2 Sheets--Sheet 1.

E. SETTLE.

Leather-Finishing Machinery.

No. 167,698. Patented Sept. 14, 1875.

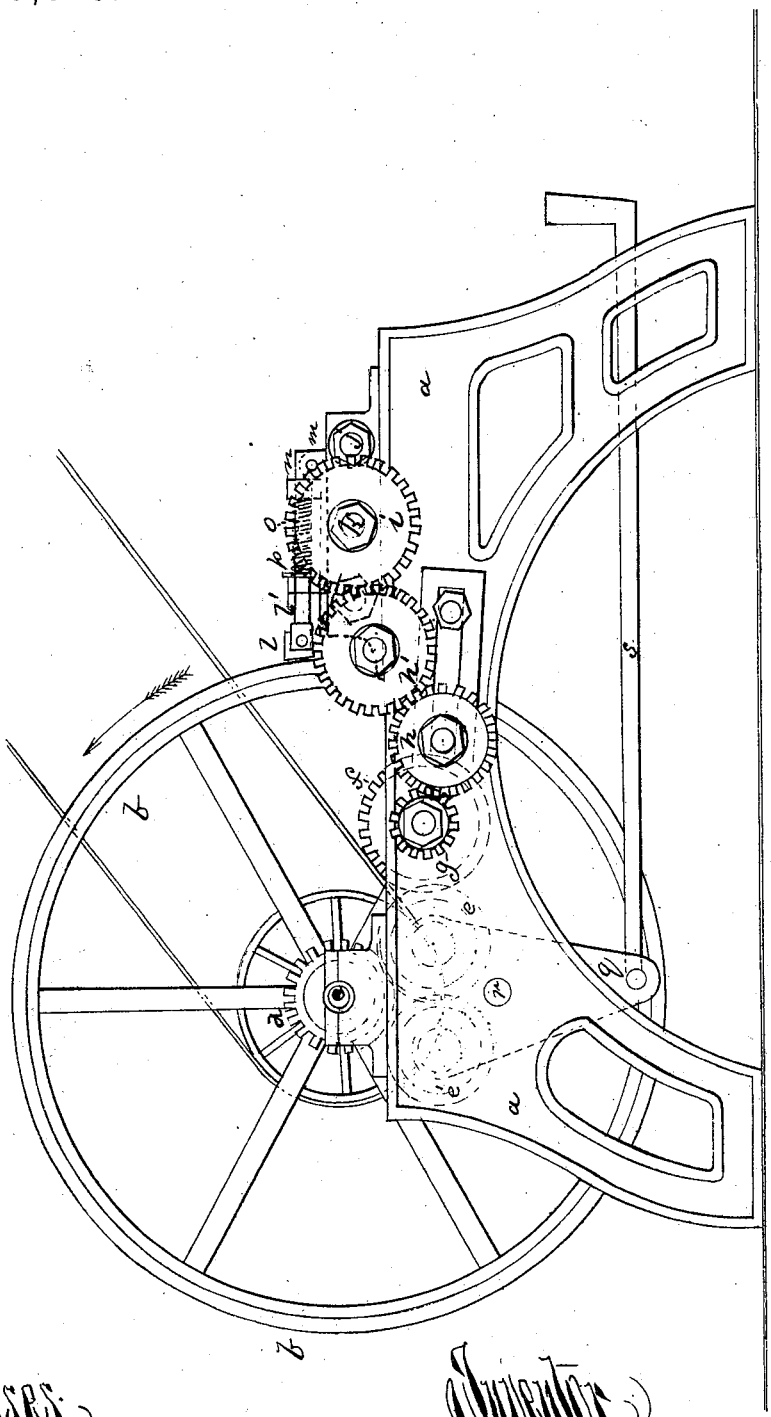

Fig. 1.

Witnesses:

Henry Elmer

Wm. W. Reid

Inventor:

Edward Settle

per John Inglis Jr & Co

Attorneys

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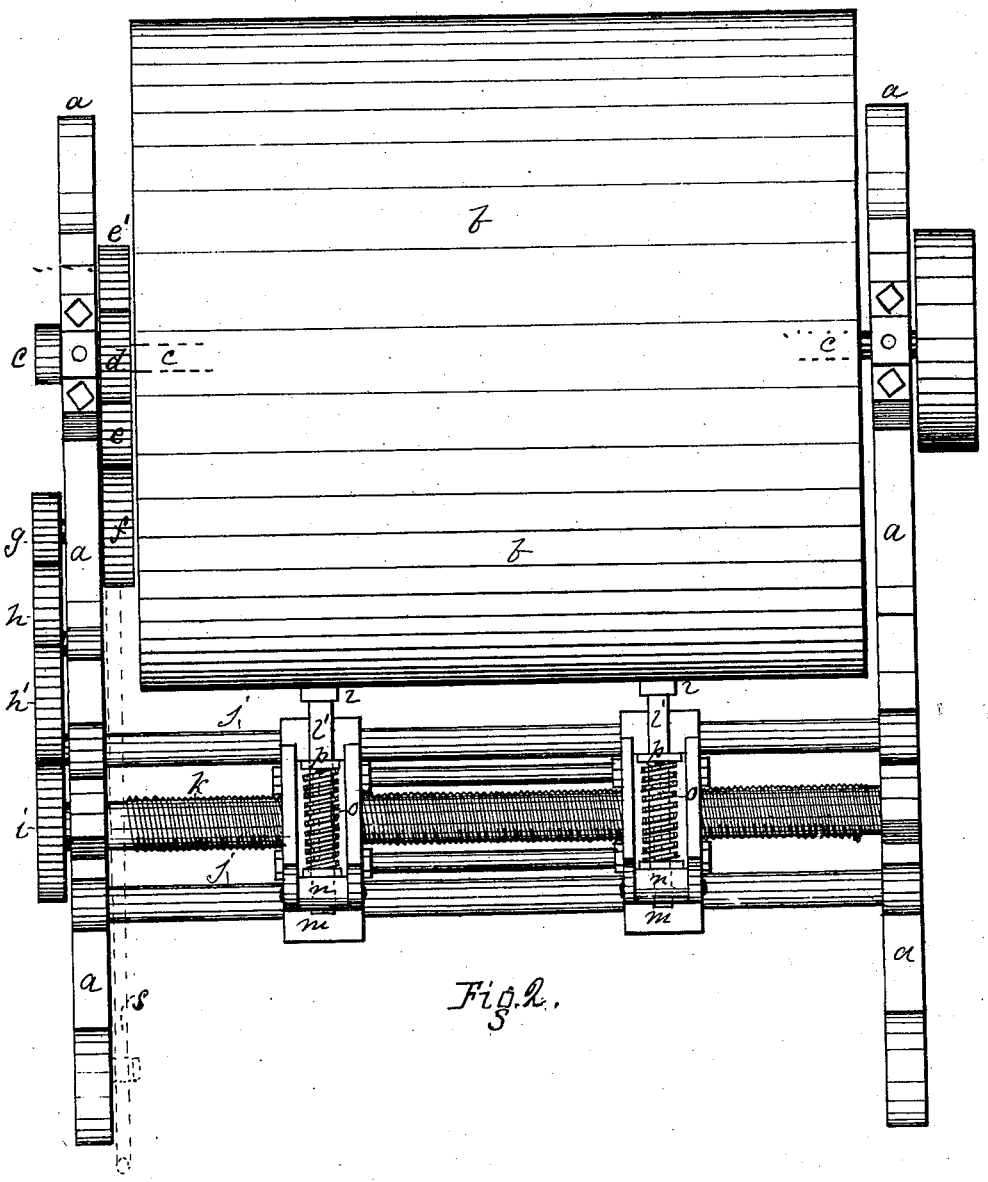

Fig. 2.

Witnesses:

Henry Elmer.

Wm. W. Reid

Inventor:

Edward Settle

per John Inglis Jr. & Co

Attorneys

UNITED STATES PATENT OFFICE.

EDWARD SETTLE, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO BENJAMIN SHEVILL, OF SAME PLACE.

IMPROVEMENT IN LEATHER-FINISHING MACHINERY.

Specification forming part of Letters Patent No. **167,698**, dated September 14, 1875; application filed January 20, 1875.

To all whom it may concern:

Be it known that I, EDWARD SETTLE, of the city of Brooklyn, county of Kings and State of New York, have invented certain new and useful Improvements in Leather-Finishing Machinery, of which the following is a specification:

My invention relates to that class of finishing-machines wherein the leather is placed over a revolving drum, and the finish or grain is given to the leather by means of a marker, arranged so as to readily move vertically from side to side of the machine, lengthwise the drum, as desired, its face traversing the exposed surface of the leather to give the desired figure.

The object of my improvements is to obtain a more accurate and steady movement of the marker, and also to enable the operator to quickly and surely change the direction of the same when desired; and the nature of my invention consists, first, in a combination of cog-wheels, properly geared, and connected with the driving or belt wheel, and in combination therewith, and with a screw-rod, upon which the markers are arranged, the screw-rod being the means for driving the said marker from side to side the machine, as desired; second, it also consists of a combination of cog-wheels with the shaft of the driving-wheel and the markers before mentioned, and as hereinafter described, to obtain a reverse motion of the marker; third, it also consists of the peculiar construction of the marker, which has a shaft or rod and a head, the shaft or rod running through suitable blocks, and said rod provided with a spring and regulating-nut, or equivalent, to hold the marker-head against the leather, the blocks arranged to slide over or upon suitable slide or guide rods, as hereinafter described, and also said marker in combination with the screw-rod, so that it is driven from side to side, as desired; fourth, it also consists in a rock-plate combination, consisting of a pivoted rocking plate, lever for rocking the same, and to the said plate are attached two cog-wheels, which gear with each other, and are so arranged as to be thrown into gear alternately with the cog-wheel attached to the drive-shaft, and one of the rock-plate cog-wheels also in gearing with other wheels, connecting and communicating its motion to the screw-rod and marker aforesaid, and as hereinafter described; fifth, it also consists of the combination of drum and marker, by means of the aforesaid gearing, and as hereinafter more definitely described.

Figure 1 is a side or end elevation of a leather-finishing machine, constructed with my improvements. Fig. 2 is a horizontal view of the same, as seen from above.

a represents the frame-work of the machine. *b* represents the drum, upon which the leather is placed. Said drum is arranged upon its shaft, which is also the drive or belt wheel shaft *c*, so as to turn in the direction of the arrows. At one end of the drive-wheel shaft is placed a cog-wheel, *d*. At *e* is a cog-wheel gearing therewith, and also with the next wheel *f*. This wheel *f* has at the outer end of its shaft a smaller gear or cog wheel, *g*, which gears with intermediate wheels *h h'*, which in turn gear with the cog-wheel *i*. This cog-wheel *i* drives the screw-rod *k*, its motion being derived through the medium of the before-mentioned cog-wheels *d e f g h h'* from the driving-shaft *c*. It may impart its motion to the screw-rod *k* through an intermediate wheel, or directly thereto by being itself set upon the screw-rod *k*, which would then become its shaft, as shown in the drawings. The screw-rod *k* runs across the machine lengthwise the drum, and is sustained at its ends by portions of the frame-work *a*, so that it may be revolved freely. At *l* is shown the head of the marker, *l'* being a rod running backward from the head, through the blocks *m* and *n*, and around said rod *l'* is a spiral spring, *o*, with regulating-nut *p*. *j j* are rods running across the machine, forming guides and tracks for the marker to run upon. The marker is pivoted to slide-block *m* at *n'*.

The rock-plate combination, for obtaining or causing direct or reverse motion to the screw-rod *k*, I will now describe.

At *r* is the pivot upon which, and extending upward therefrom, and attached thereto, is the plate *q*, fan-shaped, and having at its top, arranged to revolve properly, the cog-wheels *e'* and *e*, the latter having been mentioned before as gearing with the cog-wheel *d* on driving-

shaft *c*, and also cog-wheel *e'*. With the latter it is always in gearing, but with the former it is thrown out of gear, when desired, to allow the wheel *e'* to come into gear with the driving-shaft cog-wheel *d*, thereby giving a reverse motion, the former combination giving the direct, or vice versa. The wheels *e'* and *e* are thus brought into direct contact with the driving-shaft cog-wheel *d* alternately, when desired, by rocking the rock-plate *q* by means of the lever *s*, attached thereto, and forming the handle or treadle.

In the combination of cog-wheels, intermediate wheels *h* and *h'* are mentioned. The wheel *h'* may be left out, if desired, without changing the connection, the wheel *h* and *i* being made larger.

What I claim, and desire to secure by Letters Patent, is—

1. In combination, the driving-shaft *c*, cog-wheels *d e' e f g h h' i*, screw *k*, and marker *l*, arranged to operate substantially as and for the purpose described and set forth.

2. The marker *l*, with its shaft *l'*, blocks *m* and *n*, spring *o*, and regulating-nut *p*, in combination, as and for the purpose set forth.

3. The combination of drum *b* and marker *l* with the cog-wheels *d*, *e*, and *e'*, *f g h i*, and screw *k*, with guides *j j*, as described and set forth.

4. The combination of the shaft *r*, plate *q*, wheels *e'* and *e*, with lever *s*, arranged to operate in manner and for the purpose described and set forth.

5. The combination of lever *s*, rocking plate *q*, wheels *e'* and *e*, cog-wheel *d* on driving-shaft *c*, wheels *f g h h' i*, and screw *k*, when arranged to operate substantially as described and set forth.

EDWARD SETTLE.

Witnesses:
JOHN INGLIS, Jr.,
R. N. BOWLBY.