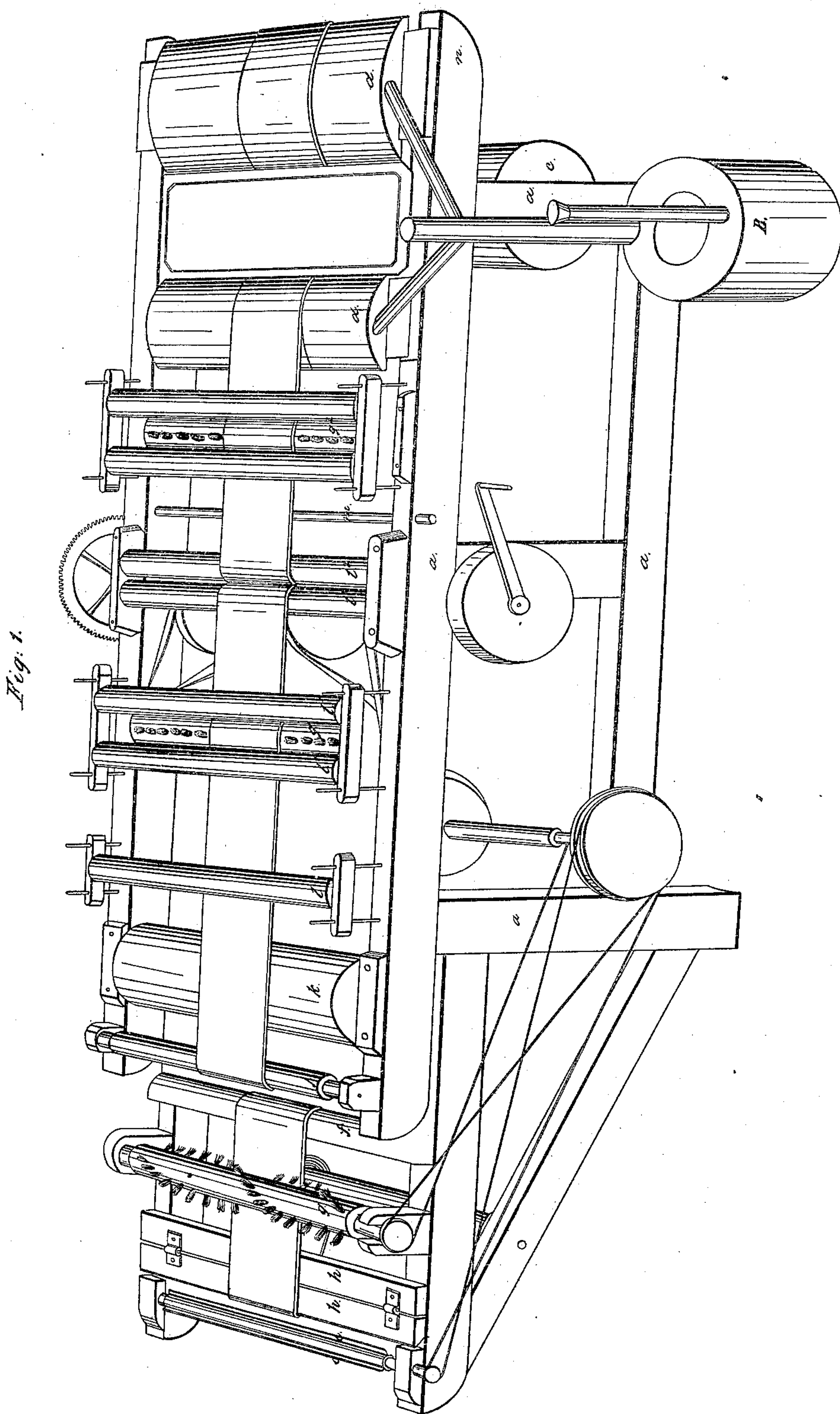


Johnston & Snyder
Cloth Dresser

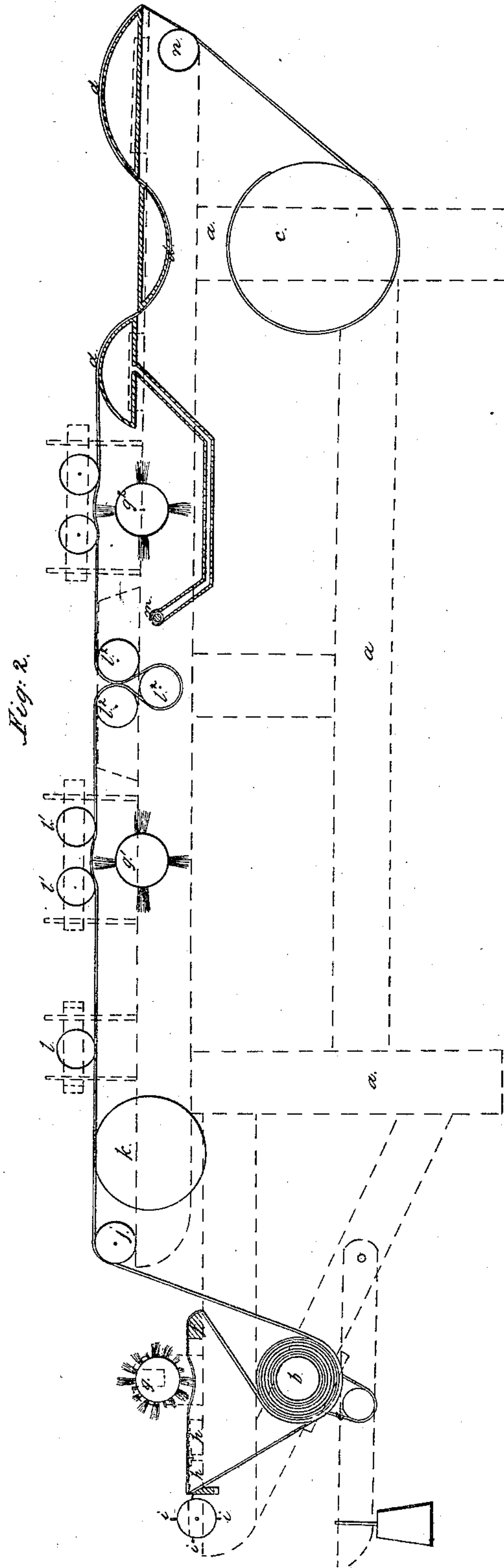
Patented Mar. 13, 1849.



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N^o 6, 188.

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UNITED STATES PATENT OFFICE.

JNO. JOHNSTON AND J. D. SNYDER, OF SALTSBURGH, PENNSYLVANIA.

APPARATUS FOR DRESSING CLOTH.

Specification of Letters Patent No. 6,188, dated March 13, 1849.

To all whom it may concern:

Be it known that we, JOHN JOHNSTON and JOHN D. SNYDER, of Saltsburgh, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Machinery for Dressing and Finishing Cloth, of which the following is a full, clear, and exact description, reference being had to the annexed drawings of the same, making part of this specification, in which—

Figure 1 is a perspective view, and Fig. 2 a longitudinal vertical section.

The same letters indicate the same parts in all the figures.

In the clothiers' art, it has ever been considered a desideratum to devise a plan by which all the various operations required in the dressing and finishing of a piece of cloth might be simultaneously performed by automatic machinery. Numerous attempts, from time to time, have been made to accomplish this object, but heretofore with only partial success, the difficulty arising from the fact that the pressing requires for its due performance more time than the other parts of the operation and whenever that time was abridged, it was found to be at the expense of the finish, which was deteriorated in quality directly as the period of the pressing was diminished. Our invention surmounts this difficulty by a new method of pressing, smoothing and leveling the surface of the cloth, which consists in subjecting it to tension, friction, moisture, and heat, as in the old way; in this manner not only is the process accelerated and much labor thereby saved, but the luster and finish of the cloth are materially improved.

In the accompanying drawings, the frame work *a* may be made of wood or metal, combined in any convenient way and of any suitable form and proportions. Upon this frame is mounted all the apparatus necessary to give a complete dress and finish to the cloth (after it has been fulled and tentered;) together with the necessary bands, pulleys, and cog wheels, to communicate to the several parts the requisite motion.

The piece of cloth to be finished is first wound around the roller *b* its end is then sewed to one end of a piece of cloth which is passed through the machine in the course indicated by the double red lines, and fastened by its other end to the cylinder *c* around which the cloth is rolled, when finished and

by which it is drawn over the smoothing and pressing convex metallic surfaces *d d d*. The cloth is prevented from being drawn off or unwound from the roller *b* without being subject to a sufficient degree of tension by means of a brake *e* with an adjustable weight upon it to increase or diminish its friction upon the roller, when the cloth is unwound from the roller *b* in the process of finishing, it is first stretched over the edge of the beam *f* which unfolds the wrinkles and smooths out the plaits, it is then brought into contact with the rotary brush *g* by which loose fibers, dust, and other adherent matter is removed and the nap smoothed down and laid in one direction, the cloth is then passed on to the adjustable hinged stretcher *h* around the edge of which it is drawn passing the shearing knives *i* in the proper position to have the nap shorn to the required length; after being shorn, the cloth passes down beneath the roller *b* thence up over the tension roller *j* to the emery cylinder *k* which grinds down the burls; the surface of the cloth is held in contact with the grinding cylinder, by the weight of the press roller *l* which slides up and down on vertical guides projecting from the upper side of the frame; the cloth is then again brushed to straighten and lay the nap, being held in contact with the rotary brush *g'* by a pair of press rollers (*l l'*); it then passes over the tension rollers *l² l² l²* (the lowest of which is moved by a cog wheel or belt,) and draws the cloth from the roller *b* through to this point of the machine passing it toward the steam pipe *m* in passing over which, it is heated and moistened by a jet of steam issuing from a narrow slit made in the upper side of said pipe, the cloth is now brought into contact with the rotary brush *g²* to lay down and smooth the nap; it next passes to the hollow metallic semicylinders *d d d* over the convex surfaces of which it is drawn and being subjected to considerable tension, while being drawn over these cylinders, it rubs upon them quite hard, producing a considerable degree of friction, which compensates for the lack of pressure in our method of finishing. The surfaces of these cylinders are polished very smooth and their interior kept filled with steam to heat them, the steam is kept in a state of constant circulation being generated in the combined furnace and boiler *B* whence it passes into the cylinders and out of the slit in the moistening tube *m*; after leaving the convex me-

tallic rubbers, the final polish is given to the cloth by bringing it into contact with a rotary cylinder *n* covered with velvet which gives to it that peculiar satiny luster and
5 silky softness which is so characteristic of highly finished cloth; the cloth now passes to the hollow metallic cylinder *c* about which it is wound as fast as finished, this cylinder performs the double office of drawing the
10 cloth through the machine and winding it up—it is turned by a belt from the main driving shaft.

The entire piece of cloth is thus drawn progressively through the machine the finish
15 being given to it by the successive operation of the different parts of the apparatus which are all simultaneously and harmoniously moved by suitably arranged wheels, belts,

pulleys and other devices, put into action and impelled by any suitable and available 20 moving power.

What we claim as our invention and desire to secure by Letters Patent, is—

The combination of the rotary brushes, shears, steaming apparatus, polishing velvet 25 roller, and other parts, as herein described, with the polished convex metallic rubbers, whereby all parts of the process of finishing a piece of cloth after it leaves the fulling mill, are simultaneously and continuously 30 performed.

JOHN JOHNSTON.
JOHN D. SNYDER.

Witnesses:

DAVID HENDERSON,
WM. HART.