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TEXTILE IRONING APPARATUS

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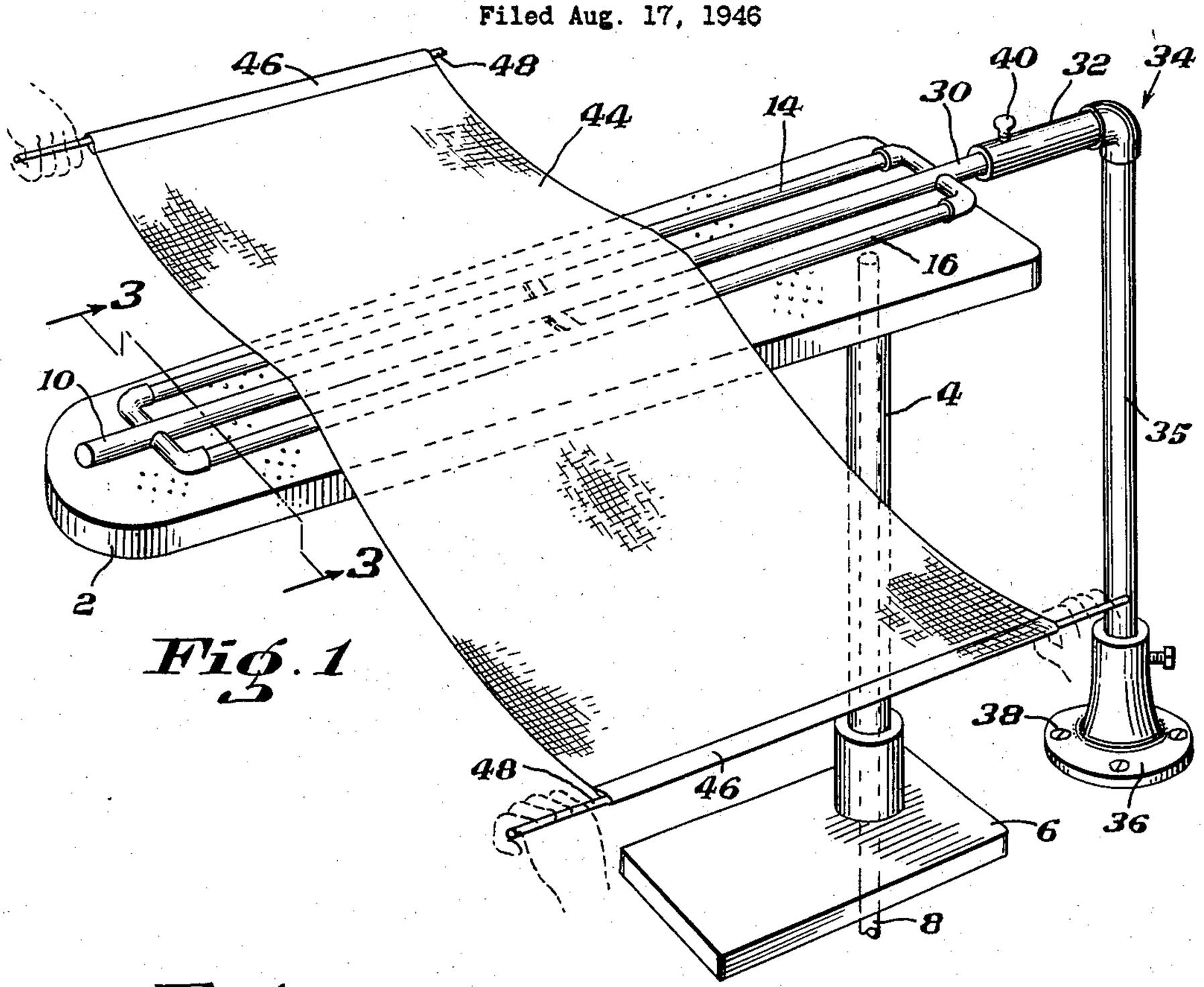


Fig. 1

Fig. 2

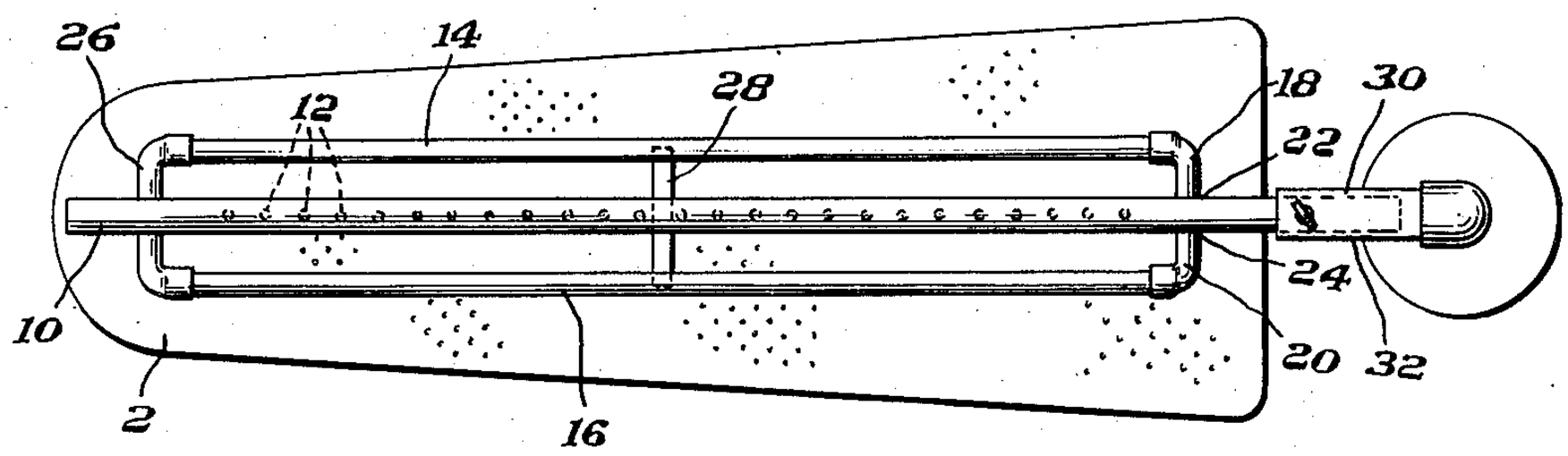
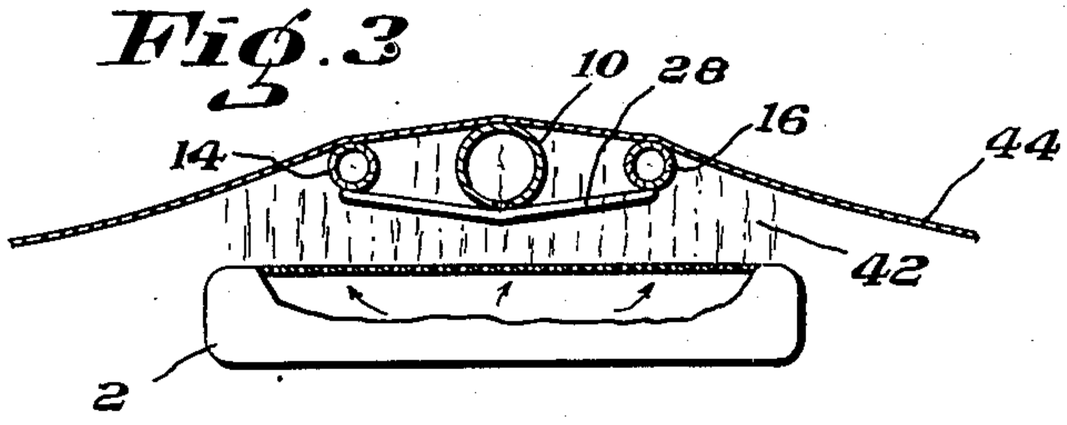


Fig. 3



INVENTOR.
Agop Berberian
BY Ever Y. Lebates
ATTORNEY

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TEXTILE IRONING APPARATUS

Agop Berberian, Arlington, Mass.

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3 Claims. (Cl. 68—6)

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The present invention relates to a machine for pressing or ironing textile materials and is more particularly concerned with an accessory which may be used with the conventional steam board or the like for ironing or pressing textile materials such as window curtains, and similar articles.

In dry cleaning establishments which handle window curtains and similar articles it is necessary to subject the curtains to an ironing or pressing operation after they have been washed or dry cleaned. These establishments customarily use for this purpose a machine known in the trade as a steam board. The steam board comprises a relatively flat table supported in a horizontal position at waist level and provided with means for admitting steam to the inside of the board and permitting it to escape at its upper side, as through a cloth covering extending over the entire upper surface of the steam board. In removing wrinkles from window curtains and the like, it has been the practice for the operator to place a part of the curtain on the board and allow it to remain there for a sufficient time to permit the textile material to assume a flat condition under the influence of the steam. The curtain must then be moved by hand to place another part of its area on the board for similar treatment. The operation thus involves a step-by-step procedure involving treatment of successive relatively small areas of the curtain and is consequently time consuming.

The present invention provides an apparatus which permits textile articles such as curtains to be expeditiously smoothed, ironed or pressed, following dry cleaning or washing, by means of a simple continuous operation and at low cost. At the same time the quality of the finish imparted to the article is as good as or better than that which is produced by the conventional procedure.

In accordance with the invention, the accessory comprises a series of parallel rods which are mounted slightly above the upper surface of the steam board so that they lie generally in a horizontal plane parallel to the board. Some or all of the rods may be provided with apertures in their lower sides to permit steam vapor rising from the board to enter the bore of the rod and thus tend to keep the outer surface of the rod at a higher temperature.

The invention will be better understood from the following detailed description of the presently preferred embodiment thereof and from the accompanying drawings of the same, wherein

Fig. 1 is a perspective view of the accessory associated with a steam board and illustrating the manner in which a window curtain may be ironed thereon;

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Fig. 2 is a plan view of the machine of Fig. 1; and

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 1.

Referring to the drawings, the steam board comprises a hollow board 2, a suitable column 4 on which the board is supported and a base 6 for supporting the column on the floor. This steam board is of conventional construction and forms no part of my invention, and, therefore, will not be described in great detail. Generally, these machines are provided on the upper surface of the board 2 with a pad or covering which may be of cloth or similar material which will permit the passage of steam vapor therethrough. Means for circulating steam within the board and releasing it over its upper surface are provided, together with a steam line, indicated at 8, for feeding steam to the board.

The accessory of the present invention comprises a central hollow tube or rod 10 which is provided with a series of small apertures 12 distributed along its length on its lower side. Supported on the center tube 10 at each side thereof is a pair of hollow tubes 14 and 16. The tubes are preferably made of metal. As may be seen more particularly in Fig. 3, the side tubes 14 and 16 are spaced somewhat from the center tube 10 and are disposed with their axes generally parallel to the axis of the tube 10 and in such a way that all three tubes lie generally in the same plane. The side tubes 14 and 16 are preferably supported from the center tube 10 primarily at the ends of the side tubes. This supporting means may take any convenient form. In the embodiment shown, it comprises a pair of tubular members 18 and 20 welded or brazed at their inner ends 22 and 24, respectively, to the outer wall of the center tube 10. The tubular members 18 and 20 are bent at right angles at their outer ends in such a way as to receive and support the ends of the tubes 14 and 16 so that these tubes will lie parallel to and in a common plane with the center tube 10. A similar mounting 26 is provided at the opposite ends of the tubes 14 and 16. To lend further support and rigidity to the system of tubes, a support 28 may be provided near the middle of the tubes at their under sides and connected to each of the tubes by soldering or brazing. Preferably the side tubes 14 and 16 are of a slightly smaller diameter than the center tube 10.

Means is provided for supporting the tubes 10, 14 and 16 in spaced relation to the board 2 and in a plane generally parallel to its upper surface. For this purpose the center tube 10 may extend for a short distance beyond the end supports 18 and 20 for engagement with a suitable standard or the like. In the arrangement illustrated, the projecting end 30 of the central tube 10 is received

in a horizontal tubular member **32** forming part of a suitable standard **34**. The standard additionally comprises a vertical member **35** and a base **36** supporting its lower end. The base **36** may be fastened to the floor by appropriate fastenings **38** or it may be made of a sufficient size and weight to support the accessory without being fastened to the floor. Conveniently, a wing nut **40** may be provided for securing the projecting end **30** of the center tube **10** in the desired adjusted position in the standard.

When the accessory is to be employed in pressing or ironing textile materials, such as curtains for example, it is placed in its mounted position shown in the drawings by inserting the projection **30** in the standard, securing it in place if desired by use of the wing nut **40**. Steam is then admitted to the steam board which causes steam vapor from the upper surface of the board to rise around and about the tubes **10**, **14** and **16** of the accessory as indicated at **42** in Fig. 3. Some of the steam vapor **42** may enter the central tube **10** through the apertures **12**, and may also enter the side tubes **14** and **16** if these are provided with apertures. At first, moisture may tend to condense on the surface of the tubes inasmuch as these are cooler than the steam. In a very short time the tubes become warm under the influence of the steam and eventually this condensation may entirely disappear. It is not necessary to wait until the condensation disappears to process the materials to be ironed on the accessory.

The manner in which the textile materials are processed will be illustrated by a description of the processing of a window curtain **44**. This curtain is provided with a hem **46** at each of its ends. The operators pass a small diameter rod or bar **48** into each hem so that it extends a short distance beyond the hem at each side. The free ends of the rods **48** are then grasped and the curtain drawn across the upper surface of the tubes in the manner illustrated in Figs. 1 and 3. A single pass of the curtain will ordinarily be sufficient to remove completely the multitude of folds and wrinkles which are present in a curtain after it has been washed or has been treated in dry cleaning solvent and extracted and dried. Preferably, the curtain **44** is kept under slight tension as it is moved across the rods although no very great tension is necessary.

I believe that the effectiveness of my apparatus can be explained in part by the presence of the atmosphere of steam rising from th steam board and permeating the curtain as it is being processed. The slight amount of moisture that may be present on the tubes as a result of condensation does not interfere with the ironing operation.

The foregoing detailed disclosure of a presently preferred embodiment of my invention is made by way of illustration and not of limitation. Modification of the constructional details may be made by those skilled in the art without departure from my invention as expressed in the appended claims. For example, a greater or lesser number of tubes than that shown may be employed, the relative diameters of the tubes may be varied and the distribution of the apertures **12** over the tube, and among the tubes, may be varied from that shown depending somewhat upon conditions, such as the nature of the material of the articles to be processed.

Having thus fully disclosed my invention, what I claim is:

1. An apparatus for use in ironing curtains which comprises an elongated hollow cylindrical center tube having a plurality of apertures in the lower side of its wall communicating with its bore, hollow cylindrical side tubes of smaller diameter than said center tube laterally spaced from and lying generally parallel to and in a common plane with said center tube on each side thereof, supports for said center and side tubes connecting the side tubes to the center tube at each end thereof and securing the tubes against rotation, and means for supplying steam to the atmosphere below said tubes adjacent said apertures, whereby said center tube is heated internally by steam entering said apertures and a damp hot atmosphere is provided about said tubes.

2. An apparatus for use in ironing curtains which comprises an elongated hollow cylindrical center tube of greater length than the cloth to be ironed, having a plurality of apertures in the lower side of its wall communicating with its bore, a hollow cylindrical side tube of smaller diameter than said center tube disposed at each side of the center tube, said side tubes being laterally spaced from and lying generally parallel to and in a common plane with said center tube, supports for said tubes connecting the side tubes to the center tube at each end thereof and securing the tubes against rotation, a support for said tubes connecting the center and side tubes at a point intermediate their ends, and means for supplying steam to the atmosphere below said tubes adjacent said apertures, whereby said center tube is heated internally by steam entering said apertures and a damp hot atmosphere is provided about said tubes.

3. An apparatus for use in ironing curtains which comprises an elongated hollow cylindrical center tube, of greater length than the cloth to be ironed, having a plurality of apertures in the lower side of its wall freely exposed to the atmosphere and communicating with its bore, a pair of hollow cylindrical tubes of smaller diameter than said center tube disposed one at each side of the center tube, said side tubes being laterally spaced from and lying generally parallel to and in a common plane with said center tube, supports for said tubes connecting the side tubes to the center tube at each end thereof and securing the tubes against rotation with respect to each other, and a support for said tubes connecting the center tube and side tubes at a point intermediate their ends.

AGOP BERBERIAN.

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