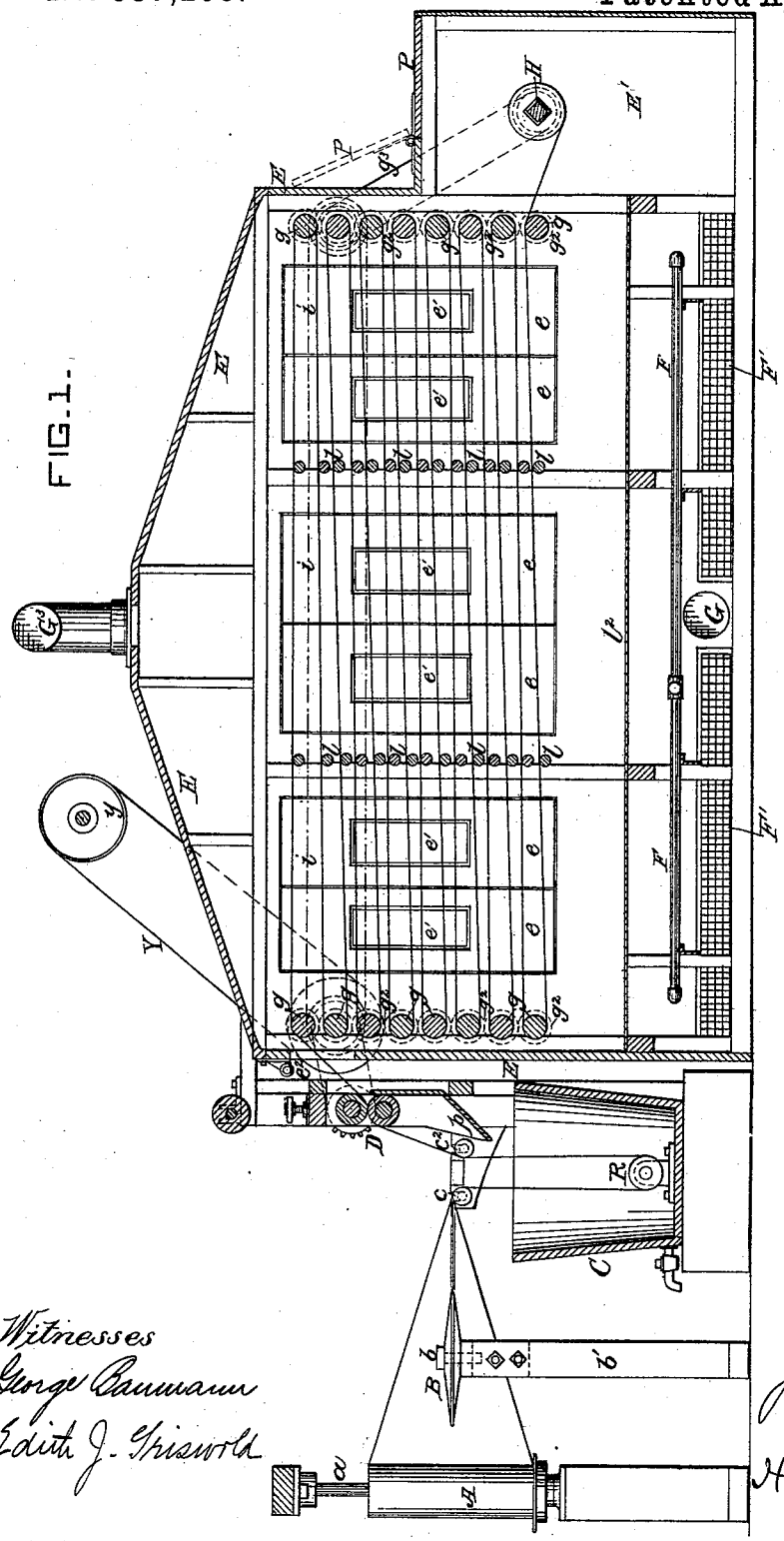
(No Model.) 3 Sheets—Sheet 1.

J. E. LEE.

BANDAGE MACHINE.

No. 537,298. Patented Apr. 9, 1895.

FIG. 1.



Witnesses
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Edith J. Griswold

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(No Model.) 3 Sheets—Sheet 2.

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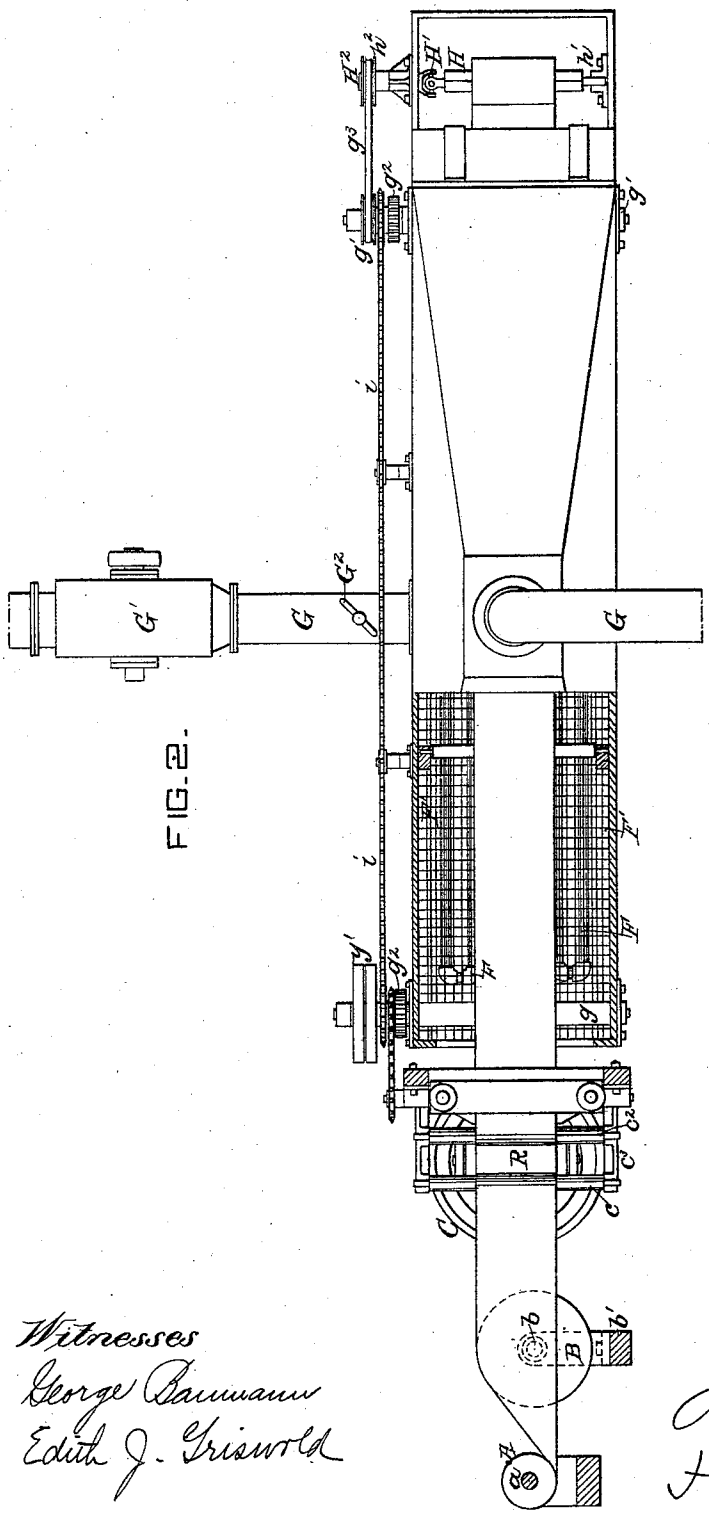

FIG. 2.

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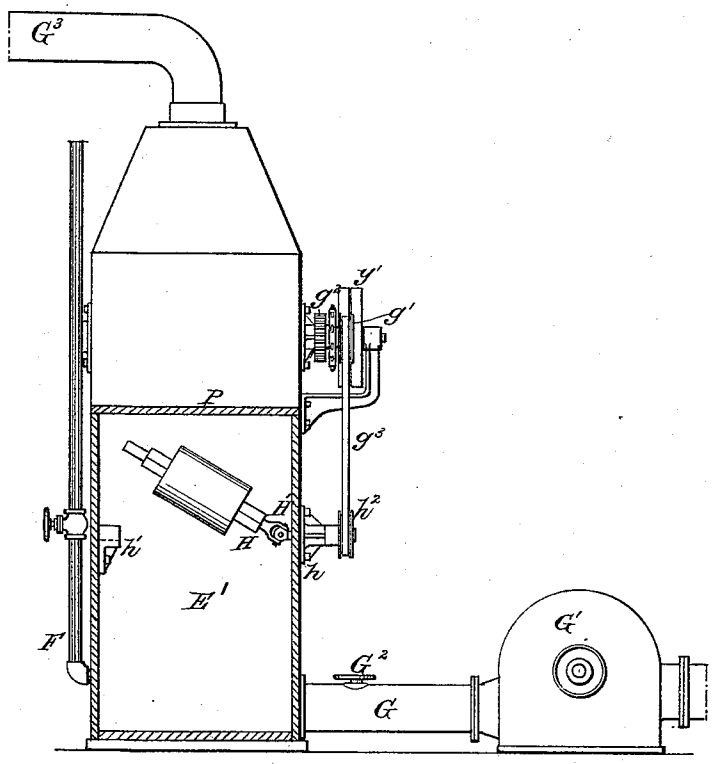
FIG. 3.



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UNITED STATES PATENT OFFICE.

JOHN ELLWOOD LEE, OF CONSHOHOCKEN, PENNSYLVANIA.

BANDAGE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 537,298, dated April 9, 1895.

Application filed June 28, 1894. Serial No. 515,962. (No model.)

To all whom it may concern:

Be it known that I, JOHN ELLWOOD LEE, a citizen of the United States, and a resident of Conshohocken, Montgomery county, Pennsylvania, have invented a Machine for Preparing Fabrics for Bandages, &c., of which the following is a specification.

My invention consists of an improved machine for preparing gauze and other fabrics for surgical bandages and other uses, the objects mainly had in view being to provide for the uninterrupted medication and drying and re-rolling of the gauze in the full lengths of the fabric as it comes from the mill.

In the accompanying drawings, Figure 1 is a longitudinal section of the machine. Fig. 2 is a plan view, partly in section; and Fig. 3 is an end view also partly in section.

The gauze or other fabric to be treated is fed or drawn from a roll A, which may be arranged on a rotary spindle *a* either in an upright or horizontal or other suitable position. In the drawings I have shown it as in an upright position, to conveniently provide for the doubling of the fabric, when it is desirable to run the goods through the machine double instead of single. In this case I provide a circular disk B free to turn on a vertical axis *b* upon a support *b'*. As the fabric from the roll A passes on its way to the medicating tank C, it bears against the edge of this disk which guides the fabric into the proper folded or doubled condition, as it passes to the tank C over the first guide roller *c*. In the bottom of the tank is a roller R, round which the fabric passes in order to insure its thorough immersion in and impregnation with the carbolic or other medicated solution in the tank. The folded and impregnated fabric thence passes over a guide roller c^2 to a pair of squeezing rollers D, which express the superfluous moisture and the latter flows back into the tank over the inclined board *p*.

The drying chamber E is a suitable rectangular inclosure, which is preferably provided at opposite sides with hinged or other doors *e* having glazed inspection openings *e'*. The fabric enters at one end at e^2, say at the top and thence passes backward and forward over a series of guide rollers *g*, *g*, preferably sufficient in number to enable the whole length of a piece of goods to be contained in the drying chamber at one time. The several adjacent rollers at each end of the drying chamber are geared together by suitable gears g^3 outside the chamber E. Motion may be imparted to these rollers by any suitable means, as by means of a belt Y passing from a driving pulley *y* over fast and loose pulleys *y' y'* on the shaft of one of the rollers *g*. In this instance I have shown such pulleys on the shaft of the second guide roller from the top at the entering end of the drying chamber. From that shaft motion may be conveyed to the rollers at the other end by means of a chain or belt *i* passing to a wheel on the shaft of one of the rollers at the delivery end of the machine, as shown. By this means all the rollers *g* are thus also feed rollers, driven at the same speed, and giving the same pull or feed upon the gauze at all points in its journey through the drying chamber. Within the drying chamber, between the geared rollers *g g*, there may be provided small supporting rollers *l l* for the lengths of fabric between the rollers *g* at opposite ends. From the last geared roller *g*, the fabric passes out of the drying chamber E into a box or compartment E' closed by a lid P and containing the take-up roll or shaft H upon which the dried fabric is automatically wound up, so that it need not be contaminated by being handled by the operator. This roll or shaft H is of squared or other polygonal section on the part which is to receive the gauze or other fabric, and at one end is rounded to turn in an open top bearing *h'*, at one side of the box, while at the other side, at H', it is universally jointed to a shaft H^2 extending through a bearing *h* in the side of the box. This shaft H^2 has a belt pulley h^2 driven by a belt g^3 from a pulley *g'* on the shaft of one of the gears g^3. This belt is sufficiently light to allow a certain amount of slip necessary in winding up the gauze on the shaft H as the roll increases in diameter.

The purpose of the open top bearing *h'* and the universal joint at H' is to permit the roll H to be easily thrown up at an angle when it is desired to finally slip the wound-up roll of fabric from off the shaft H, on raising the lid P, as indicated in Fig. 3.

The drying chamber may be heated by any

suitable means as by steam pipes F. Air, hot or cold, may be supplied through a pipe G by means of a blower or fan G′, the amount being regulated by a damper or valve G^2. There is an outlet pipe G^3 at the top. Openings F′, closed by screens, may be provided along the bottom of the drying chamber, to assist in carrying off the moisture. Along the lower part of the chamber over the steam piping, there is preferably provided a horizontal screen l^2 upon which the gauze may be laid temporarily out of contact with the pipes.

From the foregoing description, the operation of the machine will be readily understood.

I claim as my invention—

1. In a machine for preparing fabrics for surgical uses, the combination with the drying chamber, of heating devices in the bottom part of said chamber, a medicating tank outside of the drying chamber through which the fabric is passed, sqeezing rollers in front of the drying chamber, a series of drying rollers contained within the said chamber above the heating devices, and a take-up roll back of the drying chamber, and mechanism for positively rotating all the rollers uniformly to feed the fabric through the chamber, substantially as described.

2. In a drying machine, the combination of the drying chamber having feed rollers for the fabric therein, with a take-up roll and driving shaft to which said roll is universally jointed at one end, and an open top bearing, h', in which the other end of the roll turns, whereby the wound-up roll of fabric may be conveniently withdrawn, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN ELLWOOD LEE.

Witnesses:

CONRAD B. LEE,

C. D. WYNKOOP.