A. FAIFER.

LEATHER SHRINKING MACHINE.

APPLICATION FILED JULY 22, 1908.

917,857.

Patented Apr. 13, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

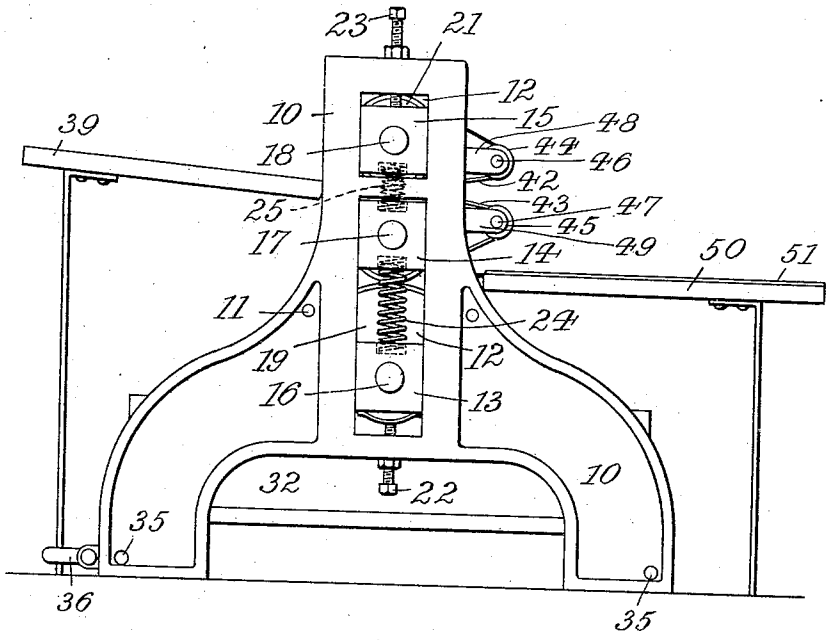
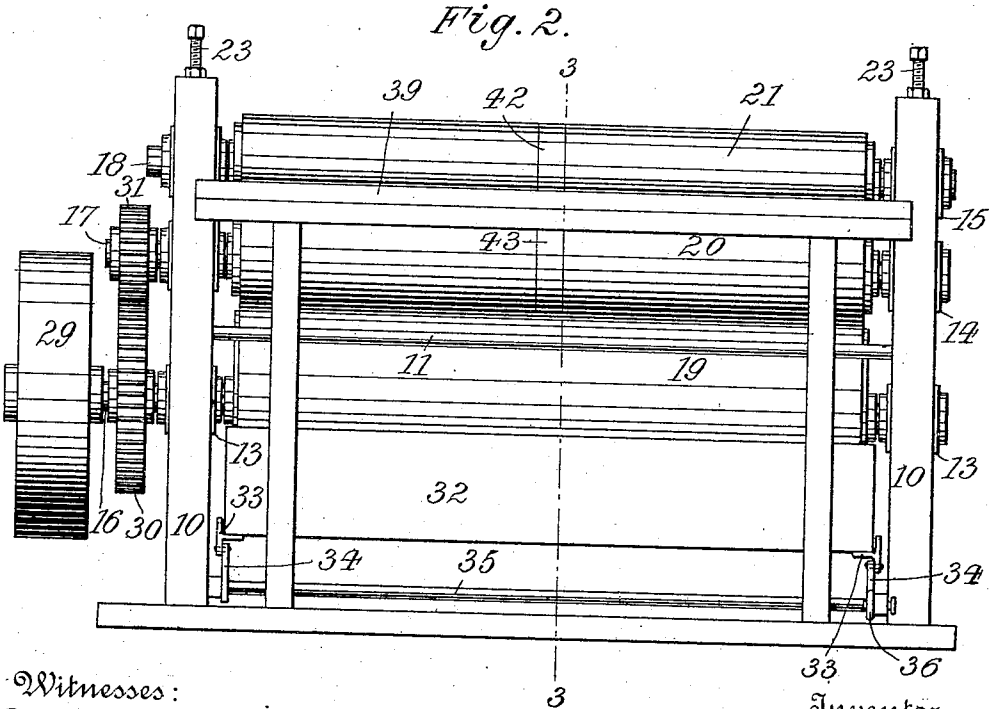


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

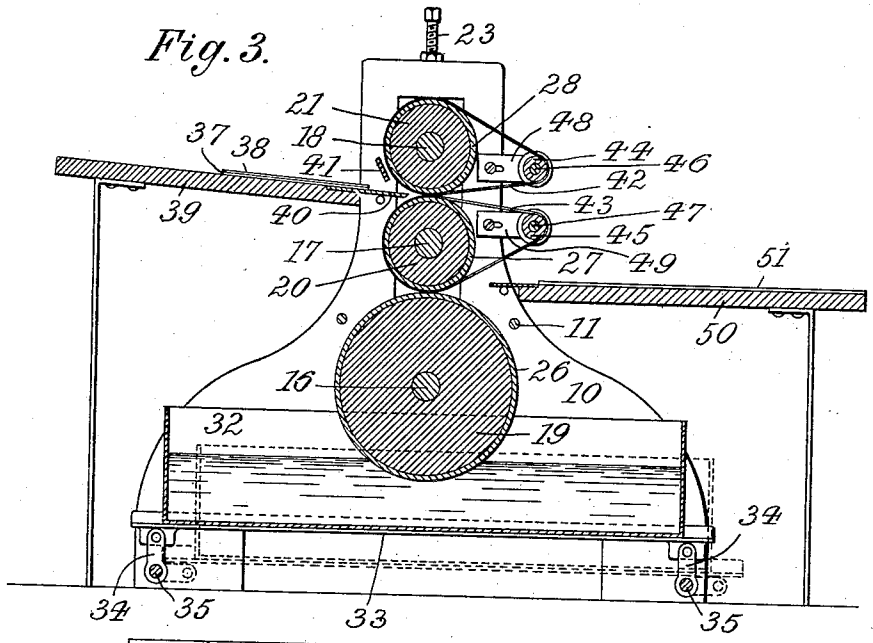
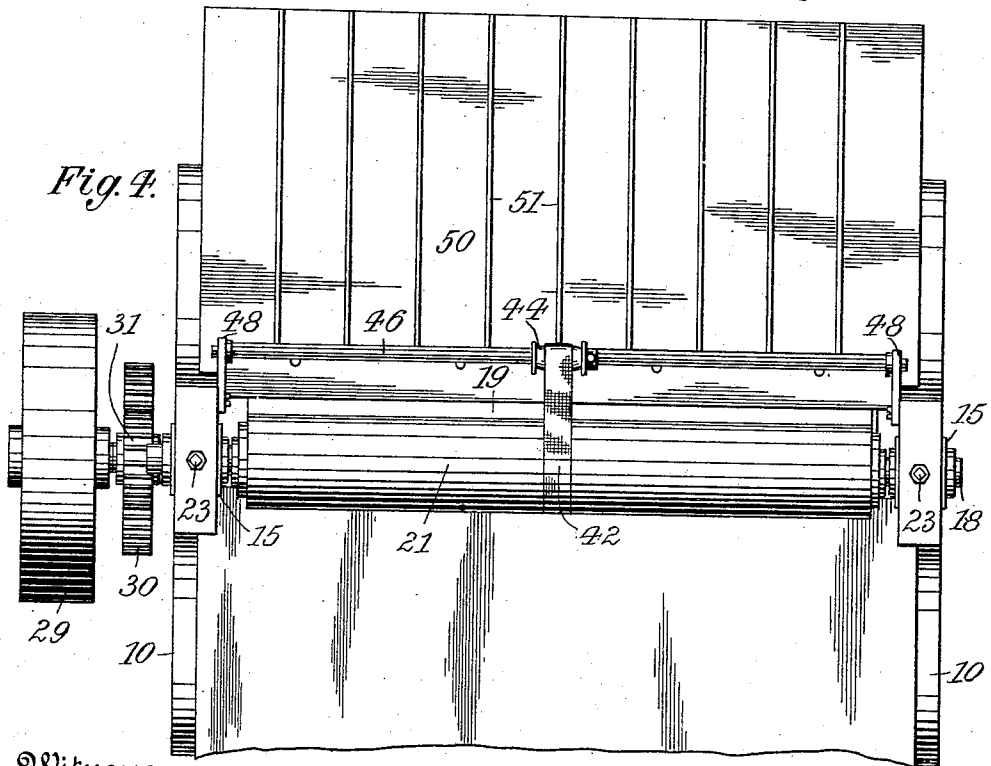


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANTHONY FAIFER, OF NEW YORK, N. Y., ASSIGNOR TO GEO. McKIBBIN & SON, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

LEATHER-SHRINKING MACHINE.

No. 917,857. Specification of Letters Patent. Patented April 13, 1909.

Application filed July 22, 1908. Serial No. 444,706.

To all whom it may concern:

Be it known that I, ANTHONY FAIFER, a citizen of the United States, residing at New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Leather-Shrinking Machines, of which the following is a specification.

This invention relates to an improved machine for moistening cut pieces of leather such as enter, more particularly, into the manufacture of flexible book covers.

The machine is adapted to moisten the backs of two superposed sheets of leather which are thus shrunk in a simple, quick and uniform manner.

In the accompanying drawings: Figure 1 is a side view of my improved leather shrinking machine; Fig. 2 a front elevation; Fig. 3 a vertical transverse section on line 3—3, Fig. 2, and Fig. 4 a plan, partly broken away.

Two parallel standards 10 are connected by longitudinal bars 11, to constitute the frame of the machine. Standards 10 are slotted vertically, as at 12, to accommodate bearings 13, 14, 15, in which turn the shafts 16, 17, 18 of three superposed parallel rollers 19, 20, 21. Bearings 13, 14, 15 are held in yielding and adjustable relation by means of a lower and upper set screw 22, 23 engaging lower and upper bearings 13, 15, and by means of coiled springs 24, 25 interposed between bearings 13, 14 and 14, 15 respectively. Rollers 19, 20, 21 are covered by a felt or other absorbent facing 26, 27, 28, and while rollers 20, 21 are of equal diameter, the diameter of roller 19 is considerably larger. Shaft 16 of roller 19 is provided with a power-pulley 29 and is intergeared with shaft 17 by wheels 30, 31, so that rollers 19 and 20 are simultaneously rotated, while roller 21 is turned by roller 20 through frictional contact. Roller 19, which constitutes the take-up roller, dips into a water pan 32 which is arranged below the same and which may be lowered, so that the roller clears the water whenever the machine is to be put out of action. As shown, pan 32 is supported on rails 33 to which are pivoted arms 34 mounted on shafts 35, one of which carries a handle 36. By manipulating this handle, pan 32 may be lowered into the position shown by dotted lines, Fig. 3, so that roller 19 clears the water. The moisture absorbed by roller 19 is, by it, transmitted to lower moistening roller 20, which, in turn, imparts it to upper moistening roller 21.

The sheets of leather 37, 38, to be shrunk are placed, face to face, upon a receiving table 39 located at the front of the machine and provided at its rear end, with an extension 40 projecting some distance between rollers 20, 21. Above extension 40 there is provided a guard 41 to protect the hands of the operator. As sheets 37, 38 are drawn through rollers 20, 21, their backs are moistened to the extent desired, the active surface of roller 21 receiving its proper amount of moisture at the intervals between the feeding of successive sheets.

In order to prevent the material, to be shrunk, from adhering to the moistening rollers and winding upon the same, each of the latter is embraced by a tape or narrow porous band 42, 43, running also over pulleys 44, 45, mounted on shafts 46, 47, that turn in bearings 48, 49. Shafts 46, 47 are arranged at the back of the machine parallel to shafts 17, 18, and at closer proximity than the latter. In this way the inner runs of bands 42, 43 diverge from one another from front to rear, so that they deflect the moistened leather away from the surfaces of rollers 21, 20, and guide it toward a rear delivery table 50. This table is preferably provided with a number of ribs 51 that support the moistened leather and prevent it from adhering to the surface of the table.

It will be seen that by the construction described, the leather is moistened in a quick and uniform manner, while the degree of saturation to be imparted to it may be readily adjusted by manipulating the set screws 22, 23 of the roller bearings.

I claim:

In a device of the character described, a frame, a movable liquid containing pan mounted within the frame, a take-up roller dipping into the liquid, a lower moistening roller contacting with the take-up roller, an upper moistening roller contacting with the lower moistening roller, a driving connection between the take-up roller and the lower moistening roller, the upper moistening roller being driven frictionally by the lower moistening roller, diverging bands engaging the moistening rollers, the moistening rollers and said bands being disposed above said

pan and the lower moistening roller being moistened by contact with the take-up roller, the lower moistening roller in turn moistening the upper moistening roller, and means for lowering said pan bodily in a longitudinal direction so that the take-up roller cannot dip into the liquid.

Signed by me at New York city, (Manhattan,) N. Y., this 21st day of July, 1908.

ANTHONY FAIFER.

Witnesses:
JOHN MCKIBBIN,
W. R. SCHULZ.