

No. 814,240.

PATENTED MAR. 6, 1906.

E. C. SMITH.
METHOD OF FORMING FOUNDATIONS.
APPLICATION FILED MAR. 20, 1905.

Fig. 1.

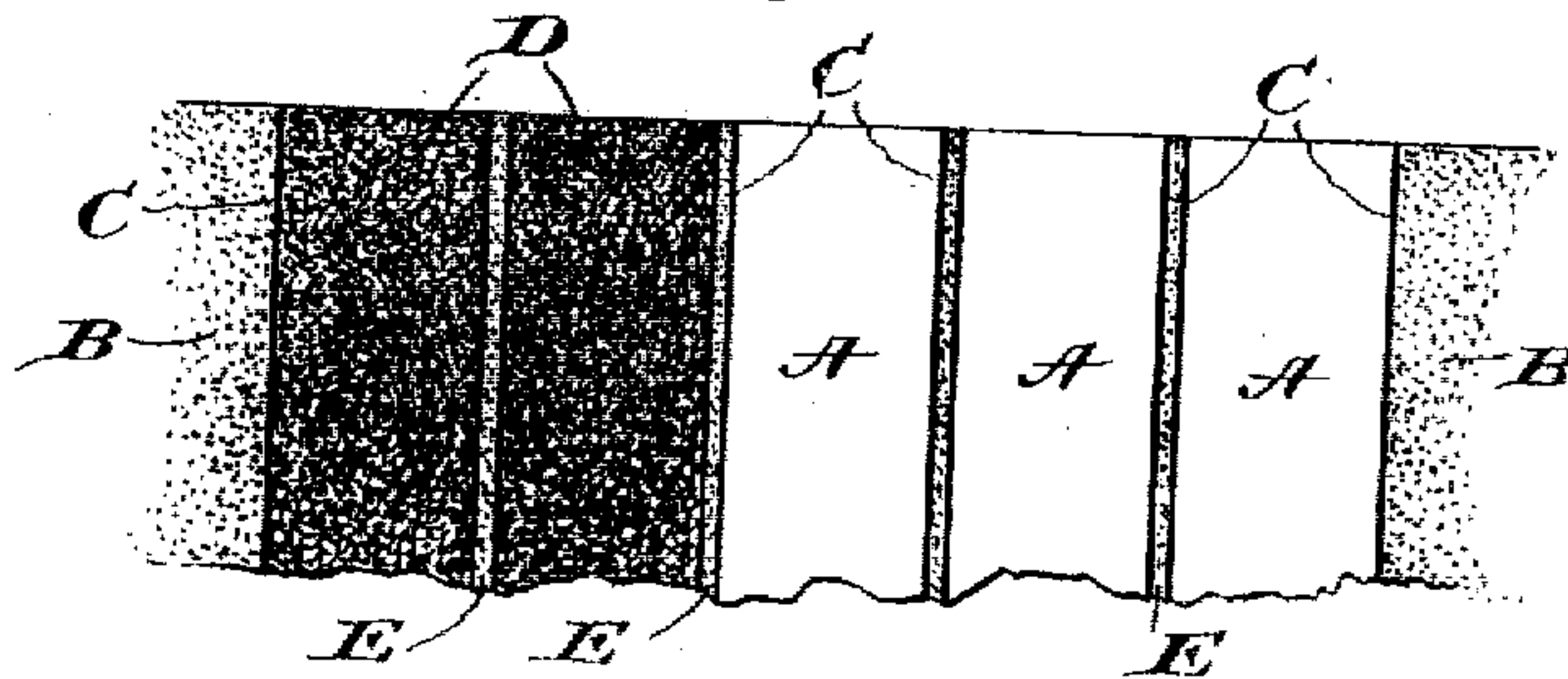
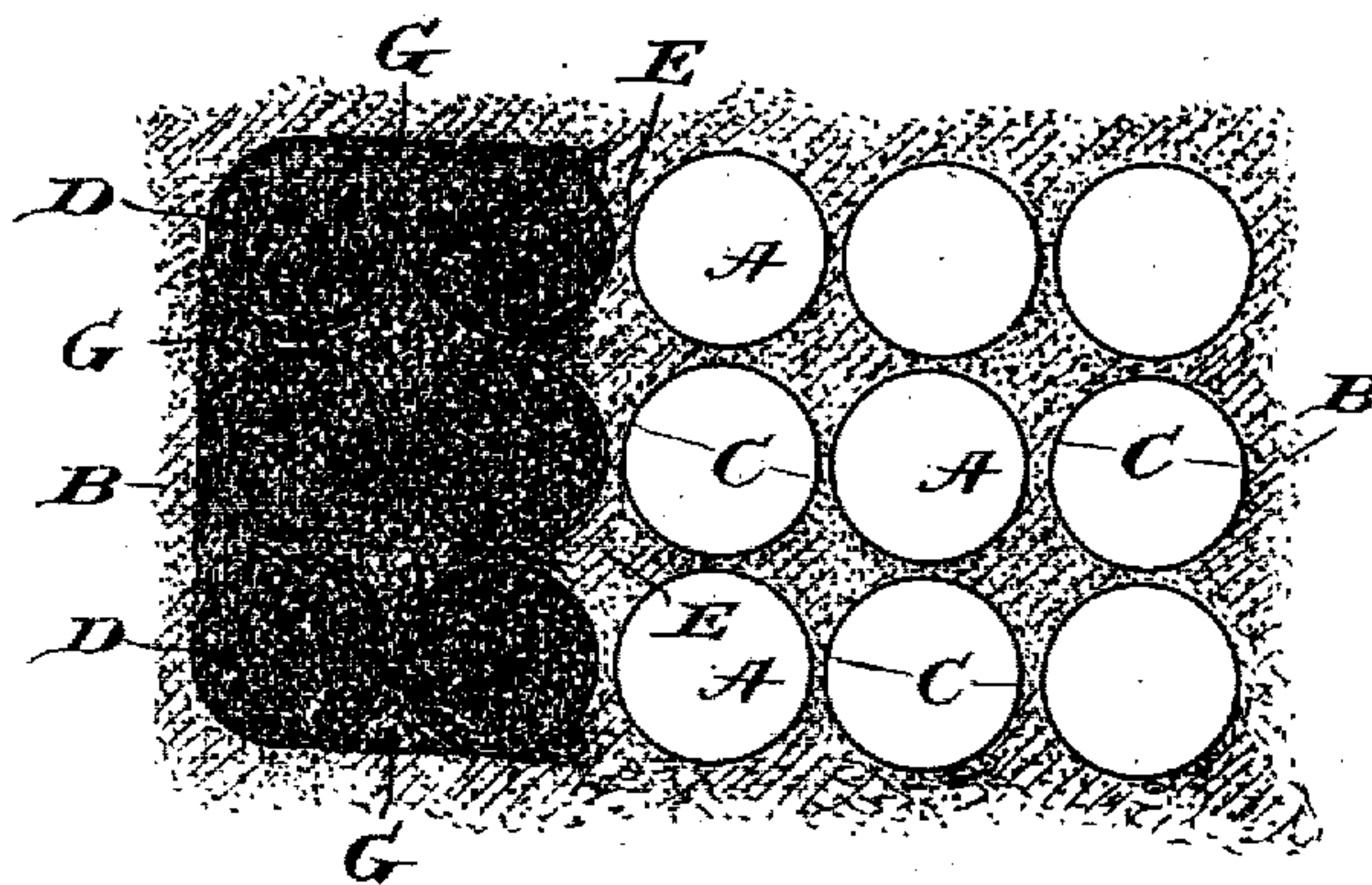


Fig. 2.



Witnesses
Jas. E. Hutchinson.
J. L. Lawlor.

Inventor
Elmer C. Smith,
by Prindle and Williams, Attorneys.

UNITED STATES PATENT OFFICE.

ELMER C. SMITH, OF COLUMBUS, NEBRASKA.

METHOD OF FORMING FOUNDATIONS.

No. 814,240.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELMER C. SMITH, of Columbus, in the county of Platte and in the State of Nebraska, have invented a certain
5 new and useful Improvement in Methods of Forming Foundations or Dams; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in
10 which—

Figure 1 is a vertical sectional view of a foundation constructed according to my method, and Fig. 2 is a plan view of the foundation illustrated in Fig. 1.

15 The object of my invention has been to provide a method of forming foundations as in water-bearing material and where it is undesirable to sink by methods heretofore used; and to such ends my invention consists in
20 the method of forming foundations or dams hereinafter specified.

In carrying my invention into practice vertical holes are formed in the material in which the foundation is to be formed, the
25 said holes being sunk in any desired manner, as by well-boring or other desirable method. I prefer to use the rotary hydraulic method of sinking the holes and prefer to use a liquid clay-mud instead of water. The mud pene-
30 trates the walls of the holes and forms a natural casing, thereby avoiding the use of a metal casing in very soft material or in quicksand. After each hole is formed it is filled with concrete or other material which will
35 set or harden. A series of columns is thus formed, as illustrated in Fig. 2, where it is desired that the foundation may be. After the concrete has "set" the earth in the spaces between and around the columns is
40 washed out by means of a water jet, so as to entirely clean the said space of earthy matter. As the said space is cleaned of earthy matter the space between each set of columns is filled with concrete, thus binding the clus-
45 ter of columns in one solid mass.

My method is suitable for forming foundations for walls, dams, bridges, &c.

It is obvious that various changes can be made in the procedure above described which will be within the scope of my inven- 50 tion, and I do not desire to be limited beyond the terms of my claims or the requirements of the prior art.

Having thus described my invention, what I claim is—

1. The method of forming foundations, consisting in forming a series of vertical molds in the location where the foundation is to be by removing the material therefrom, filling the molds thus formed with concrete, 60 the walls of the molds consisting of the natural walls formed by excavating, removing the material from between the columns thus formed, and filling the spaces formed by said latter removal with concrete. 65

2. The method of forming foundations consisting in forming a series of vertical molds by excavating in the earth of the loca- tion where the foundation is to be, the walls of said molds being formed by the natural 70 material from which the excavation is made, filling said molds with plastic material capable of hardening, removing the natural material between the columns thus formed, and filling the spaces so formed with plastic mate- 75 rial.

3. The method of forming foundations, which consists in forming a series of holes ad- jacent to each other in the location where the foundation is to be, lining the said holes with 80 clay or other strengthening material, filling the said holes with concrete, removing the natural material from between the columns so formed, and filling the spaces thus formed with concrete. 85

In testimony that I claim the foregoing I have hereunto set my hand.

ELMER C. SMITH.

Witnesses:

W. H. LEHMAN,
W. B. ROBINSON.