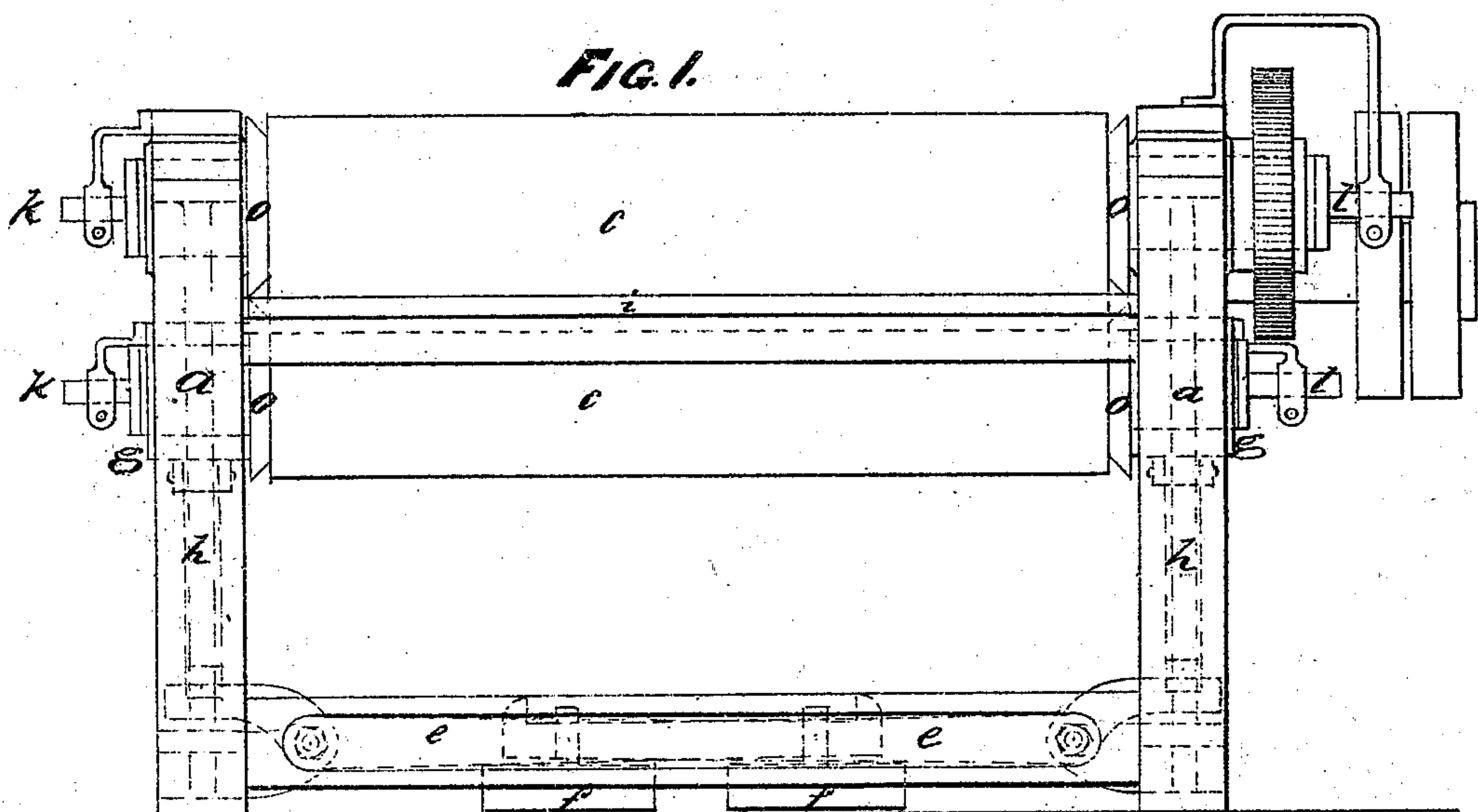
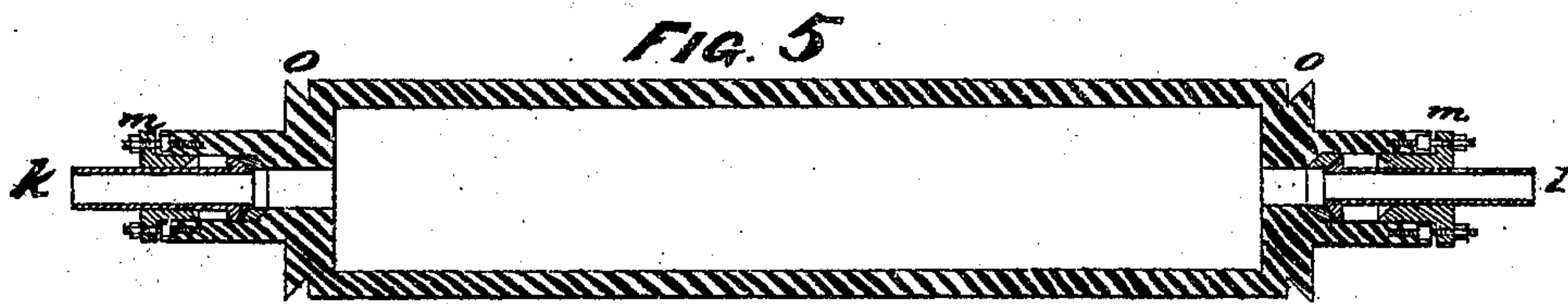
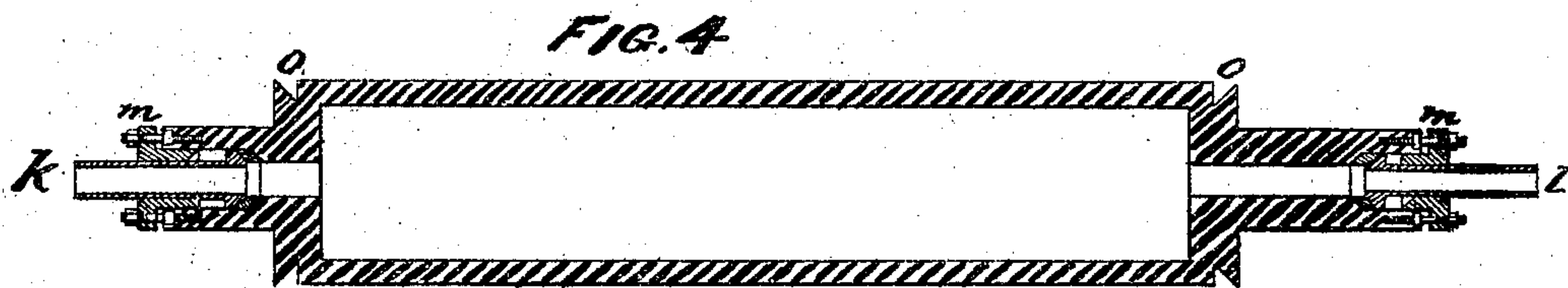


Nissey & Leachman, ^{2. Sheets, Sheet 1.}

Cloth Finishing.

No. 111,141.

Patented Jan. 24, 1871



Witnesses

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Nussey & Leachman,

Finishing Cloth.

No. 111,141.

Patented Jan. 24, 1871.

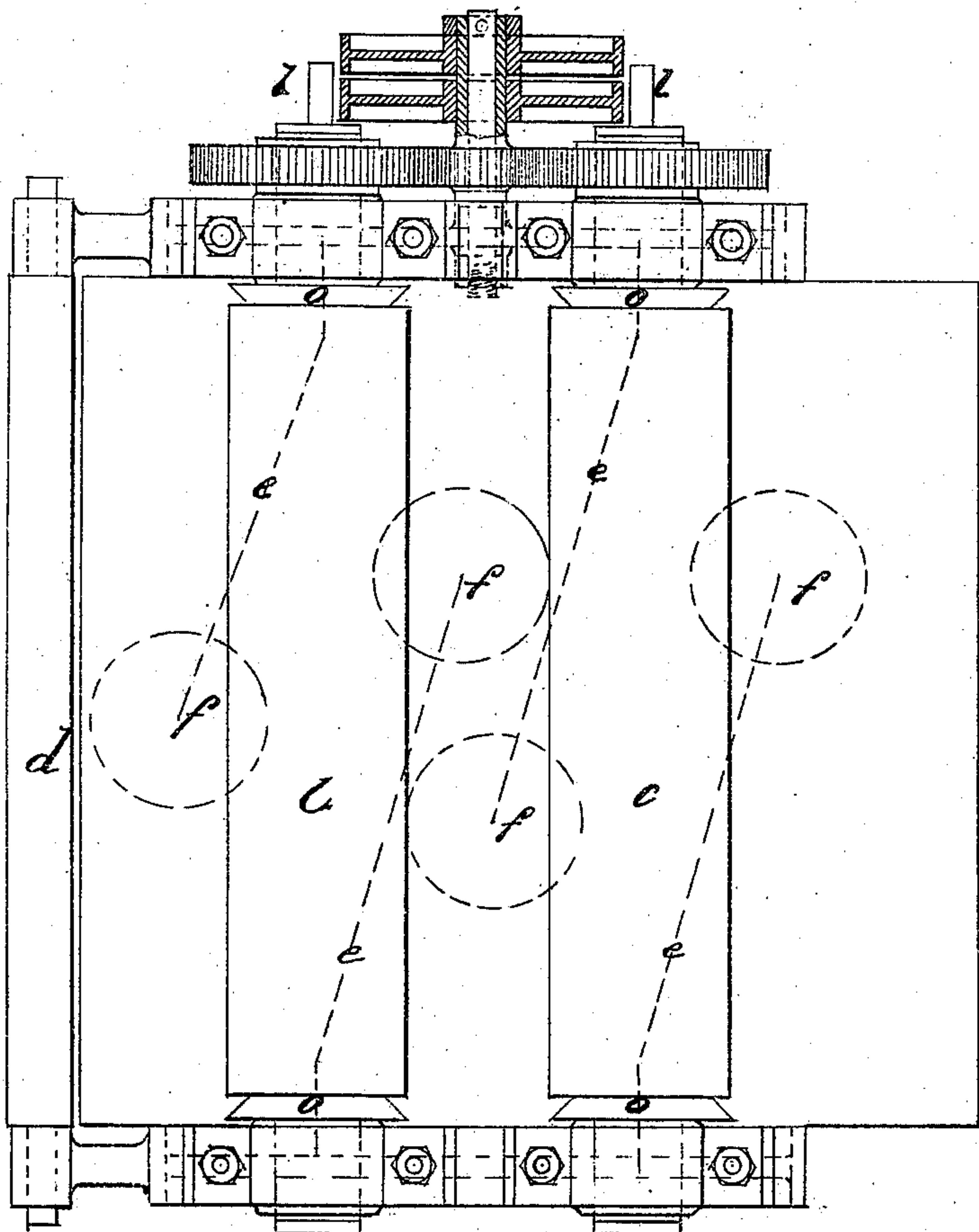


FIG. 3.

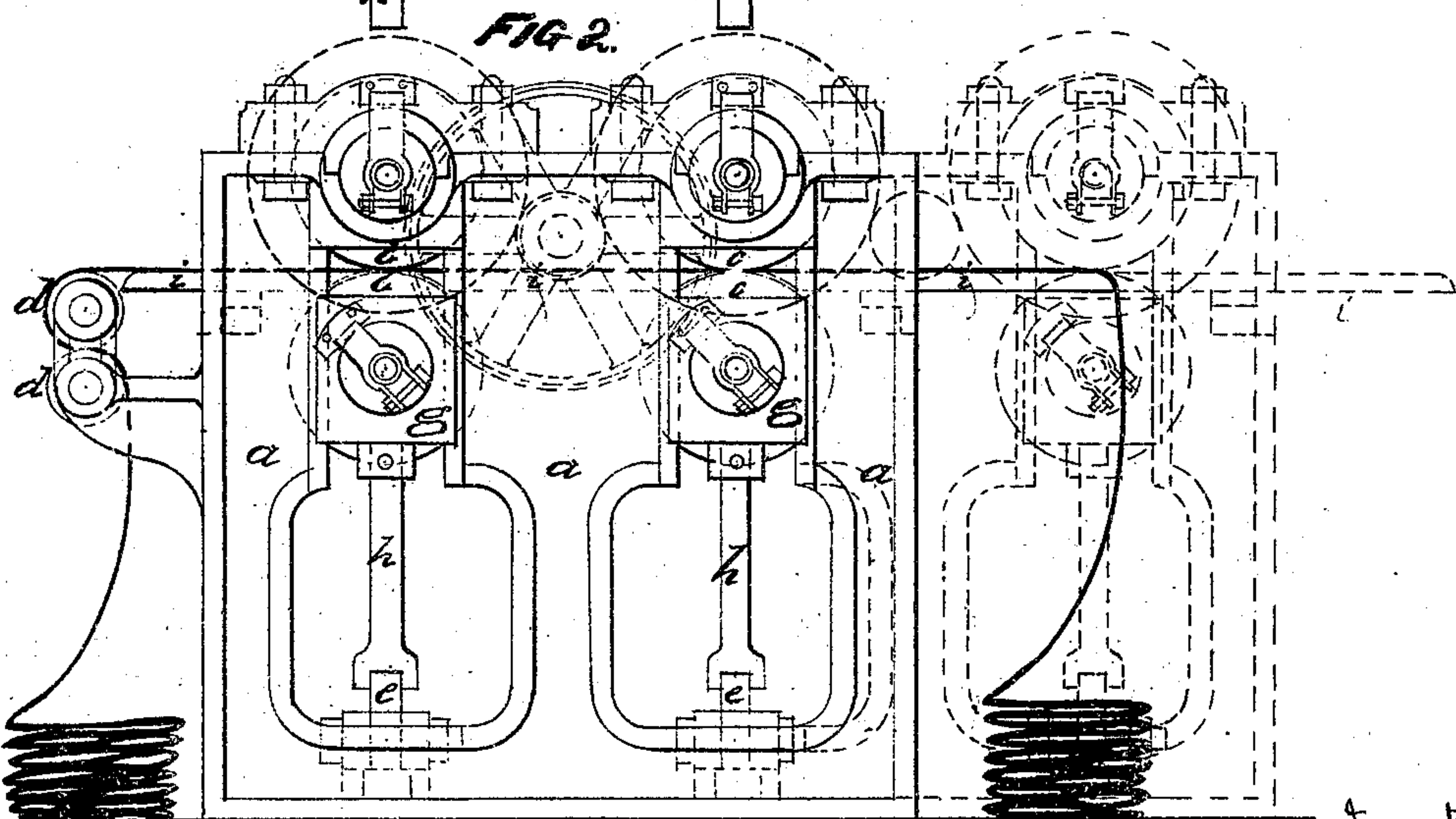


FIG. 2.

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GEORGE H. NUSSEY AND WILLIAM B. LEACHMAN, OF LEEDS, ENGLAND.

Letters Patent No. 111,141, dated January 24, 1871.

IMPROVEMENT IN MACHINES FOR PRESSING FABRICS.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom it may concern :

Be it known that we, GEORGE HENRY NUSSEY and WILLIAM BRADSHAW LEACHMAN, both of Leeds, in the county of York, England, have invented certain new and useful "Improvements in Machinery or Apparatus for Pressing Wollen and other woven or felted fabrics;" and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of our invention relates to a novel arrangement of hot and cold rollers or cylinders, as hereafter described, so as to dispense entirely with the process called papering, and thereby saving much time and expense heretofore attending the finishing of woollen and other woven or felted fabrics.

On two suitable frames which are parallel with each other we place, by preference, four rollers or cylinders. The first pair of the aforesaid rollers are hollow, and are heated by steam or other suitable means. The second pair of the aforesaid rollers are cold, and not necessarily hollow, although they may be so and supplied with cold water or other chemical preparations if necessary, so as to set the nap after passing through or between the hot rollers, and thus keeping the body in the cloth.

To the underneath rollers of the aforesaid hot and cold rollers pressure is applied by levers and weights or other mechanical means, the aforesaid hot and cold rollers being capable of adjustment in the direction of the upper rollers of the aforesaid hot and cold rollers.

In order that our said invention may be more completely understood we annex two sheets of drawings, in which—

Figure 1 represents an end elevation;

Figure 2, a side elevation;

Figure 3, a plan;

Figure 4, a section of a top roller; and

Figure 5, a section of a bottom roller.

It will be seen that we have illustrated a machine worked by power, but it is evident that we can substitute a winch-handle for the driving-pulley.

a a are the standards and frame-work of the machine.

b b, the hot rollers,

c c, the cold rollers.

d d represent friction or tightening rollers.

The fabric is first passed between the friction rollers to give the necessary tension before passing between the hot rollers; after the hot rollers it is passed between the cold rollers for the purpose of setting the nap.

e e are levers, and

f f are weights, by which means an upward pressure is given to the bottom rollers. This pressure may be increased or diminished to suit the various kinds of fabric by altering the position or size of the weights.

The bottom rollers run in sliding-bushes *g g*, fitting in corresponding guides in or on the standards *a a*.

The upright rods *h h* transmit the pressure given by the levers and weights to the bottom rollers.

i i i are tables or supports for the fabric as it passes to and from the rollers.

The table at the back of the machine is continued sufficiently far to allow the attendants to fold or "cuttle" the fabric.

The tables *i i i* are supported by brackets fixed on the standards *a a*.

Each roller is provided with a feed-pipe, *K*, through which hot or cold fluid is supplied, and also with a waste or overflow-pipe, *l*, through which the superfluous fluid is allowed to escape. Each pipe is connected with the roller by a stuffing-box, *m*, which is packed in such a manner as not to allow any leakage of the fluid as it enters or passes off from the rollers.

The end of each pipe inside each stuffing-box has a collar, by preference turned conical, as shown, and working against a bush of brass or other suitable material, as shown. The tubes or pipes are securely held in their required position by means of suitable brackets.

Tubing of any suitable kind may be attached to the ends of the pipes *K* and *l*. This depends on the position and nature of the supply of fluid.

The rollers have each a V-groove, *O*, turned in them at each end. This prevents any of the lubricating substance from the bearings getting to the fabric operated upon.

The driving-pulleys may be keyed onto the boss of the driving-pinion, which gears with the spur-wheel on the top rollers; a loose pulley also runs on the boss of the pinion. The pinion is then mounted and runs on a stud carried by one of the standards.

Having now described the nature of our said invention, and the manner in which the same is to be performed, we would remark that we do not limit ourselves to two hot and cold rollers, as any required number may be added, in the manner shown by dotted lines in fig. 2. Neither do we limit ourselves to the exact details and configuration of parts, as the same may be of course varied or modified without departing from the nature and principle of our invention.

We do not claim pressing woollen fabrics by heated

rollers or by cold rollers, but to set the nap properly we find it necessary to employ a pair of detaining rollers, so that the pair of heated rollers may lay the nap smoothly, and then the pair of cool rollers shall retain the nap while cooling, so that the cloth may be immediately folded or rolled up.

We claim as our invention—

A pair of heated pressing rollers, acting upon the cloth as received from a pair of detaining rollers, com-

bined with a pair of cool pressing-rollers to hold down the nap as the fabric cools, as set forth.

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