Sept. 23, 1930. G. S. WEINERTH 1,776,529

MULTITREATING ATTACHMENT FOR WINDING, KNITTING, AND SIMILAR MACHINES

Filed Dec. 26, 1929 2 Sheets-Sheet 1

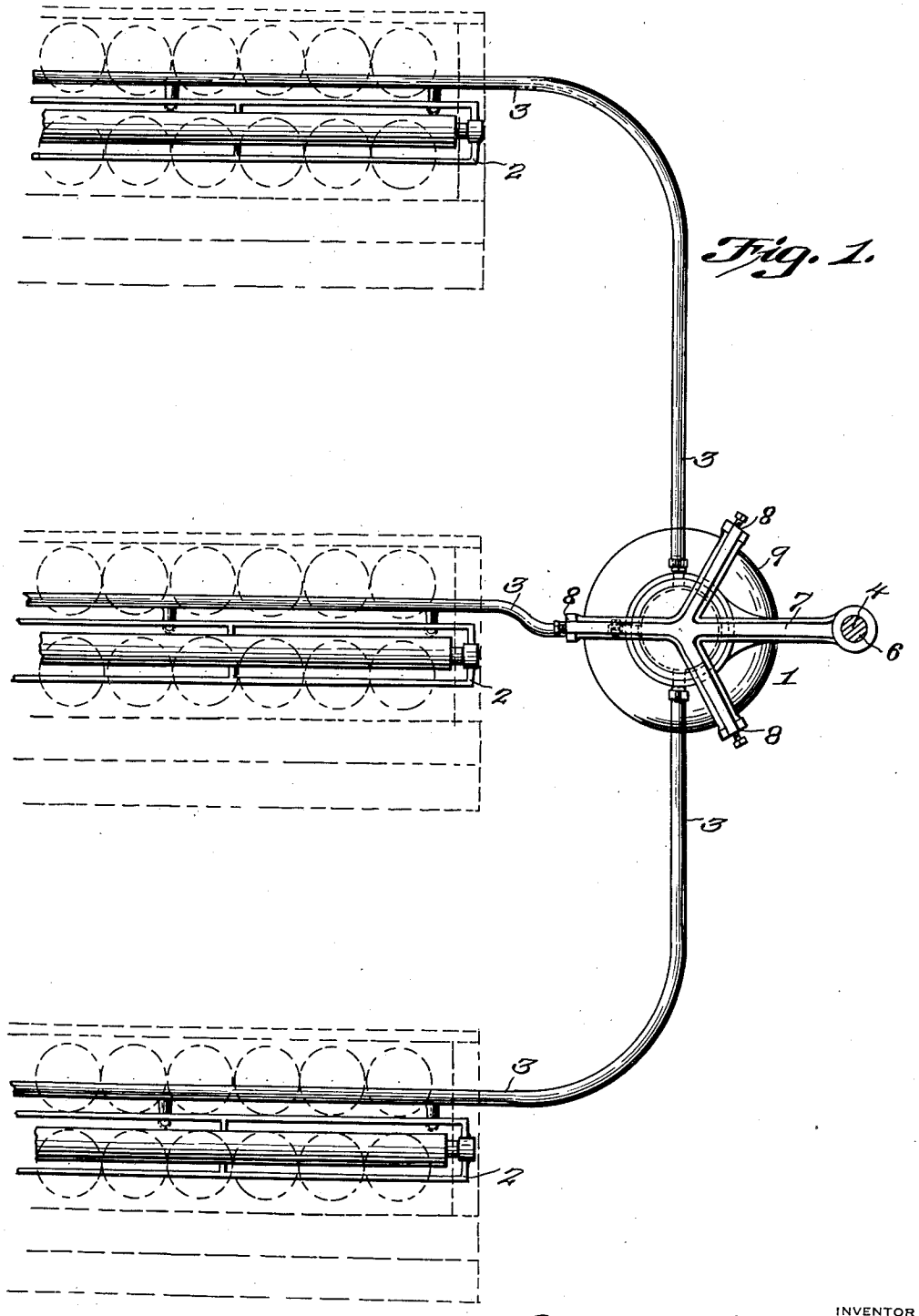



Fig. 1.

INVENTOR
George S. Weinerth
BY
Linton Kellogg & Smith
ATTORNEY

WITNESS:

Sept. 23, 1930. G. S. WEINERTH 1,776,529

MULTITREATING ATTACHMENT FOR WINDING, KNITTING, AND SIMILAR MACHINES

Filed Dec. 26, 1929 2 Sheets-Sheet 2

Fig. 2.

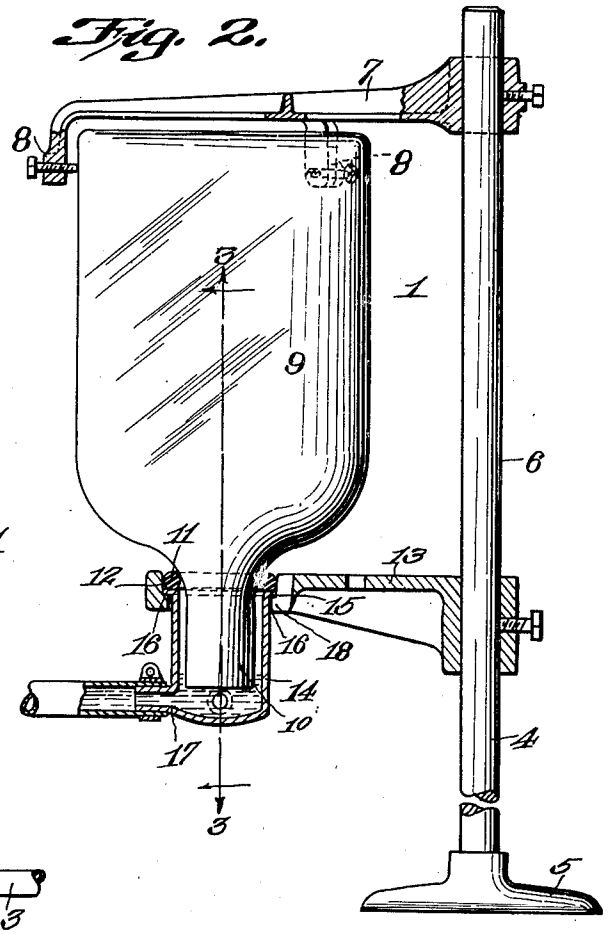



Fig. 3.

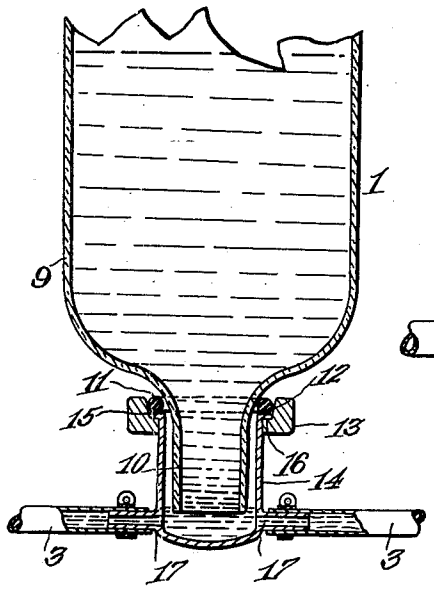
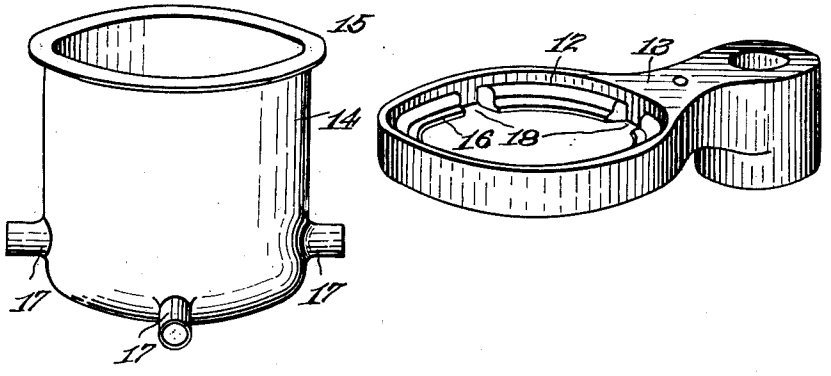



Fig. 5.

Fig. 4.




INVENTOR

George S. Weinerth

BY

Linton Kellogg & Smith

ATTORNEY

WITNESS:

Patented Sept. 23, 1930 1,776,529

# UNITED STATES PATENT OFFICE

GEORGE S. WEINERTH, OF READING, PENNSYLVANIA

## MULTITREATING ATTACHMENT FOR WINDING, KNITTING, AND SIMILAR MACHINES

Application filed December 26, 1929. Serial No. 416,639.

This invention relates to an attachment for winding, knitting and similar machines whereby a thread may be subject to the action of a treating liquid during the manipulation thereof, and has for its primary object the provision of means automatically operating to subject the thread to a uniform liquid treating action.

An object of the invention is the development of an attachment that may be connected up with a plurality of machines thereby materially reducing the cost of installation.

An object of the invention is the utilization in a thread treating apparatus of devices capable of automatic action to automatically feed the treating liquid and keep the same at a constant level.

Another object of the invention is the provision of a single liquid container or reservoir to automatically feed treating liquid to a group of thread treating devices and automatically maintain the level of the liquid constant.

An object of the invention is the provision of novel devices arranged in novel relations whereby the hydrostatic action of a treating liquid may be utilized for the automatic feeding of the liquid into contact with the traveling threads and maintain the level of the treating liquid constant to assure a uniformity of action upon the threads.

Another feature of the invention resides in the novel co-relation of the liquid trough and the liquid reservoir whereby the level of the liquid in the trough is kept in a constant relation with the level of the liquid in the reservoir through the hydrostatic action of the liquid thereby accomplishing the most effective action upon the traveling threads.

Still another feature of my invention resides in the unique structural details of the liquid feeding apparatus.

Besides the above my invention is distinguished in the novel manner of supporting the reservoir for the purpose of regulating the level of the treating liquid of the thread treating device and further for the purpose of facilitating the removal of an empty reservoir and the replacement of a filled reservoir.

With these and other objects in view the invention will be better understood from the following detailed description taken in connection with the accompanying drawings wherein:

Figure 1 is a top plan view of the attachment,

Figure 2 is a vertical sectional view through the liquid feeding apparatus.

Figure 3 is a sectional view on line 3—3 of Figure 2,

Figure 4 is a perspective view of the basin,

Figure 5 is a perspective view of one of the brackets.

The present invention, a continuation in part of my copending application filed January 16, 1929, S. N. 332,993, relates basically to a design of attachment whereby a plurality of machines may be taken care of by a single source of treating liquid. This desired result is accomplished by providing a single reservoir having a plurality of outlets that are connected selectively with a bank of machines by pipes having flexible characteristics whereby the reservoir may have its proper range of adjustments to assure the proper level of the treating liquid. To accomplish these desired objectives I have designed a unique type of basin that receives and controls the flow of liquid from the reservoir and properly distributes the same to a plurality of pipes leading to a plurality of treating troughs positioned at the proper elevation upon the various machines.

As shown in the drawings the invention consists basically of a liquid feeding apparatus 1, connected to a plurality of troughs 2, each individually to a machine and directly fed with liquid from the feeding apparatus by means of a plurality of pipes 3. I wish to call attention to the fact that the pipes 3 have flexible characteristics so that the elevation of the feeding apparatus may be changed for controlling the level of the treating liquid within the trough 2 and besides eliminate the necessity of changing the position of the troughs.

Referring specifically to the details of my invention, the numeral 4 designates a stand consisting of a base 5 and a post 6. As the base 5 rests directly upon the floor and is not

permanently attached thereto, it will be appreciated that the stand may be moved about for positioning the same in the most advantageous location with relation to the troughs carried by the various machines. As set forth in my copending application the post 6 has slidably mounted thereon a top bracket 7 that has a clamp connection 8 with the reservoir or bottle 9. The neck 10 of the bottle projects through and rests upon a ring 11 mounted in a depression 12 in one end of a lower bracket 13 which is also slidably mounted on the post 6.

My improved type of basin 14 is provided with a flange 15 that rests directly upon a ledge 16, carried by the bracket 13. This basin 14 is of the required depth to properly receive the neck 10 and allow the accumulation of liquid within the basin for providing a hydrostatic action for the control of feed of the liquid from the reservoir through the various troughs 2. To enable the basin to be connected to a plurality of troughs association with a plurality of machines, I have illustrated a group of outlets 17 projecting laterally from the basin in position to be readily connected to the pipes 3. These pipes may be in the form of rubber hose having their ends clamped to the outlets in any suitable manner. To facilitate the placement of the basin upon the brackets 13 I have shown the latter provided with a plurality of notches 18 for allowing the passage of the outlets 17. When the basin has been passed through the bracket the same is given a slight turn for positioning the outlets out of alignment with the notches, the flange 15 of the basin resting directly on the ledge 16 thereby forming the sole support for the basin.

By providing a separately mounted stand, and an independently adjustable reservoir and a group of flexible pipes having individual connection with the various troughs, it will be appreciated that a group of machines may be connected with a single reservoir, the latter capable of vertical adjustments for regulating simultaneously the level of the liquid in all the troughs of the various machines. This feature is of considerable value in the trade, due to the fact that it eliminates the necessity of a reservoir for each machine which has been the practice heretofore. It is of course to be understood that the stand will be directly connected to the frame of the machine if found advisable but this form of connection materially interferes with the proper positioning of the reservoir and the proper adjustment thereof relative to the various machines. Besides this construction necessitates changes in the machines and a direct supporting of the weight of the apparatus from the standards of the machines.

It is of course to be understood that the various machines may be connected up in other group relations than illustrated, the basic feature of my invention residing in the use of a single reservoir mounted for adjustment and having direct connection with a group of troughs associated with a group of machines.

A very important feature of the invention to which I wish to call attention, is the separate independent mounting of the reservoir which enables the positioning thereof at any required location, greatly facilitated by the utilization of a group of independent pipes that form the communications between the reservoir and the individual troughs. This feature also materially facilitates installation and prevents installation complications characteristic of attachments heretofore developed, such as those that are directly mounted on the machine in position directly above the troughs and directly deposited liquid into the troughs. The flexibility of the pipe connections enables compensation for the irregularity in mounting of the various machines and in the mounting of the liquid feeding apparatus as such flexibility not only allows lateral movements of the apparatus, but enables the latter to be adjusted vertically for accurately controlling the level of the liquid in the various troughs.

It is of course to be understood that various types of feed apparatuses may be used, various types of troughs may be utilized and various forms of connections arranged between the apparatuses and troughs and therefore I do not desire to be limited in protection in any manner whatsoever except as set forth in the following claims.

What I claim is:

1. An attachment for winding and knitting machines comprising a group of troughs, one for each machine and adapted to support a treating liquid, liquid supplying means positioned to one side of said troughs and a plurality of independent connections between all of said troughs and said means for supplying treating liquid to said troughs, said means capable of vertical adjustments.

2. An attachment for winding and knitting machines comprising a group of troughs, one for each machine, and adapted to support a treating liquid, a single liquid container having independent communications with each of said troughs and mounted for vertical adjustments to regulate the level of the treating liquid in all of said troughs automatically.

3. An attachment for winding and knitting machines comprising a plurality of troughs, one for each machine and directly attached thereto and adapted to support a treating liquid, a single container having an individual communication with each trough, a stand and a plurality of brackets adjustably connected to the stand and detachably connected with said container for

supporting the container at various elevations.

4. An attachment of the character described comprising a group of troughs adapted to be individually connected to a group of machines, a single liquid container, a stand supporting the container for vertical adjustments, a basin removably associated with and having a hydrostatic relation with said container and provided with a plurality of outlets, and individual pipe connections between said outlets and said troughs.

5. An attachment of the character described comprising a group of troughs adapted to be individually conected to a group of machines, a single liquid container, a stand supporting the container for vertical adjustments, a basin removably associated with and having a hydrostatic relation with said container and provided with a plurality of outlets, individual pipe connections between said outlets and said troughs, said pipes being flexible whereby the container may be adjusted for obtaining its position relative to the troughs and to accurately control the level of the treating liquid in the trough.

6. An attachment of the character described, a liquid feeding apparatus comprising a stand, a reservoir, a pair of brackets adjustably supported by the stand, and detachably supporting said reservoir, a basin removably supported by one of the brackets and provided with a plurality of outlets, and a plurality of pipe connections individually connected to said outlets.

7. An attachment of the character described, a liquid feeding apparatus, comprising a stand, a lower bracket having a depression, a feed basin having a flanged portion removably arranged in said depression, a ring arranged in said depression, a reservoir resting upon the ring, an upper bracket connected to said stand and removably holding said reservoir upon said ring, said basin extending below the bracket and provided with a group of outlets.

8. An attachment of the character described, a plurality of troughs, each adapted to be individually attached to a machine, a stand, a reservoir adjustably supported by the stand, a basin having a hydrostatic relation with said reservoir and a plurality of flexible pipes extending at various angles to said basin and adapted to individually establish communication between said basin and said troughs.

9. In combination, a single reservoir, a plurality of individual troughs adapted to be individually connected to winding machines, and a basin having hydrostatic connection with said reservoir and individual communications with said troughs.

In witness whereof I have hereunto set my hand.

GEO. S. WEINERTH.