

J. H. McNEIL.
 LINING CEMENTING MACHINE.
 APPLICATION FILED JAN. 7, 1918.

1,260,928.

Patented Mar. 26, 1918.

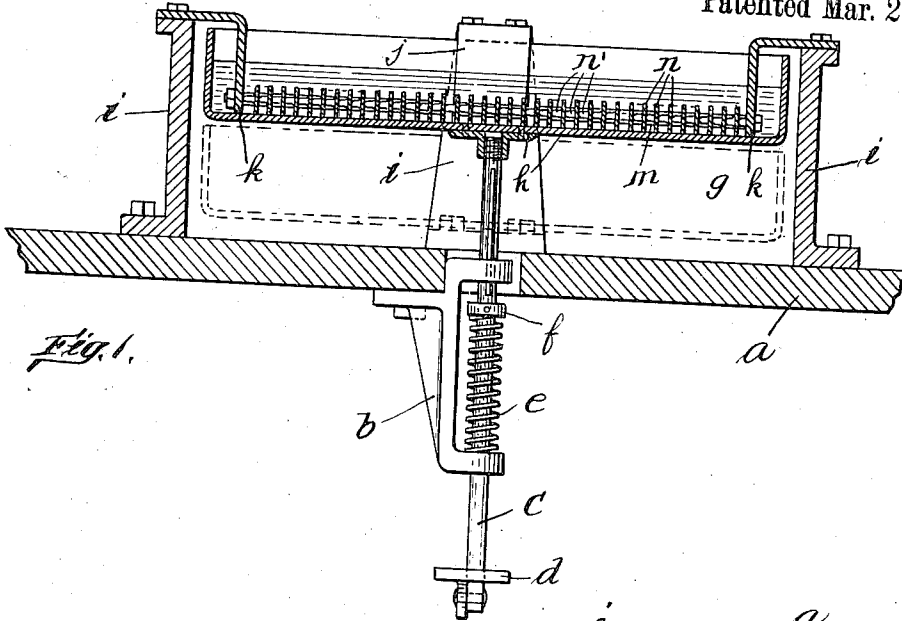


Fig. 1.

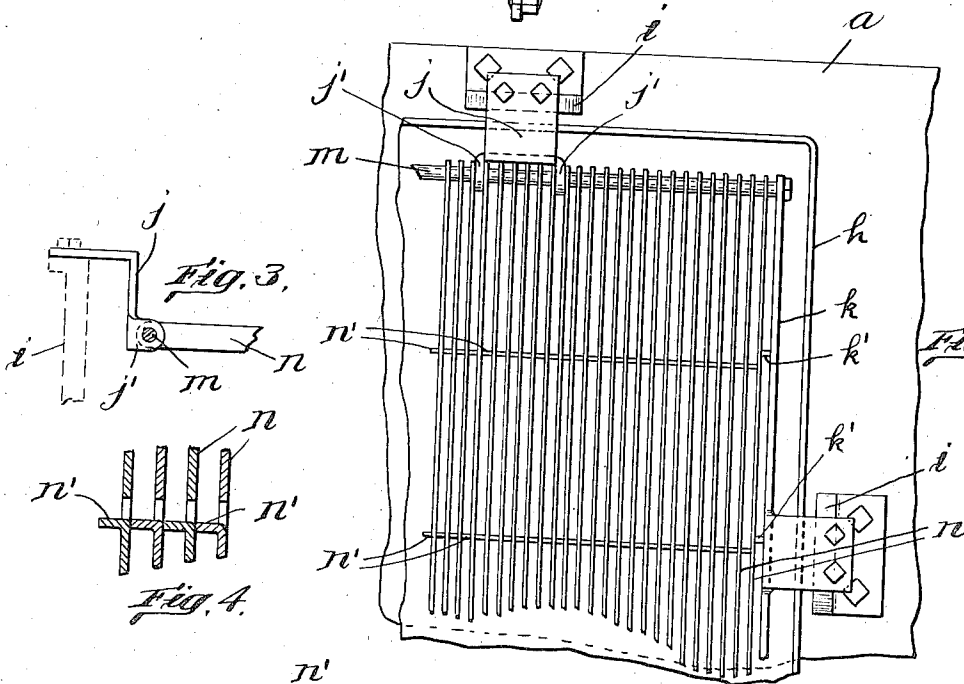


Fig. 3.

Fig. 2.

Fig. 4.

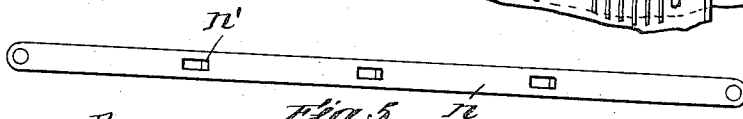


Fig. 5.



Fig. 6.

Inventor,
 Joseph H. McNeil,
 by Louis H. Harrison
 atty

UNITED STATES PATENT OFFICE.

JOSEPH H. McNEIL, OF SAUGUS, MASSACHUSETTS.

LINING-CEMENTING MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH H. McNEIL, a citizen of the United States, and a resident of Saugus, county of Essex, and State of Massachusetts, have invented an Improvement in Lining-Cementing Machines, of which the following is a specification.

This invention relates to certain improvements in machines for cementing cloth linings or doublers for shoe uppers and more particularly to machines of the type employing a cementing grid composed of thin bars, to the edges of which the material to be cemented, is applied.

15 Prior to my invention the machines of this type, which have been generally employed, are constructed so that the grid may be raised and lowered, while in a horizontal position, so that it is alternately lifted above the surface of a body of liquid cement and then submerged therein. I have found this method objectionable for the reason that, in pressing the work on the grid, there is a tendency to tilt the same, as the pressure is liable not to be applied in the middle, and, as the grid has usually been supported at the middle of each end, the mechanism is not constructed to resist said tilting action to the best advantage, or not supported as rigidly as may be desired.

When cement applying bars of very thin material are employed, so that they are easily bent, it is practically necessary to provide some means to hold them separated to the desired extent, and one of the chief objections to the means, which have previously been employed for this purpose, is the expenses incident to the manufacture of such means.

40 The objects of my invention are to provide a form of cementing machines of the above described type, in which the cementing grid will be rigidly supported and held against unequally applied pressure, and in which a simple and effective means for holding the cementing bars in suitably spaced relation may be provided without substantial expense.

I accomplish these objects in the manner hereinafter described and shown in the accompanying drawing, in which an embodiment of my invention is shown and in which:—

Figure 1 is a vertical longitudinal sectional view of a cementing machine embodying my invention.

Fig. 2 is a plan view of a portion of the grid and its supporting means.

Fig. 3 is a detail view of one of the grid supports.

Fig. 4 is a detail sectional view, on an enlarged scale, of a portion of the bars.

Figs. 5 and 6 are detail views of one of the bars.

According to my invention, the machine is mounted on a suitable table or support *a*, to the under side of which a bracket *b*, is secured and in which a vertical rod *c* is mounted, said rod being adapted to be moved reciprocally therein, by means of a treadle *d* attached to its lower end, and to be sustained in raised position by a spring *e*, which encircles the rod and is arranged between an arm of the bracket and a collar *f* on the rod. A receptacle or pan *g*, for containing liquid cement, is mounted on a base flange *h* secured on the upper end of the rod *c*, said pan being of square, or rectangular form and of convenient depth.

An upright support *i* is mounted on said table adjacent each end and the rear side of the pan *g* and an angular shaped bracket *j* is secured on the upper end of each support in position to extend over the edge of the pan and to depend vertically therein. The end brackets at the ends of the pan are each rigidly connected to a rigid bar *k*, from one to the other of which a pair of rods *m* extend, and a series of thin flat bars *n* are arranged on said rods in parallelism, said rods passing through said bars adjacent their ends and said bars being spaced apart by washers placed therebetween on the rods, the whole construction being clamped together by nuts on the ends of said rods, so that a rigid grid is produced, which is suspended by said brackets in the pan or receptacle *g* and out of contact with the sides of the latter. The bracket *j* at the rear of the pan, is connected to the rearmost side rod *m* in any convenient manner, as by providing ears *j'* thereon, through which the rod is passed and which serve as spacing washers. The whole grid is thus rigidly supported at three points in a horizontal position, the upper edges of its bars being held in the same horizontal plane.

Each cementing bar *n* is provided with several, preferably three in practice, projecting tongues or lugs *n'*, which are cut therefrom and extend at right angles thereto, said tongues being of a length equal to

the space desired between the bars, or the width of the spacing washers on the side rods *m*, so that when the bars are placed in position on the side rods, the ends of the tongues of each bar will bear against the adjacent side of the bar next thereto and prevent any one bar from being sprung or bent into closer proximity to the next adjacent bar, than the length of said tongue.

The end bars *k*, which constitute the end portions of the grid frame, are preferably provided on their innermost sides, with small projections *k'*, corresponding in length and location to the tongues *n'*, which are adapted to engage the adjacent bar *n* and hold the same against lateral springing movement. While it would only be necessary to have these lugs formed on one of the end frame bars *k*, as these parts are cast, it is more convenient to have them cast alike, so that, to avoid interference with the tongues on the adjacent bar, the projections *k* are located in positions slightly to one side of the lines of the tongues. The upper or cement applying edge of the bars *n* thus will always be held in predetermined spaced relation and in approximate parallelism throughout the length thereof. The tongues *n* may be readily formed by a dieing-out operation, and may be formed at the same time the holes are punched in the ends of the bars to receive the rods *m*, so that, aside from the expense for making the die, the tongues may be formed without expense. It will be apparent that the exact form and number of said tongues, lugs or projections is not material to my invention.

In practice, the pan *g* is normally supported by the spring *e* so that its bottom is forced against the under side of the grid, in which position, when the pan is partly filled with liquid cement, the grid bars will be entirely submerged, as shown in Fig. 1. To operate the machine, the operator merely depresses the treadle and draws down the rod *c* against the spring action, so that the pan is lowered until the liquid level therein is below the plane of the upper edges of the bars, which will retain a certain portion of the cement, and which, when the work is

laid thereon, will apply cement thereto in the usual manner.

As the grid is firmly supported on three sides, it will be rigidly held against unequal pressure which is likely to be applied thereto, and, as the grid is always held at the same level, the work thereon may be rapidly performed. The tongues or projections on the bars, which hold their upper edges in the desired spaced relation, do not substantially interfere with the free flow of the cement through the grid as the receptacle is raised and lowered.

I claim:—

1. A cementing machine comprising a support, a horizontally disposed, cement applying grid, sustaining means for said grid depending from said support, a receptacle for liquid cement arranged to inclose said grid and means to raise and lower said receptacle to raise and lower the level of the liquid in said receptacle above and below the cement applying surface of the grid.

2. A cementing machine comprising a support, a horizontally disposed grid having a cement applying face on its upper side, vertically depending sustaining means for said grid mounted on said support, a receptacle for liquid cement mounted beneath said grid in position to inclose the same, means normally acting to sustain said receptacle in position to cause submergence of the grid in the liquid contained therein, and manually controlled means to lower said receptacle to a position at which the liquid level therein is below the level of the face of said grid.

3. A cementing machine comprising a grid composed of a series of flat bars arranged edgewise in parallelism, each of said bars having a transversely extending projection formed thereon and arranged to engage the adjacent side of the next adjacent bar, to hold said bars in predetermined spaced relation.

In testimony whereof, I have signed my name to this specification.

JOSEPH H. McNEIL.

Witnesses:

L. H. HARRIMAN.

H. B. DAVIS.