S. G. RHODES, M. SHILLITO & J. I. SPEED.

MACHINE FOR FINISHING YARN, THREAD, &c.

No. 169,374. Patented Nov. 2, 1875.

FIG. 1.

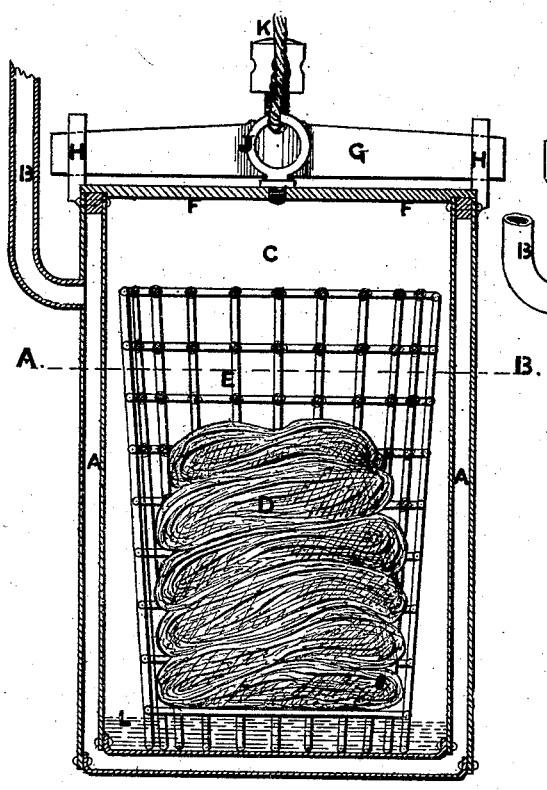


FIG. 2.

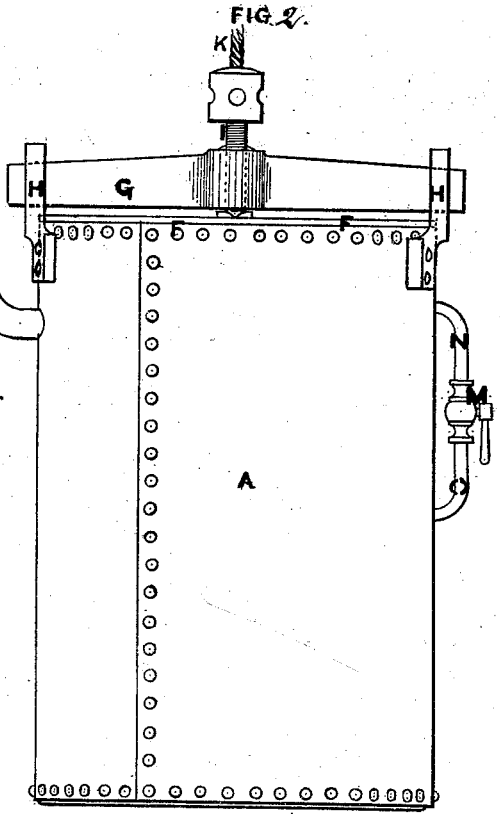


FIG. 3.

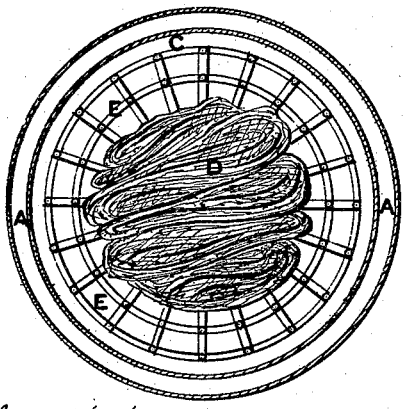
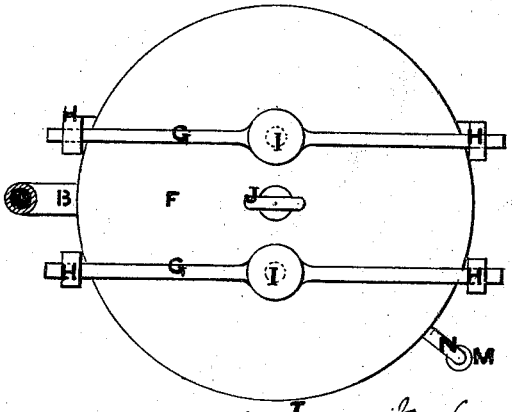


FIG. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL G. RHODES, MICHAEL SHILLITO, AND JOHN I. SPEED, OF LEEDS, ENGLAND.

IMPROVEMENT IN MACHINES FOR FINISHING YARN, THREAD, &c.

Specification forming part of Letters Patent No. **169,374**, dated November 2, 1875; application filed August 17, 1875.

To all whom it may concern:

Be it known that we, SAMUEL GIBSON RHODES, MICHAEL SHILLITO, and JOHN IRELAND SPEED, of the firm of SHILLITO, RHODES & Co., yarn-finishers, of Leeds, in the county of York, England, have invented certain Improvements in Machines for Finishing Yarn and Threads and Braid, and in apparatus connected therewith, of which the following is a specification:

This invention relates to improvements in apparatus for setting and giving luster to yarn and threads in hanks and on bobbins, doing away with the present plan of washing and drying after gassing.

To make our invention better understood we will proceed to describe the same by reference to the accompanying drawing, in which—

Figure 1 represents a sectional elevation of the improved apparatus; Fig. 2, front elevation of the same; Fig. 3, section through the line A B; and Fig. 4, plan of our improved apparatus.

A is a jacketed cylinder or cistern, to which is fitted a steam-pipe, B, and through which passes steam from a boiler, the steam employed having, by preference, a pressure of about sixty pounds on the square inch. The steam, acting on the jacketed cylinder, produces a superheated temperature in the interior C of the cylinder, when hermetically closed, of about 250° Fahrenheit; but we may employ pressure to produce a highly superheated temperature. The yarn, after having been gassed, is placed either in hanks D or on bobbins in an open receiver or basket, E, and put inside the jacketed cylinder A. A cover, F, is then placed on the cylinder or cistern and hermetically closed and secured by means of one or two cross-bars, G, passed through lugs H, fitted on the cylinder sides, and acted on by screws I, or by any other suitable means. A ring, J, is screwed in the cover F, to which is attached a rope, K, or a chain, which is passed over a pulley to lift up the cover F. The yarn in hanks is kept in the cylinder or cistern about fifteen minutes, and yarn on bobbins about five minutes, thoroughly setting the yarn or thread. The yarn or bobbins may be wetted or dried. To wet them and give the required weight, we place some water, L, in the bottom of the cylinder, which produces steam, or a tap, M, is employed, fitted to pipes N and O. The pipe N is fitted in the outside casing, and the pipe O in the inside. When the tap is turned it admits steam from the jacketed cylinder A into the inside C.

By these means we produce setting and luster on yarn and threads, removing all dust produced by the gassing, thereby finishing the yarn or thread and doing away with washing and drying.

The pressure in the inside of the cylinder or cistern when closed in is about two pounds on the square inch, but will increase with the pressure of the steam employed. A safety-valve is fitted on the cylinder or cistern.

The apparatus may be employed for finishing, setting, and giving luster to braid.

Having thus described our invention, and the manner in which the same is to be performed, what we claim as our invention is—

The described apparatus for finishing, setting, and giving luster to yarn, thread, or braid, consisting of the jacketed cylinder A and its steam-inlet pipe, the open receiver or basket E, and close cover F, all as set forth.

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