

G. F. DUNN.
CEMENT APPLYING MACHINE.
APPLICATION FILED JULY 16, 1903.

930,593.

Patented Aug. 10, 1909.

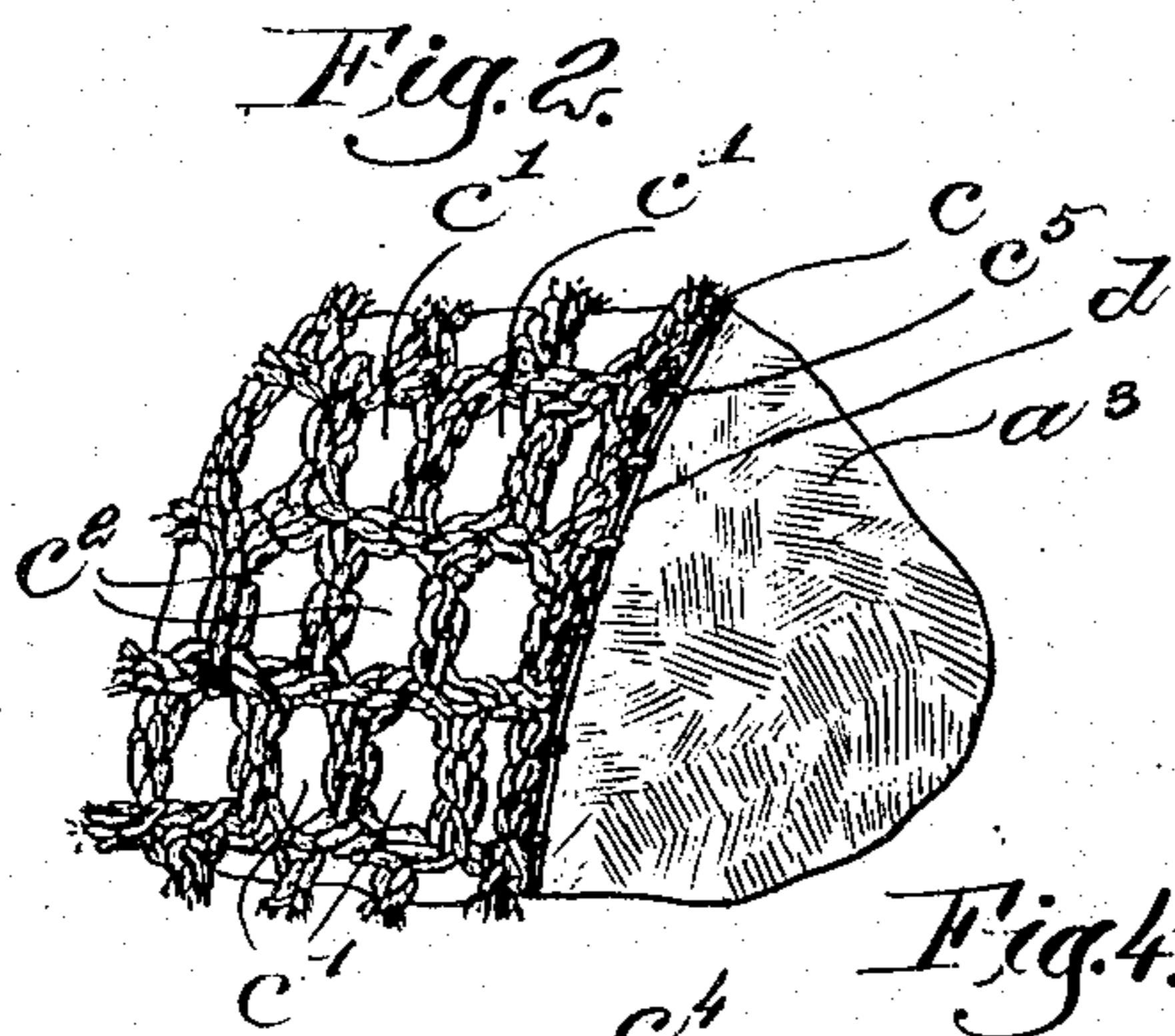
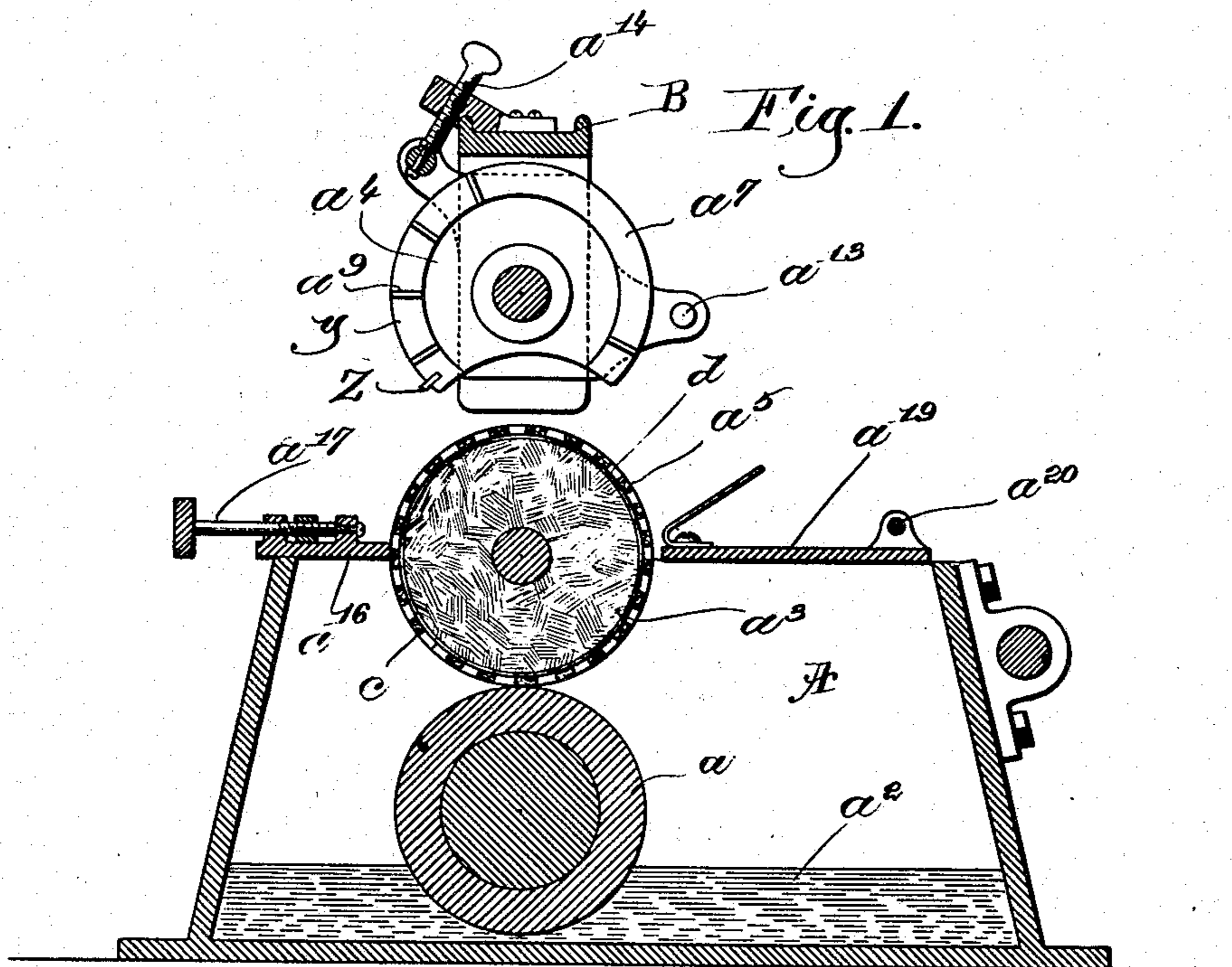
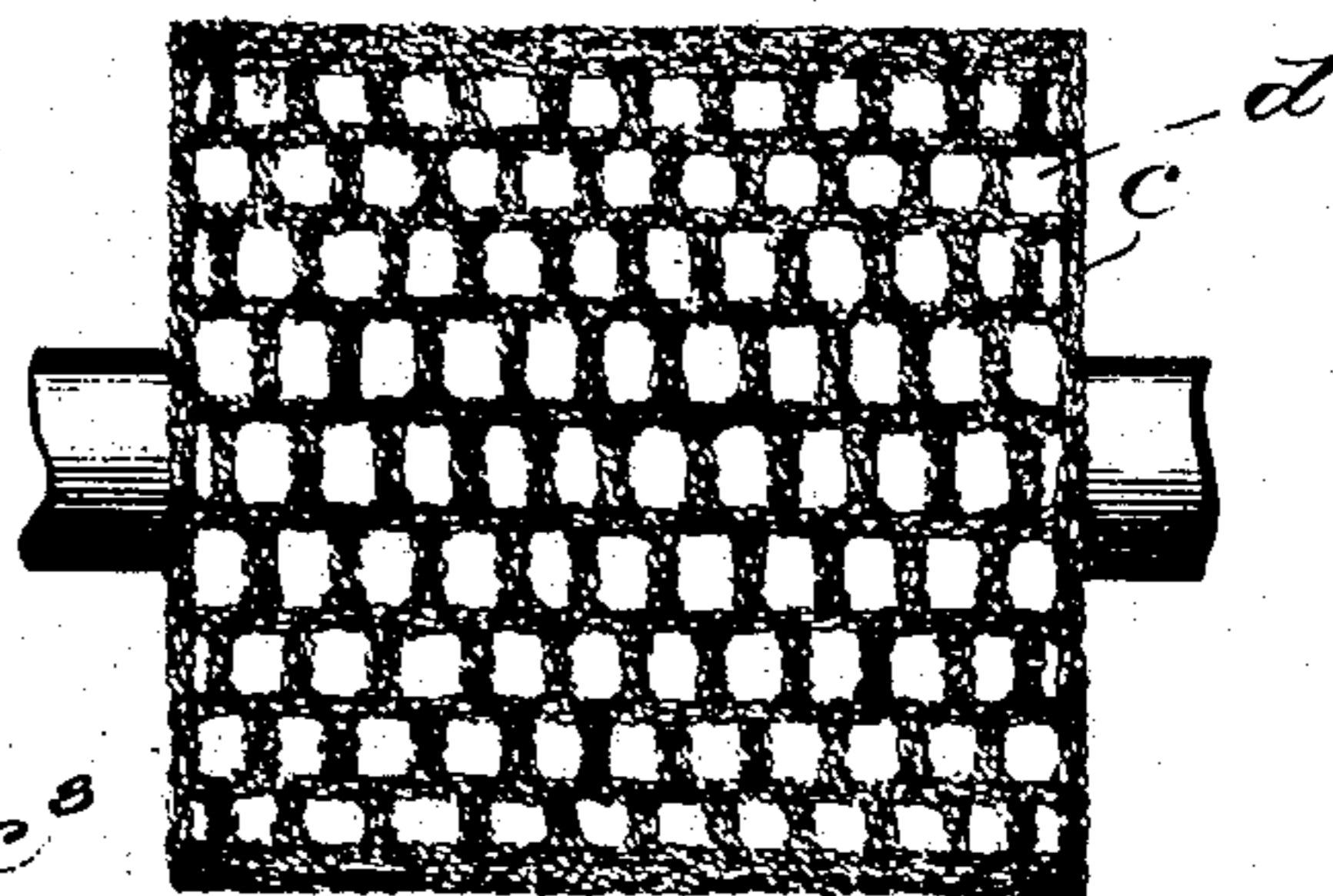


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE F. DUNN, OF BROCKTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO UNITED SHOE MACHINERY COMPANY, A CORPORATION OF NEW JERSEY.

CEMENT-APPLYING MACHINE.

No. 930,593.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed July 16, 1903. Serial No. 165,743.

To all whom it may concern:

Be it known that I, GEORGE F. DUNN, of Brockton, State of Massachusetts, have invented an Improvement in Cement-Applying Devices, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is an improvement in machines for applying cement to inner-soles and relates particularly to the machine disclosed in my Patent No. 728,793, dated May 19, 1903.

The object of my invention is to facilitate the cement applying capacity of the machine and render the roll exceedingly durable and efficient, and my invention resides mainly in providing the resilient roll, described in detail in my aforesaid patent, with a foraminous surface of tough, highly yielding character, preferably of quite appreciable depth or thickness.

My invention will be more fully set forth in the following description taken in connection with the accompanying drawings and the invention will be more particularly defined in the appended claims.

In the drawings, Figure 1 is a central vertical transverse section of a machine of the general construction and arrangement of parts set forth in my patent, provided with my present improvements. Fig. 2 is a perspective view of a fragmentary portion of the new roll. Fig. 3 shows the roll in front elevation, the shaft being broken away. Fig. 4 illustrates in top plan the effect of my improvement in applying cement to an inner-sole.

The general features of construction and operation of my machine will be understood by reference to my before mentioned patent, the corresponding parts being similarly lettered herein and therefore not further described.

The roll a^3 which is preferably of highly resilient material as described in said patent is supplied with cement a^2 by a distributing roll a and the inner-sole is fed thereto by the superimposed feed roll a^4 , a projecting abutment or stop z being provided, against which the front end of the inner-sole may be placed in order to bring it exactly in position.

In accordance with this invention the re-

silient cement applying roll has a tough, flexible peripheral surface in which are cement carrying pockets. In the illustrated embodiment of the invention the resilient periphery of the roll a^3 is provided with a jacket or covering c capable of yielding freely in all directions, according to the movement of the contained resilient substance which comprises the roll proper. Preferably this covering or outer surface c is made of tough, durable material, which will stand a great deal of wear and use without appreciable permanent compression and is practically indestructible under ordinary conditions of use, while at the same time permitting the cement applying surface of the roll to yield in all directions required for applying the cement as desired. While this covering may be made of various materials, I have found that the above character and results may be obtained to best advantage by having a knitted, fibrous and absorbent jacket prepared as shown in Figs. 2 and 3, this jacket or covering being made of strong cord or thread, coarsely knitted so as to give it the required depth or thickness, strength, permanence, and binding structure.

The covering is made in open-work fashion and preferably it has a definite arrangement of openings or pockets c' , c^2 arranged in similar longitudinal series, said series being alternating or staggered with relation to each other so that the openings or pockets c' come out of circumferential alinement with the openings or pockets c^2 . The result of this construction is that, in use, the cement is deposited regularly in daubs, as it were, as indicated at c^3 , Fig. 4, although the entire surface c^4 receives some cement.

Preferably the open-work jacket is mounted on a flexible base or retainer of thin yielding, coarse-mesh, or non-foraminous material, such as burlap, cheese-cloth, leather, netting, etc., as indicated at d , which, if desired, may be secured to the jacket at intervals, as indicated at c^5 , this base serving as a protector for retaining and preserving the resilient material of the roll without interfering with its free yielding efficiency.

The combination of the resilient substance of the roll itself with the readily flexing covering or outer surface described, gives uniformity of action and long life to the roll,

so that very little attention is required on the part of the operator; moreover the pockets c' , c'' serve to carry an even and copious supply of cement.

5 In use, all that the operator has to do is simply to see that he places the end of the inner-sole against the stop z at the proper time, the machine being perfectly automatic otherwise; and, by reason of my present im-
10 provement, no further adjustment will, as a rule, be required, inasmuch as the receiving surface of the roll a' cannot wear down or become displaced and the mesh-like cement-carrying surface thereof insures that a proper
15 and uniform delivery and transfer of cement will always take place.

If the peripheral pocketed surface of the roll is formed by a jacket such as that described above, the jacket will preferably be
20 removable so that if it, or the retainer c in case the retainer is used, becomes worn or injured they may be replaced by new coverings upon the same resilient roll body.

Further advantages, and other equivalent
25 embodiments, of my invention will occur to those skilled in the art, in view of the foregoing explanation thereof; and as already intimated, I do not intend to restrict myself in all respects to the details herein presented, as
30 various changes in material and construction may be resorted to without departing from the spirit and scope of my invention. Also I wish it understood that while my machine is particularly adapted to inner-soles, it may
35 be used for applying cement to outer-soles, taps and the like, and that accordingly I use the word "inner-sole" in the claims and elsewhere, without intending to restrict the machine in any way thereto.

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

1. In a machine of the kind described, a cement-applying roll having a resilient body
45 portion provided on its outside with a peripheral surface of durable, flexible material full of holes.

2. In a machine of the kind described, a cement tank, a roll for applying the cement
50 therefrom to an inner-sole, said roll having a soft yielding body and a tough, flexible peripheral surface, having external cement carrying pockets.

3. In a machine of the kind described, a
55 cement tank, and a resilient roll for applying cement from said tank to an inner-sole, said roll being provided with a removable outer layer of externally rough material constructed to hold the cement in its external
60 cavities and part with said cement upon contact with the inner-sole.

4. In a machine of the kind described, a cement tank, a roll for applying the cement therefrom to an inner-sole, said roll having a

soft, yielding body, and a separate covering 65 surface of open-work construction and appreciable depth affording pockets for conveying and delivering the cement.

5. In a machine of the kind described, a cement tank, a roll for applying the cement 70 therefrom to an inner-sole, said roll having a resilient body and a peripheral surface of fibrous material and open-work formation.

6. In a machine of the kind described, a cement tank, a highly resilient roll for ap- 75 plying the cement therefrom to an inner-sole, said roll being covered peripherally with a knitted jacket.

7. In a machine of the kind described, a cement tank, a roll for applying the cement 80 therefrom to an inner-sole, said roll being covered peripherally with a removable knitted jacket, having successive series of pockets formed in the knitted construction of the cover. 85

8. In a machine of the kind described, a cement tank, a roll for applying the cement therefrom to an inner-sole, said roll being covered peripherally with a removable jacket, having successive series of pockets formed 90 therein, circumferentially out of line with each other.

9. In a machine of the kind described, a cement-applying roll, having a roll body of resilient material and formed on its periph- 95 eral surface with pockets scattered thickly thereover.

10. In a machine of the kind described, a cement-applying roll, having a resilient body, a flexible retainer of durable material on the 100 periphery of the roll, and cement-carrying pockets cooperating with said resilient body to deliver cement to the article treated.

11. In a machine of the kind described, a cement tank, a resilient roll for applying the 105 cement therefrom to an inner-sole, said roll having in its periphery successive series of pockets which are circumferentially out of line with each other.

12. In a machine of the kind described, a 110 cement-applying roll, and feeding mechanism for feeding inner-soles thereto, said feeding mechanism being provided with a projecting stop, against which the end of the inner-sole may be positioned for feeding, and said roll 115 being yielding to accommodate itself to said projecting stop and said inner-sole.

13. In a machine of the kind described, a cement-applying device, feeding mechanism for feeding inner-soles thereto, including a 120 rotary device having a concentric work-engaging and positioning feeder to press the work against said cement-applying device, and a projecting stop carried by said feeding mechanism against which the end of the 125 inner-sole may be placed for feeding.

14. In a machine of the kind described, a cement-applying roll, and feeding mechanism

for feeding inner-soles thereto, said feeding mechanism being provided with a projecting stop against which the end of the inner-sole may be positioned for feeding and said roll
5 being constructed and arranged to accommodate itself to said projecting stop.

In testimony whereof, I have signed my

name to this specification, in the presence of two subscribing witnesses.

GEORGE F. DUNN.

Witnesses:

GEO. H. MAXWELL,
J. ETHEL TARR.