differs from this arrangement in that the ready-made covering is bent into tubular form and wrapped around a helically-wound wire core. This arrangement is capable of economical manufacture in large quantities as the process of making the entire metallic frame or core has the advantage that the tedious and time-consuming interbraiding of the longitudinal and cross members of the core is dispensed with.

In the accompanying drawings, Figure 1 represents a perspective view of the helical wire core of my improved frame, Fig. 2 is a plan-view of the lattice-work covering, Fig. 3 is a horizontal transverse section showing the covering lattice-work placed in position around the core, and Fig. 4 is a vertical transverse section showing the outer helical wire placed around the covering lattice-work and connected therewith.

Similar letters of reference indicate corresponding parts in the several figures.

According to my improved process the metal framework or core for concrete bodies is made in the following manner: First,

several rods *a* of iron or steel, the number of which corresponds to the size and circumference of the framework to be made, are arranged on a working table sidewise of each other and held in position thereon by means of staples, pins and the like, not only as regards their distance from each other, but also in regard to the relative position toward each other. When for instance the metallic core for a cylindrical concrete body is to be made, the individual longitudinal rods are placed equidistantly from and parallel with each other; while for a conical body, the rods are equidistantly from each other at one end, but placed in converging position toward each other. The longitudinal rods *a* are next connected by a plurality of parallel iron wires *b* which are located closely together, and arranged preferably in pairs, in such a manner that an open-meshed lattice-work is obtained. On a mold which corresponds in shape with the wire-reinforcing frame to be made and the cross-section of which can be adjusted in any approved manner, is then wound an iron wire *d* in helical form, which is fastened at both ends to the mold. Around this wire-core is placed the lattice-work in the form of tube and tightly connected therewith by means of tying wires around the same, so that the strong longitudinal rods of the lattice-work are located in the direction of the axis of the helical core and inclose the same uniformly around its circumference. After the lattice-work *a b* is thus placed in position, a helical wire *c* is wound around the tubular lattice-work but in a direction opposite to that of the interior wire-core, and tied thereto by means of binding wire. The mold is then reduced in cross-section and withdrawn from the ribbed frame or core, which is then tied carefully at the intersections of the longitudinal and cross wires with wire, so that finally a rigidly connected metal framework and core is obtained which, when embedded in with concrete, forms therewith a structure of great strength.

In place of the lattice-work described, the covering for the interior wire-core can also be made of suitable wire netting, perforated or imperforate sheet metal, expanded sheet metal plates and the like.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A metallic frame or core for concrete

structure, comprising an inner helically wound wire-core of widely spaced coils, a lattice-work covering wrapped tightly around said wire-core and consisting of a plurality
5 of strong longitudinal rods and a plurality of transverse wires connecting said rods, fastening wires between said wire-core and covering, a second outer helical wire-core of widely spaced coils wound tightly around
10 the lattice-work covering, in a direction op-

posite to that of the inner core, and fastening wires tying said covering and cores together at their points of intersection.

In testimony, that I claim the foregoing as my invention, I have signed my name in 15 presence of two subscribing witnesses.

HEINRICH EBERLEIN.

Witnesses:

OTTO WOLFF,

RICHARD IFFERT.