CHEESE WINDING SPINDLE

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A slot 8 is cut in the broad end of each segment to facilitate withdrawal. The segments are slipped underneath the spring rings 7 until the sleeve is complete; then the spring rings are moved one to each end of the sleeve.

Alternatively, as shown in Fig. 3 the clearance sleeve may consist of a number of plates or segments 19 of which the broad end of each is soldered to an end ring 12 which consolidates the sleeve into two parts, i.e., two rings having alternate clearance plates soldered thereon.

The clearance sleeve being in position covering the spring centre encased by the inner stocking 6, the outer knitted stocking 9 is now drawn over the top of the clearance sleeve and rings (if used). The mounting of the spindle for winding purposes is thus completed.

The cheese is now wound and then removed from the spindle.

By means of a hook the clearance sleeve is now extracted, segment by segment, or, if the form of clearance sleeve shown in Fig. 3 is used, the rings with soldered segments are withdrawn and the cheese is now ready for dyeing.

In the further modification shown in Fig. 4 the clearance sleeve composed of a number of plates 14 is soldered to end flanges 13 mounted on a steel centre 11, the ends of which are rotatable in a suitable holder. A spring centre covered with a protective stocking is passed into part of the clearance sleeve before assembly of the latter; the clearance sleeve is then assembled, the outer stocking is drawn over the outside of the assembled clearance sleeve, and the cheese is wound on top, as before. To remove the cheese, one flange 15, on which two or three alternate plates are soldered, is withdrawn by means of a key, and then the other flange, which is fixed to the steel centre and carries the remaining plates is drawn out. The cheese is now resting on the spring centre with two protective stockings between its inner core and the spring.

What I claim is:
1. In combination with a spindle, a helical spring surrounding said spindle, a stocking surrounding said spring, a removable clearance sleeve comprising metallic segments
shaped to form a cylinder surrounding said
stocking, and an outer stocking surrounding
said sleeve.
2. In combination with a spindle, an ex-
panding sleeve secured to said spindle, a
spring surrounding said sleeve, inner and
outer stockings surrounding said spring
and a removable clearance sleeve interposed
between said stockings, said clearance sleeve
10 comprising tapered metallic segments re-
movable endwise in opposite directions, said
segments shaped to form a cylinder when as-
sembled.
In testimony whereof I have signed my
name to this specification in the presence of
15 two subscribing witnesses.
WILLIAM HERBERT SUTTON.
Witnesses:
ISABEL ROLLS,
ANNE R. WATT.