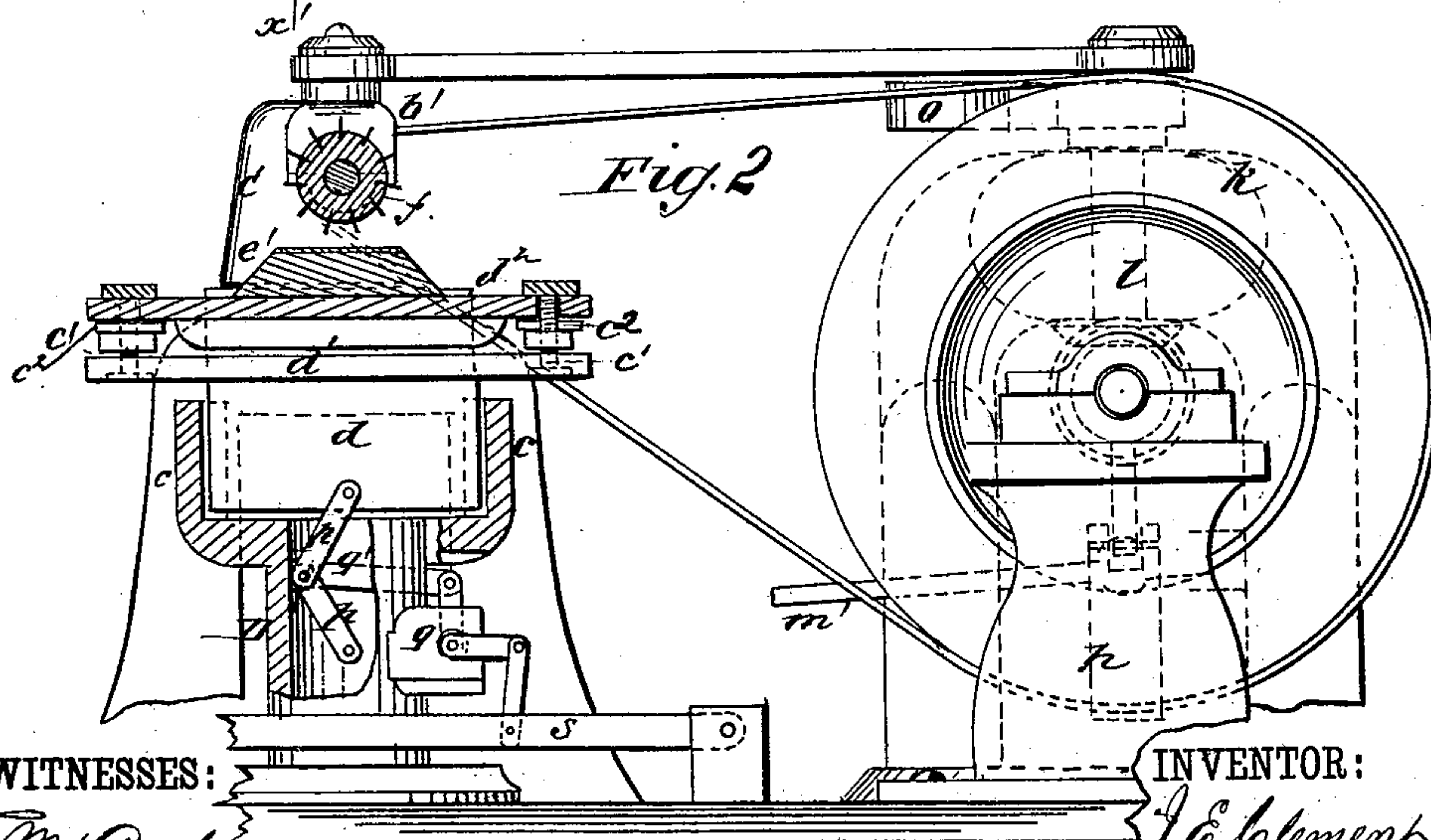
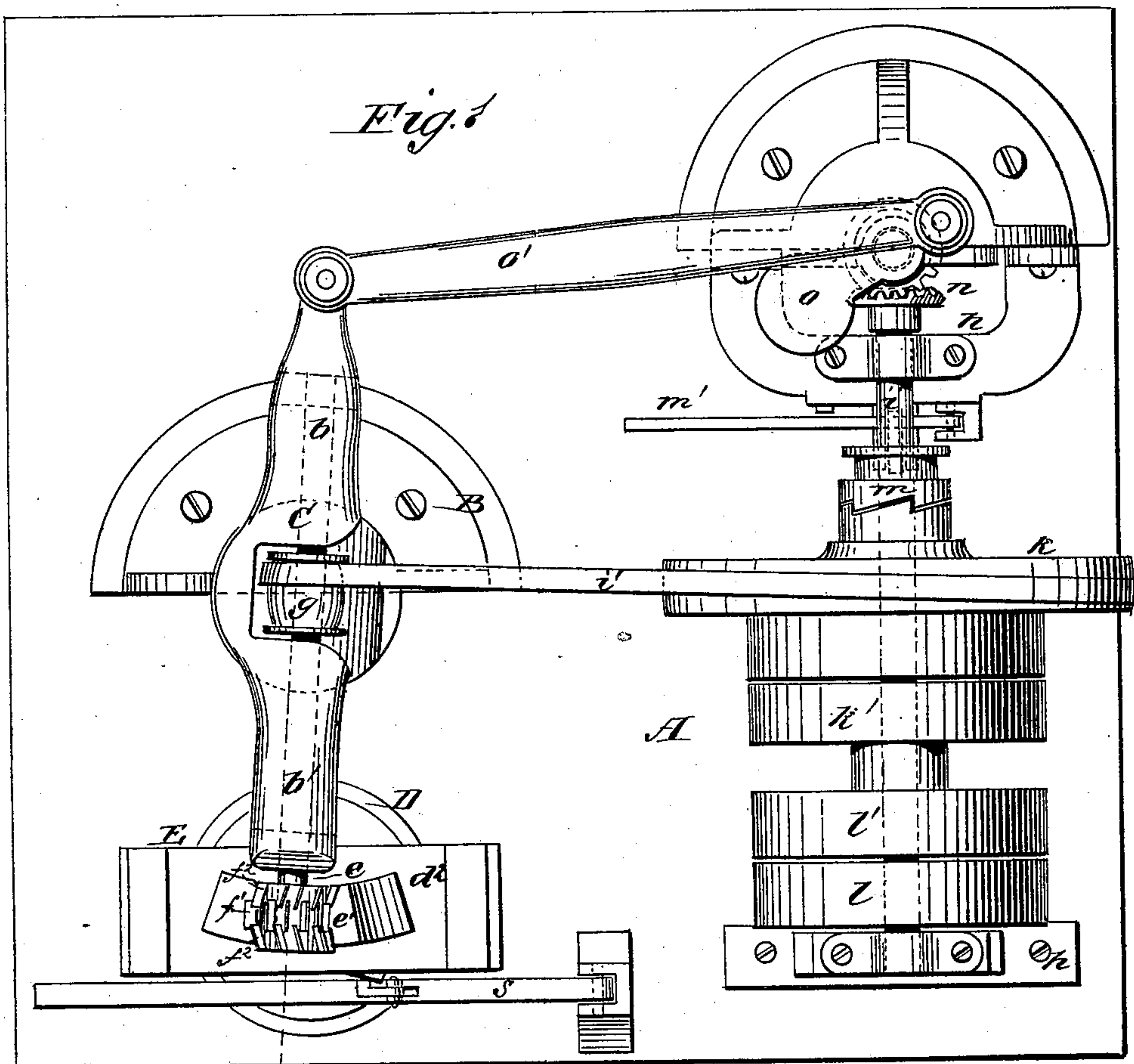


2 Sheets—Sheet 1.

MACHINE FOR WHITENING LEATHER.

Patented Sept. 13, 1881.



WITNESSES:

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L. Sedgwick

INVENTOR:

BY

ATTORNEYS.

(Model.)

J. E. CLEMENT & J. A. ENOS.

2 Sheets—Sheet 2.

MACHINE FOR WHITENING LEATHER.

No. 247,014.

Patented Sept. 13, 1881.

Fig. 3

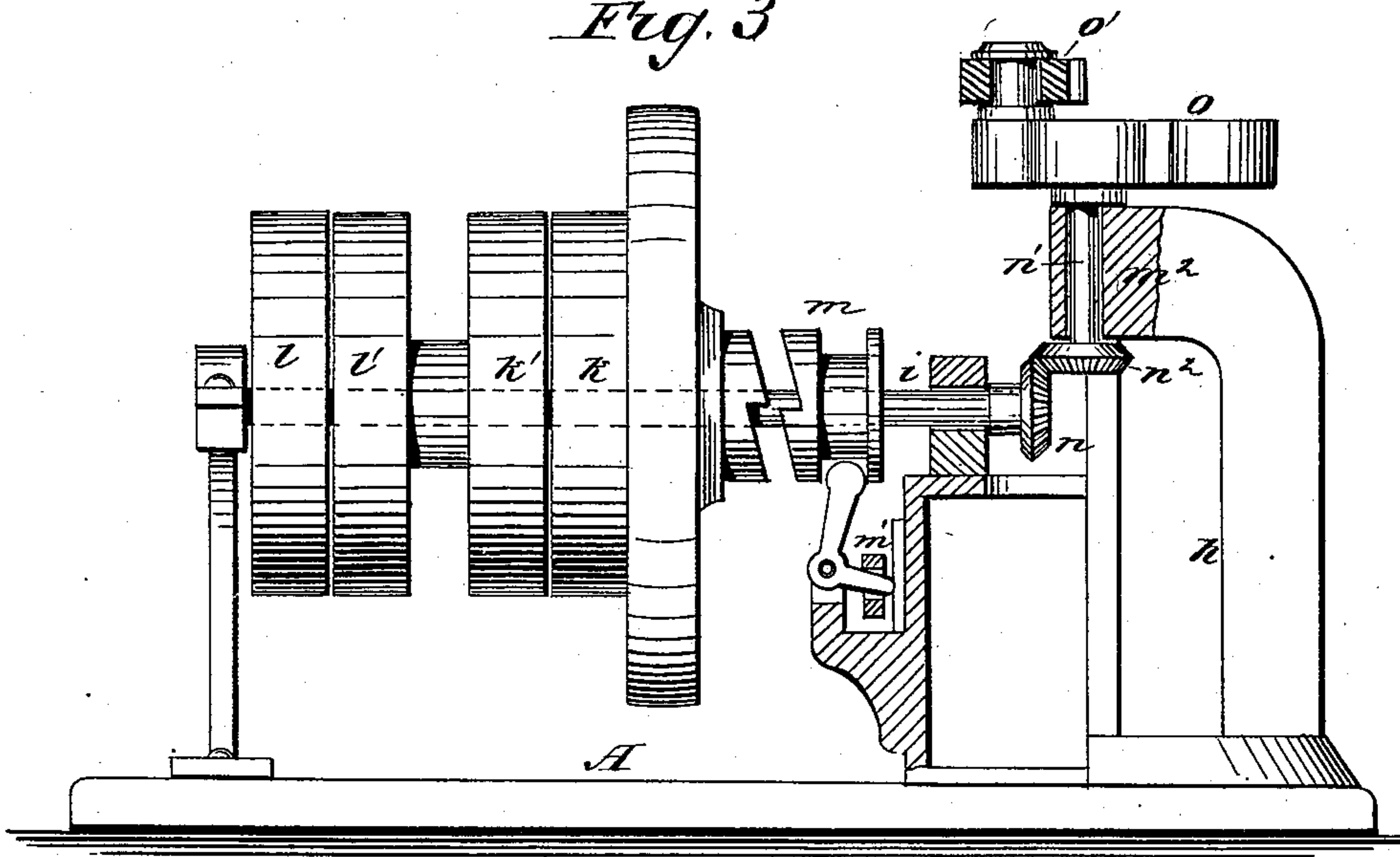


Fig. 4

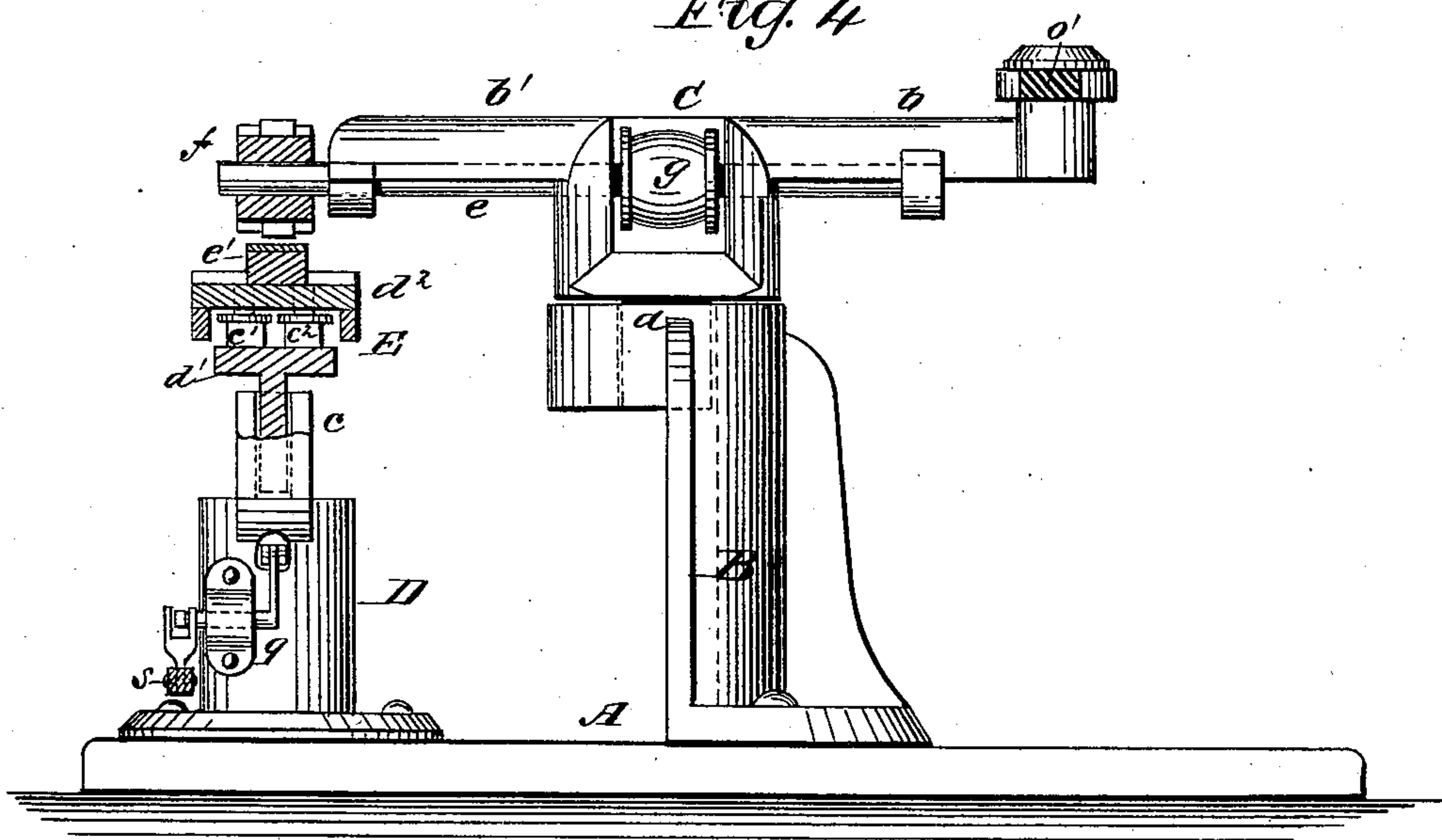
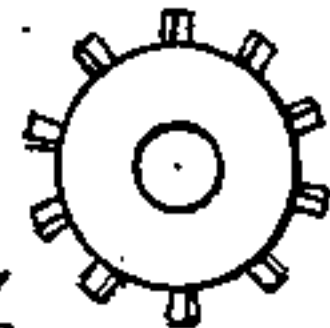


Fig. 6

Fig. 5

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MACHINE FOR WHITENING LEATHER.

SPECIFICATION forming part of Letters Patent No. 247,014, dated September 13, 1881.

Application filed February 28, 1881. (Model.)

To all whom it may concern:

Be it known we, JOHN E. CLEMENT and JOHN A. ENOS, of Peabody, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Machines for Whitening Leather, of which the following is a specification.

Our improvements relate to machines for planing off the surface of leather, usually termed "whitening leather."

The object of the invention is to construct a machine of light and portable character by which the work named can be done rapidly and perfectly.

The essential features of our invention consist in a rocking hub carrying the revolving cutter-head, by which the cutter is made to act in a level plane; in an adjustable bed of novel construction; in a novel arrangement of mechanism for operating the hub and cutter-head; and in cutters of novel form, all of which features are hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of our machine. Fig. 2 is a side elevation and vertical section through the feed-bed. Fig. 3 is an end view, partly in section, showing the driving mechanism and shifting devices. Fig. 4 is a vertical section on the line $x x'$ of Fig. 1. Figs. 5 and 6 show a cutter-head with cutters in modified form.

Similar letters of reference indicate corresponding parts.

The bed-plate A supports the operative mechanism, so that the machine can be set up at any desired place.

B is a stand fixed on the bed-plate.

C is a hub, having a spindle, a , that enters the top of the stand, so that the hub is supported and can turn freely, and formed with arms $b b'$, extending from opposite sides.

D is a hollow stand, formed with grooved posts $c c$, in which is fitted a slide, d , that carries the feed-bed E, as described hereinafter.

e is a shaft extending through hub C, and beneath the arms $b b'$, with suitable bearings at the ends of the arms. This shaft carries a cutter-head, f , above bed E, and is fitted within a recess of hub C, with a pulley, g , having a beveled surface.

$h h'$ are stands supporting a horizontal shaft, i , on which is a loose double pulley, $k k'$, that

connects by a belt, i' , with the pulley g on shaft e , and to which power is to be applied.

k' is a loose pulley next to pulley k .

l is a fast pulley on shaft i , also for connection of power, and l' is a loose pulley next to pulley l .

m is a clutch fitted to slide on shaft i , for engagement with the hub of pulley k , there being a groove-and-feather connection of the clutch with the shaft, so that the clutch serves to connect shaft i and pulley k .

m' is the clutch-operating lever.

n is a bevel-gear on the end of shaft i .

n' is a short vertical shaft sustained in a box, m^2 , on the stand h , and carrying a bevel-gear, n^2 , that engages with gear n .

o is a balanced crank-arm fixed on the upper end of shaft n' , and connected with the arm b of hub C by a rod, o' .

The machine is to be operated ordinarily by the connection to pulley l with the clutch m engaged with pulley k , so that the hub C, with its arms $b b'$, is rocked to carry the cutter-head back and forth in a horizontal plane above the bed E, while at the same time the head is revolved by the belt from pulley k to pulley g . The pulley g is beveled or tapered toward each end, so that belt i' shall hug it closely at all times. The power connection to pulley k will be arranged to give reverse movement to such pulley, and thus revolve the cutter-head backward. This is used while the cutters are being sharpened by an emery-block held against them, and during such sharpening the clutch m will be disengaged and the belt moved from fast pulley l to loose pulley l' , so that the hub C will not be rocked.

The feed-bed E, carried by slide d , consists of a fixed plate, d' , secured to the slide, and upper plate, d^2 , held in place by guide-pins c' , projecting from the plate d' . There are rubber blocks or spiral springs c^2 , carried by pins c' , on which springs plate d^2 rests, so that the plate is held against the action of the cutters by spring-pressure.

At the upper side of plate d^2 is fixed a raised block, e' , upon which the leather is to be laid.

As shown in Fig. 2, the slide d , is connected with toggle-bars $p p$, that are within stand D. At the side of the stand a crank-shaft, q , is hung, and a rod, q' , connects one arm of the

shaft with toggles *p*, while the other arm of the shaft is connected to a foot-lever, *s*, that is hung on bed A. By pressure on lever *s* the toggles are straightened, and bed E thus raised 5
bodily with the required pressure. The slide *d* moves in the posts *c*, and is thus held squarely and the bed-plates *d'* *d*² retained level.

Heretofore the cutters used in this work have consisted of a spiral blade secured to the head. 10
The tendency of such cutters is to work the leather to one side by the screw action.

Our improved cutter-head has straight cutters arranged in three lines around the head. The center cutters, *f'*, are parallel with the 15
axis of the head, and the outer cutters, *f*², incline from the sides of the head to the center, toward the direction of revolution, with their inner ends lapping the ends of the center cutters. The side cutters, *f*², thus tend to pull 20
the leather in opposite directions, while at the same time they act evenly and effectively upon the whole surface.

In the modification shown in Figs. 5 and 6 the cutters, instead of being in the broken 25
lines, as just described, are continuous from each side to the center, thus making them of V form.

This machine is of simple and durable construction in all its parts. The cutters act in 30
a straight line, and the bed adapts itself to the

cutters. In operation the leather is placed on the block *e'*, and is manipulated by the attendant, who holds one end and moves it to bring all portions of the surface under the cutters.

Having thus fully described our invention, 35
we claim as new and desire to secure by Letters Patent—

1. In machines for whitening leather, the rocking hub C, formed with arms *b b'*, the revolving shaft *e*, cutter-head *f*, and feed-bed E, 40
substantially as shown and described, combined for operation as set forth.

2. In machines for whitening leather, the combination of the hub C, provided with arms *b b'*, and spindle *a*, supporting-stand B, shaft 45
e, cutter-head *f*, beveled driving-pulley *g*, and reciprocating pitman *o'*, substantially as shown and described, for operation as set forth.

3. In machines for whitening leather, the bed E, having slide *d* connected centrally with 50
toggles *p*, shaft *q*, rod *q'*, and operating-lever *s*, in combination with stand D, provided with grooved posts *c*, substantially as shown and described, whereby the bed may be adjusted squarely and bodily, as set forth.

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JOHN AUGUSTUS ENOS.

Witnesses:

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OSCAR B. HURLBUT.