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MACHINE FOR MAKING PROTECTIVE SLEEVES

Filed Jan. 30, 1946

2 Sheets-Sheet 1

Fig. 1.

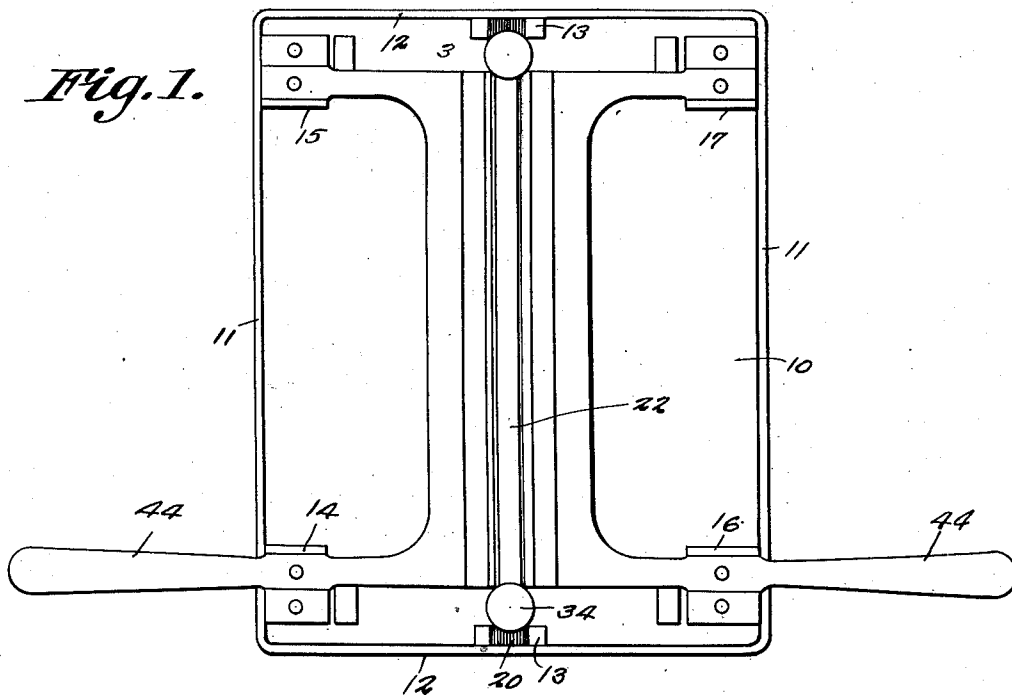
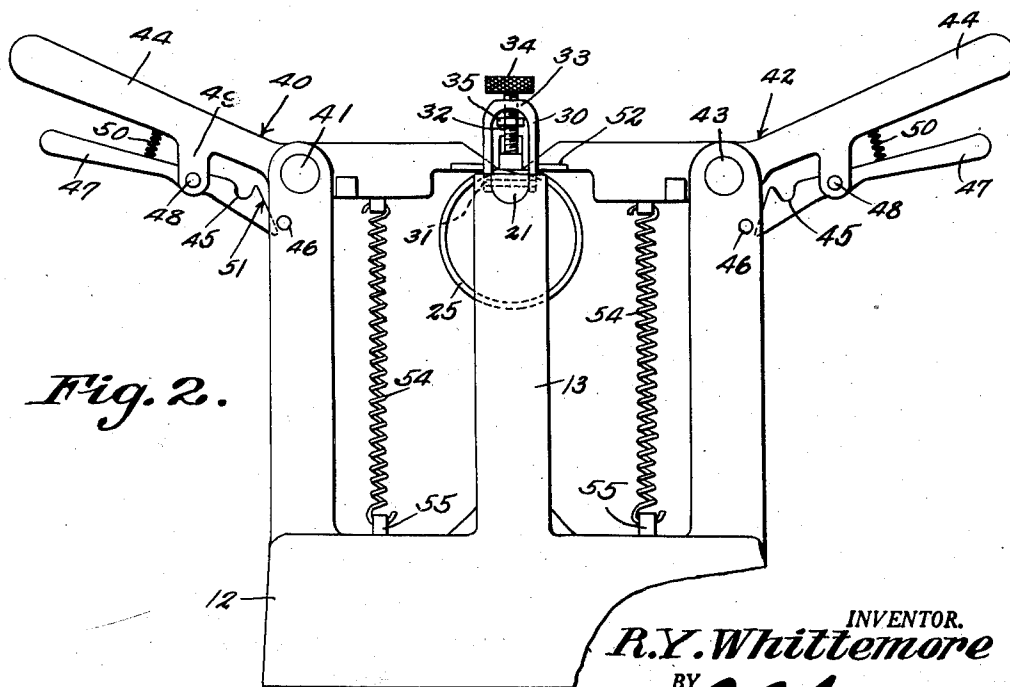


Fig. 2.



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Fig. 3.

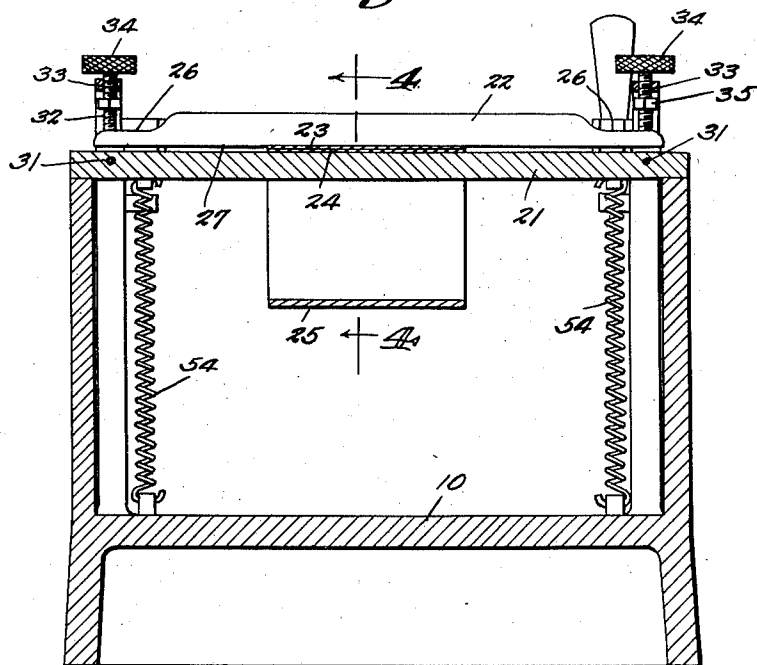
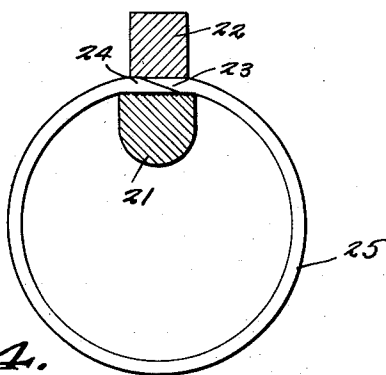


Fig. 4.



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MACHINE FOR MAKING PROTECTIVE SLEEVES

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4 Claims. (Cl. 154-42)

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This invention relates to a device for forming protective sleeves.

An object of the invention is the provision of a device for forming a protective sleeve for a drawing roller in a spinner frame, said device including clamping elements for retaining the beveled ends of a sheet of material on a clamping bar with the ends of the material being clamped after cement has been applied to one of the beveled surfaces.

Another object of the invention is the provision of a machine for manufacturing a cot from a sheet of cork in which the free ends of the sheet have been sheared so that when the sheared ends are cemented together, a sleeve will be formed having the same thickness throughout the circumference of the sleeve, said machine having a bar upon which the sheared ends are placed with means at each side of the bar for holding the ends in position, one or more of the ends being treated with a cement so that when a clamping bar is pressed upon the cemented sheared ends and onto the first-mentioned bar, said ends will be rigidly connected together.

A further object of the invention is the provision of the machine for forming protective sleeves in which a supporting bar is removably supported above a base member with pivoted holding elements disposed at each side of the bar for resting on the beveled ends of a strip of material, so that when cement is applied to one of the beveled ends and a clamping bar is applied to the first-mentioned bar, the beveled ends will be secured together.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a plan view of a sleeve-forming machine, constructed in accordance with the principle of my invention.

Figure 2 is an end view in elevation of the machine.

Figure 3 is a longitudinal vertical section of the machine.

Figure 4 is a transverse fragmentary vertical section taken along the line 4-4 of Figure 3.

Referring more particularly to the drawings, 10 designates a base member having upstanding

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side walls 11 and end walls 12. A pair of posts 13 rise from the end walls and are disposed in a longitudinal central line of the base 10. Posts 14 and 15 are located adjacent one side wall 11 and rise from the base member 10. Other posts 16 and 17 rise from the base member 10 adjacent the other side wall 11. The posts 14 to 17 inclusive are located at the corners of the base member.

It will be noted from Figures 1 and 2 that the upper end of each post 13 has a groove 20 to receive the ends of a bar 21 which extends longitudinally of and above the base member. The bottom portion of the bar 21 is rounded, while the upper surface is flat, shown more particularly in Figure 4.

A clamping bar 22 is adapted to be placed upon the bar 20 (Figure 4) and is adapted to rest upon the beveled ends 23 and 24 of a sheet of material 25 which is adapted to be formed into a protective sleeve for a drawing roller in a spinner frame, and commonly known as a cot. The opposite ends of the bar 22 are reduced as shown at 26 for a purpose which will be presently explained. The under-face 27 of the bar 22 is flat.

A yoke 30 is pivoted at 31 on each end of the bar 21, so that it may swing outwardly from the ends of said bar. A bolt 32 is threaded into a passage in the bight portion 33 of each swingable yoke 30. A manipulating knob 34 is secured to the outer end of the bolt so that the bolt may be screwed inwardly and properly adjusted. A nut 35 on each bolt may be employed for locking the bolt in position after it has been adjusted.

Careful inspection of Figure 3 will show that the yokes may be swung inwardly on their pivots so that the free ends of the threaded bolts may engage the top surface of the reduced portions 26 of the clamping bar 22.

A retaining element 40 has an intermediate portion pivoted at 41 on the posts 14 and 15 at one side of the bar 21. A retaining element 42 has an intermediate portion pivoted at 43 on the posts 16 and 17 at the other side of the bar 21. Each retaining element has an operating handle 44 projecting outwardly from each side of the machine and has a catch 45 adapted to engage a pin 46 on an adjacent post for holding the retaining element in an inoperative position. Each catch has an operating handle 47 pivoted at 48 on ears 49, projecting downwardly from the handle 44. A spring 50 between the handle and the lever 47 tends to maintain the catch in operative relation with the pin 46. It will be noted that the inner end of the catch is beveled at 51 so that when the handle 44 is moved downwardly,

this beveled edge will slide over the pin 43 until the catch 45 receives said pin.

The inner edge of each member 40 and 42 extends along the bar 21 but terminates short of the ends of said bar as shown in Figure 1. These inner ends of the members 40 and 42 are provided with a straight edge 52 and are adapted to rest upon the beveled ends of the material 25 for holding said ends in contact with each other (Figure 2). However, the inner edges of the members 52 are spaced sufficiently apart so that the bar 22 may be placed on the beveled ends 23 and 24 of the material 25. The members 40 and 42 are for the purpose of retaining the ends in position so that the clamping bar 22 may be applied to the beveled ends of the material.

A coil spring 54 is attached to the under-face of each member 40 and 42 and extends downwardly and is connected to a lug 55, mounted on the base 10.

The operation of my device is as follows:

Before the material 25 is applied to the machine, the bar 22 must be removed after the yokes 30 have been swung beyond the ends of the bar 21. The members 40 and 42 must be moved out of position so that the handles 44 are depressed until the catches 45 engage the pins 46. The end 24 of the material 25 is placed on the flat surface of the bar 21, after which the catch 45 is released so that the spring 54 will pull the inner end of the member 40 downwardly and engage the end 24 and retain it in position on the bar 20. The other catch 45 is released so that the spring 54 will pull the inner end of the member 42 downwardly and engage the other end 23 of the strip of material 25. In this manner both of the ends 23 and 24 will be positioned on the bar 21, with the beveled edges on the ends of the strips 25 being in overlapping position. Cement is then applied to one beveled edge or both beveled edges if necessary.

The clamping ends 23 and 24 of the material 25 are now held in place so that the bar 22 may be applied to the cemented ends of the material. The yokes 30 are then swung inwardly so that the free ends of the threaded bolts 32 may slip over the rounded ends of the bar 22 and engage the upper surface of the reduced portions 26 of said bar. If necessary the knobs 34 may be manipulated to exert pressure on the bar 22, so that the beveled edges of the material 25 will be held firmly in place to permit the cement to dry, which only requires a few minutes.

As soon as the ends are cemented together, the operating arms 44 are moved downwardly until the catches 45 engage the pins 46, whence the members 40 and 42 will be held in an inoperative position. The bar 22 is then removed by the release of the yokes 30, after which the bar 21 is raised from the sockets 29 in the upper ends of the posts 13, and the completed sleeve is then slipped off said bar, after which other sleeves are formed on the machine.

What is claimed is:

1. A device for forming a sheet of material into a protective sleeve with the opposite ends of the sheet being beveled, comprising a frame, a longitudinal bar mounted on the frame, a clamp pivotally mounted at each side of the frame and having an inner free edge adapted to retain the beveled ends of the sheet in overlapped position after one of said ends has had an application of cement, a second bar resting on the overlapped ends, a U-shaped member pivoted on each end of the first-mentioned bar and swingable over an

adjacent end of the second bar and means carried by each U-shaped member for applying pressure on the second bar, whereby to cause the second bar to press the overlapped ends of the sheet of material against the longitudinal bar.

2. A device for forming a sheet of material into a protective sleeve, the opposite ends of the material being beveled, comprising an oblong base, supports on the base at opposite sides thereof, a post rising from each end of said base, a bar supported by the posts midway between the side supports, a retaining means pivotally mounted on the supports at each side of the base and provided with a straight edge adapted to maintain the beveled ends of the sheet on the bar, with the beveled edges of the material overlapped after at least one edge has had an application of cement, a second bar resting on the overlapped ends, and means pivoted on each end of the first bar for forcing the second bar tight against the cemented beveled ends of said material, whereby to press said ends against the first-named bar.

3. A device for forming a sheet of material into a protective sleeve, the opposite ends of the material being beveled, comprising an oblong base, supports on the base at opposite sides thereof, a post rising from each end of said base, a bar supported by the posts midway between the side supports, a retaining means pivotally mounted on the supports at each side of the base and provided with a straight edge adapted to maintain the beveled ends of the sheet on the bar, with the beveled edges of the material overlapped after at least one edge has had an application of cement, a second bar resting on the overlapped ends, springs holding the retaining means pressed on the material, and a threaded bolt swingably mounted on each end of the first bar and adapted to exert pressure on the second bar, whereby to cause the second bar to press the overlapped ends of the material against the first-named bar.

4. A device for forming a sheet of material into a protective sleeve with the opposite ends of the sheet being beveled, comprising a frame, a longitudinal bar mounted on the frame, a clamp pivotally mounted at each side of the frame and having an inner free edge adapted to retain the beveled ends of the sheet in overlapped position after one of said ends has had an application of cement, a second bar resting on the overlapped ends, the longitudinal bar being removably carried by the frame, springs holding the clamps pressed on the material where supported by the longitudinal bar, a U-shaped member pivoted on each end of said longitudinal bar, and a bolt threaded into a passage in the bight portion of each U-shaped member, and engageable with an adjacent end of the second bar for exerting pressure on said bar, whereby to cause the second bar to press the overlapped ends of the sheet against the longitudinal bar.

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