

(No Model.)

4 Sheets—Sheet 1.

J. HALL.
LEATHER DRESSING MACHINE.

No. 583,995.

Patented June 8, 1897.

FIG. 1.

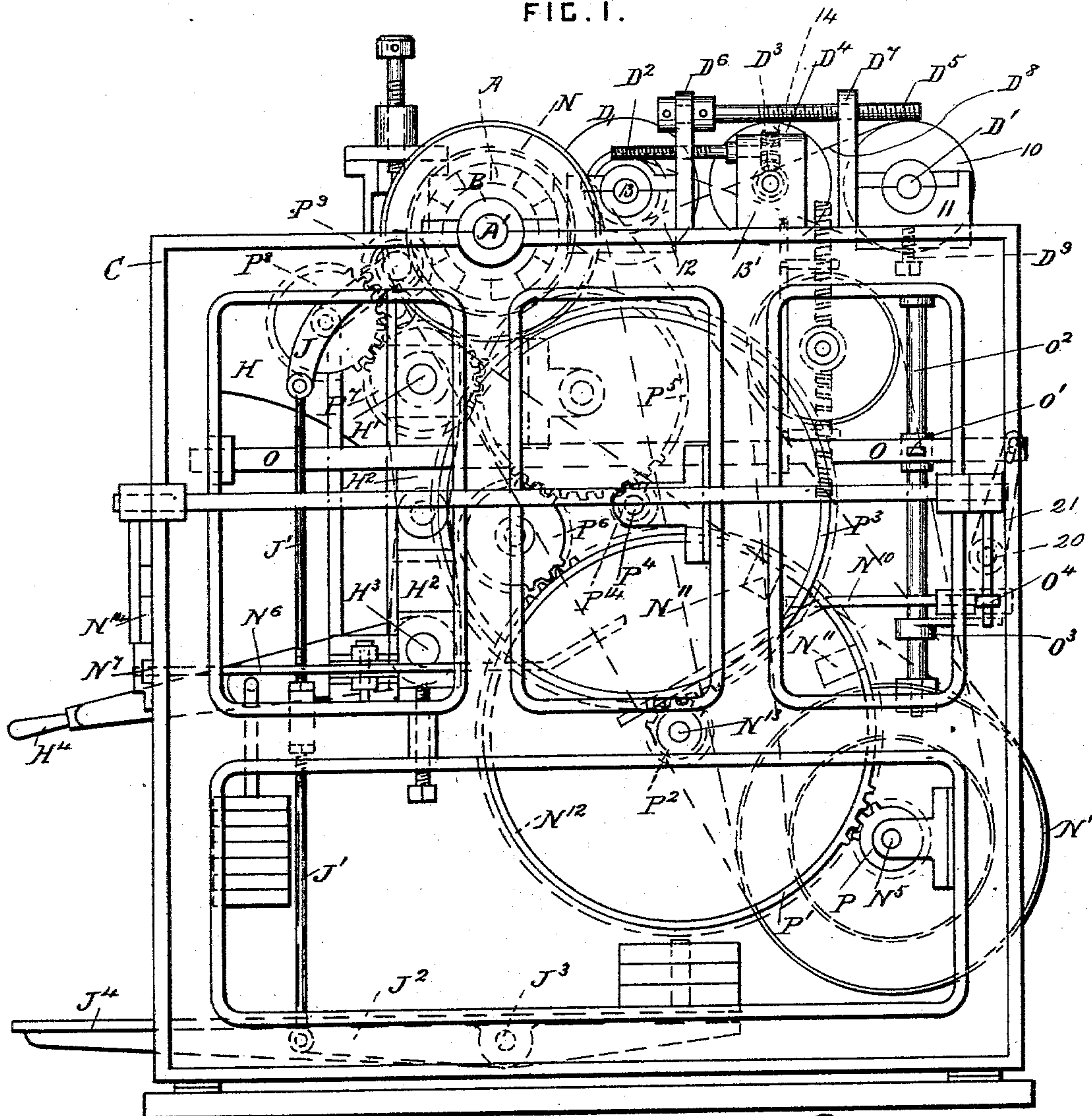
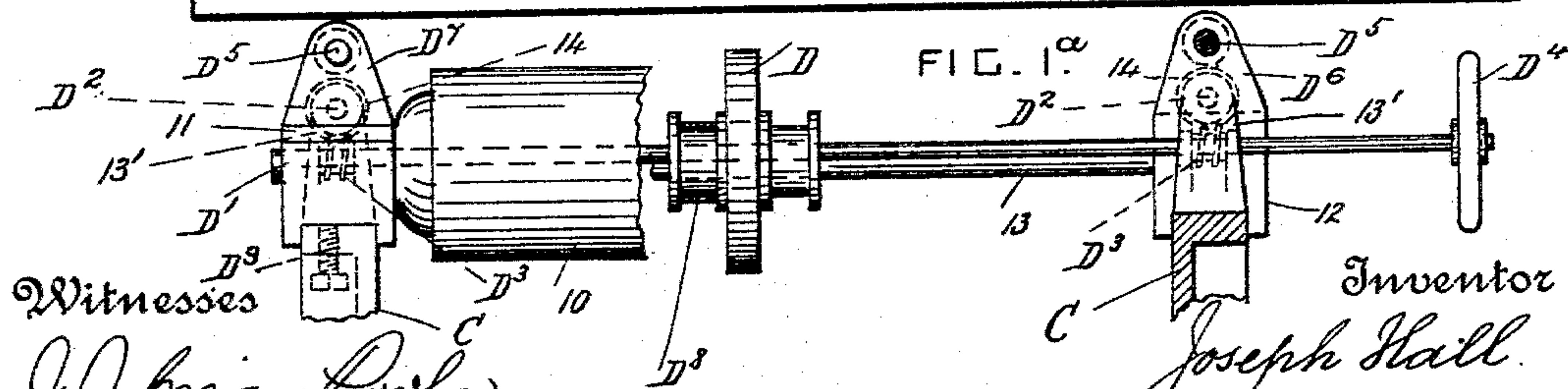


FIG. 1^a.



Witnesses

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Inventor

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By Attorney Robert W. Jenner

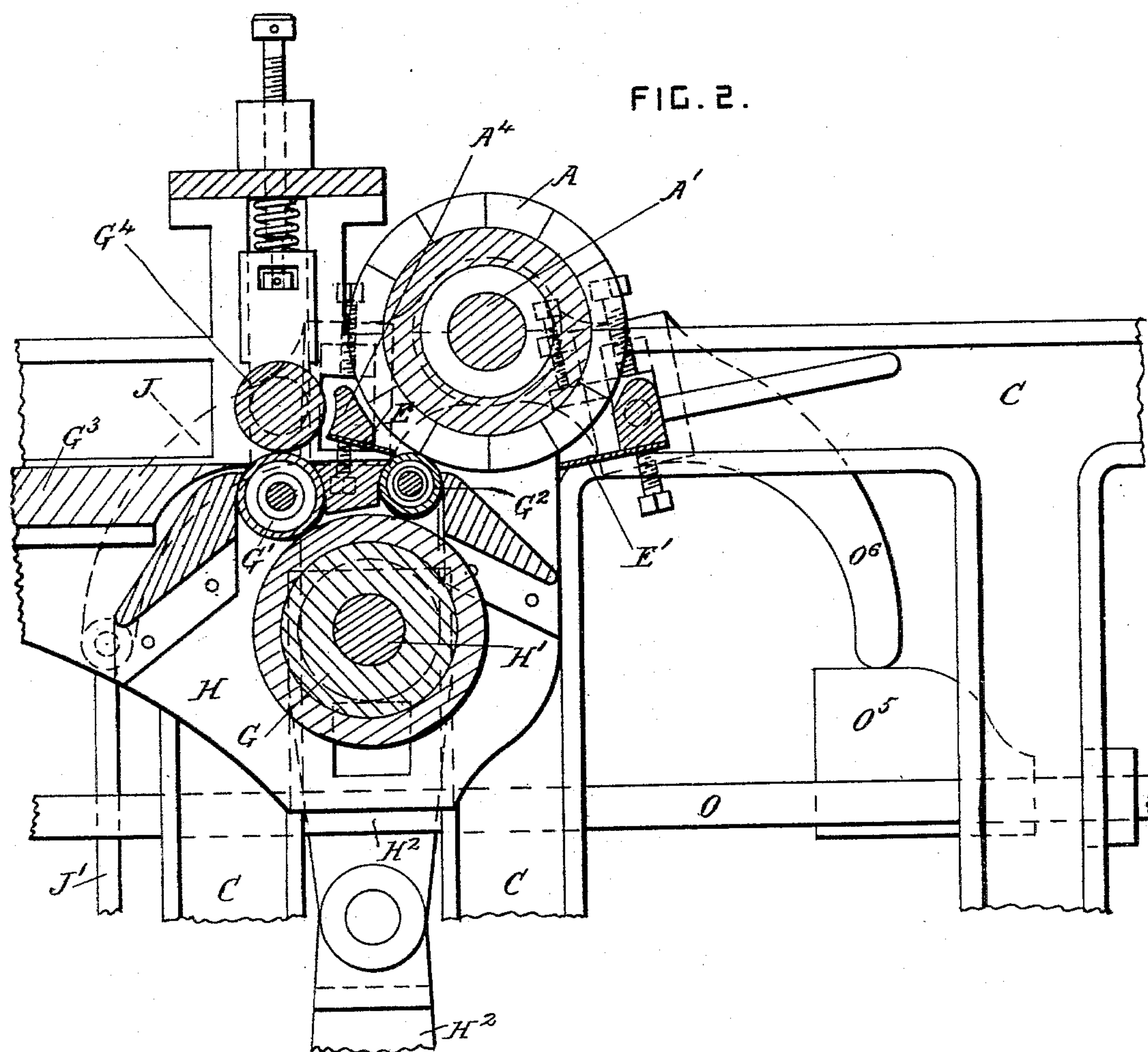
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4 Sheets—Sheet 2.

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Witnesses

J. Sprigg Pool
Edward D. Johnson

Inventor

Joseph Hall

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(No Model.)

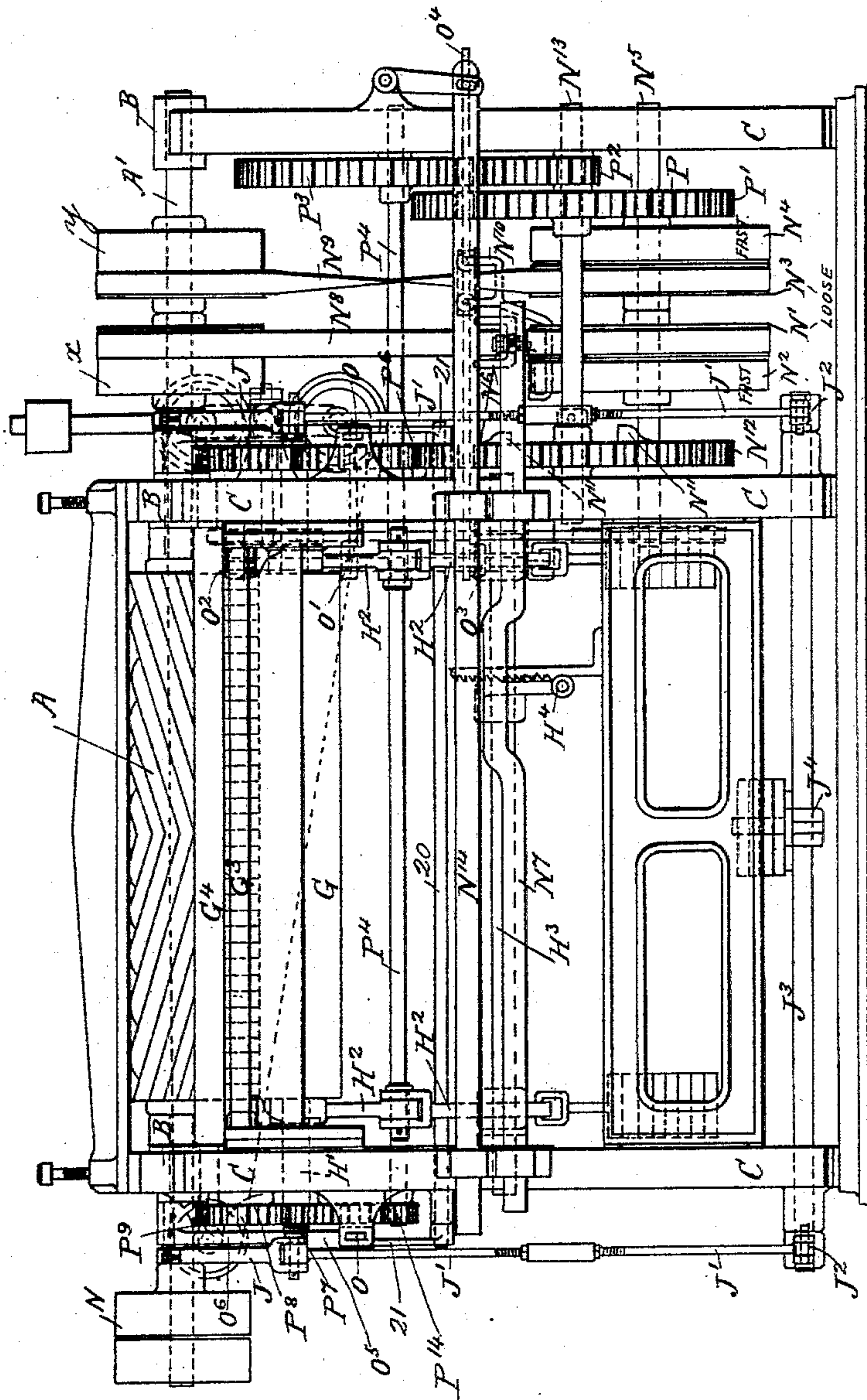
4 Sheets—Sheet 3.

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FIG. 3.



Witnesses:
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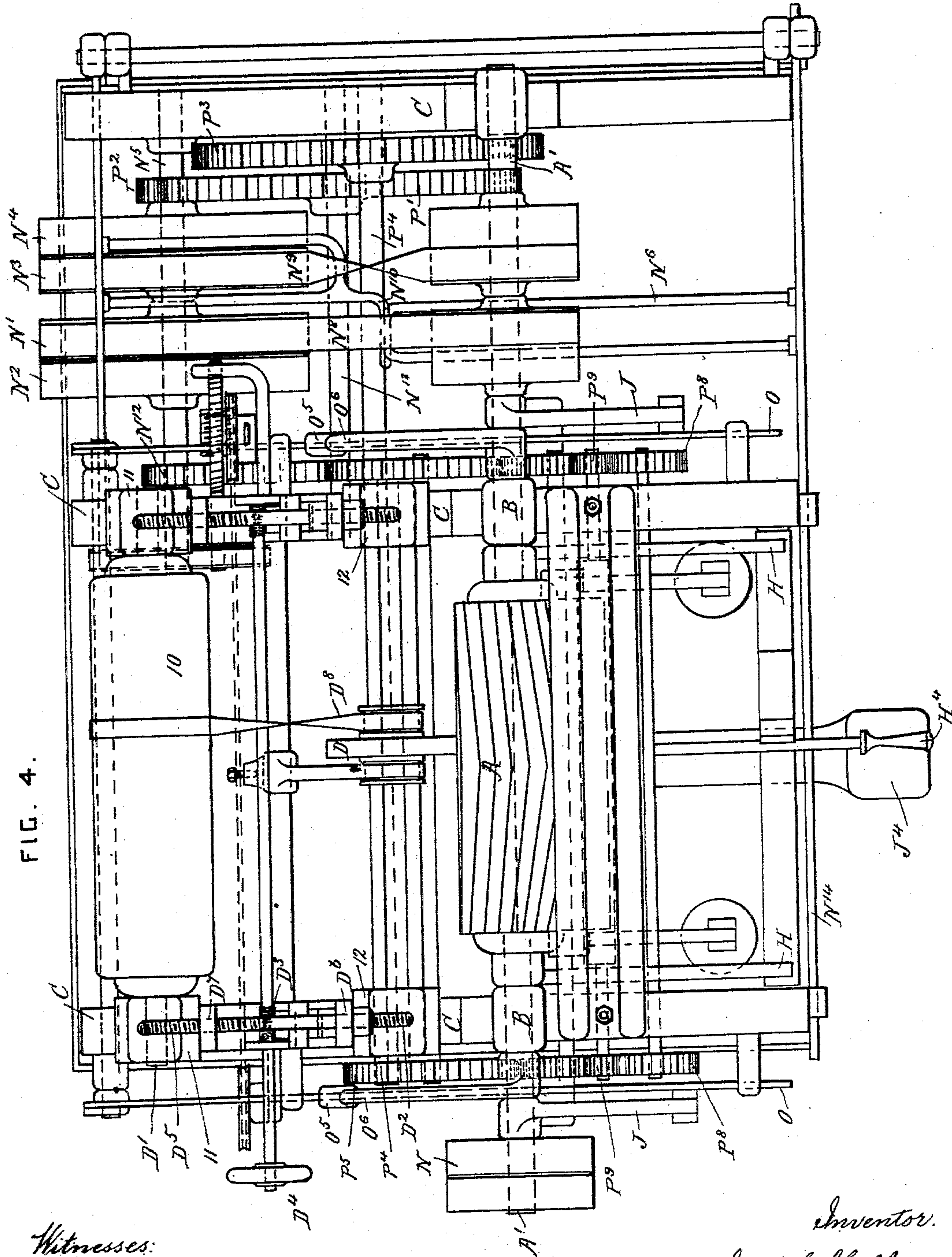
(No Model.)

4 Sheets—Sheet 4.

J. HALL.
LEATHER DRESSING MACHINE.

No. 583,995.

Patented June 8, 1897.



UNITED STATES PATENT OFFICE.

JOSEPH HALL, OF LEEDS, ENGLAND.

LEATHER-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 583,995, dated June 8, 1897.

Application filed July 26, 1895. Serial No. 557,266. (No model.) Patented in England December 6, 1894, No. 23,720.

To all whom it may concern:

Be it known that I, JOSEPH HALL, a subject of the Queen of Great Britain, residing at Leeds, in the county of York, England, have
5 invented new and useful Improvements in Leather-Dressing Machines, (for which I have obtained a patent in Great Britain, No. 23,720, dated December 6, 1894,) of which the following is a specification.

10 My invention consists in machinery for shaving, slicking, whitening, buffing, scouring, setting, flattening, slating, fleshing, and scudding skins, leather, and analogous substances.

15 The object of my invention is to provide improved machinery for the purposes aforesaid, which can be carried out by simply changing the cutters or cylinders and which is specially applicable for shaving and leveling
20 skins, by which a skin can be shaved and leveled at one continuous operation, or half of the skin can be so treated and the skin and machine then reversed, so as to shave and level the other half, an important feature
25 of my said invention being that the action of the machine can be reversed automatically or by hand.

In the drawings, Figure 1 is a side elevation of machine according to my invention. Fig.
30 1^a is an end view of portions of the devices which actuate the driving-roll, portions of one of the side frames and of the belt-pulley 10 being shown broken away. Fig. 2 is an enlarged detail view of feeding arrangement.
35 Fig. 3 is a front elevation of Fig. 1. Fig. 4 is a plan view.

A' is the driving-shaft of the machine, journaled in bearings B on the side frames C and provided with a driving-pulley N.

40 A is a rotary cutter, of approved construction, secured on the shaft A' between the inner side frames.

D is an emery grinding-roll for keeping the cutter sharp. The grinding-roll D is revolved
45 in contact with the cutter by means of a belt D⁸, driven from a belt-pulley 10. The pulley 10 is secured on a shaft D' and is driven from any approved source of power. The shaft D' is journaled in two similar vertically and lon-
50 gitudinally slidable bearings 11, carried by the side frames C.

D⁹ are two similar screws operating to ad-

just the bearings 11 vertically, and D⁵ are two similar screws operating to adjust the bearings 11 longitudinally. The screws D⁵ are
55 journaled in brackets D⁶ and engage with the lugs D⁷ on the bearings 11. The brackets D⁶ project from longitudinally-slidable bearings 12, in which the grinding-roll shaft 13 is journaled. The bearings 11 and 12 have flanges
60 which straddle the tops of the inner side frames C. The screws D⁹ engage with the flanges at the tops of the frames and raise the bearings 11 when screwed upward. The bearings 12 are not adjustable vertically.
65 Similar bearings and means for adjusting them are provided on each side of the machine.

The position of the grinding-roll is adjusted by means of two similar screws D², journaled
70 in blocks 13', secured to the side frames and engaging with the brackets D⁶. A worm-wheel 14 is secured on each screw D² and is revolved by means of a hand-wheel D⁴ and a worm D³ of approved construction. This
75 arrangement of parts not only permits the grinding-roll to be adjusted to the cutter and simultaneously slides along the bearings 11, so that the belt is kept at a uniform tension, but it permits the tension of the belt to be
80 adjusted separately by the screws D⁵ without affecting the adjustment of the grinding-roll.

G is a driving-roller covered with india-rubber and mounted on the shaft H'.

H are two similar cheeks pivoted on the
85 shaft H'.

H² are links pivoted together and connected with the cheeks H and to a rock-shaft H³, journaled in the side frames.

H⁴ is a hand-lever secured on the rock-shaft
90 H³ and operating to rock the said cheeks.

G' and G² are the two lower guide-rolls, journaled in the cheeks H. The roll G² is arranged under the cutter A, and the roll G' is arranged at a little distance in front thereof.
95

G³ is the feed-board in front of the roll G'.

G⁴ is a feed-roll arranged over the roll G'. The roll G⁴ runs in the side frames and is provided with any approved means for adjusting it vertically, so that it may bear with more or
100 less pressure on the hide.

The hide is passed from the feed-board between the rolls G' and G⁴ and between the roll G² and the cutter A. When the motion

of the feed-rolls is reversed, the hide is carried back again.

E is a guide-plate carried by a bar A⁴, which projects through holes in the side frames and is supported by two similar arms J, pivoted on the cutter-shaft A'. The rear edge of the plate E can be depressed to press the hide on the roll G². A second guide-plate E' can be arranged behind the cutter, if desired.

The guide-plate E is raised and lowered by means of rods J', which are connected to a counterbalanced foot-lever J⁴ by a shaft J³, journaled in the side frames.

The feed-rollers are revolved first in one direction and then in the other by means of two belt-pulleys α and γ , secured on the shaft A'.

N⁵ is a shaft journaled in the lower parts of the side frames.

N¹ and N³ are loose pulleys journaled on the shaft N⁵, and N² and N⁴ are fast pulleys secured on the shaft N⁵.

N⁸ is an open belt passing over the pulleys α and N², and N⁹ is a crossed belt passing over the pulleys γ and N⁴.

N⁶ is a belt-shifter of approved construction for operating the belt N⁸, and N¹⁰ is a similar belt-shifter for operating the belt N⁹.

P is a toothed pinion secured on the shaft N⁵ and gearing into a toothed wheel P', secured on a shaft N¹³, journaled in the side frames.

P² is a toothed pinion secured on the shaft N¹³ and gearing into a toothed wheel P³, which is secured on a shaft P⁴, journaled in the side frames and extending across to the other side of the machine.

P⁷ is a toothed wheel secured on the shaft H' of the roller G and operating to revolve it. The wheel P⁷ gears into a pinion P¹⁴, secured on the end of the shaft P⁴ on the other side of the machine from the belt-shifters.

P⁸ is a toothed wheel journaled on a pin projecting from the adjacent side frame and gearing into the wheel P⁷.

P⁹ is a toothed wheel secured on the shaft of the feed-roll G⁴ and gearing into the wheel P⁸, so that the said roll is revolved.

The feed-rolls G' and G² are revolved by frictional contact with the roller G.

P⁶ is a toothed wheel gearing into the toothed wheel P⁵ and journaled on a pin projecting from the adjacent side frame.

N¹² is a toothed wheel gearing into the wheel P⁶ and journaled on the shaft N¹³. The wheel N¹² is provided with projections N¹¹ for operating the belt-shifters in any approved manner, so that the direction of motion of the feed-rolls and of the roller G can be changed

automatically. The belt-shifters may, however, be operated by hand. The belt-shifter N⁶ is connected to a slidable bar N⁷, extending across the machine, and the belt-shifter N¹⁰ is connected with a slidable bar N¹⁴ in a similar manner. A bar O⁴ is also operatively connected with the belt-shifter bar N¹⁴ and operates a lever O³, secured on a vertical shaft O², which is journaled in suitable bearings. A lever O' is secured on the shaft O² and engages with a slidable bar O, which extends across the machine and is provided with a tappet O⁵, as shown in Fig. 2. This tappet engages with a projection O⁶ on one of the cheeks H and raises the guide-plate when the hide is to be fed in. The other side of the machine is provided with a similar bar O for operating a similar projection on the other cheek, and the two bars O are operatively coupled together by a cross-shaft 20 and levers 21.

What I claim is—

1. In a leather-working machine, the combination, with a revoluble cutter, of a grinding-roll mounted in slidable bearings provided with brackets D⁶, stationary blocks 13, screws D² journaled in the said blocks and engaging with the brackets D⁶, means for revolving the said screws, a belt-pulley 10, slidable bearings 11 supporting said pulley and provided with lugs D⁷, a belt passing over the pulley 10 and driving the grinding-roll, and revoluble screws D⁵ journaled in the brackets D⁶ and engaging with the lugs D⁷, whereby the belt-pulley can be adjusted simultaneously with the grinding-roll or separately, substantially as set forth.

2. In a leather-working machine, the combination, with a revoluble cutter, and a roller G; of two feed-rolls G' G² driven by friction from the roller G, said roll G² being under the cutter, a feed-roll G⁴ over the roll G', a feed-board G³, cheeks pivoted concentric with the roller G and supporting the rolls G' G² and the board G³, means for oscillating the said cheeks, arms J pivoted concentric with the cutter and provided with means for oscillating them, a bar A⁴ carried by the said arms, a guide-plate E carried by the said bar and arranged over the roll G², driving mechanism for revolving the cutter continuously in one direction, and driving mechanism operating to revolve the roller G and feed-roll G⁴ first in one direction and then in the opposite direction, substantially as set forth.

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Witnesses:

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ARTHUR STEPHENSON.