

J. & D. PENDERGAST.

CONE OR FORMER FOR FELT HARDENING MACHINES.

No. 399,072.

Patented Mar. 5, 1889.

Fig. 1.

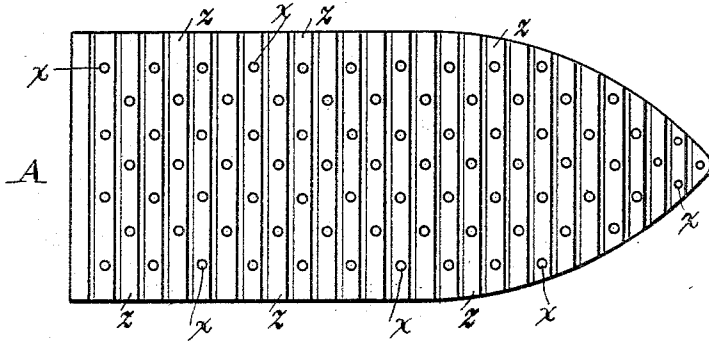
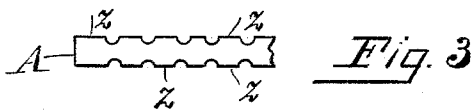
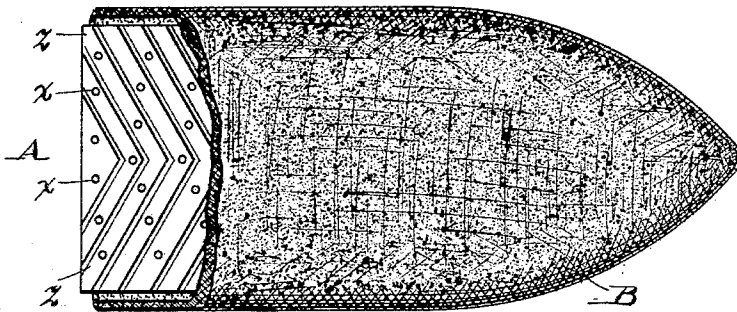


Fig. 2.



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INVENTORS:
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(No Model.)

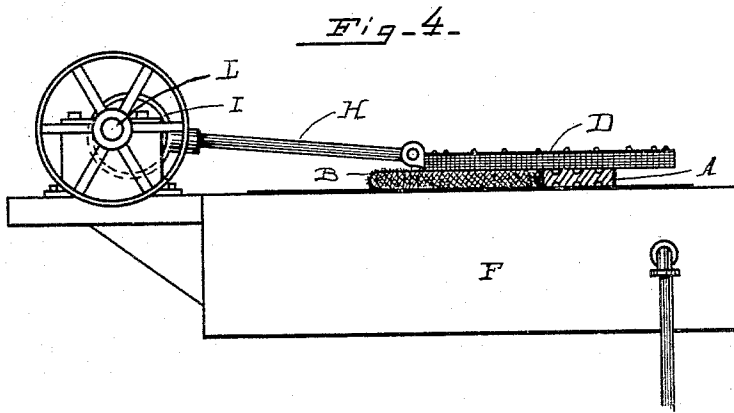
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOHN PENDERGAST, OF BOSTON, AND DANIEL PENDERGAST, OF MERRIMAC,
MASSACHUSETTS.

CONE OR FORMER FOR FELT-HARDENING MACHINES.

SPECIFICATION forming part of Letters Patent No. 399,072, dated March 5, 1889.

Application filed November 17, 1888. Serial No. 291,094. (No model.)

To all whom it may concern:

Be it known that we, JOHN PENDERGAST, of Boston, in the county of Suffolk, State of Massachusetts, and DANIEL PENDERGAST, of Merrimac, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Cones or Formers for Felt-Hardening Machines, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of the former detached; Fig. 2, a like view showing the former in use in a bat; Fig. 3, an edge elevation illustrating certain details of construction, and Fig. 4 an elevation showing the device in use upon the steam-table of a hardening-machine.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

Our invention relates especially to that class of formers which are employed in hardening felt goods, as boots, shoes, hats, &c.; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a more effective and otherwise desirable device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the former considered as a whole, and B the bat.

The former, as illustrated in the drawings, is cone-shaped in side elevation, but may be constructed of any shape suitable for the character of the goods to be formed thereon and of any suitable material.

The body of the former is foraminous or provided with holes *x*, to permit the passage of steam during the process of hardening.

The faces of the former are provided with ribs or corrugations *z*, which may be arranged transversely, as shown in Fig. 1, or diagonally, as shown in Fig. 2, or in any other suitable manner. The corrugations on one of the faces may, however, be omitted, if desired.

In the use of our improvement the bat B is formed or folded onto the former A by hand in the usual way, after which the former is disposed on the steam-table F of the hardening-machine (see Fig. 4) beneath the pad D, which is reciprocated by the pitman-rod H, actuated by an eccentric, I, on the shaft L in the usual manner. The former is turned on the table by hand and the bat manipulated as in ordinary machines of this character until properly hardened. The felt composing the bat is thus pressed into the grooves between the ribs or corrugations *z*, thereby preventing it from slipping on the former and rendering the process of hardening much more effective.

The perforations *x*, by allowing the steam to pass through the former, permit it to act much more thoroughly on the bat.

Having thus explained our invention, what we claim is—

1. As an improved article of manufacture, a former for felt goods, comprising a foraminous body provided with ribs or corrugations on one or both of its faces, substantially as set forth.

2. The former A, provided with perforations *x* and corrugations *z*, substantially as and for the purpose described.

JOHN PENDERGAST.
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Witnesses:

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