L. STERNBERGER.

Starching-Machine.

No. 169,054. Patented Oct. 19, 1875.

Fig. 4.

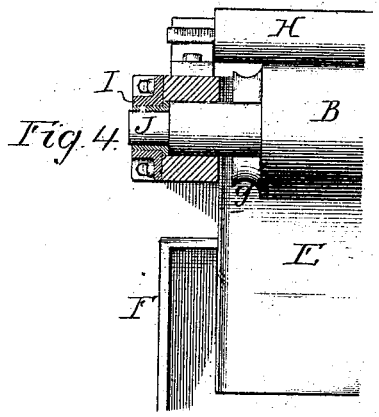


Fig. 1

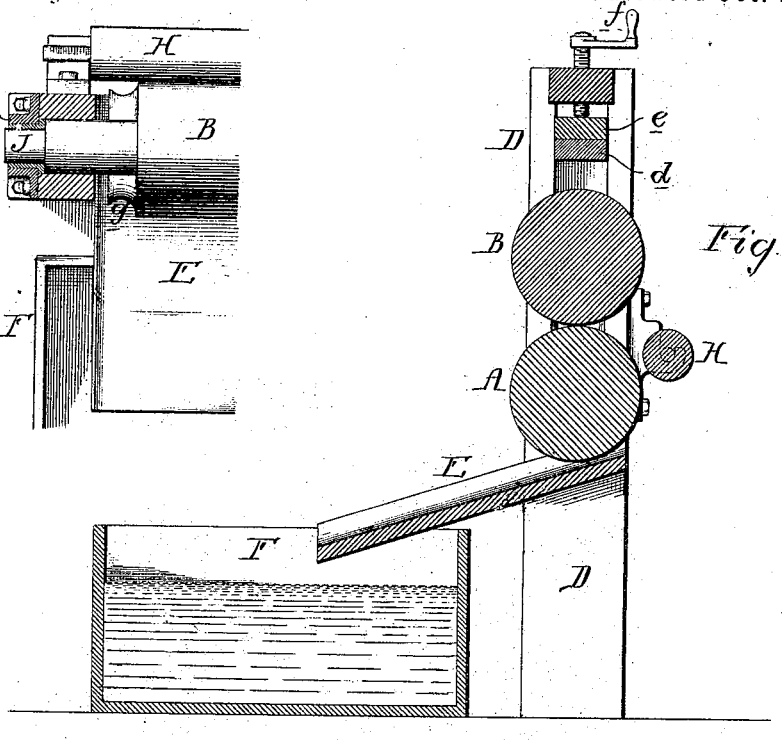


Fig. 2.

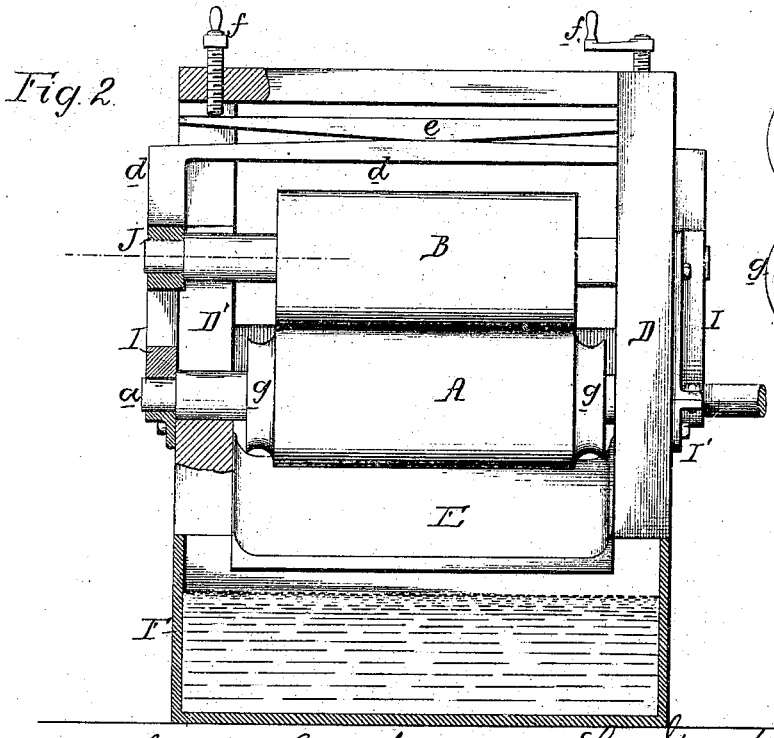
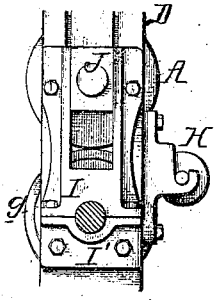


Fig. 3



Witnesses. Harry Smith
Thomas McElvain

L. Sternberger
by his Attorneys
Atwood & Dodge

UNITED STATES PATENT OFFICE.

LEOPOLD STERNBERGER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STARCHING-MACHINES.

Specification forming part of Letters Patent No. **169,054**, dated October 19, 1875; application filed July 10, 1875.

To all whom it may concern:

Be it known that I, LEOPOLD STERNBERGER, of Philadelphia, Pennsylvania, have invented certain Improvements in Machines for Starching Fabrics, of which the following is a specification:

The object of my invention is to so construct a machine for starching light fabrics, such as muslin, linen, &c., that the consumption of starch will be economized, and the goods prevented from becoming soiled; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of my improved starching-machine; Fig. 2, a front view of the same, partly in section; and Figs. 3 and 4, detached views illustrating different features of my invention.

The construction of the body of the machine is not unlike that of an ordinary clothes-wringer, there being two rubber-coated rollers, A and B, the former revolving in fixed bearings *a*, and the latter being arranged to slide vertically, and its journals being acted upon by a longitudinal yoke, *d*, which is caused to bear upon the journal-boxes by the action of a spring-strip, *e*, the amount of pressure being determined by regulating-screws *f f* at each end of the frame of the machine. At each end of the lower roller A, however, there is, in the present instance, a grooved collar, *g*, and directly beneath the roller, and extending entirely across the machine between the side frames D D′, is an inclined shelf, E, the outer end of which projects over a tub or box, F, which is partly filled with the starching composition.

The fabric to be starched is first immersed in this composition, and is then passed between the rolls A and B, and thence over a roller, H, from which it falls into a suitable receptacle in a properly-starched condition, the rolls A and B having expressed all the surplus starch, which is forced to the ends of the rolls, and is received by the grooved collars *g*, from which it runs in a thin stream onto the inclined shelf or table E, and thence back into the starching-box F.

The grooved collars *g* cause the starch to be returned to the box F in a perfectly clean condition, and prevent it from flowing down onto the spindle of the lower roller, and becoming soiled by contact with the same, or from clogging up the bearing. To prevent the possibility of any oil from this bearing becoming mixed with the starch, however, and to provide against the soiling of the edges of the fabric as it passes through the rolls, I prefer to arrange the bearings for both the rolls upon the outside of the frames D D′, and for this purpose I employ bearing-blocks I I, (shown more fully in Figs. 2 and 3,) each of these blocks having lugs for attachment to the edges of the side frames D D′, and being provided at the bottom with a cap, I′, so as to form a bearing for the lower roll. The upper parts of the blocks I form arms, between which are guided the journal-boxes J of the upper roll B, the said journal-boxes being thus allowed to slide vertically to any desired extent.

Although I prefer the mode herein described of applying the pressure to the upper roll B, it will be evident that other modes of effecting this object may be employed, if desired.

I claim as my invention—

1. The combination, in a machine for starching fabrics, of two pressure-rollers, A and B, arranged one above the other, the lower roll being provided at the ends with grooved collars *g*, as and for the purpose herein set forth.

2. The bearing-blocks I I, adapted for attachment to the outside of the side frames D D′ of the machine, and provided with arms for the vertical guidance of the journal-box J of the upper roll, and with bearings for the journal of the lower roll, all substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEOPOLD STERNBERGER.

Witnesses:

EDWARD H. ECKFELDT,

HARRY SMITH.