

(No Model.)

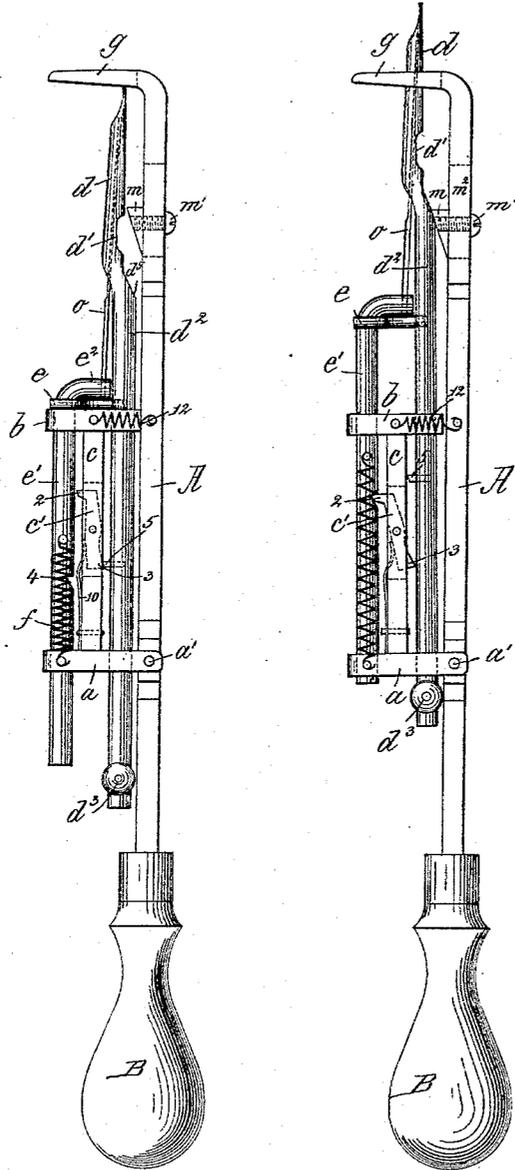
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FABRIC TURFING IMPLEMENT.

No. 339,642.

Patented Apr. 13, 1886.

Fig: 1.

Fig: 2.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

GEORGE W. GRIFFIN, OF FRANKLIN FALLS, NEW HAMPSHIRE.

## FABRIC-TURFING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 339,642, dated April 13, 1886.

Application filed September 24, 1885. Serial No. 178,071. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. GRIFFIN, of Franklin Falls, county of Merrimac, and State of New Hampshire, have invented an Improvement in Fabric-Turfing Implements, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to construct a hand-operated device for inserting rags or usual carpet-yarns into woven fabric to form a pile—as, for instance, in the making of rugs, &c.—and is an improvement upon Letters Patent of the United States No. 246,005 granted to me August 23, 1881, to which reference may be had.

The invention consists, essentially, in the combination, with the needle and its co-operating pile-inserting instrument, of mechanism, substantially as will be described, for operating the said needle and its pile-inserting instrument, the said mechanism being of such construction as to be easily operated by hand.

Also, in the combination, with the needle and its co-operating pile-inserting instrument, of feeding mechanism, substantially as will be described, whereby the implement is caused to travel along over the surface of the fabric forming the foundation, and through which the pile is being inserted.

The main supporting-bar, to which the actuating parts are attached, is bent at right angles, its forward end forming a presser-foot for the needle and its co-operating pile-inserting instrument.

The feeding mechanism herein shown consists of a cam-block adjustably attached to the main supporting-bar, a projecting portion of the needle striking the said cam-block as the needle enters the material, the said cam-block being of such shape that during the further movement of the needle into, and while it is held by, the fabric in making its stitch, the supporting-bar and its attached presser-foot are moved laterally from the needle a sufficient distance to come into position for the next stitch, so that when the needle is withdrawn from the fabric and restored to its normal position parallel with the supporting-bar by suitable springs or otherwise the said needle will be in position for the next stitch.

Figure 1 represents in front elevation an apparatus for inserting pile into woven fabric, and Fig. 2 a similar view, with the needle in the position it will occupy when forced through the material and forward or outward by the cam-block.

The main supporting-bar A, to which is attached the guide-frame *a b c*, is provided with a hand-piece, B.

The guide-frame consists of the bearing-block *a*, pivoted to the supporting-bar A at *a'*, and the auxiliary bearing-block *b*, rigidly connected with the said bearing-block *a* by a rod, *c*.

The needle *d*, made tubular and having an eye, *d'*, is herein shown as in one piece with the needle-bar *d''*, and fitted to slide freely in the said bearing-blocks *a b*, the handle *d'''* being supplied to reciprocate the said needle when desired.

The pile-inserting instrument, composed of a shank portion, *e'*, fitted to slide freely in the guide-frame, is bent substantially at right angles at its forward end, as shown at *e'*, to form a shoulder or projection to be loosely engaged by a bifurcated arm, *e*, projecting from the needle-bar.

The pile-inserting instrument, composed of a flat piece of metal, to extend forward through the tubular needle and grooved at its forward end, is attached to the shank *e'*. The rod *c* has pivoted within it a dog, *e'*, having two oppositely-projecting teeth, 2, 3, the tooth 2 being adapted to engage a notch, 4, cut in the side of the shank *e'*, while the tooth 3 is acted upon by a projection, 5, extending from the needle-bar *d''*, the said dog being controlled by a flat spring, 10, secured to the rod *c*. Normally the tooth 2 of the dog is cut to protrude and bear against the shank *e'*, the remaining parts of the apparatus being as shown in Fig. 1. As the needle, it having the pile-forming material placed in its eye *d'*, as in the patent referred to, is forced forward by the handle *d'''* through the fabric, the arm *e*, by its engagement with the shank *e'* of the pile-inserting instrument, also carries the latter forward, with its point just in the rear of the point of the needle, and, arriving at their extreme positions through the fabric, the tooth 2 of the dog *e'* or locking device engages the notch 4 of the shank *e'*, locks the pile-inserting instrument in its extreme position through the fab-

ric while the needle-bar is withdrawn, the pile-inserting instrument remaining in its extreme position, holding the loop of pile until the needle has reached its starting-point, when the projection 5 will strike the tooth 3 of the dog *c'* and, disengaging it from the projection 4, permit the pile-inserting instrument to immediately return to its normal position by the spiral spring *f*, connecting it with the bearing-block *a*, the return of the pile-inserting instrument leaving behind it the loop of pile, and the parts are ready to be operated for the insertion of a new loop. The supporting-bar *A* is bent at its forward end at right angles, as at *g*, and is bifurcated to form a presser-foot, between the forked ends of which the needle, with its co-operating pile-inserting instrument, passes, as in a sewing-machine.

The needle-bar has an inclined portion, *d<sup>s</sup>*, which, co-operating with a cam-block, *m*, adjustably secured to the supporting-bar *A* by means of a screw, *m'*, in a slot, *m<sup>s</sup>*, in the said bar, constitutes the feeding mechanism. The action of said inclined portion on the cam-block after the entrance of the point of the needle into the fabric causes the presser-foot to be moved upon or over the material a sufficient distance to come into proper position for the next insertion of the next pile-loop. When the needle is withdrawn from the fabric, it is restored to its normal position, or parallel with the supporting-bar, by the spiral spring 12, which connects the guide-frame with the supporting-bar *A*.

It is obvious that the mechanism herein described for operating the needle and pile-inserting instrument may be employed with equally good results with a flat or other needle.

I claim—

1. The supporting-bar, the guide-frame, the needle-bar, the needle, and the pile-inserting instrument attached to the shank *e'*, and the arm *e*, connected to the needle-bar and engaging the said shank to move the pile-inserting instrument through the fabric, combined with the locking device, substantially as described, to lock the pile-inserting instrument in its extreme position through the fabric while the needle returns, and with mechanism, substantially as described, for releasing said

locking device and permitting the pile-inserting instrument to return after the needle has returned, as set forth.

2. The supporting-bar, the guide-frame, the needle-bar, the needle, and its co-operating pile-inserting instrument attached to the rod *e'*, combined with the arm *e*, engaging the said pile-inserting instrument to push it through the fabric, and with the dog or locking device *c'*, to engage the said pile-inserting instrument, and the projection 5, to trip the said dog or locking device, substantially as and for the purpose described.

3. The guide-frame, the needle-bar provided with the incline, the needle, and pile-inserting instrument, the shank *e'*, and the supporting-bar pivoted with relation to the guide-frame, the cam-block *m*, co-operating with the needle-bar to move the supporting-bar laterally while the needle is penetrating the material, substantially as described.

4. The supporting-bar, its presser-foot, and needle and pile-inserting instrument, combined with the pivoted supporting-frame carrying the needle and pile-inserting instrument, and the cam-block, all as set forth.

5. The supporting-bar and its presser-foot, combined with a tubular needle, and pile-inserting instrument moving within the tubular needle, both needle and pile-inserting instrument being pivotally connected with the supporting-bar, and the cam-block for moving the supporting-bar forward while the needle remains in the fabric being turfed, substantially as described.

6. In a machine for turfing fabric, the needle and pile-inserting instrument, and a pivoted frame carrying the same, the cam to effect the feeding of the material being turfed by the needle and pile-inserting instrument, and the presser-foot to hold the material in place while the pile is being inserted, all substantially as described.

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

GEORGE W. GRIFFIN.

Witnesses;

HEBER C. GRIFFIN,  
P. HANCOCK.