

J. ROGERS.
METHOD OF MANUFACTURING CONCRETE ARTICLES.
APPLICATION FILED MAY 20, 1905.

945,607.

Patented Jan. 4, 1910.
2 SHEETS—SHEET 1.

Fig. 1.

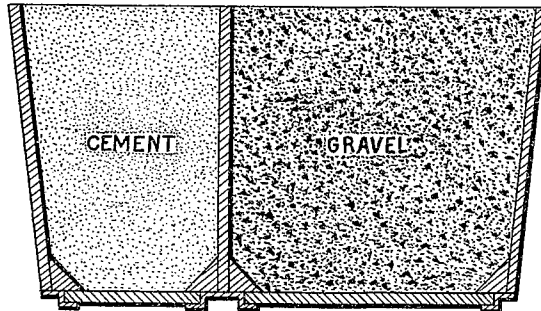


Fig. 2.

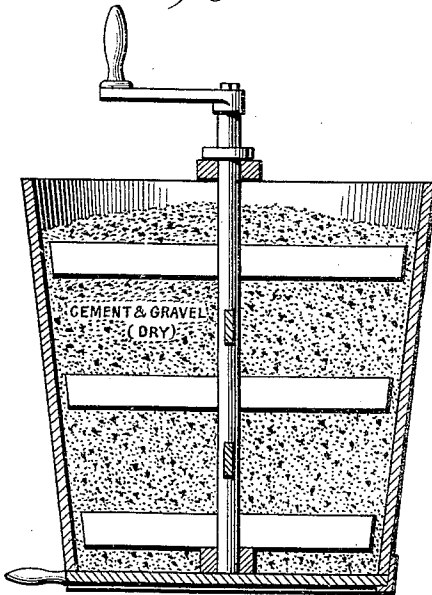
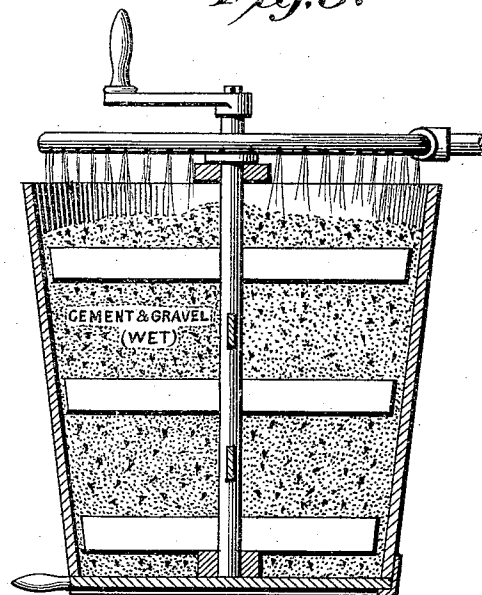


Fig. 3.



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Fig. 4.

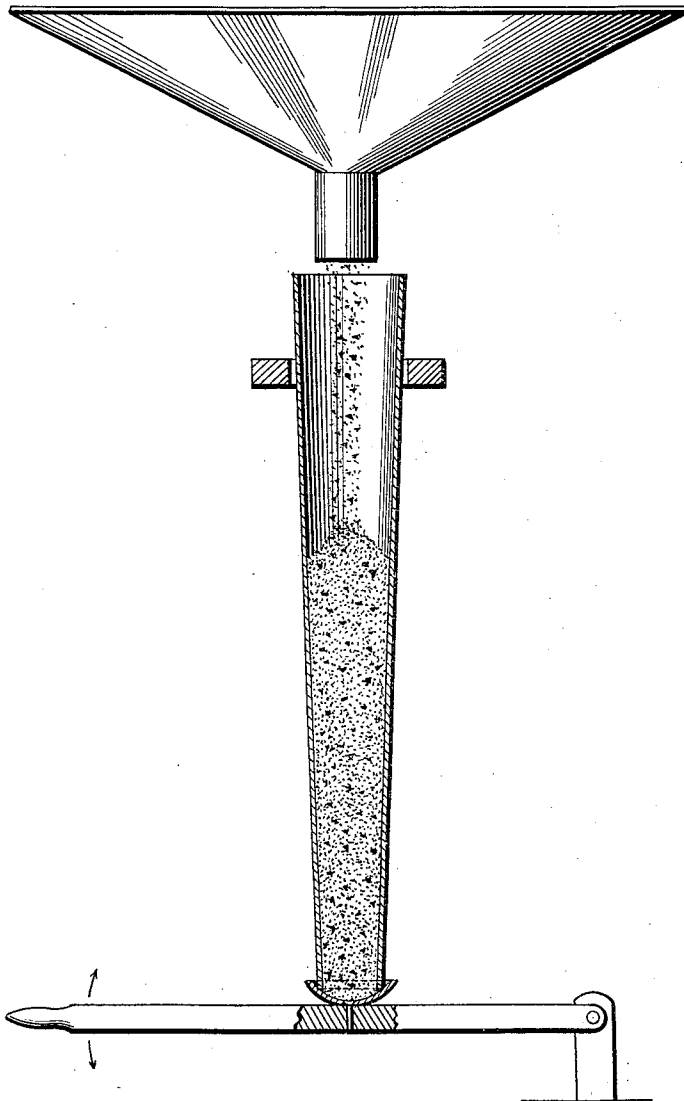
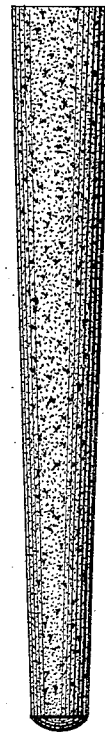


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN ROGERS, OF PLATTEVILLE, WISCONSIN.

METHOD OF MANUFACTURING CONCRETE ARTICLES.

945,607.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed May 20, 1905. Serial No. 261,471.

To all whom it may concern:

Be it known that I, JOHN ROGERS, a citizen of the United States, residing at Platteville, in the county of Grant and State of Wisconsin, have invented a new and useful Method of Manufacturing Concrete Articles, of which the following is a specification.

The present invention relates more particularly to a method of manufacturing cement or concrete fence posts, though not necessarily limited thereto.

It is a well known fact that, when cement, gravel and water are mixed, air bubbles are formed which permeate the whole mixture and which must be removed, as otherwise blow-holes or air spaces will be formed in the finished articles. Likewise, it is desirable to eliminate all surplus water before the material has set, in order to provide a compact non-porous structure. This has heretofore been attempted by mixing the material, introducing the same into a mold, and then placing the material under great pressure. This method, however, is open to many objections and has proved impracticable.

The present invention has for its object the provision of a novel and simple method whereby articles can be cheaply and expeditiously made and wherein the danger of porous defective castings is practically obviated.

The different steps of the method are illustrated in the accompanying drawings, wherein:

Figure 1 is a sectional view through a measure. Fig. 2 shows the material when mixed in dry form. Fig. 3 illustrates the material when subjected to a combined wetting and stirring action. Fig. 4 illustrates the filling and actuation of the mold. Fig. 5 shows the finished article.

In carrying out the method, the gravel and cement are first measured, as indicated in Fig. 1. These materials in proper proportions are then placed together and thoroughly mixed and commingled in a dry state, as illustrated in Fig. 2. Water is thereupon slowly sprinkled upon the mixture, and, at the same time, the materials are thoroughly stirred while the sprinkling action is taking place, as illustrated in Fig. 3. At this point air bubbles will be formed upon the application of the water, but as the material is thoroughly stirred during such application, these air bubbles have sufficient

opportunity to escape. The stirring action is continued until the effervescence is entirely over. The material is then deposited by gravity centrally into a vertically disposed downwardly tapered mold, as illustrated in Fig. 4, and during the filling action of said mold, the same is given a vertically reciprocatory shaking or joggling motion in the path of movement of the falling material, so that the material as rapidly as deposited will be spread toward the sides and solidly compacted in the mold and all air and surplus water driven therefrom and raised to the top, which water will run off when the mold is filled. As an excessive amount of water is used in the mixing operation for the purpose of permitting all the particles of the material to be acted on to free the air bubbles, it is highly desirable to get rid of this excess water during the molding operation so as to materially lessen the drying period of the post after the mold is removed, and this elimination of the water is accomplished in the manner just described. The mold is then removed and the post set aside to cure, said post being smooth and compact, non-porous, and without blow-holes or similar defects. In this method, it will be observed that no heavy pressure is necessary upon the material in the mold and the desired results appear to be obtained by the preliminary mixing of the material in a dry state, with the later moistening action, and the elimination of the air bubbles and water at different steps in the process or method.

The method above described may be performed by suitable machinery, and an example thereof will be found in a co-pending application, Serial No. 261,472, filed May 20, 1905, said application illustrating one type of machine, particularly intended for carrying out this method.

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

The herein described method of making a fence post, which consists in stirring together previously measured quantities of cement and sand while the same are in a dry state, then slowly sprinkling water on said mixture, and simultaneously with the sprinkling, stirring the same by a rotary action to thoroughly commingle the water therewith, and permit the escape of air bubbles created by the application of the water,

then stopping the sprinkling of the water
after the quantity is sufficient to wet sub-
stantially all the particles of the material,
but continuing the rotary stirring action
5 after the addition of the water has ceased
and until effervescence is entirely over, then
feeding the wet material by gravity cen-
trally into the open top of a vertically dis-
posed downwardly tapered mold, and si-
10 multaneously with the filling of the mold,
reciprocating said mold in a vertical direc-
tion in the path of movement of the falling
material to pack the material as it falls

therein, spread it from the center to the sides
of the mold whereby the settling of the mate- 15
rial will form the upper end of the molded
post flat and cause the water to rise to the top
and run off, and finally removing the post
from the mold.

In testimony, that I claim the foregoing 20
as my own, I have hereto affixed my signa-
ture in the presence of two witnesses.

JOHN ROGERS.

Witnesses:

GRACE L. KING,
A. T. ROGERS.