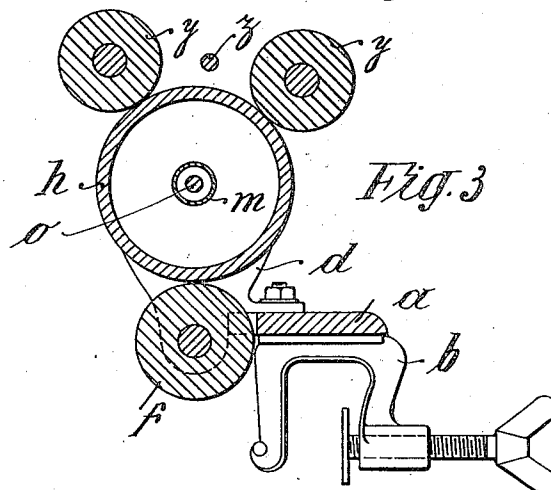
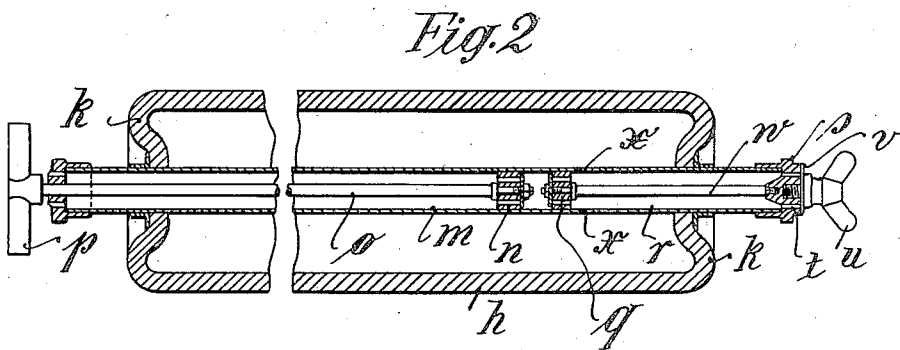
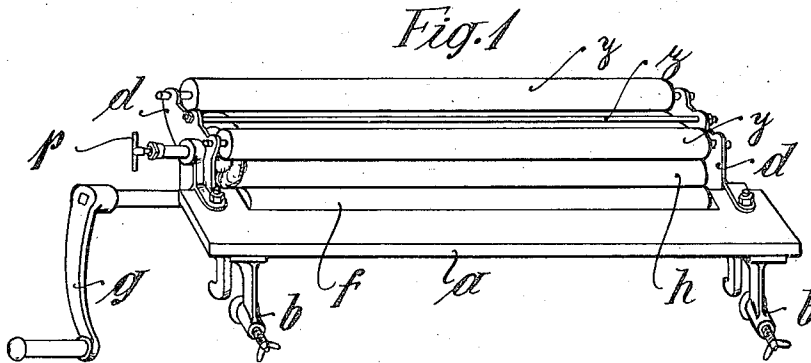


F. W. LAUTERBACH.
 MANGLING ROLLER.
 APPLICATION FILED APR. 30, 1908.

922,488.

Patented May 25, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

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MANGLING-ROLLER.

No. 922,488.

Specification of Letters Patent.

Patented May 25, 1909.

Application filed April 30, 1908. Serial No. 430,120.

To all whom it may concern:

Be it known that I, FRIEDRICH WILHELM LAUTERBACH, a subject of the King of Saxony, residing at Lobstädt, Saxony, Germany, have invented certain new and useful Improvements in Mangling-Rollers, of which the following is a specification.

Mangle rollers consisting of metal cores with thick india-rubber jackets are not sufficiently elastic for many classes of work, and are liable to crush buttons and the like, and to injure the linen passed between them if the thickness thereof is unequal, so that certain parts are subjected to excessive pressure. Moreover, such rollers are themselves subject to injury by buttons and similar hard objects, to which they cannot yield sufficiently.

The present invention, which obviates these disadvantages, primarily consists in using pneumatic mangle-rollers, or rollers with air-filled jackets, in which the air is sufficiently compressed to enable the required pressure to be exerted on the articles to be mangled, and the elasticity of which prevents the exertion of injurious pressure on hard objects or thick portions of the linen or the like passing through the machine. The invention also provides means for regulating or restoring the air pressure in the pneumatic jackets, as will be set forth hereinafter.

A construction embodying the invention is illustrated in the annexed drawing.

Figure 1 is a perspective view of a mangling machine in which one of the rollers is a pneumatic roller; Fig. 2 is a longitudinal section of the pneumatic roller, and Fig. 3 a cross-section of the machine.

The bed-plate *a* is provided with clamps *b* of the usual kind for fixing the machine to a tub or the like. The rollers are mounted in bearings *d* fixed to the bed-plate. The lower mangling roller *f*, of solid india-rubber traversed by a shaft, is rotated by the crank *g*. The upper mangling roller *h* consists of a hollow india-rubber cylinder closed at its ends by india-rubber walls *k*. The shaft *m* traversing this cylinder is hollow and protrudes at both ends. The walls *k* make tight joints with the shaft *m*. A piston *n* traversed by valved ducts is movable in the hollow shaft *m*, and is connected by a rod *o* to a handle *p*. By means of this piston air

drawn into the hollow shaft through orifices at the left-hand end of the shaft can be forced through a valve *q* into a chamber *r*, which communicates by means of orifices *x* with the interior of the cylinder *h*. At the right-hand end of the shaft *m* the chamber *r* is closed by a cap *s*. The latter is traversed by ducts *t* but the outer orifices of the latter are normally closed by a disk *v* which is pressed against the cap by a wing-screw *u*. A rod *w* fixed to the cap and the valve *q* holds the latter in its proper position.

It will be seen that by operating the pump-piston *n* the air in the cylinder *h* can be compressed to the desired degree. By unfastening the screw *u* air can be allowed to escape from the cylinder *h* through the ducts *t*. Solid abutment-rollers *y* are arranged above the upper mangling roller, to assist in holding the latter down against the articles to be mangled. Any convenient number of rollers *y* may be used. A tie-rod *z* connects the two bearing-plates *d*.

Instead of having one of the mangling rollers solid, the said rollers may both be pneumatic.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

A pneumatic mangling roller comprising a hollow pneumatic rubber cylinder closed at its ends by integral rubber walls, a shaft hollow throughout its length traversing said cylinder and the end walls thereof, said shaft having peripheral orifices and forming a pump casing, a valve within said shaft dividing same into two chambers, each having ducts in its ends exteriorly of the cylinder, a manually operable pump-piston in one of said chambers adapted to suck air through the ducts in said chamber and force same through the valve into the other chamber and through the aforesaid orifices into the cylinder, and means for closing and opening the ducts in the last mentioned chamber substantially as set forth.

In witness whereof I have signed this specification in the presence of two witnesses.

FRIEDRICH WILHELM LAUTERBACH.

Witnesses:

HERM. SACK,
RUDOLPH FRICKE.