(No Model.)

B. W. MOYLAN & H. P. GRIEMSMANN.

CARPET STRETCHER.

No. 405,171. Patented June 11, 1889.

Fig. 1.

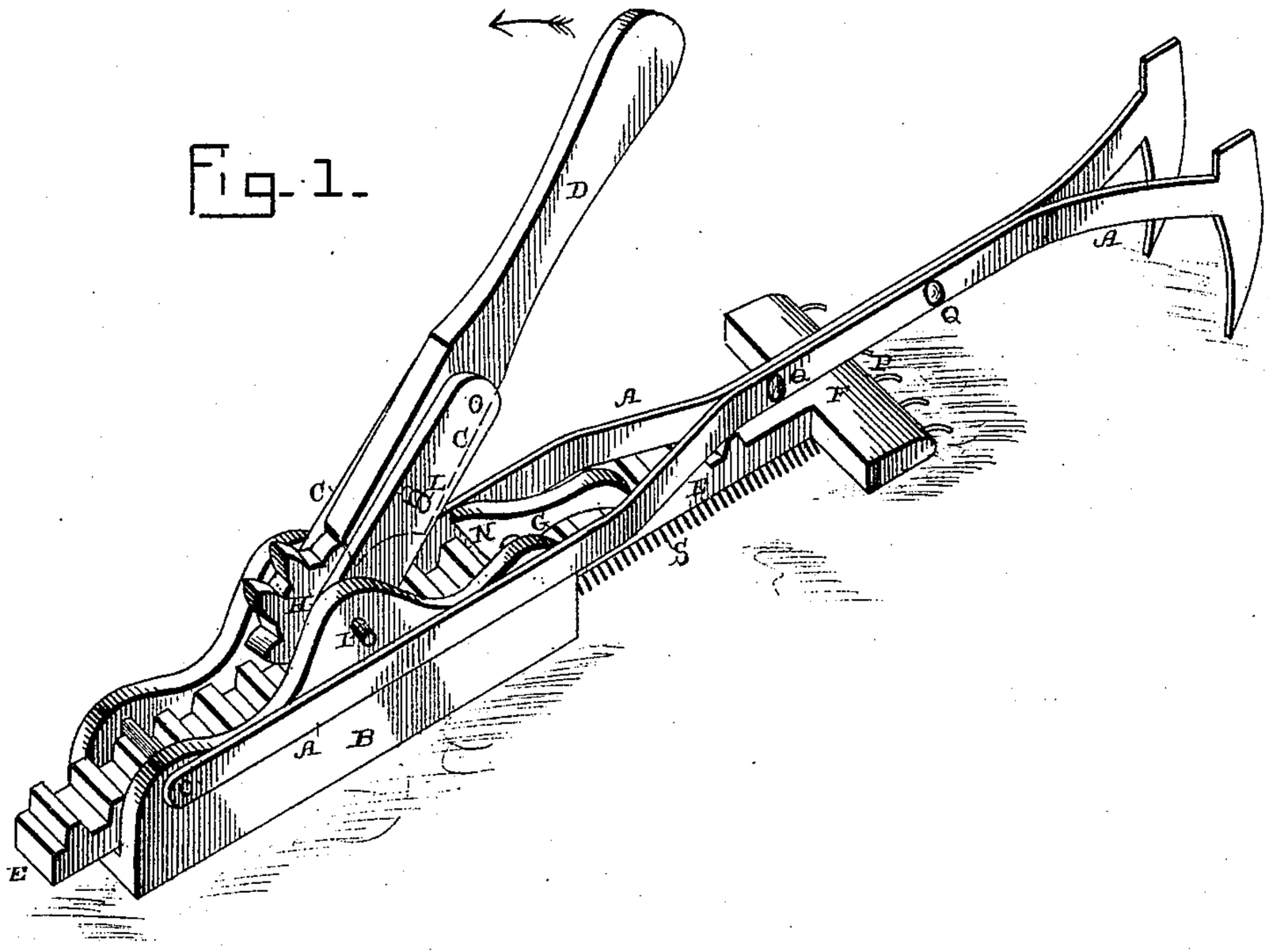
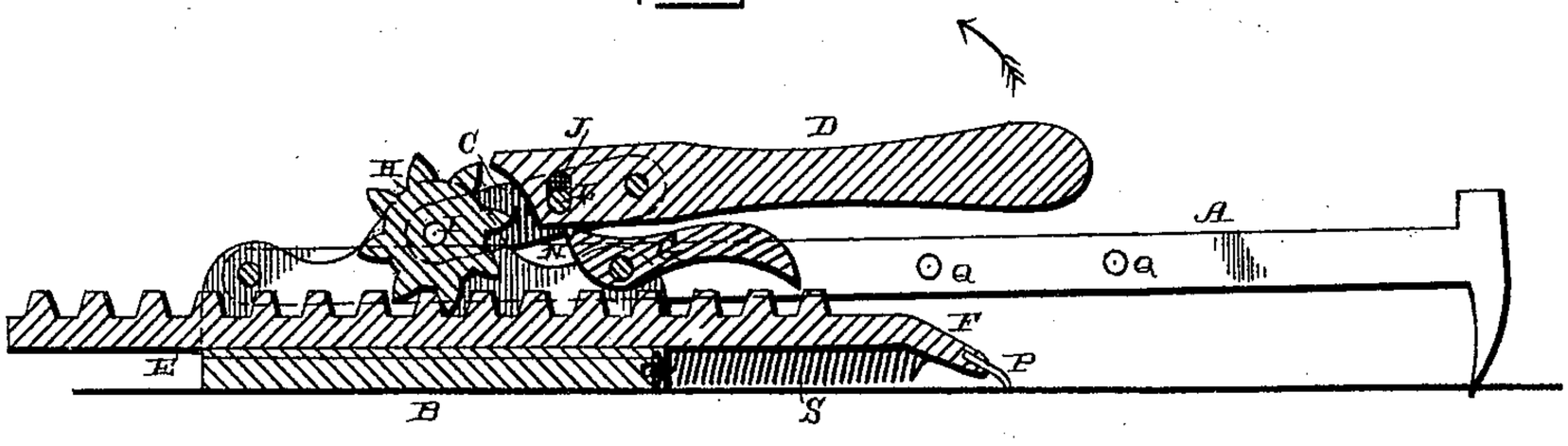


Fig. 2.



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UNITED STATES PATENT OFFICE.

BRYAN WILLIAM MOYLAN AND HENRY PETER GRIEMSMANN, OF ELMIRA, NEW YORK.

CARPET-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 405,171, dated June 11, 1889.

Application filed March 15, 1889. Serial No. 303,371. (No model.)

To all whom it may concern:

Be it known that we, BRYAN WILLIAM MOYLAN and HENRY PETER GRIEMSMANN, of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Carpet-Stretchers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in carpet-stretchers; and the object is to provide a carpet-stretcher consisting of a recessed base-block, in which slides a rack-bar carrying teeth at its forward end for engaging the carpet, a cog-wheel pivoted in the recess, a lever for operating the cog-wheel, and a pawl having its free end to project up a suitable distance, so that the lever which operates the cog-wheel is pressed forward sufficiently far and engages the upper end of the pawl and disengages its lower end from the rack-bar, thus releasing it, and a holder which is driven into the floor.

Another object is to construct the operating-lever of links which have their inner ends pivoted upon the shaft of the cog-wheel, and an operating-handle pivoted between their upper ends having its lower end to extend downward a suitable distance and provided with a slot and a pin passing through the links and the said slot, whereby the lower end of the handle will engage the cogs of the wheel when it is forced backward, but which slips idly over them when brought forward.

Figure 1 is a perspective of a carpet-stretcher embodying our invention. Fig. 2 is a longitudinal vertical section, showing the handle pressed forward and tripping the dog.

B represents a base-block, which is provided with upwardly-projecting sides, so as to form a recess or guide for the rack-bar E, which slides therein. The center of these sides is extended upward a suitable distance, as shown, so as to allow the cog-wheel H to be pivoted between them above the rack-bar E, and with which the cog-wheel engages. Pivoted at their lower ends upon the shaft I, which passes through the projecting sides and the cog-wheel H, are the two links C, between the upper ends of which is pivoted the handle D. This handle D has its lower end extending downward a suitable distance, so as to engage the cog-wheel H when it is forced backward in the direction of the arrow. In order to limit the movement of the handle D between the links C, a slot J is made in the lower end of the handle and a pin L is passed through the links and the slot J. By this construction when the handle is forced backward its lower end engages the cog-wheel H and forces it around; but when its upper end is pressed forward the lower end is carried out from between the links C the length of the slot J, which is sufficient to allow its lower end to pass freely over the wheel without engaging the cogs. The forward end of the rack-bar E has secured to it or formed as a part of it the transverse block F, which is provided with a suitable number of teeth P, which catch in the carpet when the rack-bar is forced forward.

Pivoted in the front end of the base-block B is the catch G. This catch has its lower end to engage the upper serrated surface of the rack-bar, while its upper free end N extends upward a suitable distance, for the purpose hereinafter described.

A indicates the holder, which is preferably formed of two pieces of flat metal, as shown, and which is secured together at the point or points Q, while its rear and front ends are separated or bifurcated, as shown. The front ends of this holder A are formed into sharp points of any suitable shape, which are adapted to be driven into the floor. The rear ends of this holder extend backward upon each side of the base-block B, and are pivoted to the rear end of the base-block in any suitable manner. The shaft I, which passes through the central projections of the sides of the base-block and which forms a journal for the cog-wheel, has its ends extending outward a suitable distance over the inner ends of the holder A, so as to prevent the holder from turning upward when the machine is being carried around, and also to

hold it and the base-block in their proper relative position when in operation, as will be hereinafter described. Secured to the front end of the rack-bar and to the front end of the base-block is the spring S, which draws the rack-bar backward when it is released by the upward movement of the lower end of the pawl G. Another function of this spring is, that as the rack-bar is forced forward the tension of the spring pulls the forward end of the rack-bar downward, thus causing the teeth upon the transverse bar F to catch in the carpet.

In operating our invention the pointed prongs of the holder A are driven into the floor on the side of the room toward which the carpet is to be stretched, the stretcher resting on the carpet and the handle D drawn forward. The handle is then drawn backward, when the lower end of the handle will engage the cog-wheel and partially revolve it and force forward the rack-bar. As the rack-bar is forced forward, the spring which is attached to the transverse block F and the forward end of the base-block draws the outer end of the rack-bar down and causes the teeth to catch in the carpet and stretch it as the rack-bar is forced forward. When the handle is drawn forward, its lower end is raised out of engagement with the cog-wheel and allows it to move freely. The rack-bar is held in its forward position by the lower end of the latch G, which engages therewith.

While there is a strain upon the carpet and while it is being tacked, the projecting ends of the shaft J, which passes through the cog-wheel, engage the upper edges of the inner ends of the holder and prevent the outer end of the base-block from being drawn upward, and thus hold the base-block and the holder in their proper relative positions. When the carpet has been sufficiently stretched and tacked, the handle is depressed forward, thus engaging the rear upwardly-projecting end of the pawl G, which raises its front end out of the rack-bar, which is then thrown backward by the spring attached to it and the front end of the rack-bar disengaged from the carpet.

Having thus described our invention, we claim—

1. In a carpet-stretcher, the combination of the recessed base-block, a rack-bar sliding therein, a cog-wheel pivoted in the base-block and engaging the rack-bar, a handle which engages the cog-wheel and causes it to revolve, a holder pivoted to the rear end of the base-block and provided with points which are driven in the floor, and the shaft which passes through the cog-wheel and extends out over the inner ends of the holder A in front of the point at which they are pivoted to the base-block, for the purpose substantially as shown.

2. The combination of the recessed base-block, a holder pivoted thereto at one end and its other end formed into points adapted to be driven into the floor, a cog-wheel pivoted in the base-block, a handle for operating the cog-wheel pivoted between links which have their lower ends pivoted upon the journal of the cog-wheel, a rack-bar sliding in the base-block with which the cog-wheel engages, and provided with teeth at its forward end for catching into the carpet, and a pawl pivoted in the front end of the base-block above the rack-bar for engaging its upper serrated surface, the upper end of the pawl projecting a suitable distance, whereby, when the handle is pressed forward, it is made to engage the upper end of the pawl, and thus disengage its lower end from the rack-bar, for the purpose substantially as described.

3. The combination of the base-block, the holder pivoted thereto, the rack-bar sliding therein, the latch pivoted in the forward end of the base-block above the rack-bar, the cog-wheel pivoted in the base-block which engages the rack-bar, the rack-bar having teeth for catching in the carpet, the links C, pivoted upon the shaft of the cog-wheel, the handle D, pivoted between their outer ends, provided with a slot J at its lower end, and a pin which passes through the links and the slot, whereby the lower end of the handle engages the cog-wheel when forced backward but is disengaged from the cogs when forced forward, substantially as set forth.

4. The combination of the base-block, the holder, the rack-bar, the cog-wheel pivoted in the base-block, the handle for operating the cog-wheel, the pawl pivoted in the forward end of the base-block which engages the rack-bar, the rack-bar which slides in the recess of the base-block and having teeth at its front end to catch in the carpet, and a spring secured to the forward end of the rack-bar and to the base-block, for the purpose substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

BRYAN WILLIAM MOYLAN.
HENRY PETER GRIEMSMANN.

Witnesses:
B. YENGER,
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