J. Coates.

Preparing Fabrics for Printg.

No. 5,430. Patented Mar. 21. 1848.

Fig. 4.

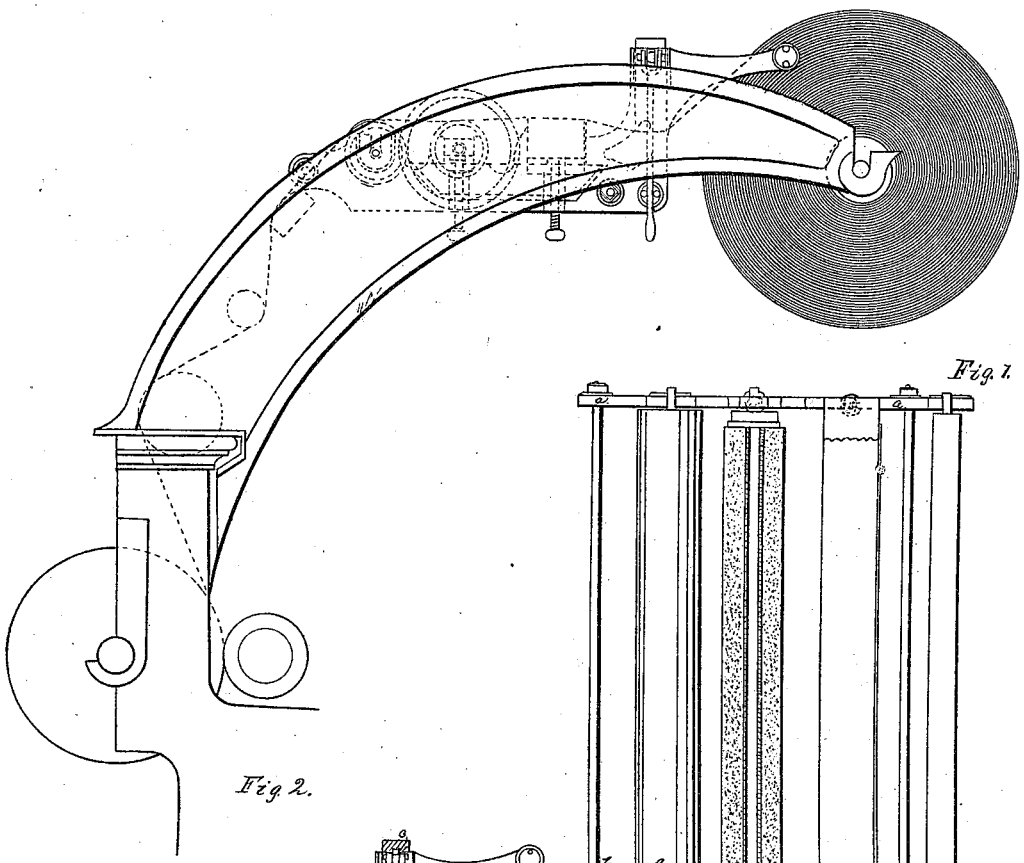


Fig. 1.

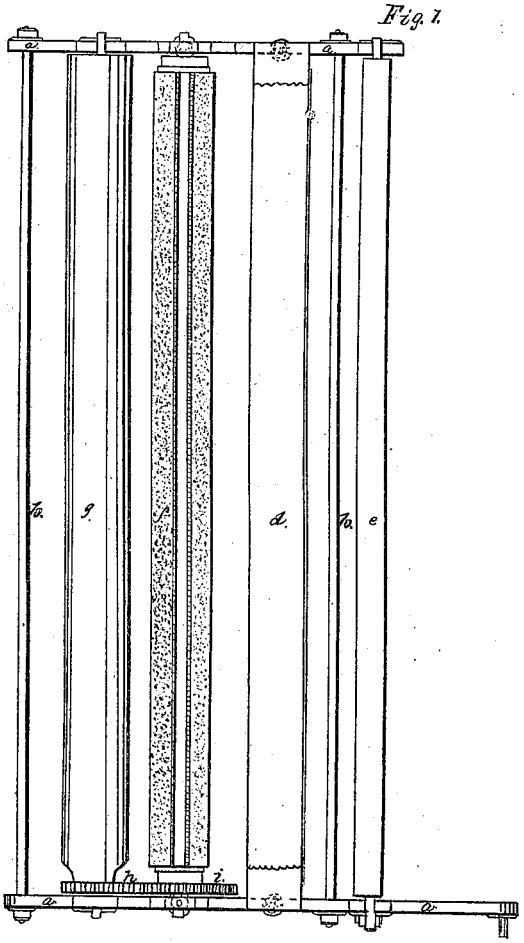


Fig. 2.

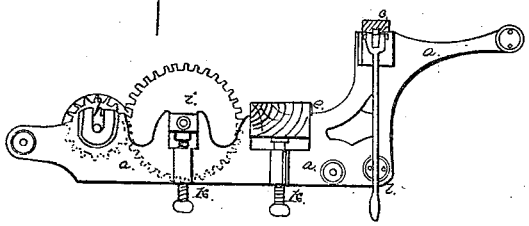
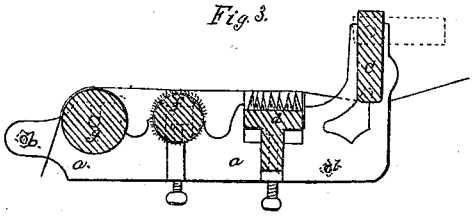


Fig. 3.



Witnesses.

Chas. Davis.

John Cook.

Inventor.

John Coates

UNITED STATES PATENT OFFICE.

JOHN COATES, OF MANCHESTER, ENGLAND.

PREPARING FABRICS FOR PRINTING.

Specification of Letters Patent No. 5,480, dated March 21, 1848.

To all whom it may concern:

Be it known that I, JOHN COATES, of Manchester, in the county of Lancaster, England, a subject of the Queen of Great Britain, have invented certain improvements in machinery or apparatus for cleaning the surface of woven fabrics or freeing the same from fibrous or other loose matters previous to printing thereon; and I do hereby declare that the following is a full and exact description of my said invention—that is to say, these improvements in machinery or apparatus for cleaning the surface of woven fabrics or freeing the same from fibrous or other loose matters previous to printing thereon consist in the application, employment, or use for such purposes of a revolving cylinder or roller covered with wire cards, such as is used in the carding of cotton, either employed in connection with a stationary brush or without it, which apparatus may be either attached to the ordinary printing-machine for printing calicos or other woven fabrics or to the winding-machine for preparing the cloth-roller used in such machinery or used separately from either.

This apparatus is to be applied to the surface of calico or any woven fabric to clean it from loose fibers or other extraneous matters previous to printing thereon and thereby preventing the occurence of imperfect work frequently arising from the presence of such loose matters and also increasing the capability of producing more work in a given time. Such card cylinder or roller and brush or any other modification of a similar cleaning apparatus may either be used separately or detached if preferred or may be attached to or in connection with the ordinary calico printing machine as herein described and placed between the cloth roller and the printing roller or it may be employed in any other convenient situation.

In the drawing accompanying these presents Figure 1 shows a plan view of an arrangement of mechanism which is suitable to the above purposes and drawn upon a scale of about two inches to the foot. Fig. 2, is an end view and Fig. 3, a section of the same. Fig. 4, is a diagram showing the relative position of the apparatus when used in connection with the ordinary calico printing machine.

The cloth or calico is represented by the red line.

a, *a*, is the side framing of the apparatus connected together by the rods *b*, *b*, and supporting the tension rail *c*, *c*, under which the cloth passes and thence over the stationary brush *d*, *d*, which has a "doctor" or steel blade *e*, *e*, extending along one side. The cloth then passes over the wire card cylinder or roller *f*, *f*, and over the tension roller *g*, *g*, to the printing apparatus. The roller *g*, *g*, may be covered with felt or cloth if preferred and the tension of the calico or other woven fabric passing over it causes the same to revolve and by means of the spur pinion *h*, and wheel *i*, turns the wire card cylinder or roller *f*, *f*, in the reverse direction. Thus the calico or other woven fabric passing over the stationary brush *d*, *d*, and "doctor" *e*, *e*, and subsequently over the revolving card cylinder or roller becomes thoroughly brushed and cleaned from any loose material which might adhere to it thus causing the fabric to present a much smoother or better surface for printing. The brush *d*, *d*, and the wire card cylinder or roller *f*, *f*, may be adjusted by the screws *k*, *k*, and a slight lateral or traversing motion may also be imparted to it perhaps in some instances in an oblique direction to that of the cloth.

When the apparatus is not desired to be at work the tension rail *c*, *c*, may be thrown into the position shown by dotted lines at Fig. 3 by means of the lever *l*, the cloth will then pass over the roller *g*, *g*, without touching the brush or the said card cylinder or roller.

I claim—

The use of a card cylinder and brush as applied to the ordinary calico printing machine for cleaning the surface of the cloth as described.

Witness my hand, Manchester Nov. 18th 1847.

JOHN COATES.

Witnesses:

JOHN DAVIS,

JOHN COOP.