No. 831,294.

PATENTED SEPT. 18, 1906.

A. OLSON.

FABRIC CLEANING MACHINE.

APPLICATION FILED MAY 21, 1906.

4 SHEETS—SHEET 1.

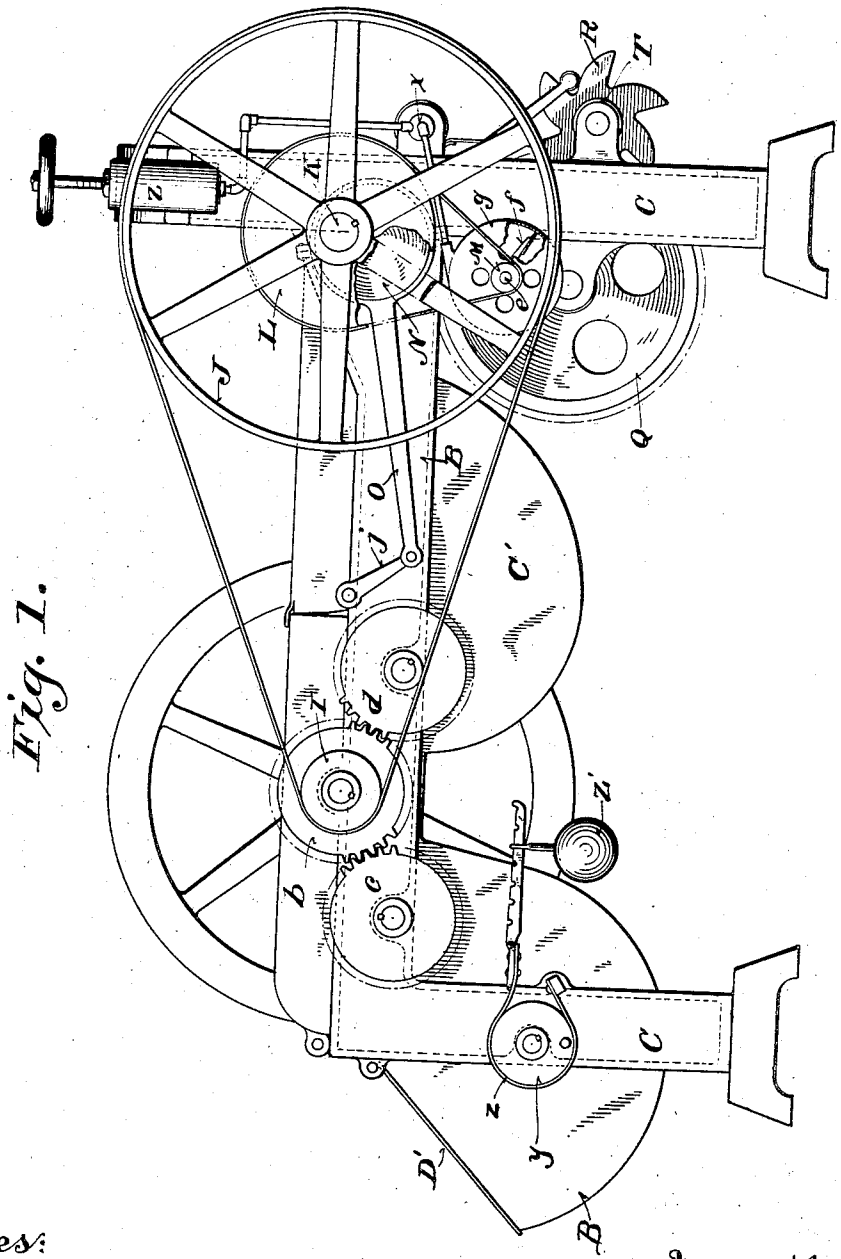


Fig. 1.

Witnesses:
Fred Palm.
George Telbez.

Inventor:
Andrew Olson.
By Clephane & Young.
Attorneys.

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4 SHEETS—SHEET 2.

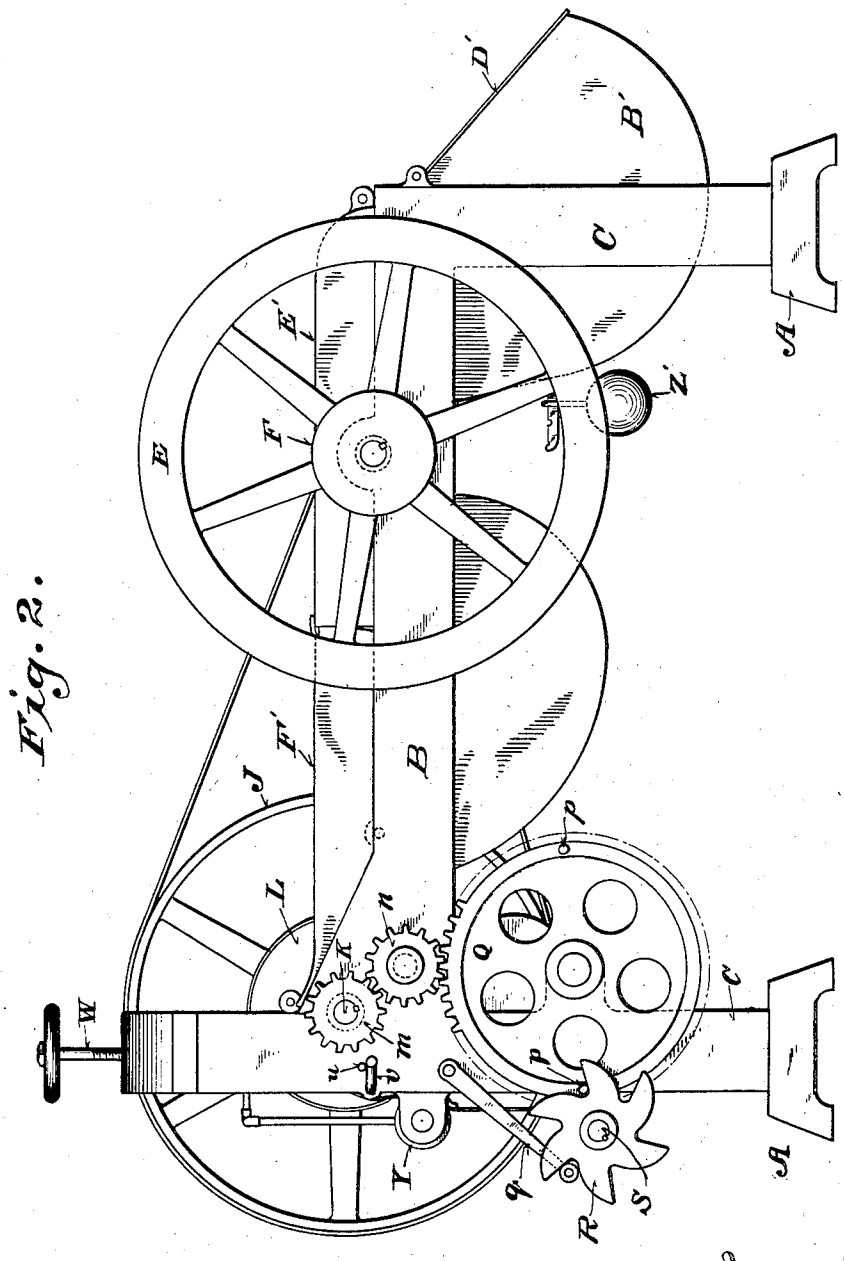


Fig. 2.

Witnesses:
Fred Palm.
George Felber

Inventor
Andrew Olson.
By Oliphant & Young.
Attorneys.

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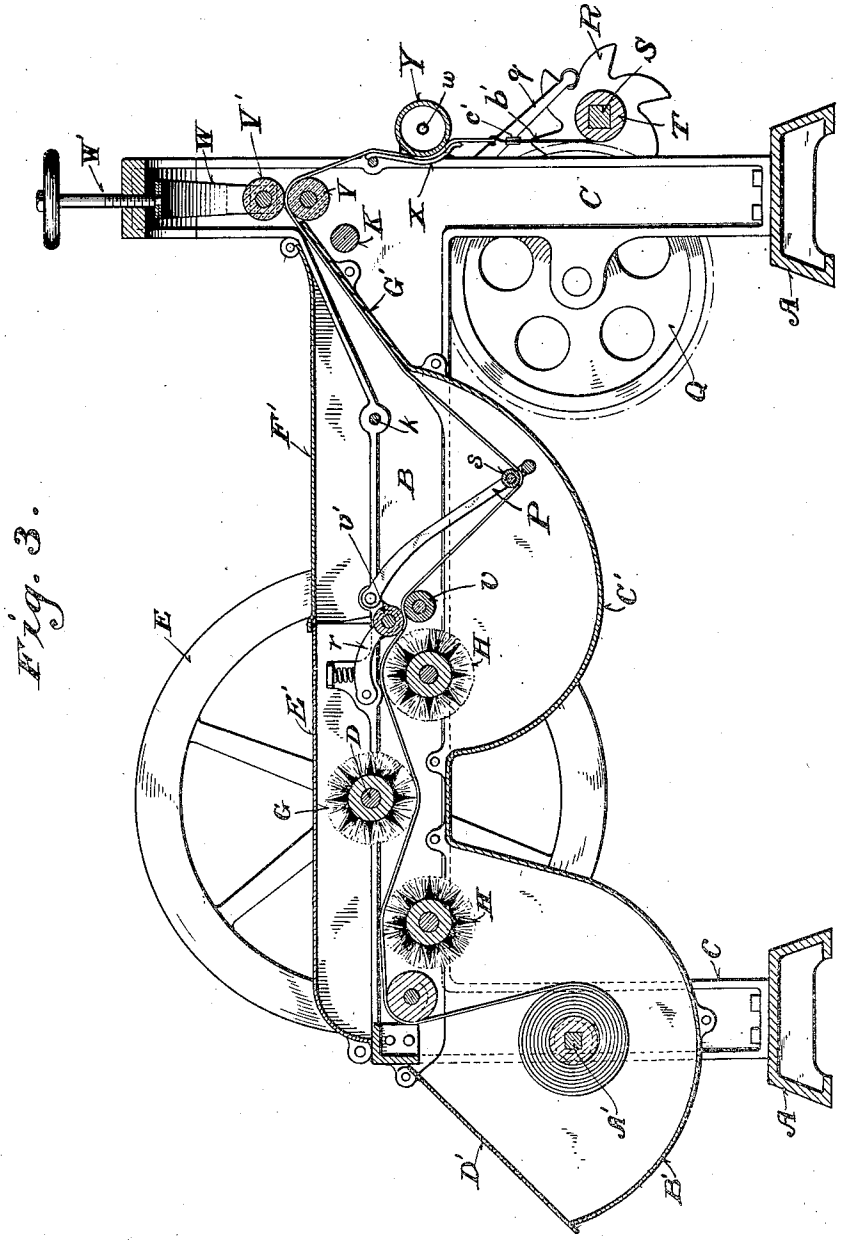


Fig. 3.

Witnesses:
Fred Palm.
Geo. Felber.

Inventor:
Andrew Olson.
By Dyrenforth, Young & Co.
Attorneys

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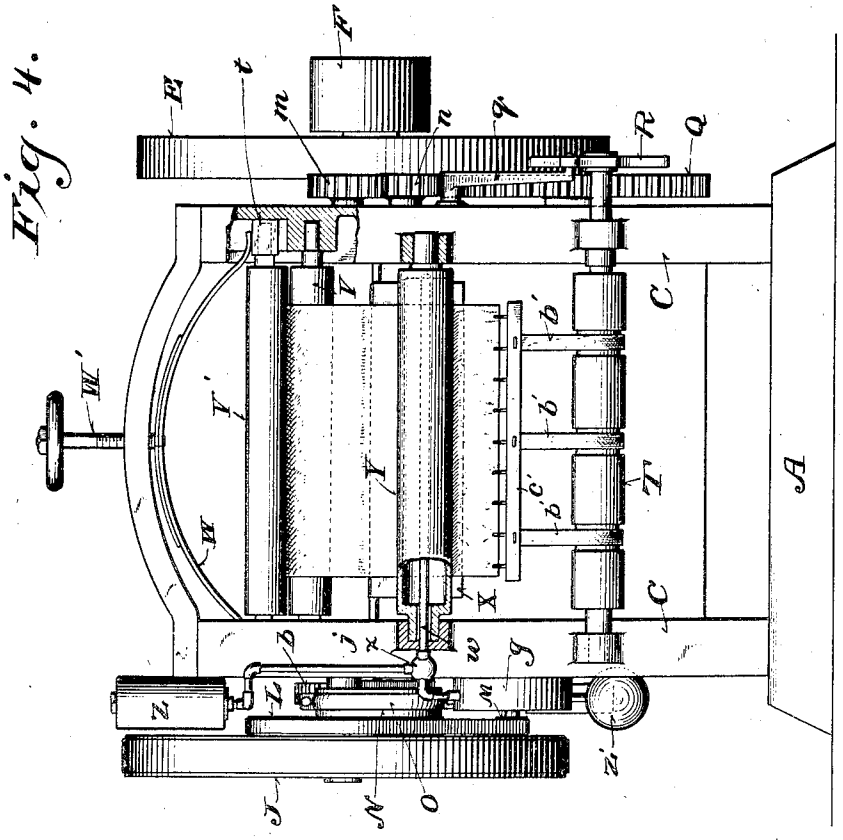
A. OLSON.

FABRIC CLEANING MACHINE.

APPLICATION FILED MAY 21, 1906.

4 SHEETS—SHEET 4.

Fig. 4.



Witnesses:
Fred Palm.
George Feller

Inventor:
Andrew Olson.
By Dysham & Young.
Attorneys.

UNITED STATES PATENT OFFICE.

ANDREW OLSON, OF CORLISS, WISCONSIN, ASSIGNOR OF ONE-FOURTH TO EDWARD E. ERICKSON AND ONE-FOURTH TO JOSEPH G. HORNWALL, OF CORLISS, WISCONSIN.

FABRIC-CLEANING MACHINE.

No. 831,294. Specification of Letters Patent. Patented Sept. 18, 1906.

Application filed May 21, 1906. Serial No. 317,879.

To all whom it may concern:

Be it known that I, ANDREW OLSON, a citizen of the United States, and a resident of Corliss, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Fabric-Cleaning Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in certain peculiarities of construction and combination of parts herein shown, described, and claimed, its object being to provide simple, economical machines especially designed for cleaning carpets or other fabric in a continuous web.

Figure 1 of the drawings represents an elevation of one side of a machine in accordance with my invention; Fig. 2, a similar view of the opposite side of the machine; Fig. 3, a vertical longitudinal section of said machine; and Fig. 4, a front elevation of the same, partly in section.

Referring by letter to the drawings, A indicates each of a pair of transverse sills, and B side pieces of a frame, vertically-depending portions C of these side pieces being bolted to the sills. The frame is provided with bearings for a main shaft D, having a fly-wheel E and driving-pulley F fast thereon. A cylindrical scouring-brush G is fast on the shaft D above and between a pair of similar brushes H, journaled in the aforesaid frame. A spur-wheel *b*, fast on the main shaft, meshes with similar wheels *c d*, fast on journals of the brushes H, and these brushes rotate in opposite directions.

A small pulley I, fast on the main shaft, has belt connection with a large pulley J, fast on a counter-shaft K, for which the frame aforesaid is provided with bearings. A pulley L, fast on the counter-shaft, is in belt connection with another smaller pulley M, fast on the shaft *e* of a rotary fan *f*, having the casing *g* thereof attached to the machine-frame, and an eccentric N, fast on said counter-shaft, turns in the ring end of a pitman O, that is connected at its other end to a crank *j* of an annular rocker-yoke P, for which said frame is provided with bearings, upward play of the yoke being limited by a stop-rod *k*, arranged in its path. A spur-pinion *m*, fast on the counter-shaft, meshes with a similar pinion *n*, loose on a lateral stud of the machine-frame and in mesh with a spur-wheel Q, loose on a similar stud and shown provided with diametrical opposite side lugs *p*, that alternately engage a ratchet-wheel R, fast on the spindle S of a take-up roller T, suitable bearings being provided for the spindle. A detent *q* is hung in connection with the frame of the machine to engage the ratchet-wheel and prevent reverse movement of the take-up roller. The rotary motion of the take-up roller is intermittent, and the frequency of its movement depends upon the number of lugs *p* on the spur-wheel Q aforesaid.

Between the forward scouring-brush H and the rocker-yoke P are tension-rolls U U′, one of which is journaled in stationary bearings and the other in spring-controlled pivoted arms *r*, one of these arms being shown in Fig. 3. An antifriction-sleeve *s* is supported on a rod in the aforesaid rocker-yoke adjacent to the transverse end of same.

Journaled in the sides of the machine-frame is a lower wringer-roll V, and an upper wringer-roll V′ is journaled in movable boxes *t*, for which guide-recesses are provided in said frame. A semi-elliptic spring W is arranged to bear at its ends on the journal-boxes *t*, and a tension-screw W′ for the spring is arranged to turn in an arch of the aforesaid frame. A concavo-convex swing-plate X is hung in the machine-frame back of an ironing-roll Y, journaled in bearings with which said frame is provided. A stop-pin *u* is stuck in an aperture of one side of the machine-frame over a crank extension *v* of a journal of the plate X to hold said plate in working position. Extending through one of its journal-bearings into the ironing-roll is a burner-pipe *w*, in connection with a mixing-chamber *x* for air and gasolene, that are respectively piped to said chamber from the fan-casing aforesaid, and a tank Z, supported in connection with the aforesaid frame. Journaled in the machine-frame is a roller A′, on which carpet or other continuous-web fabric to be cleaned is wound. A crank-wheel *y* is fast on a journal of the roller A′, and said roller is tensioned by a weight-controlled band-brake *z*, the weight *z′* being adjustable on the beam of said brake to vary tension. Troughs B′ C′ are suspended between the side of the machine-frame, and covers D′ E′ F′ are also provided

in connection with said frame to inclose the contents of the troughs. From the trough C′ is an incline G′ to the wringer-rolls.

The feed-roller A′ and the take-up roller T are similar in detail, each being annularly grooved at intervals of its length. Tapes *b′* are fastened to each of said rollers to wind in the grooves of same, and a head-strip *e′*, fastened to the tapes, is hooked or otherwise fastened to the material to be wound. The tapes, in connection with the supply and take-up rollers, are long enough in practice to extend clear through the machine.

A cleaning fluid is put in the trough B′, and the web of carpet or other material is trained from the feed-roller A′ up over a supporting-roller H′, between scouring-brushes G H and tension-rolls U U′, through the rocker-yoke P, in contact with the antifriction sleeve or roller *s*, hung therein, between the wringer-rolls, and finally between the plate X and ironing-roll Y, the forward end of said web being attached to the strip *c′*, joining the tapes *b′*, in connection with the take-up roller aforesaid. Rinse fluid is supplied in the trough C′, and the feed of the aforesaid material being intermittent a portion of said material is agitated by the rocker yoke P in said rinse fluid while another portion thereof is being scoured. The rinsed material passes between the wringer-rolls and from thence down between the plate X and ironing-roll Y, to be finally wound dry on the take-up roller, as aforesaid.

I claim—

1. A machine for cleaning continuous-web fabric and which comprises a suitable frame and troughs, feed and take-up rollers at opposite ends of the machine, the feed-roller being within one of the troughs, a supporting-roller and cylindrical scouring-brushes in proximity to the feed-roller, said brushes being arranged to operate upon both sides of a web of fabric trained through the machine, tension-rollers between which said fabric is fed after passing the brushes, a rocker-yoke operative in another of the troughs and through which the fabric is trained after passing the tension-rollers, wringer-rolls between which the fabric is passed on its way from said rocker-yoke to the take-up roller, and means for imparting intermittent motion to said take-up roller and continuous motion to said scouring-brushes and rocker-yoke.

2. A machine for cleaning continuous-web fabric and which comprises a suitable frame and troughs, feed and take-up rollers at opposite ends of the machine, the feed-roller being with one of the troughs, a supporting-roller and cylindrical scouring-brushes in proximity to the feed-roller, said brushes being arranged to operate upon both sides of the web of fabric trained through the machine, tension-rollers between which the fabric is fed after passing the brushes, a rocker-yoke operative in another of the troughs, and through which the fabric is trained after passing the tension-rollers, wringer-rolls between which the fabric is passed on its way to the take-up roller, an ironing-roll and backing-plate between which the fabric is passed ahead of the take-up roller, means for continuous heating of the ironing-roll by commingled air and burning fluid, and means for imparting intermittent motion to said take-up roller and continuous motion to said scouring-brushes and rocker-yoke.

3. A machine for cleaning continuous-web fabric and which comprises a suitable frame, cleaning and rinsing fluid troughs, means by which the fabric is intermittently fed through the troughs, scouring-brushes arranged to operate upon the fabric, means for agitating the fabric in the rinse-trough, and means for wringing the rinsed fabric.

4. A machine for cleaning continuous-web fabric and which comprises a suitable frame, cleaning and rinsing fluid troughs, means by which the fabric is intermittently fed through the troughs, scouring-brushes arranged to operate upon the fabric, means for agitating the fabric in the rinse-trough, and means for wringing and ironing the rinsed fabric.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ANDREW OLSON.

Witnesses:
N. E. OLIPHANT,
JOSEF HORNWALL.