

[54] CONTAINER-LAST FOR THE CLEANING OF FOOTWEAR

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[56] References Cited

UNITED STATES PATENTS

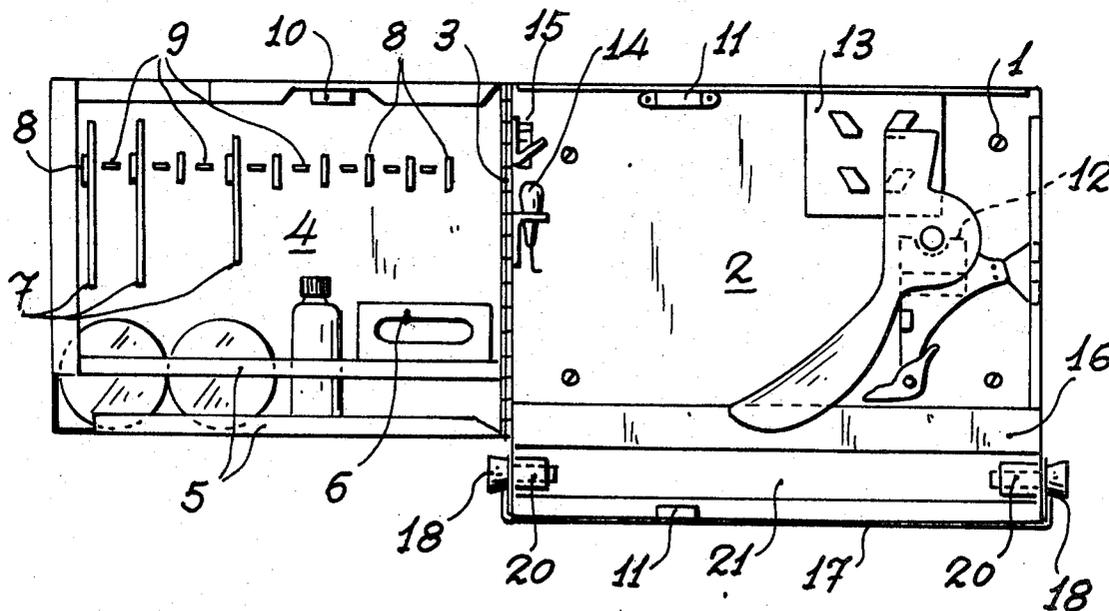
2,485,505	10/1949	Nelson.....	12/128 H
2,673,360	3/1954	Bascom.....	12/114.2
3,454,972	7/1969	Hermida.....	12/53.7

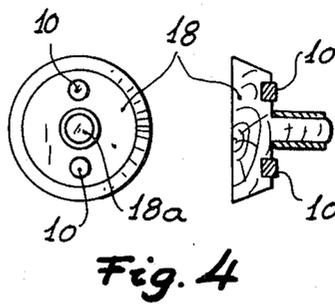
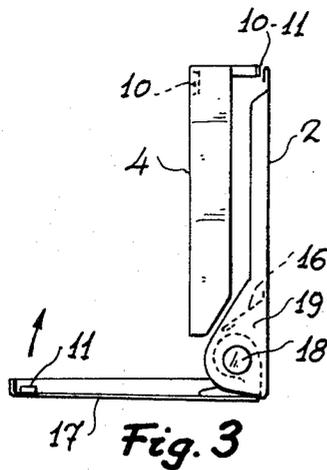
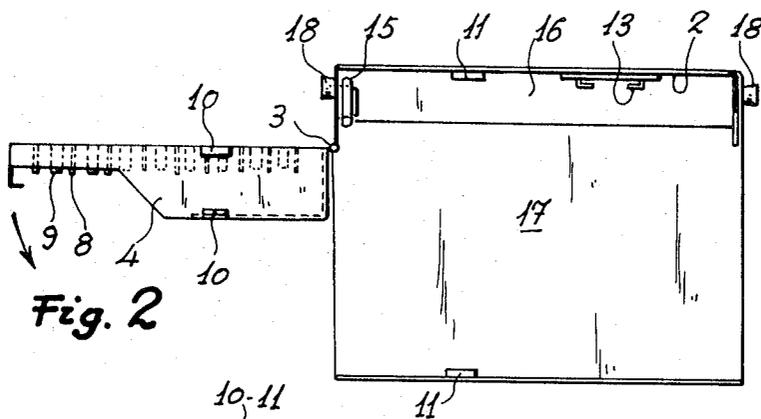
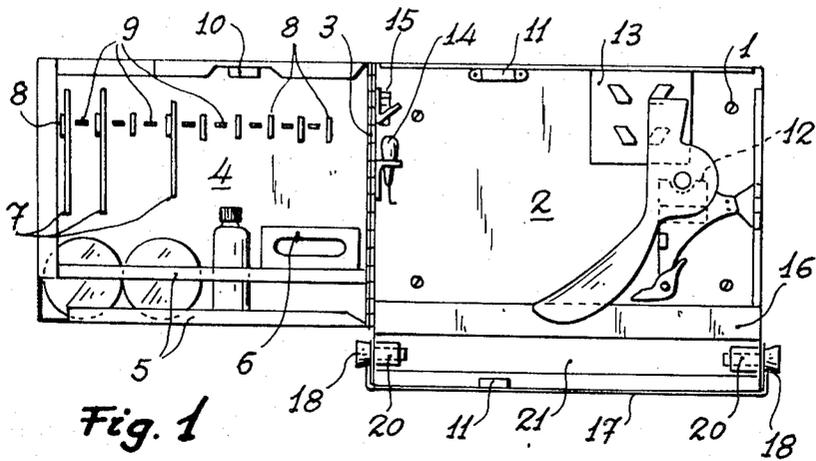
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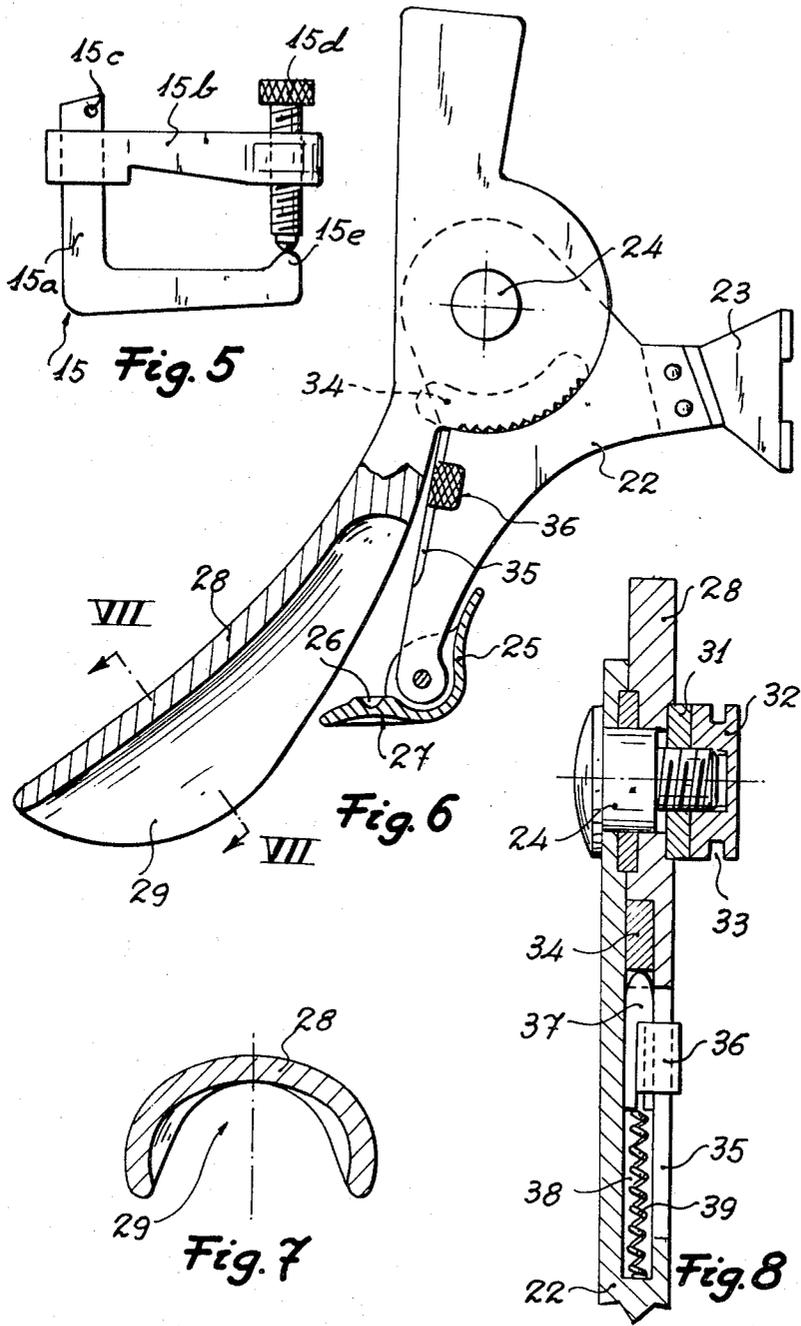
[57] ABSTRACT

The present invention relates to a combined container and last specially designed to facilitate the cleaning of footwear. The container consists of a special metal cupboard which is fixed directly to the wall and which is fitted with two front covers; one exterior cover which can rotate on a lower horizontal shaft and which on being opened and situated in its horizontal limiting position is converted into a tray for the collection of dust, and another interior cover which is vertically hinged on one side, and which can move through 180°, thus enabling the user to see its inner face to which there is attached a series of special supports to hang the corresponding applicator and cleaning brushes. On the back wall there is a hanger to hold an articulated last in a position of rest which enables the container to be closed, and an anchor-piece on which the said last is arranged in a position for use, that is to say perpendicular to the bottom of the container.

9 Claims, 8 Drawing Figures







CONTAINER-LAST FOR THE CLEANING OF FOOTWEAR

The present invention relates to a combined container and last specially designed to facilitate the cleaning of footwear.

The container consists of a special metal cupboard which is fixed directly to the wall on anchor blocks and which is fitted with two front covers: one exterior cover which can rotate on a lower horizontal shaft, which is easy to dismantle and which on being opened and situated in its horizontal limiting position is converted into a tray for the collection of dust, dry mud and other dirt that shoes may have adhering to their soles, and another interior cover which is vertically hinged on one side, and which can move through 180°, thus enabling the user to see its inner face to which there is attached a series of special supports to hang the corresponding applicator and cleaning brushes, and a small shelf to contain tins of polish, bottles of dye, rags, dusters, etc., all of which is arranged in a very orderly manner and is at hand to be used without confusion.

On a lateral wall of the container hangers are arranged to hold a scraper and an accessory pressure tool, while on the back wall, in addition to the corner holes for the fixing screws, there is a hanger to hold an articulated last in a position of rest which enables the container to be closed, and an anchor-piece on which the said last is arranged in a position for use, that is to say perpendicular to the bottom of the container.

The articulated last to which we refer has antecedents in the U.S. Pat. No. 3,454,972, of the same applicant but, in its present version it has been considerably improved in some details that increase its efficacy, such as the arrangement of means which permit the holding of footwear without heels (sandals, slippers, etc.) the inclusion of means that prevent the lateral tilting of the shoes once they are fitted on the last, the inclusion of means that permit the lateral suspension of the complex of the said last during periods when it is not in use, and the notable improvement of the ratched mechanism that maintains the distance between the tow-piece and the heel-piece of the last, which determine the holding of the shoe in place.

The container complex is designed in such a manner that once its two front covers have been opened, the last on being fixed to its anchor-piece, is situated on the outer cover which collects the dirt. In the closed position, this cover has a semi-cylindrical posterior collector which prevents the dirt from falling on the floor and which permits the operation of cleaning and emptying to be postponed for a certain time. The said cover tilts on an ideal horizontal axis which takes the material form of two opposed lateral bolts whose assembly positions are assured by means of magnets that adhere to the metal sheet of which the container is formed. The closed positions of the two front covers are also maintained by means of magnets.

In order that the object of the invention may be better understood, and only by way of example, some drawings are annexed, in which:

FIG. 1 shows the front view of the container, completely open, and with the incorporated last in a rest position.

FIG. 2 shows an upper plan view of the container shown in FIG. 1, without the last.

FIG. 3 shows a lateral view of the container shown in FIG. 1, but with the interior cover closed and the exterior cover open.

FIG. 4 shows a plan view and a section through the diameter of one of the bolts that constitute the horizontal tilting axis of the exterior cover.

FIG. 5 shows a lateral view of the small mechanical jack that co-operates with the tilting heel-piece of the last in the holding of footwear without heels.

FIG. 6 shows a lateral view, partially cut away, of the articulated last that forms a part of the container last complex in accordance with the invention.

FIG. 7 shows a section of the front part of the last through the line VII—VII of FIG. 6.

FIG. 8 shows a conventional section of the last which illustrates its devices of articulation and holding, by means of which there are determined the relative positions of the front part and the tilting heel-piece to permit the placing and removal of the footwear and the adjustment to the different measurements that such footwear may present.

With reference to the above-mentioned drawings, FIGS. 1, 2 and 3 illustrate the forms and arrangement chosen for the container, the whole of which in a closed position has the appearance of a small parallelepiped cupboard of limited depth, which is fixed by means of screws 1 which traverse its back 2 to the wall or to an appropriate vertical support.

On the outer edge of one of the sides there is a hinged joint 3 on the vertical shaft of which there is supported in its rotations of more than 180° the interior cover 4 which, on being opened, makes available all the necessary accessory elements for the cleaning of footwear, which elements are suitably distributed on a lower shelf 5 a tray 6 of small size and a series of supports that enable the brushes 7 to be kept in place in a comfortable manner, which supports consists of a series of vertical flanges 8 which have horizontal flanges 9 arranged between them; the handle of the brush 7 is kept in contact with the vertical flanges and the horizontal flanges are designed to be situated among the bristles of the brush which is thus suspended in place.

On the upper edge of the said interior door of cover 4 there is a permanent magnet 10 which maintains the closed position by adhering to a small plate 11 which is fitted on the back wall 2, on which there is also arranged a forked support 12, from which the articulated last is suspended in its rest position, and an anchor piece 13 on which the said last is fixed in its working position, being wedged on the two pairs of elbow-bend opposing tongues situated thereon.

On the inner part of the side there are attached the appropriate supports to hold a scraper 14 and a small pressure jack 15, which are shown in more detail in FIG. 5, and which is constituted by a bracket (15a) along one of whose edges there moves a slider 15b which cannot become separated because of the existence of a check-piece 15c and which has screwed into its end a screw 15d with a knurled head, which end is situated opposite to a head 15e which is situated at the end of the other branch of the bracket 15a. The purpose of this accessory and its functioning in co-operation with parts of the tilting heel-piece of the last will be explained later on.

In the lower part of the back 2 there is a longitudinal visor 16 which partially covers the lower horizontal joint of the exterior door or cover 17 which turns on an

axis that takes the material form of two opposed lateral bolts 18, each one of which (FIG. 4) is a truncated conical piece from the centre of whose minor base there projects a cylindrical rod 18a, included in a metal sheath 18b on both sides of which there are permanent magnets 10.

The metal sheaths 18b of the said bolts 18 pass, making a close fit, through the holes made in some lugs 19 which arise from the lateral posterior edges of the door 17 and subsequently are coupled in the interior of two bushings 20 pertaining to the sheath 2 to constitute the points of support of the movements of the said cover 17 which, in the open position (as shown in FIGS. 1, 2 and 3) is arranged perpendicularly with respect to the back 2, while in the closed position it abuts against the interior cover 4 covering it and adhering to a small plate 11 that is solidly joined to the permanent magnet 10 that the said interior cover has fixed to it.

Earth, dust and other waste matter that may be produced by the cleaning of footwear are collected by the said exterior cover 17, which constitutes a tray when it is open, on the posterior part of which there is arranged a semi-cylindrical prolongation 21 which acts as a collector of the dirt when the said cover 17 is closed and situated in a vertical position.

On the articulated last which is shown in FIG. 6, it can be seen that its fixed piece 22 is substantially triangular, and, in a known manner, has attached at one of its angles the terminal with lugs 23 intended to be coupled in the anchor-piece 13 of the container; at another angle there is situated the articulation bolt 24, while at the third and lower angle there is fitted the tilting heel-piece 25 which, in the upper part of its flat end has a semi-spherical hollow 26 and in the lower part has a recess 27 opposite to the said hollow which, in cooperation with the pressure jack 15, is intended to receive the end of the screw 15d while the head 15e exercises pressure against the lower face of the sole of footwear that does not have heels, and adjusts it against the step-piece that is determined by the lower recess 27 of the said tilting heel-piece 25.

For its part, the movable piece 28 of the articulated last has at its front end a lower hollow space 29 that facilitates the holding of the shoe by means of a falling of edges that have a greater height in the said zone (FIG. 7) and cause it to be wedged in the interior of the shoe in order to avoid lateral movements of the latter.

FIG. 8 shows a section which includes the devices of articulation and of retention that permit the movements and fix the positions of the movable piece 28 with respect to the fixed piece 22 of the last, which devices are constituted by different metal pieces constructed with materials suitable to their function and coupled by their forms to the said fixed 22 and movable 28 pieces of the last, which can now be entirely constructed (in a very advantageous manner) with moulded materials both metal (aluminium or another light alloy) and plastic.

The articulation bolt 24 is made of steel and on its cylindrical part there are seated the said fixed 22 and movable 28 pieces and, in particular, a thick steel washer 30 that is held between the said pieces and concealed in a housing that they constitute for it. The head of the bolt 24 abuts against the outer wall of the fixed piece 22, while its threaded end appears on the other side of the movable piece 28 on whose surface there is a slight recess in which there is housed the edge of a

round nut 31 which is coupled on the said threaded end and whose position is fixed by means of a nut lock device 32 which, on its exterior cylindrical surface has a throat 33 intended to co-operate with the forked support 12 being coupled in the hollow of the latter in order to maintain the articulated last suspended in a position of rest.

The movable piece 28 is complemented at its lower part by an externally toothed sector 34 which fits into a housing in such a way that its ratchet teeth are arranged on the line of the curved assembly which, with its centre in the bolt 24, is arranged between the said fixed 22 and movable 28 pieces.

On the front edge of the said fixed piece 22 there is a groove 35 through which there moves the outer wing of a forked button 36 whose inner wing which presents a small lug in the direction of the interior is solidly joined to the hammer of the ratchet 37 and which can move in the interior of a housing 38 made in the wall of the fixed piece 22 communicating with the groove 35 and in the bottom of which there is housed a spiral contracting spring 39 which thrusts the said hammer 37 so that its bevelled end engages in the teeth of the ratchet which the sector 34 causes to face it.

This union of the pieces is attained by the fact that the said hammer has a cut initiated in its lower part and which terminates once it has passed one half of the height of the piece; in one of its sides it has a groove or cut that coincides exactly with the width of the bottom so that the inner wing of the button is engaged serving as a chek-piece in the exact width of the longitudinal housing over which it travels.

The circumstances of size, form and material are variable, with particular reference to each one of the elements that constitute the sum-total of the last-container in which there may be varied all that which does not imply an alteration in the essence of the object expounded in the foregoing description, which should be taken in its widest sense and not as a limitation of possibilities of implementation.

What is claimed is:

1. A container-last for the cleaning of footwear, which last pertains to the type that is constituted by two pieces articulated with one another in the form of a scissors, one piece being fixed to the container by means coupling it to another piece fixed to a vertical support and at its lower end having a tilting heel fitted to it, the other piece being movably mounted to the first piece by means of a turning axis and a ratchet device to maintain the relative positions, and which on its front end has a semi-ridged fusiform prolongation which is introduced under the upper of the shoe, which last is characterized in that in the upper horizontal face of the tilting heel-piece there is a semi-spherical hollow and on the lower face a recess opposite to the said hollow, which in co-operation with a screw-operated mechanical pressure jack, by fixing the position of the end of the said screw, makes it possible to hold the posterior part of the sole of footwear without heels.

2. A container-last for the cleaning of footwear, in accordance with claim 1, characterized in that the movable piece of the articulated last has at its front end an interior hollowed space that facilitates the holding of the shoe by means of a falling of edges that provides the said front end with greater height and causes it to be wedged in the interior of the shoe to avoid the lat-

eral movements of the upper, once it has been fixed longitudinally.

3. A container-last for the cleaning of footwear, in accordance with claim 1, characterized in that the articulation and retention devices that permit the movements and fix the relative positions between the movable and fixed pieces of the last are constituted by different metal pieces constructed with materials appropriate to their function and coupled by their forms to the said movable and fixed pieces, the whole of which are constructed with moulded materials.

4. A container-last for the cleaning of footwear, in accordance with claim 1, characterized in that the articulation device includes a steel bolt on whose cylindrical part there are seated the above-mentioned movable and fixed pieces and, principally, a thick steel washer which is held between the said pieces and concealed in a housing that they constitute; the head of the said bolt abuts against the exterior face of the fixed piece, while its threaded end appears on the other side of the movable piece, on whose surface a slight recess has been made in which there is housed the edge of a round nut which is coupled at the said threaded end and whose position is fixed by means of a nut-lock cover which, on its exterior cylindrical surface, has a throat intended to cooperate with a forked support solidly joined to the back of the container, it being coupled in the hollow of the latter in order to maintain suspended in a position of rest the articulated last.

5. A container-last for the cleaning of footwear, in accordance with claim 1, characterized in that the central zone of the movable piece of the last is complemented with a steel sector toothed on the exterior which is fitted in and remains in a housing of the form presented to it and which has its ratchet teeth on the line of the curved assembly which, with its center in the articulation bolt, is arranged between the said movable and fixed pieces, on the front edge of which fixed piece there is a groove in which there moves the exterior wing of a forked button whose interior wing which has a small lug in the direction of the interior is solidly joined to the hammer of the ratchet and can move along the interior of a housing made in the wall of the said fixed piece communicating with the said groove, in the bottom of which housing there is contained a spiral contracting spring which thrusts the said hammer, which is of steel, so that its bevelled edge engages in the teeth of the ratchet which the above-mentioned sector causes to face it, and because the said union of the pieces is attained by the fact that the said hammer has a cut initiated in its lower part and which terminates once it has passed half the height of the piece; in one of its sides it has a groove or cut that coincides exactly with the width of the button so that the interior wing of the button engages serving as a check-piece in the exact width of the longitudinal housing over which it moves.

6. A container-last for the cleaning of footwear, in accordance with claim 1, characterized in that, in the closed position the container has the appearance of a small parallelepiped cupboard which is fixed to the wall

or a vertical support by means of screws that traverse its back and which is closed with two front covers, one exterior cover which can turn on a lower horizontal axis, which is easy to dismantle and which, on being extended as far as its horizontal limiting position, is converted into a tray for collecting dust, mud and other dirt, and another interior cover or door which is vertically hinged on a side and can move through 180° which enables the user to see its inner face which is equipped with means for holding the cleaning implements.

7. A container-last for the cleaning of footwear, in accordance with claim 6, characterized in that, in the internal part of the interior door there are arranged in the lower part a shelf and a tray of small size and above these a series of supports for the cleaning and applicator brushes consisting of a series of projecting vertical flanges which have horizontal flanges situated between them and which also project; the handle of the brush abuts against the vertical flanges and the horizontal flanges are constructed in such a way as to pass through the bristles of the brush which is thus suspended vertically and aligned with the other brushes.

8. A container-last for the cleaning of footwear, in accordance with claim 6, characterized in that, in the upper part of the said interior door or cover there are two permanent magnets that maintain the closed position of the complex by adhering to small plates solidly joined, one to the back of the container and the other to the exterior cover or door, which turns on a lower horizontal axis which takes the material form of two opposed lateral bolts, each one of which is a truncated conical piece from the center of whose minor base there projects a cylindrical rod on both sides of which there are arranged permanent magnets which adhere to the sheet metal of which the container is constructed, which cylindrical rods pass, making a tight fit, through the holes made in some lugs that rise from the posterior lateral edges of the cover or door and later engage in the interior of two bushings pertaining to the back, to constitute the two supporting points for the turning of the said cover, which, on its posterior part, has a semi-cylindrical prolongation that acts as a collector of dirt when it is situated vertically on being closed.

9. A container-last for the cleaning of footwear, in accordance with claim 6, characterized in that, in the internal part of its side there are arranged the supports appropriate to support a scraper and a small pressure jack cooperating with the tilting heel-piece of the last for holding footwear without heels, while in the lower part of the back there is arranged a longitudinal visor which partially covers the horizontal articulation of the exterior door to cover, at the same time that, solidly joined to the said back, there is a forked support from which, by means of the throat of the nut-lock cover of its articulation bolt, there hangs the articulated last in a position of rest, and a plate with tongues or anchor pieces on which the said last is fixed in its working position.

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