

1,297,816.

F. A. ESPELAND.
MOPPING MACHINE.
APPLICATION FILED OCT. 29, 1918.

Patented Mar. 18, 1919.

2 SHEETS—SHEET 1.

FIG. 1.

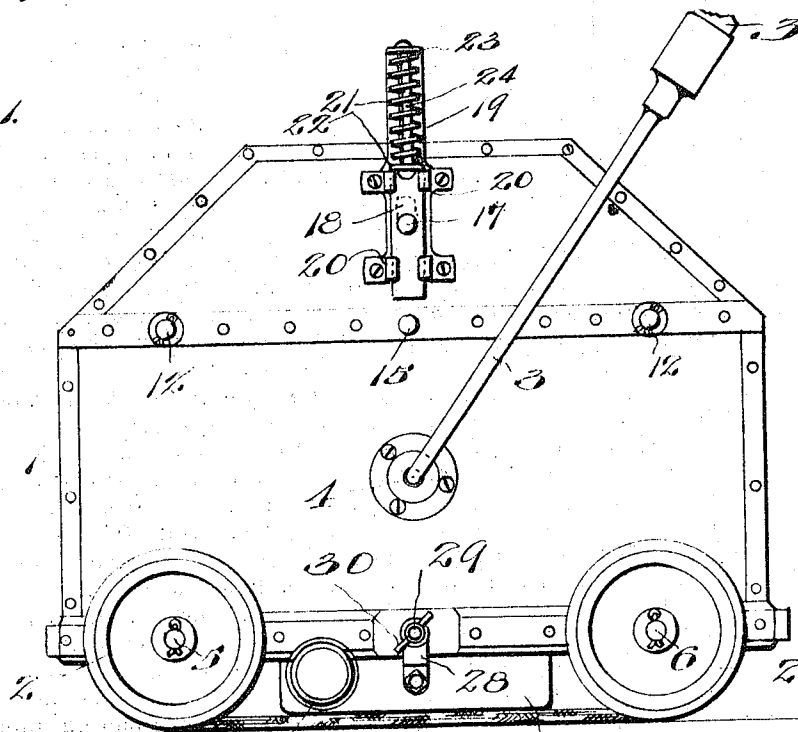
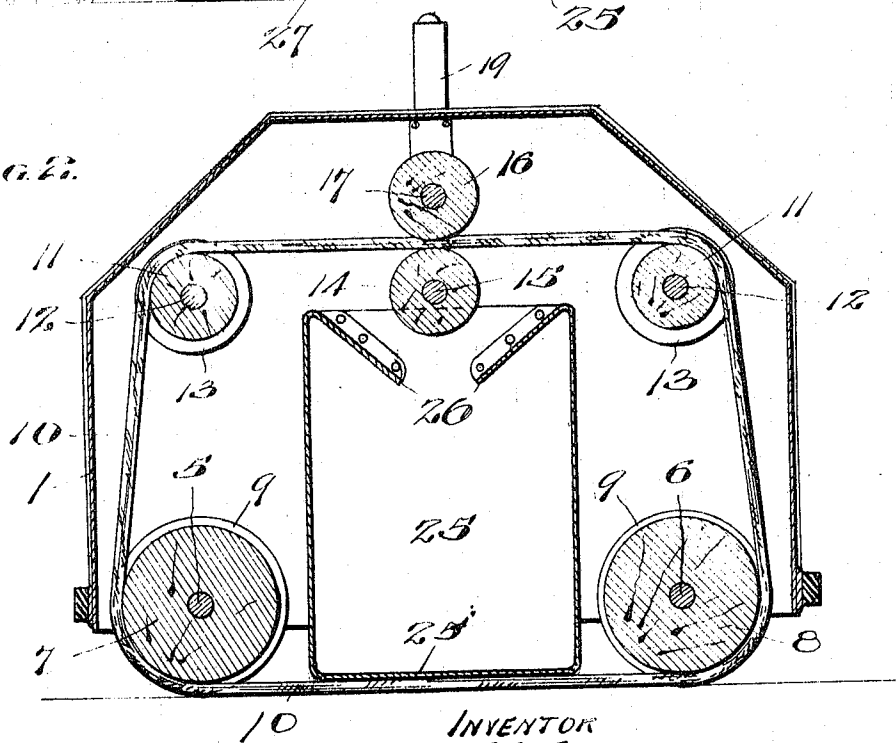
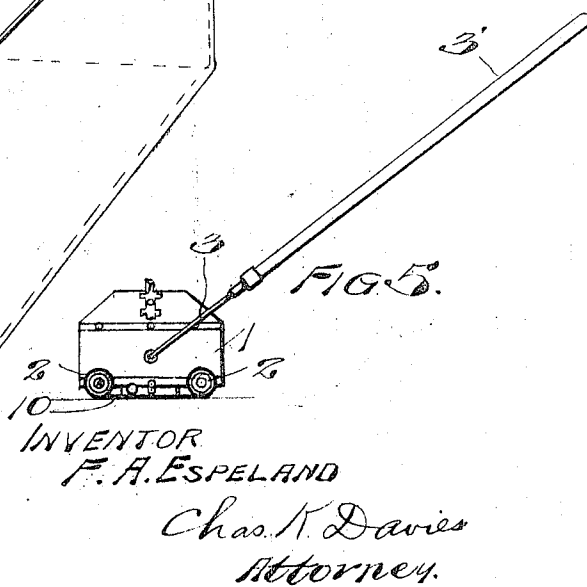
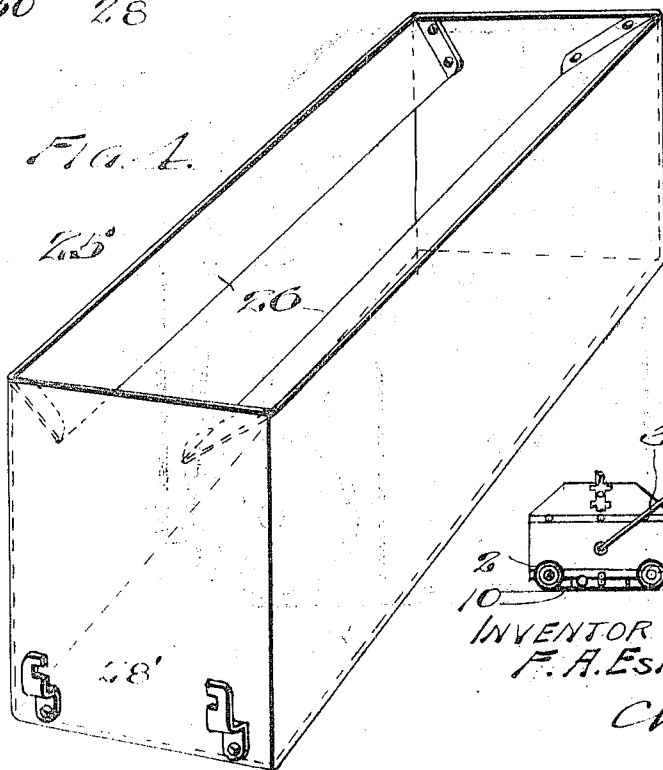
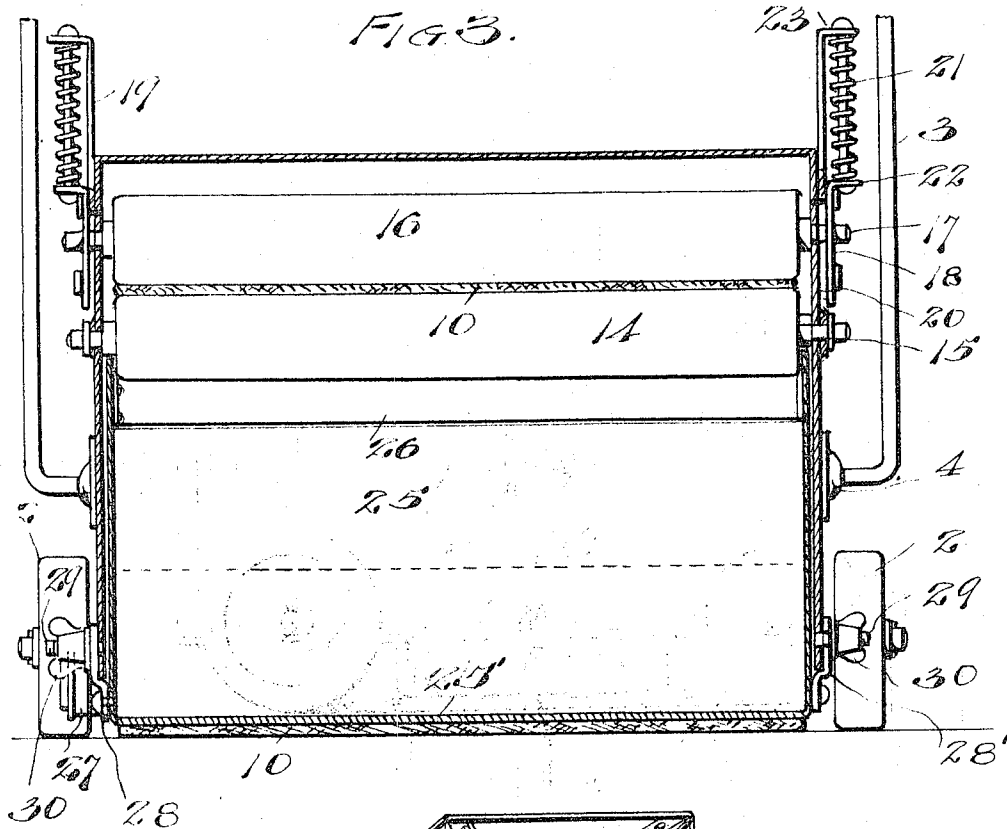


FIG. 2.



INVENTOR
F. A. ESPELAND
Chas. A. Davis
Attorney.

1,297,816.



UNITED STATES PATENT OFFICE.

FRANKLIN A. ESPELAND, OF OAKES, NORTH DAKOTA.

MOPPING-MACHINE.

1,297,816.

Specification of Letters Patent.

Patented Mar. 18, 1919.

Application filed October 29, 1918. Serial No. 260,135.

To all whom it may concern:

Be it known that I, FRANKLIN A. ESPELAND, a citizen of the United States of America, residing at Oakes, in the county of Dickey and State of North Dakota, have invented certain new and useful Improvements in Mopping-Machines, of which the following is a specification.

The present invention relates to improvements in mopping machines under the broad class of brushing and scrubbing machines, the primary object of the invention being the provision of a domestic floor mopping machine that is operated in manner similar to a carpet cleaner or sweeper of the hand type, to cleanse the floor or other surface, and wring from the endless belt that forms the cleansing element the dirty water.

The invention involves the construction and combination and arrangement of parts in such a device as will be hereinafter set forth, particularly with relation to the detachable reservoir or tank for receiving the dirty water from the wringer rollers.

In the accompanying drawings one example of the physical embodiment of the invention is illustrated showing the best mode so far devised for the practical application of the principles of the invention, and this device has proven its success in actual operation.

Figure 1 is a side elevation of one of the machines embodying the invention.

Fig. 2 is a vertical, central, longitudinal view of the machine in Fig. 1.

Fig. 3 is a vertical, central, transverse sectional view of the device.

Fig. 4 is a perspective view of the removable reservoir or receiving tank for the wringer rollers and guide for the endless mop.

Fig. 5 is a side elevation of a complete device.

In the preferred form of the invention as illustrated, the implement is of the type of hand operated carpet sweeper, and involves the use of the housing 1, which is preferably of sheet metal and supported on wheels 2 so that it may be pushed and pulled across the floor to be cleansed by means of the yoke 3 pivoted to the housing at 4 and provided with the usual handle 3'.

The wheels 2 are fixed to revolve with their shafts or axles 5 and 6 which are journaled in the housing and on these shafts are fixed the respective wooden rolls 7 and 8,

each formed with end flanges 9 for guidance of the endless mat or mop 10.

The mop is of suitable material for the purpose, and in the form of an endless belt 60 it passes over the oppositely disposed rolls 11, 11, each having a shaft 12 supported in the housing, and these rolls have guide flanges 13 at their ends for the edges of the mop. The housing is open at the bottom, 65 and the rollers 7, 8, and 11 extend transversely of the housing, the rollers 7 and 8 projecting below the bottom of the housing so that the mop 10 is guided and held with its bottom surface below the tread of the 70 supporting wheels 2 of the device. The idle rollers 11, 11 are arranged directly above the mop actuating rollers 7 and 8, and midway between the two rollers 11, 11 are arranged the transverse wringer rolls for the mop. 75 The lower wringer roll 14 has a fixed or stationary axle 15, while the upper wringer roll 16 has a flexibly supported axle 17, which is under tension and pressed toward the lower roll as in other wringers of this 80 type.

At each end of the axle 17 and outside the housing, is attached a vertical slide plate 18 movable with relation to the fixed base plate 19 which projects above the housing, 85 and this base plate is fashioned with guide lugs 20 so that the slide plate 18 may be moved with relation to the base plate and be guided thereon. The spring 21 interposed between the head 22 of the slide plate 18 and the head 23 of the fixed base plate 19 90 is coiled about the bar or rod 24, and the spring, it will be apparent, holds the axle 17 and of course the roller 16 down, so that the roller is engaged on top of the endless mop 95 10. Directly under the wringer rolls is located the removable receptacle or reservoir 25 for the dirty water squeezed out of the mop, and this reservoir is of proper size and shape to fit up within the housing be- 100 tween the rollers 7 and 8 with its end walls extending up back of the ends of the lower wringer roll 14, to a point just below the axle 15. Oppositely disposed flanges 26 are arranged to be positioned below and at the 105 sides of the lower roll 14, and these flanges, which extend the entire length of the reservoir, guide the water as it drips or drops from the wringer rolls into the reservoir, and the water may be drained from the 110 reservoir through the outlet 27 at one end near the bottom thereof.

The reservoir is detachably fastened to the housing through the instrumentality of three suspending hooks, as 28 pivoted at one end, and 28' pivoted at the other end of the reservoir, the hooks being offset so that they will swing freely on their pivots to engage over their respective, threaded bolts 29 that project from the the housing in position to be engaged thereby, and each of these threaded bolts has a butterfly or wing nut 30 to clamp the hook in place on the bolt. In this manner the reservoir not only forms a receptacle for the water dripping from the wringer, but it performs the function of a guide for the endless mop, and the bottom 25' of the receptacle or tank holds the mop to its working surface. The mop is caused to travel about the rollers due to the movement of the housing as it is pushed back and forth on its wheels, the rollers 7 and 8 actuating the mop to travel in either direction depending upon the direction of stroke of the device. But in all movements, the mop or endless belt is held to its work between the rollers by the bottom surface of the reservoir, and of course the mop is passed through the wringer rollers with each movement of the mop to squeeze water therefrom.

What I claim is:—

30 1. In a mopping machine the combination

with the open bottom housing, the actuating wheels and axles supported in the housing and actuating rollers on said axles, and an endless mopping belt passing under said actuating rollers, and idle rollers for the belt, of a detachable reservoir supported in the housing and a wringing device acting on the belt above said reservoir, said reservoir having a plane bottom face to hold the mopping belt on the surface to be cleansed as the belt passes under the reservoir, and means for supporting the reservoir in contact with the mopping belt.

2. In a mopping machine, the combination with the open bottom housing, the actuating wheels and axles supported in the housing and actuating rollers on said axles, and an endless mopping belt passing under said actuating rollers, and idle rollers for the belt, of a pair of wringer rolls engaging the belt, an open top reservoir with guide flanges below the wringer rolls, pivoted hooks on the ends of the reservoir to engage supporting devices on the housing, and said reservoir having a plane bottom face and held to the housing whereby the reservoir bottom holds the mopping belt to the surface to be cleansed.

In testimony whereof I affix my signature.
FRANKLIN A. ESPELAND.