

(No Model.)

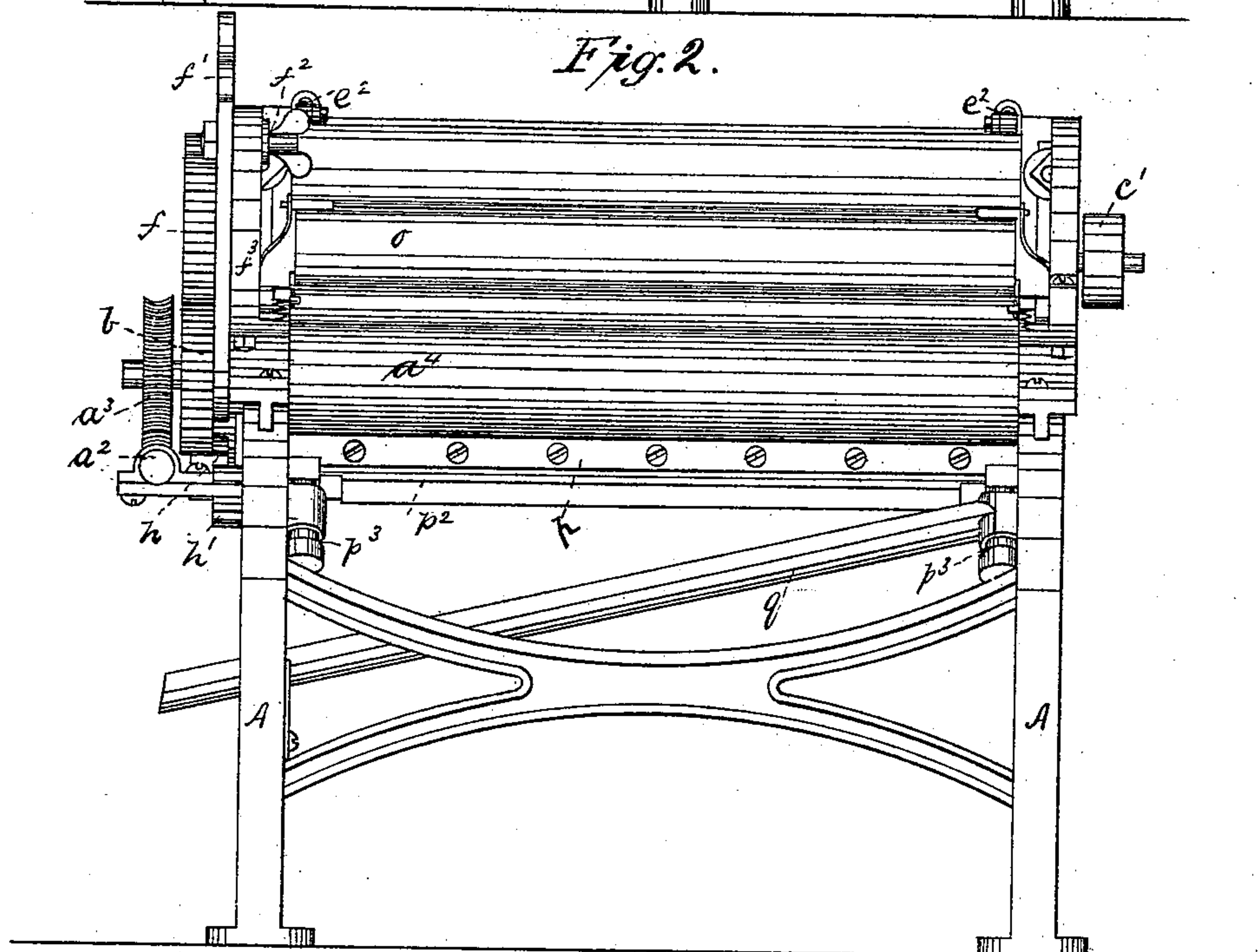
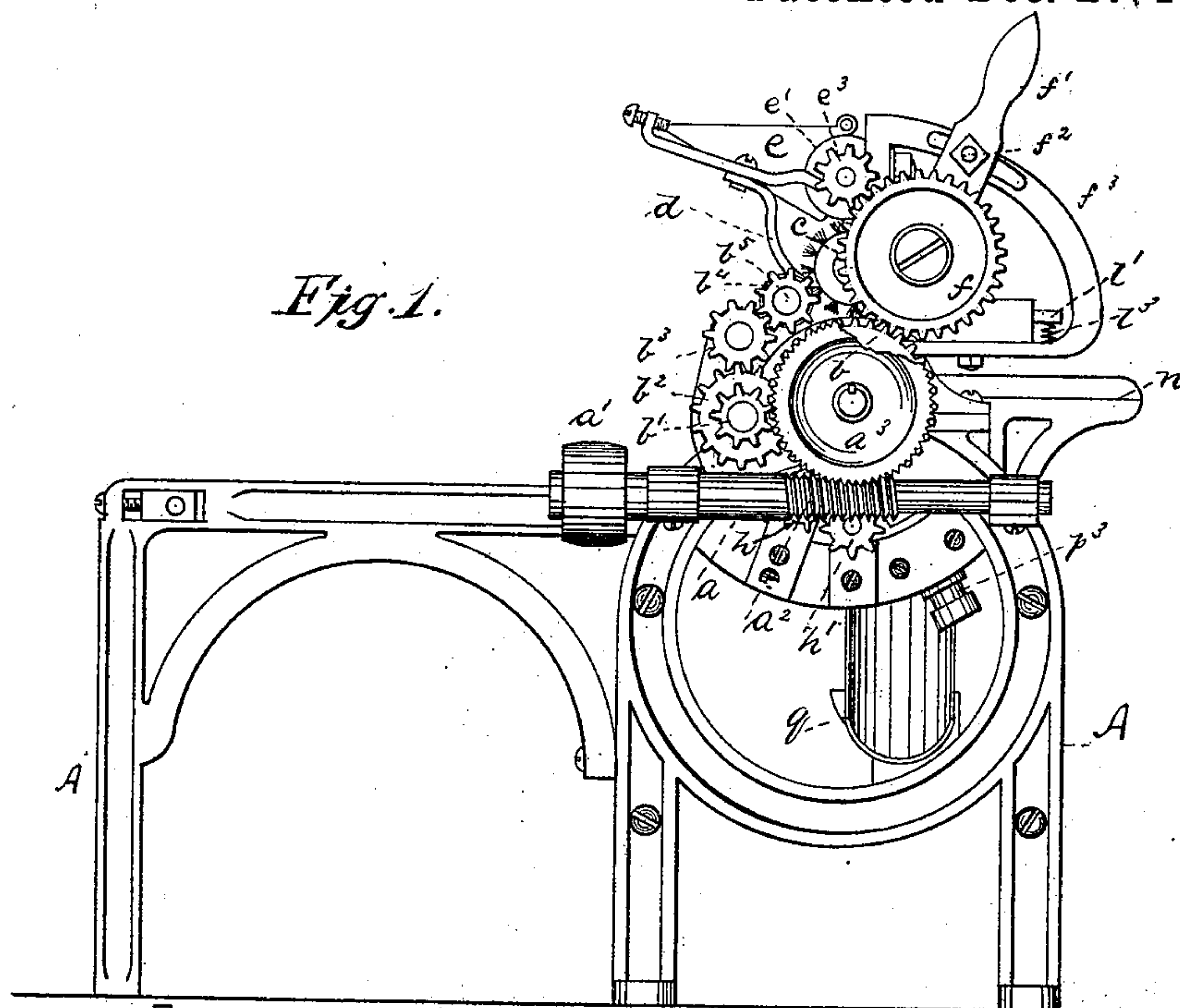
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F. B. BATCHELDER.

LEATHER BLACKING, COLORING, AND DRESSING MACHINE.

No. 251,401.

Patented Dec. 27, 1881.



Witnesses.

Arthur Reynolds
Bernice L. Hayes

Inventor.

Fred B. Batchelder,
by Crosby & Morgan Attys.

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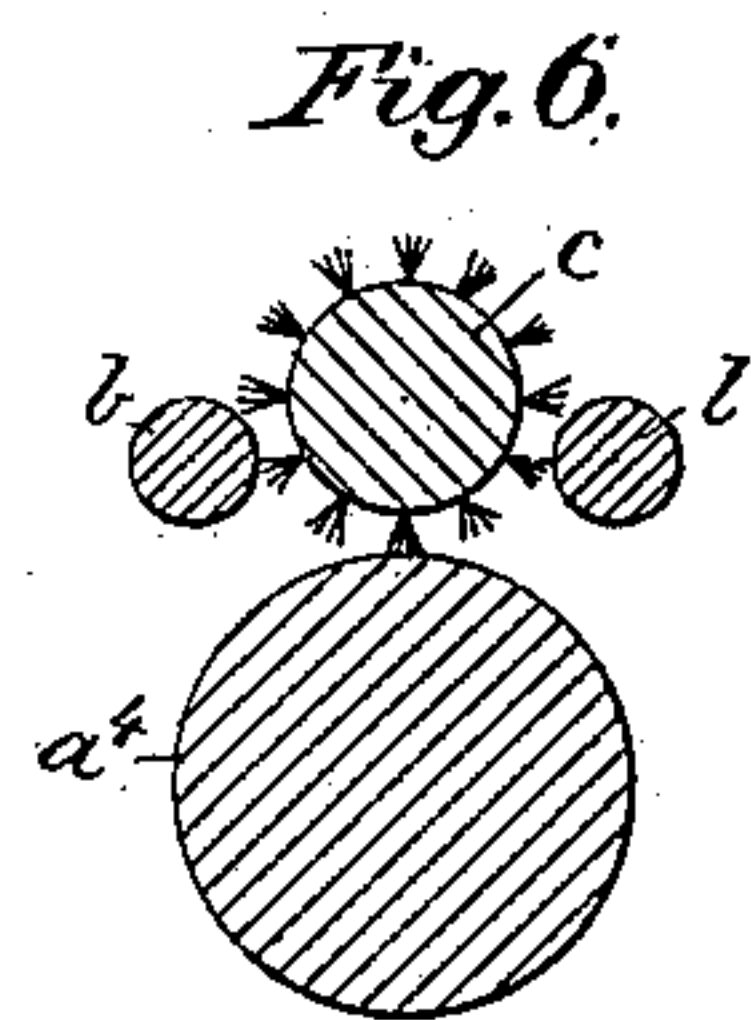
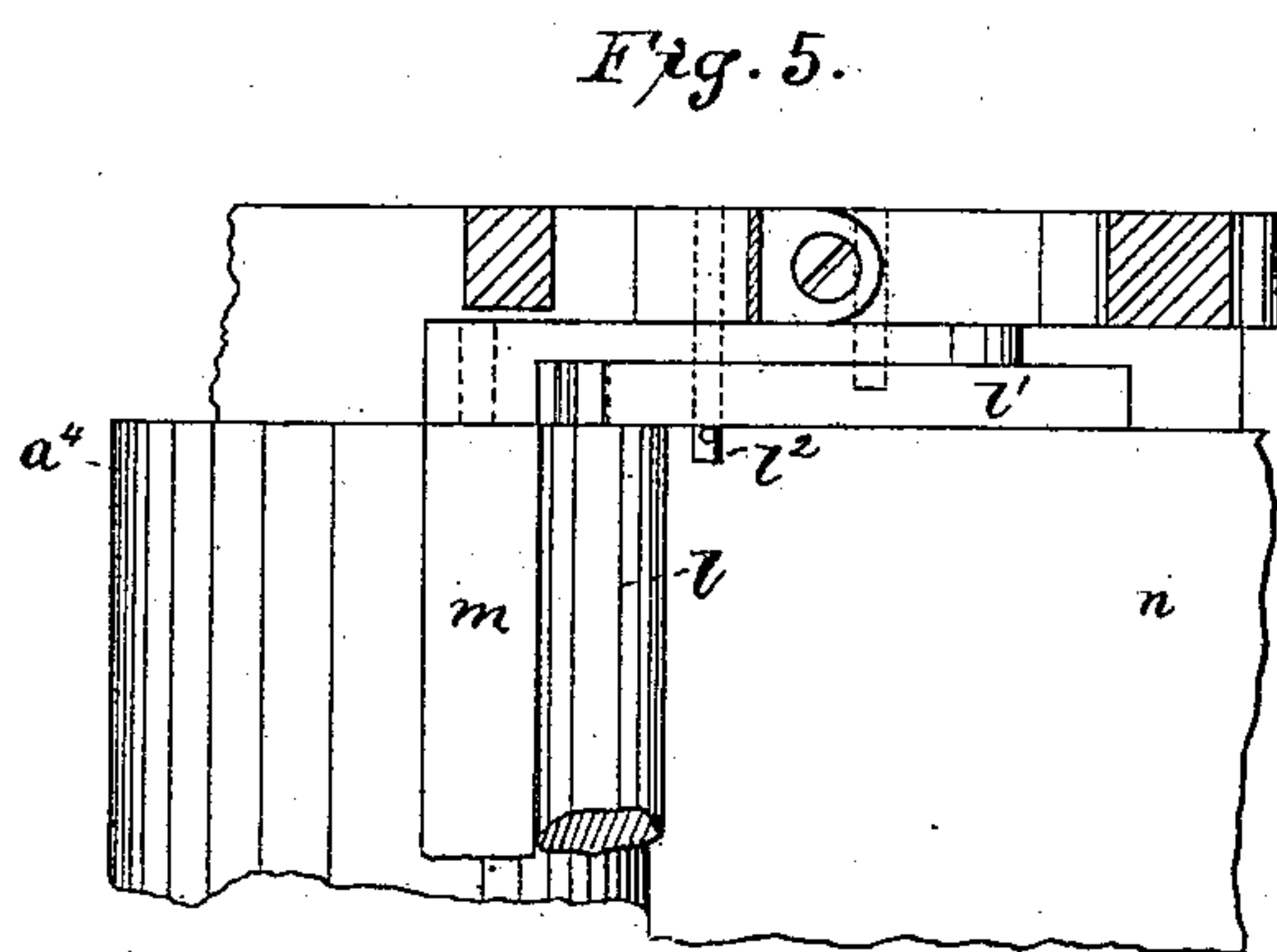
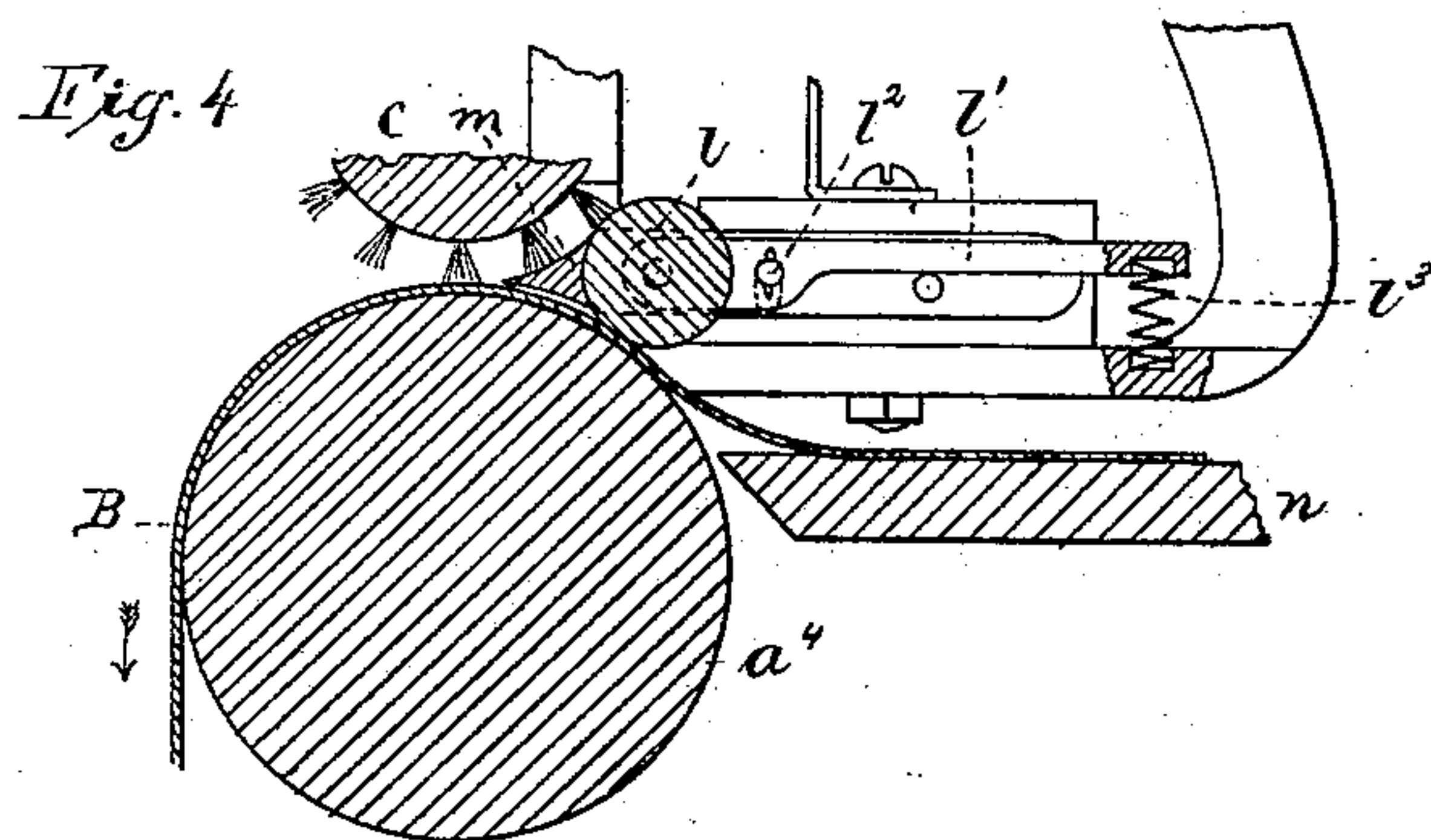
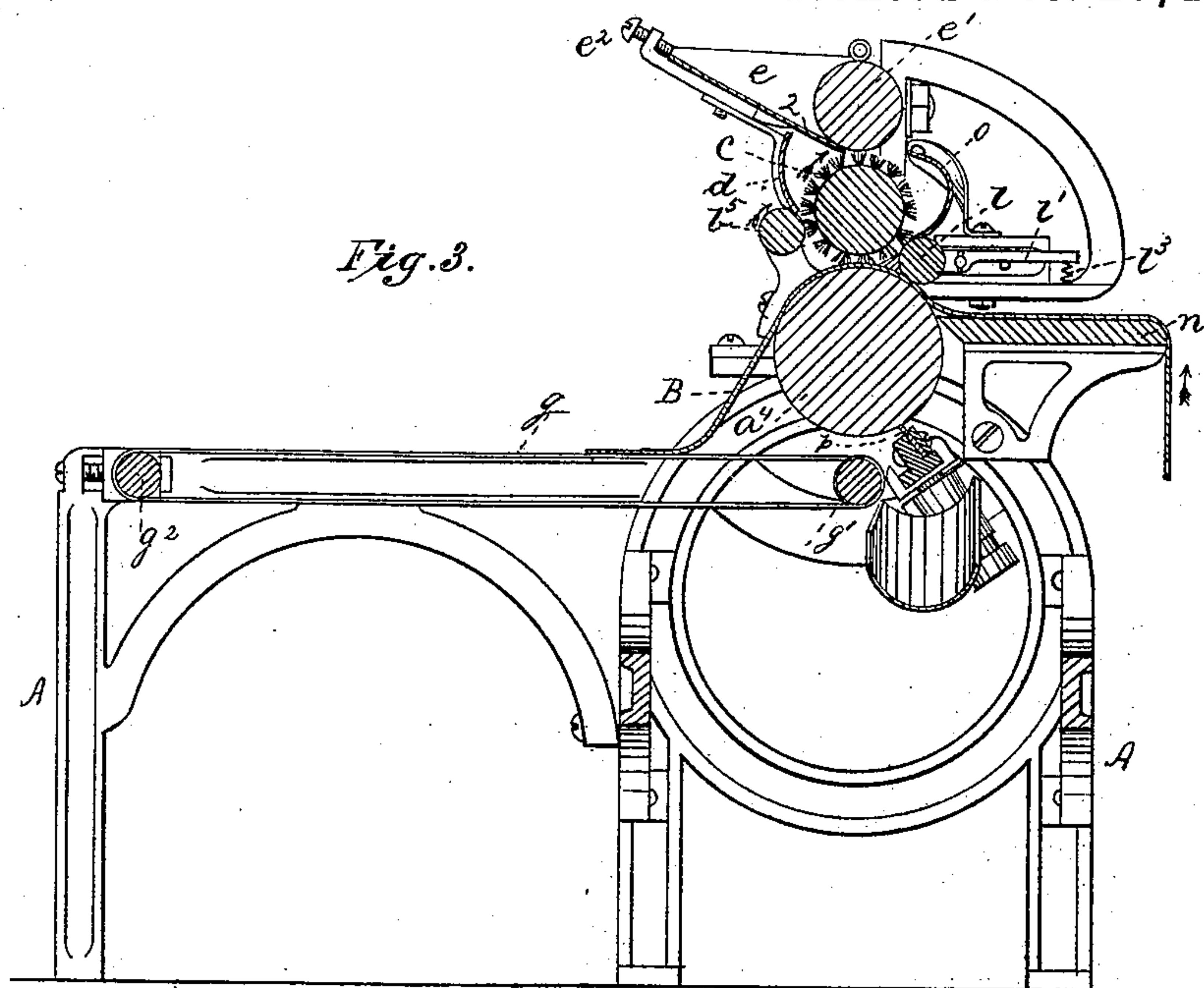
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Attys.

UNITED STATES PATENT OFFICE.

FRED B. BATCHELDER, OF BOSTON, MASSACHUSETTS.

LEATHER BLACKING, COLORING, AND DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 251,401, dated December 27, 1881.

Application filed April 4, 1881. (No model.)

To all whom it may concern:

Be it known that I, FRED B. BATCHELDER, of Boston, Suffolk county, State of Massachusetts, have invented an Improvement in Leather Blacking, Coloring, or Dressing Machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention in machines for blacking, coloring, or dressing leather, hides, or skins has for its object the production of an efficient machine for this purpose, it applying automatically to the said hide or skin blacking, paste, stains, or other liquid dressing or material commonly applied to the same to prepare it for use and market.

My invention consists, chiefly, in a rotating supporting-surface for the leather, a receptacle for blacking or dressing, receptacle-roller therein, and a blacking or dressing applying brush or roller located between the receptacle-roller and the said supporting-surface, combined with a wiper or cleaner to operate substantially as hereinafter described; also, in a blacking or dressing applying brush or roller and rotating supporting-surface, combined with a spatter-guard and spatter-roller below it, and with a wiper for the supporting-surface, as will be hereinafter described; also, in a blacking or dressing applying brush or roller and rotating supporting-surface, combined with a roller and holding-bar to act upon and hold the leather, as will be hereinafter described; also, in a blacking or dressing applying brush or roller and rotating supporting-surface for the leather, combined with a movable or traveling surface to receive the blacked or dressed hide or skin from the said supporting-surface, as will be hereinafter described.

Figure 1 is a left-hand-side elevation of a machine embodying my invention; Fig. 2, a front view thereof, with the table *n* omitted; Fig. 3, a longitudinal vertical section of Fig. 2; Fig. 4, an enlarged detail to be referred to; Fig. 5, a detail in top view of Fig. 4, with the brush *c* omitted; and Fig. 6 is a modification to be referred to.

The frame-work *A* will be of suitable shape to sustain the working parts. The power-shaft *a*, having thereon a belt-wheel, *a'*, driven

in any proper way, has also a worm, *a*², which engages the worm-gear *a*³, secured to one of the journals of the hide or skin supporting surface *a*⁴, herein shown as a cylindrical surface, which by its rotation or movement acts to feed the hide or skin *B* through the machine at the desired speed. The journal of this supporting-surface *a*⁴ is also provided with a toothed wheel, *b*, (see Fig. 2, and shown in Fig. 1,) by breaking out the worm-gear *a*³. This toothed wheel *b* engages a pinion, *b'*, connected with a toothed gear, *b*², that engages an idle-gear, *b*², and through it drives the pinion *b*⁴ on the roller *b*⁵, (see Fig. 3,) located at the rear of the blacking or dressing applying brush or roller *c*, and immediately below the edge of the spatter-guard *d*, the said roller *b*⁵ rotating in the same direction as the brush or roller *c*, and just in contact with it, serving to convey from the spatter-guard to the brush or roller *c* the material thrown therefrom into the spatter-guard during the rotation of the said brush or roller, the roller *b*⁵ also serving to itself arrest the liquid dressing thrown tangentially from the brush or roller *c*, and by its rotation keep the blacking or dressing thrown from the brush or roller *c* from dropping upon the leather at the rear of the supporting-surface *a*⁴.

The blacking or dressing applying brush or roller will preferably be clothed with bristles; but it might be covered with a sponge, felt, or other surface capable of receiving blacking or dressing and applying it to the hide or skin, and so, also, I desire to be understood that I consider a flat brush as an equivalent. One of the journals of this blacking or dressing applying brush *c* has upon it a belt-pulley, *c'*, by which the said brush or roller is driven independently at any desired speed.

The blacking or liquid dressing, or material to be applied to the upper surface of the hide or skin *B*, is placed in the receptacle *e*, herein shown as an open box, the sides of which, at its lower end, are concaved to fit the periphery of the receptacle-roller *e'*, which may be made to travel more or less near the straight lower edge, 2, of the bottom of the said receptacle by means of the adjusting-screws *e*², the amount of space between the edge of the bottom of

the receptacle *e* and the roller *e'* determining the amount of blacking or dressing to be delivered to the brush or roller *c*. This roller *e'* may be driven more or less rapidly to carry or
 5 deliver more or less blacking or dressing to the brush *c*. This I may do by changing the size of the gear *e³* on the journal of the roller *e'*, the toothed speed-wheel *f*, which engages the said gear *e³* and drives the said roller *e'*,
 10 being mounted on a stud of an adjustable carrier, *f'*, provided with a locking device, *f²*, to engage an arch, *f³*, and hold the said carrier in proper position.

In practice I prefer to slightly groove, flute,
 15 or pit the roller *e'*, to enable it to take up a greater quantity of blacking or dressing. The hide or skin as it leaves the supporting-surface *a⁴* is delivered upon an endless belt or moving bed, *g*, herein shown as composed of
 20 cords or tapes extended about rollers *g'* *g²*, the one *g'* being driven positively from the toothed wheel *b* by the intermediate worm, *h*, which engages the pinion *h'* at the end of the said shaft *g'*. The tanned hide or skin to be dressed is
 25 introduced between the supporting-surface *a⁴* and roller or brush *c* under a roller, *l*, which, as clearly shown in Figs. 3 and 4, has its journals mounted on levers or arms *l'*, pivoted at
 30 *l²* and acted upon by springs *l³*, to keep the said roller depressed upon the hide or skin to properly hold it. The front ends of the levers or arms *l'* are joined to a holding-bar,
 35 *m*, which is of a shape to fit the space between the brush *c*, the support *a⁴*, and roller *l*. The under side of this holding-bar (see Fig. 4) is so shaped, curved, and located with relation
 40 to the surfaces of the roller *l* and the supporting-surface *a⁴* as not to bear upon the hide or skin until after the passage of the edges of the same beyond the nip of the roller *l*, the said
 45 holding-bar being devised to act upon and hold the end of the hide or skin, after passing beyond the nip of roller *l*, (the latter then dropping,) and prevent the hide or skin being drawn
 in too rapidly. In front of the apparatus I have placed a table, *n*.

In some instances and for some classes of work I modify the machine so far described, as represented in Fig. 6, and where I have
 50 shown the roller *l* as elevated considerably above the position shown for it in Figs. 3 and 4, and in such position there will be left sufficient space to permit the operator to retain hold of and control the position and movement
 55 of the hide or skin being acted upon by the brush or roller *c*, and in such case also the holding-bar *m* would be omitted.

To prevent the blacking or dressing being thrown from the brush or roller *c* toward the
 60 front of the machine I have provided the auxiliary spatter-guard *o*. The roller *l* and the holder *m*, when used, also serve to prevent the blacking or liquid dressing from being thrown out at the front of the machine. The support-
 65 ing-surface *a⁴* and brush *c* are as long as the maximum width of the hide or skin to be

blacked or dressed; but as the hides or skins being finished or dressed are always different, both as to width and outline at their edges, it results that the brush *c* always applies black-
 70 ing or dressing to more or less of the surface *a⁴*.

The blacking or dressing applied to the surface *a⁴* must all be removed and the surface be left clean so as not to apply blacking or dress-
 75 ing to the under side of the hide or skin as it comes in contact with it. To do this I have provided a wiper or cleaner, *p*, (shown clearly in Figs. 2 and 3,) as a strip of flexible material held by a suitable adjustable bar, *p²*, so that the
 80 edge of the wiper or cleaner may be pressed with more or less force against the surface *a⁴*, the degree of its pressure being preferably regulated by adjusting-screws *p³*. The ma-
 85 terial wiped or scraped from the surface *a⁴* drops into the trough *q* and passes therefrom into a suitable pail or bucket to be rinsed, if desired.

I wish it to be understood that I do not desire to limit my invention to the use of a wiper or cleaner just such as shown, as I might em-
 90 ploy a knife edge or blade closely fitted to the surface *a⁴*, or I might employ a rotating cleaner and remove the blacking or dressing from the said rotating cleaner by means of a blade; but I prefer to employ as the best means known
 95 to me a flexible or india-rubber wiper or cleaner such as herein shown. A patent of the United States, No. 227,204, granted to me May 4, 1880, shows the first form of mechanism which I built and experimented with in the blacking,
 100 dressing, and finishing of hides and skins; but, as will be noticed by a comparison of the drawings of the said patent with my present drawings, I have very considerably altered the
 105 construction of the parts.

By driving the brush-roller *c* and the supporting-surface *a⁴* independently I am enabled to rotate either at any desired speed, and thus rub the blacking, coloring, or dressing matter
 110 more or less into the surface of the hide or skin.

The bearings for the brush *c* and roller *e'* will preferably be made adjustable vertically to accommodate for the thickness of the leather and compensate for wear.

I claim—

1. In a machine for blacking or dressing
 115 leather, hides, or skins, the rotating supporting-surface for the leather, the receptacle for blacking or dressing, the receptacle-roller *e'*, and the blacking or dressing applying brush
 120 or roller *c*, located between the receptacle-roller and the said supporting-surface, combined with the wiper or cleaner *p*, to operate substantially as described.

2. In a machine for blacking or dressing
 125 leather, hides, or skins, the brush or roller *c* and rotating supporting-surface, combined with the spatter-guard and spatter-roller below it, and with a wiper or cleaner, to operate substantially as described.

3. The brush or roller *c* and rotating sup-
 130 porting-surface, combined with the roller *l*

and holding-bar, substantially as and for the purpose described.

4. In a machine for blacking or dressing
5 hides or skins, the blacking or dressing ap-
plying brush or roller *c* and rotating support-
ing-surface, combined with the movable or trav-
eling surface to receive the blacked or dressed
hide or skin from the said supporting-surface,
substantially as described.

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

FRED B. BATCHELDER.

Witnesses:

G. W. GREGORY,

W. H. SIGSTON.