

No. 694,077.

Patented Feb. 25, 1902.

F. RAASCH & J. W. KRUEGER.
FLOOR TREATING MACHINE.

(Application filed May 4, 1901.)

(No Model.)

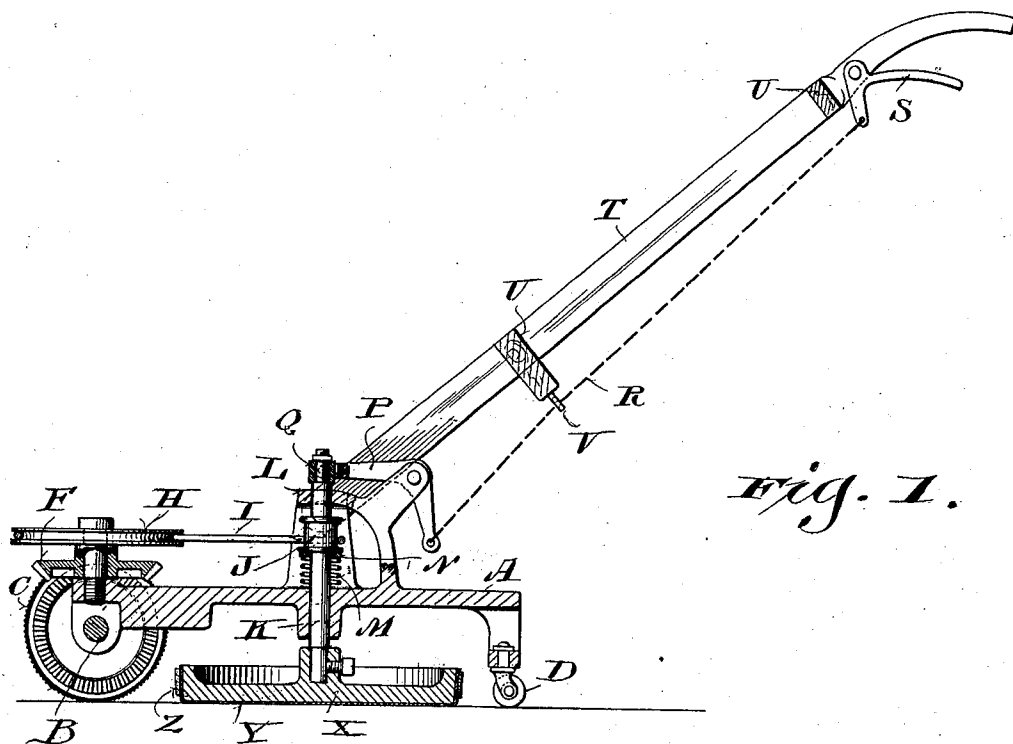


Fig. 1.

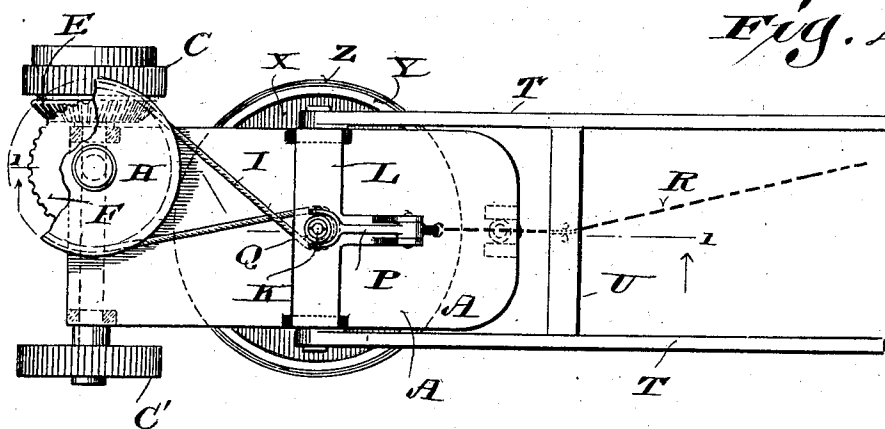


Fig. 2.

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FLOOR-TREATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 694,077, dated February 25, 1902.

Application filed May 4, 1901. Serial No. 58,709. (No model.)

To all whom it may concern:

Be it known that we, FERDINAND RAASCH and JOHN W. KRUEGER, citizens of the United States, and residents of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Floor-Treating Machines; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention has for its object to provide simple economical machines designed for sweeping, scrubbing, abrading, and polishing floors, the same consisting in what is hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a vertical longitudinal section view of a machine in accordance with our invention, this view being indicated by lines 1 1 in the second figure; and Fig. 2, a plan view of the machine, partly broken away.

Referring by letter to the drawings, A indicates a platform, B an axle hung in bearings under the forward end of the platform, C C' traction-wheels on the axle, and D a steering-wheel in swivel connection with said platform under the rear end of same, these parts in the arrangement specified constituting the carriage of our machine.

The traction-wheel C and a bevel gear-wheel E are fast on the axle B, the traction-wheel C' being fast or otherwise on said axle. The bevel gear-wheel E meshes with a bevel gear-pinion F, that is loose on a stud screw-threaded in platform A or otherwise rigid therewith, this stud being best shown in Fig. 1. Rigid with the pinion-hub is a wheel H for the transmission of rotary motion by means of a belt I to another but smaller wheel J, fast on a vertical spindle K, that turns in the carriage-platform and a bracket L of the same, a spiral spring M being arranged intermediate of said platform and a washer N on said spindle under the smaller belt-wheel. While we have shown the wheels H J as pulleys for a smooth belt, it will be found practical and perhaps preferable to employ a link belt and make said wheels with sprocket-teeth for the engagement of such a belt.

In fulcrum connection with ears of the bracket L is a bell-crank lever P, one arm of

which has spanner connection with trunnions of a ring Q on the shouldered upper end of spindle K under a washer and key. The other arm of the bell-crank is connected by a chain or other flexible device R with a hand-lever S, hung on one of a pair of push-handles T, joined by braces U and pivotally connected to standards of the bracket L aforesaid, a guide V for the flexible device being provided in connection with the lower one of said braces.

Held in detachable connection with the lower end of spindle K by a set-screw or otherwise is a head X in the form of a horizontal disk, the under working side of which is faced with sweeping, scrubbing, abrading, or polishing material, according to the work to be done with the machine, and a variety of such heads may be furnished with said machine to be interchangeable on the rotary spindle of same. The head herein shown has its under side faced with a sheet Y of abrading or polishing material, a ring Z being employed to clamp the upturned edge of the sheet on the periphery of said head.

Propulsion of the herein-described carriage results in rotary motion of head X, and pressure of this head on the adjacent floor-surface is regulated by operating hand-lever S to swing bell-crank lever P against resistance of the spring M, that constitutes a yielding support for spindle K and its connections. The gearing above specified is such that the spindle and head in connection therewith are driven at a higher speed than that at which the carriage is propelled, and the contact of the under side facing of said head with a floor readily sweeps, scrubs, abrades, or polishes the surface of same, with which it is brought into greater or less frictional contact by means of the lever mechanism operated against spring resistance.

By having the handles T in pivotal connection with the carriage the machine as a whole is better suited to the convenience of persons of different stature, and, if found desirable, the forward portion of the platform of said carriage may be made heavier than the remainder.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of a carriage comprising a platform, a rotatory front axle, traction-wheels on the axle, and a rear steering-wheel; a vertical spindle for which the carriage is provided with bearings, a bevel gear-wheel fast with one of the traction-wheels on said axle, a stud on the carriage-platform, a bevel-pinion loose on the stud and in mesh with said gear-wheel, a power-wheel rigid with the pinion-hub, another power-wheel fast on said spindle, a belt connecting the two power-wheels, a spiral spring surrounding the aforesaid spindle between the power-wheel thereon and said carriage-platform, a spindle-lifting bell-crank lever fulcrumed to a bracket of the

carriage, push-handles in connection with said carriage, a hand-lever on one of the push-handles, a flexible device connecting said levers, and a surface-treating head in connection with the lower end of the rotatory spindle.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

FERDINAND RAASCH.
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Witnesses:

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