

(No Model.)

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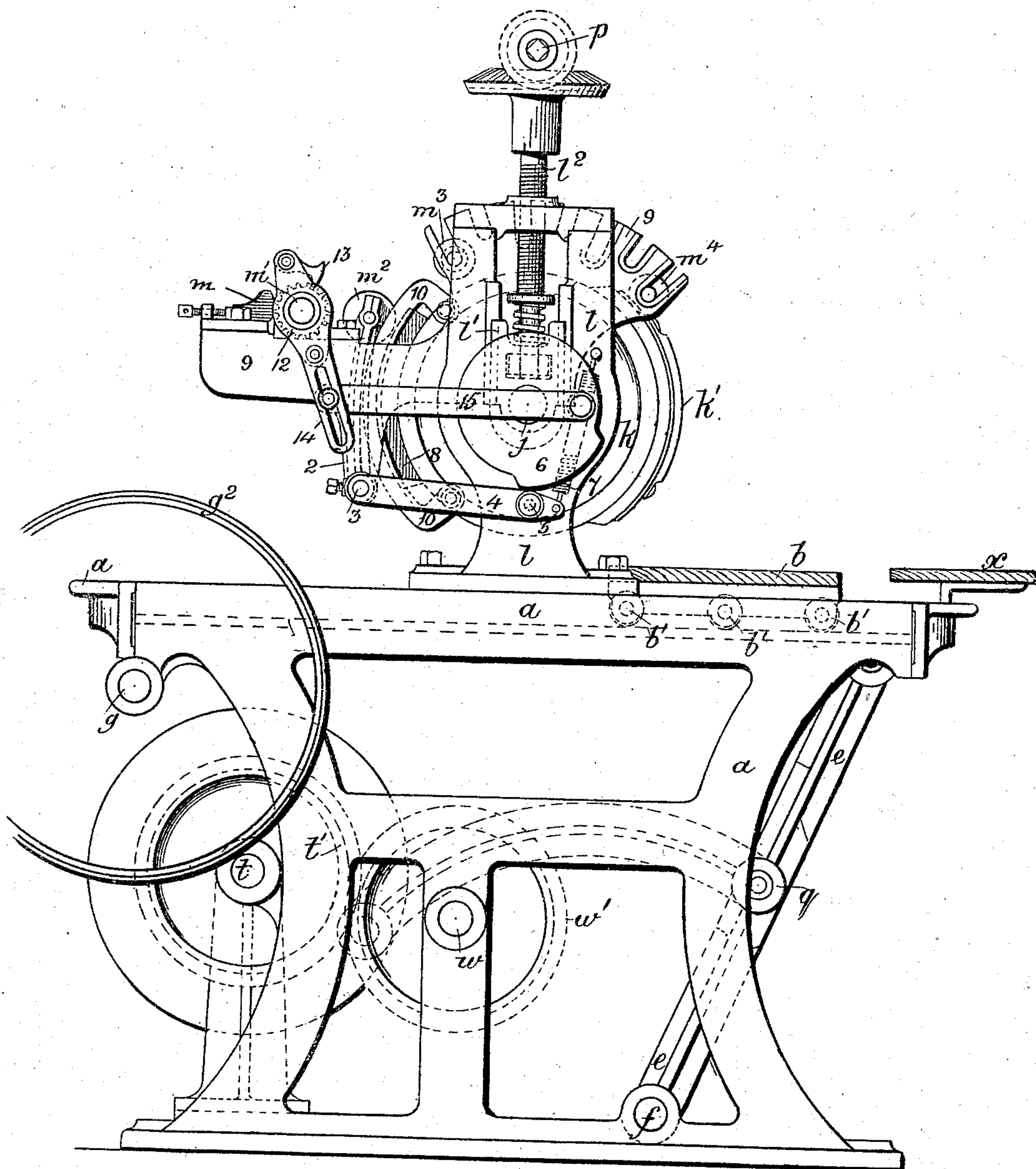
R. J. LINTON.

MECHANISM FOR PRINTING FOLDED FABRICS, &c.

No. 500,770.

Patented July 4, 1893.

FIG. 1.



Inventor:

Richard John Linton

By

Richardson

his Attorneys.

Witnesses:

E. B. Bolton
J. S. Prising.

(No Model.)

4 Sheets—Sheet 2.

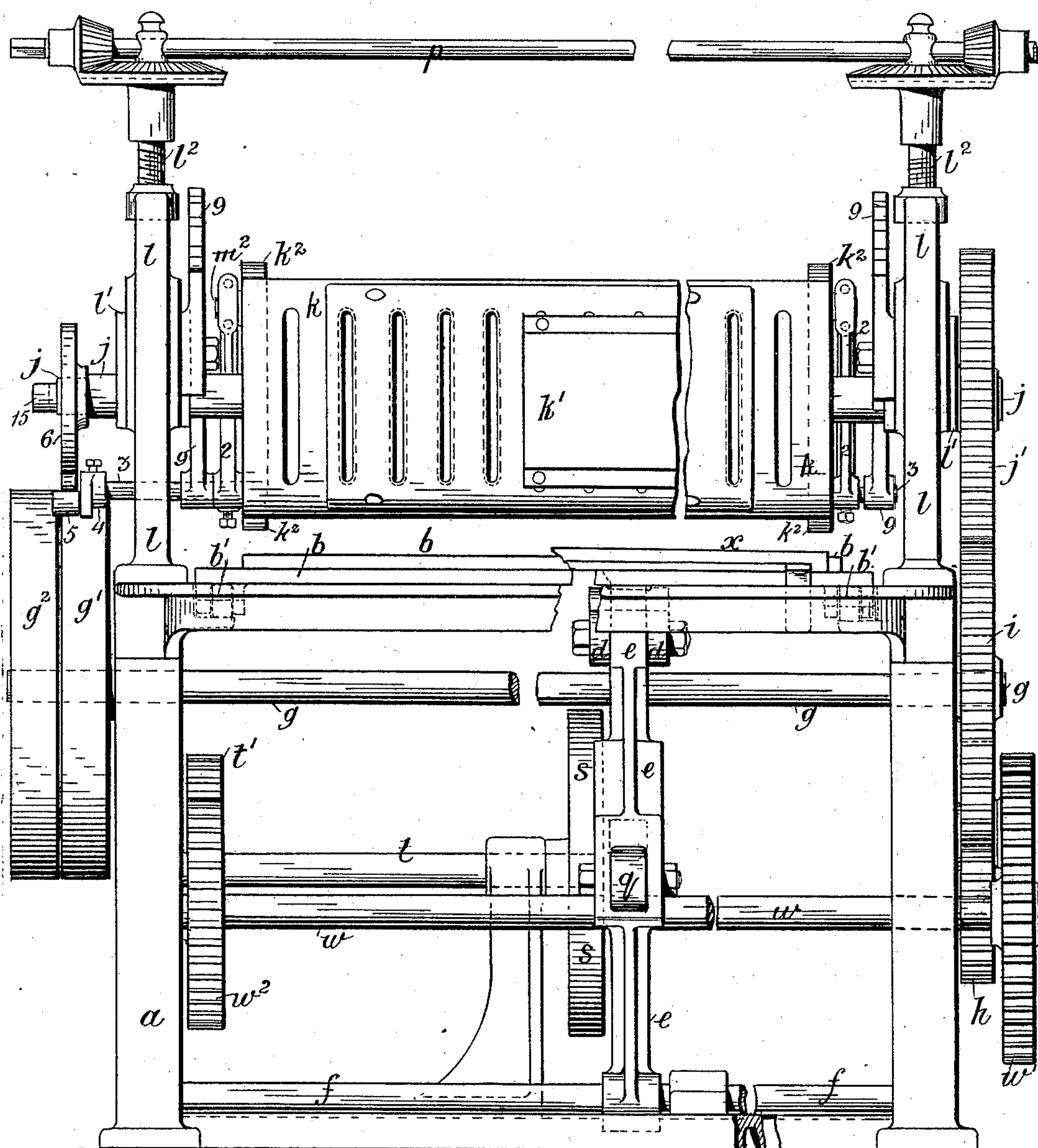
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FIG. 2.



Inventor

Richard John Linton
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E. B. Balton
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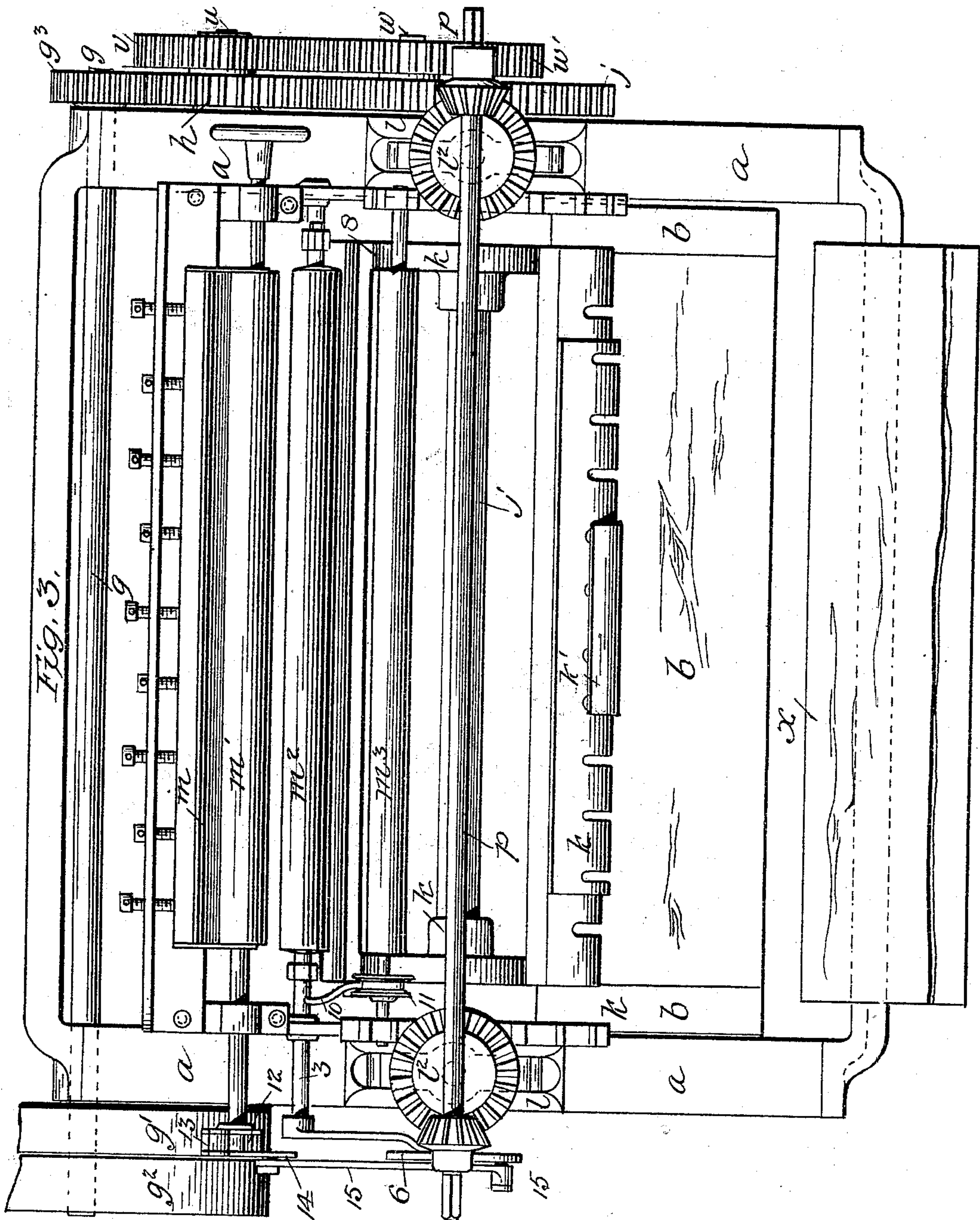
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Attest
Melvin M. Adams
Wm. T. Hall.

Inventor
Richard J. Linton
by Richards & Co.
ATTN

(No Model.)

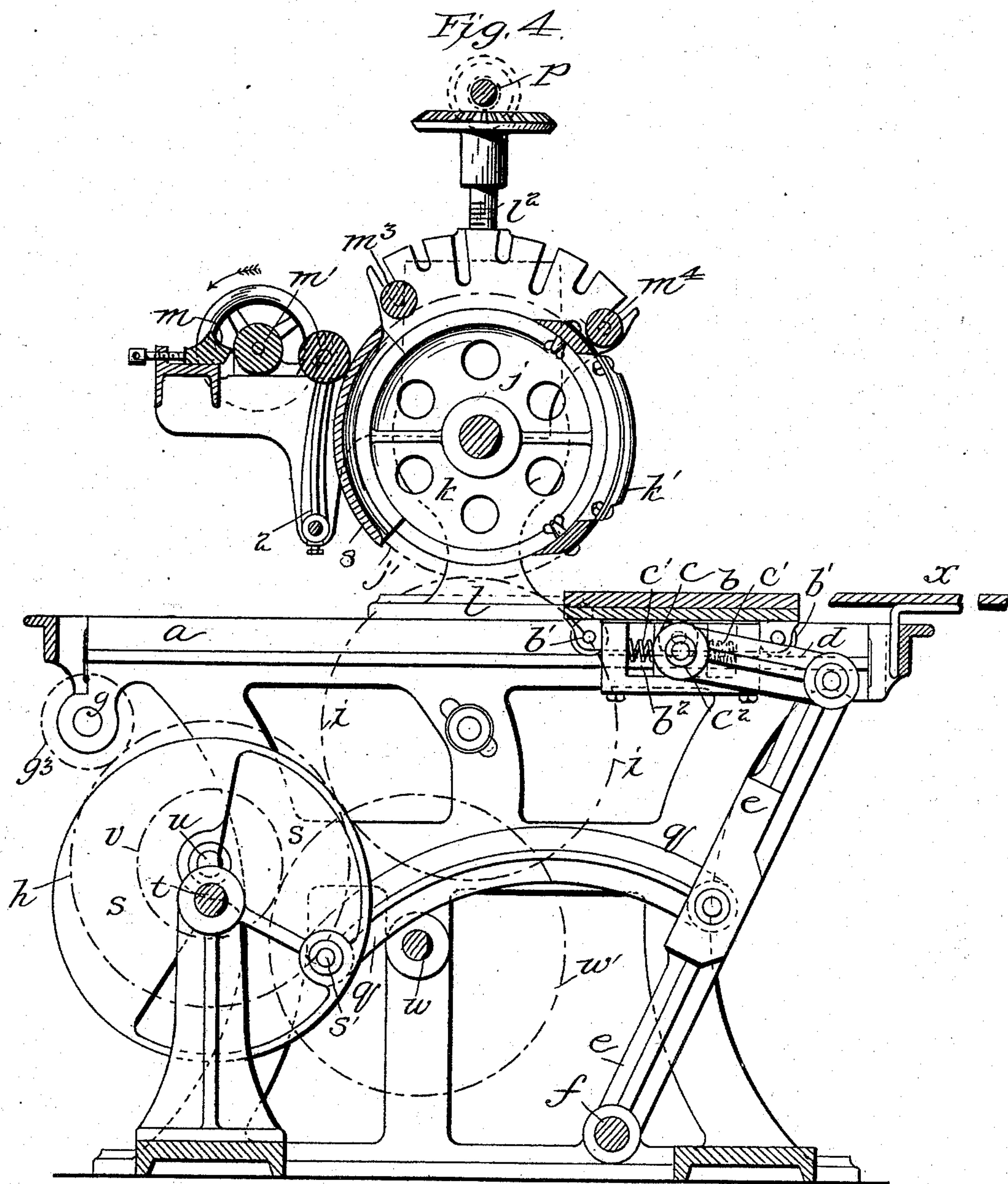
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UNITED STATES PATENT OFFICE.

RICHARD J. LINTON, OF MANCHESTER, ENGLAND.

MECHANISM FOR PRINTING FOLDED FABRICS, &c.

SPECIFICATION forming part of Letters Patent No. 500,770, dated July 4, 1893.

Application filed July 15, 1891. Serial No. 399,668. (No model.) Patented in England July 5, 1889, No. 10,846.

To all whom it may concern:

Be it known that I, RICHARD JOHN LINTON, a subject of the Queen of Great Britain, and a resident of Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Mechanism for Printing Folded Fabrics, &c., (for which I have obtained Letters Patent in Great Britain, No. 10,846, bearing date July 5, 1889,) of which the following is a specification.

My invention relates to improvements in mechanism for printing or stamping trade marks, letters, figures and other distinctive marks or devices upon folded fabrics or woven goods in the piece, and my invention consists in an improved arrangement or application of mechanism for such purpose.

In constructing my improved mechanism, I employ a revolving drum or cylindrical frame, on the periphery of which I mount and secure any suitable number of printing blocks to print or stamp the required impression on the pieces. I employ, in conjunction with the said revolving drum, a traveling table to carry the pieces to be printed with the required trade mark or other device or mark by the revolving printing drum or frame. The printing drum and the table, which carries the pieces, are caused to travel at the same surface speed so as to obtain a clear and unblurred impression of the printing blocks on the pieces.

Any convenient and suitable arrangement for applying ink or color to the printing block or blocks may be employed.

In order that my invention may be fully understood and readily carried into effect I will describe the accompanying four sheets of drawings reference being had to the figures and letters marked thereon.

Figure 1 is an end view, Fig. 2 a front view, and Fig. 3 a plan of my improved mechanism for printing or stamping trade marks and the like upon folded fabrics or woven goods in the piece, and Fig. 4 is a transverse vertical section of Fig. 2.

In these views—*a* designates the frame of the machine on which is mounted a sliding table *b*, supported on rollers *b'*, to carry the piece to be printed. On the underside of the table is a box *b²* in which is fitted a block *c* cushioned by springs *c'* and connected by two

arms *d* to a rocking lever *e*, which is fixed on a shaft *f* supported in the machine frame. The lever *e* is rocked by an arm *g* connected thereto and to a crank pin *s'* carried by a face-plate *s* fixed near the end of a shaft *t*.

The driving shaft *g* is driven by means of a pair of fast and loose pulleys *g'* *g²* and a belt, not shown, and the shaft *t* is driven by means of a pinion *g³* which drives a spur wheel *h* fixed on a stud *u* on which is also fixed a spur wheel *v*. On a shaft *w* are fixed two gears *w'* and *w²* the former receiving motion from the wheel *v* and the latter transmitting it by a gear *t'* to the shaft *t* whereby the table *b* is driven alternately to and fro. The spur wheel *h* above named drives, by means of a gear wheel *i* and a gear *j'*, the shaft *j* on which is fixed the drum or cylindrical frame *k*. The printing blocks, type, &c., *k'* are secured along one side of the drum *k* and may be of metal, wood or other suitable material. The shaft *j* is journaled in slide blocks *l'* fitted in standards *l* and adjustable by means of screws *l²* so that the printing drum *k* with its appurtenances can be raised and lowered by a shaft *p* and gearing as shown farther from or nearer to the sliding table *b* as required; or in place of raising and lowering the drum *k* and its appurtenances the sliding table *b* may be fitted so as to be capable of adjustment to or from the drum *k* which would answer the same purpose.

The printing blocks or type *k'* may be furnished with ink or color by any suitable arrangement as for example that shown in the drawings which consists of the adjustable doctor *m*, which forms a color box for the roller *m'*, the color being taken from the roller *m'* by a traveling roller *m²* which is supported in two arms *2* fixed on a rocking shaft *3* on which is also fixed a lever *4* which has a roller *5* held in contact with a cam *6* by a spring *7*. The cam *6* is fixed on the drum shaft *j* and, as the latter rotates, actuates the lever *4*, and so causes the arms *2* to carry the roller *m²* from the roller *m'*, by which it is supplied with color, to the inking pad *8* which is fixed on the opposite side of the drum *k* to that of the printing type, &c., *k'*. The color thus supplied to the inking pad *8* by the traveling roller *m²* is delivered to the rollers *m³* and *m⁴* supported in the slotted brackets *9*

which are secured to the standards 1 the said brackets also supporting the rocking shaft 3. The roller m^3 is caused to move endwise while being inked by the pad 8 by a cam plate 10 secured to the end of the drum k and a grooved pulley 11 fixed on the axis of the roller m^3 . The color roller m' is rotated by means of a ratchet wheel 12 fixed on the roller and a pawl 13 carried by a slotted lever 14 fulcrumed loosely on the the axis of the roller m' and actuated by a bar 15 connected to the cam 6. The color rollers $m^2 m^3 m^4$ are rotated by frictional contact with the parts k^2 of the revolving drum k (when not being driven by contact with the inking pad 8) whereby the color is applied smoothly and evenly to the type k' .

In operation the folded fabric or piece is placed upon the sliding table b and the machine then started so that the said table with the piece begins to move forward as the printing drum k begins to revolve, the gearing being so arranged that the table b has during its forward movement a surface speed approximating that of the printing drum k . As the piece passes beneath the printing drum k it is printed by one of the printing blocks secured thereon and the sliding table b continues to move forward until the printing block k' leaves the piece, when the latter is removed by an attendant on the other side and the table b returns empty the printed piece being replaced by a fresh piece from the stationary feed table x . The difference in speed between the drum k and the table b , arising from the fact that the latter travels faster at one part of its stroke than at another, by means of the connections above described is compensated by the springs c' which allow the table to yield and move forward at the same speed as that of the drum. During the revolution of the drum k the inking pad 8 is inked by the traveling roller m^2 and the

ink is transferred to the rollers $m^3 m^4$ and by them applied to the printing block, &c., k' which is thus inked at every revolution of the drum k .

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with the drum or cylindrical frame, having printed blocks thereon, and means for positively rotating the same of the reciprocating feed table adapted to engage said drum, and crank mechanism and connections for reciprocating the table including compensating means for allowing the drum and table to travel at the same surface speed, substantially as set forth.

2. The combination with the positively driven drum or cylindrical frame, having printing blocks thereon, of the rollers $m' m^2$, arms 2, the upper ends of which form bearings for roller m^2 , shaft j and cam wheel 6 on said shafts, rods 4 secured at one end to the arms 2 and at the other end to spring 7, roller 5 on said rod adapted to engage the cam wheel to actuate said roller m^2 , and rod 15, pivoted on the cam wheel for actuating the roller m' substantially as set forth.

3. The combination with the positively driven printing drum, and the reciprocating feed table, of the rocking bar e , means for operating the same and rod d , of block c and springs c' , whereby said table is allowed to travel at the same surface speed as the said drum, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

RICHARD J. LINTON.

Witnesses:

S. W. GILLETT,

HERBERT ROWLAND ABBEY.