(No Model.)

T. ROWE.

APPARATUS FOR DETECTING WRINKLES IN CLOTH.

No. 601,780. Patented Apr. 5, 1898.

Fig. 1.

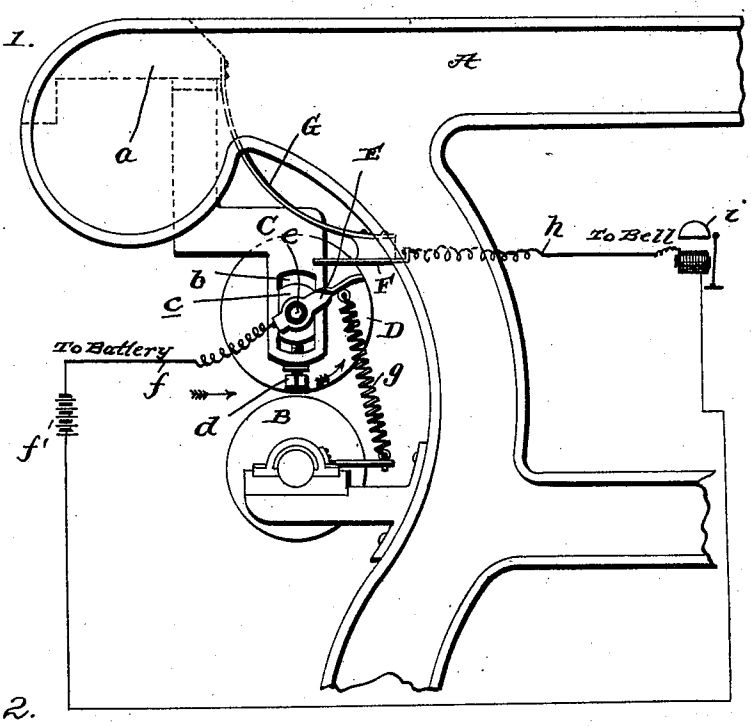
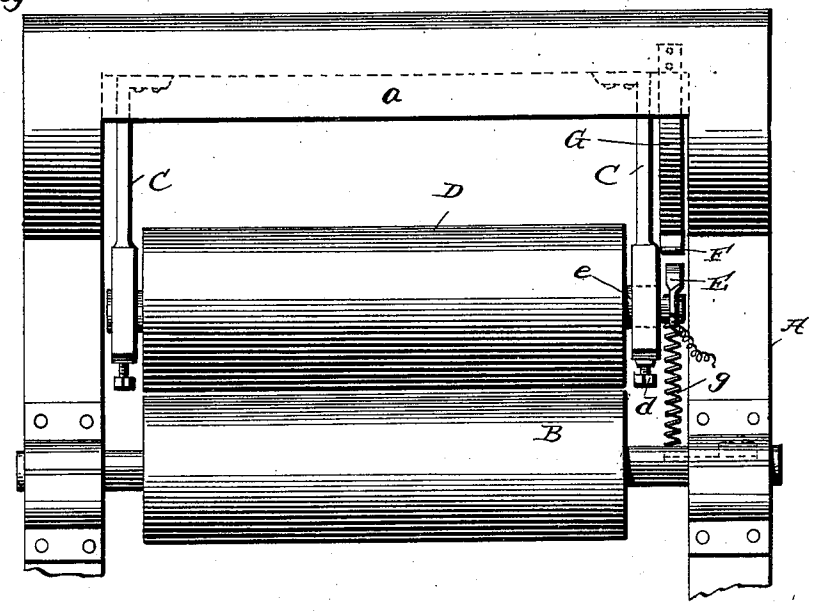


Fig. 2.



Witnesses:
C. H. Raeder
Jessie G. Croney.

Inventor
Thomas Rowe
By James J. Sheehy
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS ROWE, OF WOONSOCKET, RHODE ISLAND.

APPARATUS FOR DETECTING WRINKLES IN CLOTH.

SPECIFICATION forming part of Letters Patent No. 601,780, dated April 5, 1898.

Application filed September 13, 1897. Serial No. 651,461. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ROWE, a citizen of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Apparatus for Detecting Wrinkles in Cloth; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention contemplates the provision of a simple and highly efficient apparatus for notifying an attendant of wrinkles, seams, creases, and the like existing at any point in the width of cloth or fabric that is being fed into a shearing or similar machine, and it will be fully understood from the following description and claim when taken in conjunction with the annexed drawings, in which—

Figure 1 is a side elevation of a portion of the frame of a shearing-machine with my improved apparatus in its proper operative position thereon, and Fig. 2 is a front elevation of the same.

Referring by letter to the said drawings, A designates a portion of the main frame of an ordinary cloth-shearing machine, B designates the usual feed-roll of the same, and C designates the hanger-arms of my improved apparatus, which arms are preferably connected to the breast-beam *a* of the machine-frame, as shown. These hanger-arms C have their lower portions arranged above the axis of the feed-roll B, and they are provided in such lower portions with vertically-elongated slots *b*, in which are arranged vertically-movable bearing-blocks *c*, the said blocks being designed to normally rest on adjusting-screws *d*, which extend through threaded apertures in the lower ends of the hanger-arms, as shown.

D designates the detector-roll of the apparatus. This roll D has its journals *e* arranged in the bearing-blocks *c*, and it is provided upon one of said journals with a contact-finger E, which is designed to be electrically connected by a wire *f* with one pole of a suitable electrogenerator *f'*. The finger E and consequently the detector-roll are held against casual rotation by a coiled spring *g*, which is connected at one end to said finger and at its opposite end to the machine-frame, as shown.

F designates a contact-piece which is disposed above the finger E and is designed to be electrically connected by a wire *h* with an electric bell *i* or other suitable annunciator, which in turn is electrically connected with the pole of the generator *f'*, opposite to that with which the finger E is connected, as shown. The said contact-piece F may be mounted in any suitable manner; but I prefer to connect it with, but insulate it from, a spring-strip G, which is connected to the breast-beam *a*, this construction being preferred since it permits the piece F to give when the finger D is forced against it, and thus prevents breakage of any of the parts.

In the practical operation of the apparatus the bearing-blocks *c* are adjusted through the medium of the screws *d*, so that the detector-roll D will just clear the cloth or fabric as it passes over the roll B into the shearing-machine. The said detector-roll is held against casual rotation by the spring *g*, as before described; but if there is a crease, wrinkle, or seam in the cloth or fabric the same will turn the roll D in the direction indicated by arrow and carry the finger E into engagement with the contact device F. This will close the electric circuit and ring the bell, and thereby apprise the attendant of the existence of the imperfections in the cloth in time to enable him to stop the shearing-machine before the creased or wrinkled portion of the cloth can enter the same. When the machine is stopped, the crease or wrinkle is removed and the machine is again set in motion. As soon as the crease or wrinkle is removed from the cloth or the cloth is drawn backward to facilitate the removal of the crease or wrinkle the spring *g* will cause the detector-roll and contact-finger to resume their normal positions, ready to indicate the next crease or wrinkle that occurs in the cloth.

It will be obvious from the foregoing that the apparatus may be adapted for use in conjunction with fabric of different thicknesses by simply adjusting the detector-roll through the medium of the screws *g*.

It is essential to the proper shearing of cloth and other fabric that they be free from wrinkles, creases, seams, and the like when

they enter the shearing-machine, and therefore it will be seen that my improved apparatus forms an important adjunct of a shearing-machine.

While designed more particularly for use in conjunction with shearing-machines, my improved apparatus may be used in conjunction with other machines when it is desirable that the cloth entering such machines be free from wrinkles throughout its width.

The apparatus may also be used apart from a machine when desired to detect creases and wrinkles in a piece of cloth, the feed-roll B in such case being rotated by any suitable means.

I would further have it understood that when desirable the shearing-machine may be equipped with a suitable stop device so arranged and connected that when the electric circuit is closed the shearing or other machine will be automatically stopped.

Having thus described my invention, what I claim is—

In the apparatus for the purpose described, the combination of the main frame, a feed-roll journaled in the main frame, hanger arms or supports connected with the main frame and disposed above the feed-roll and having vertically-elongated slots, the bearing-blocks arranged in said slots, screws taking through threaded apertures in the hanger-arms and adjustably supporting the bearing-blocks, the normally idle detector-roll having journals arranged in the bearing-blocks, a yielding contact device supported by the frame and forming one terminal of an electric circuit, a contact-finger fixed on the journal of the detector-roll and forming the other terminal of the circuit and adapted, when the detector-roll is rotated, to engage the yielding contact device, and a coiled spring connected at one end to the contact-finger and at its opposite end to the frame, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS ROWE.

Witnesses:
E. L. ROY SPAULDING,
GEO. W. SPAULDING.