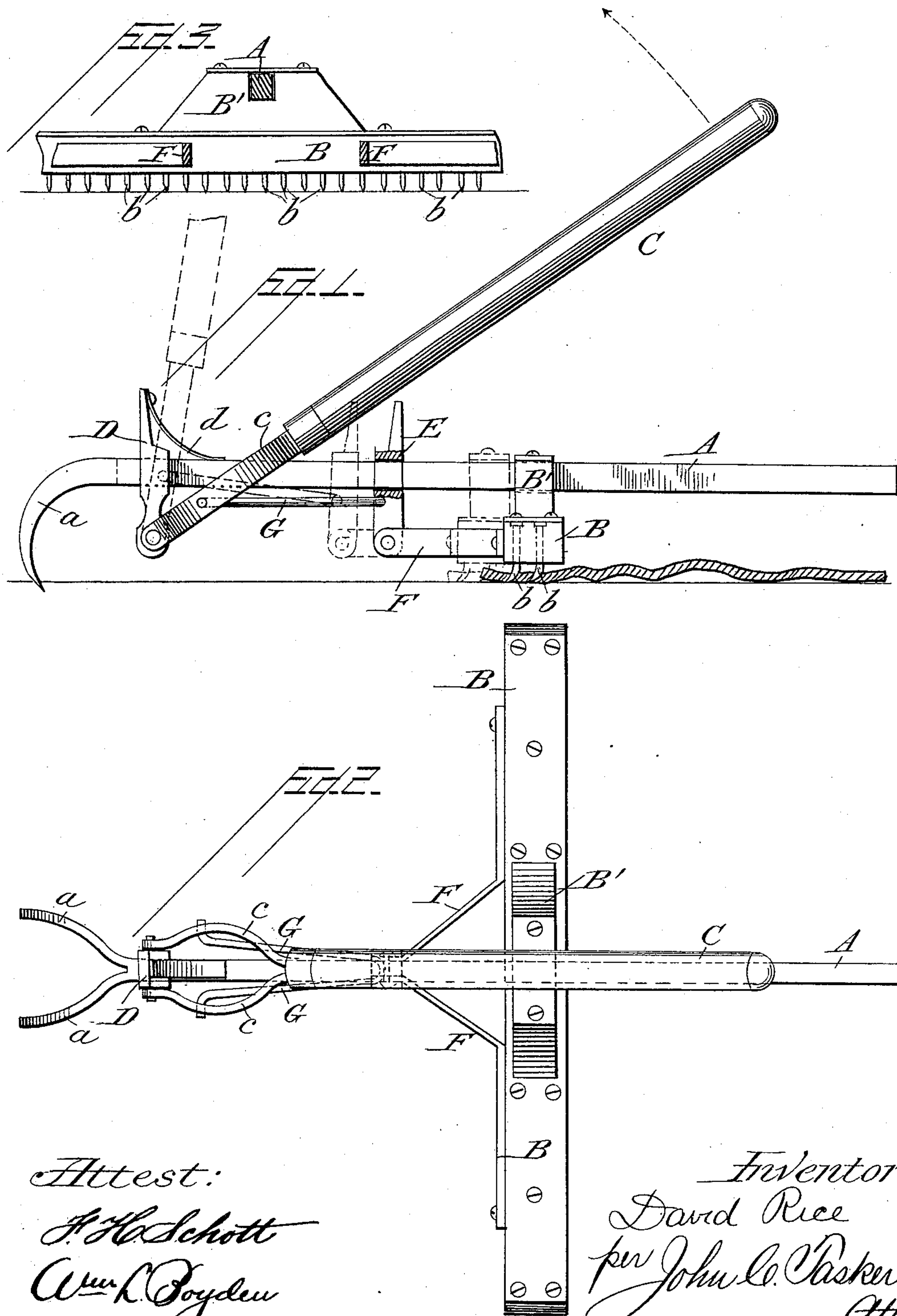


(No Model.)

D. RICE.
CARPET STRETCHER.

No. 452,508.

Patented May 19, 1891.



Attest:

H. H. Schott
Wm. L. Boyden

Inventor.
David Rice
per John C. Parker
Atty

UNITED STATES PATENT OFFICE.

DAVID RICE, OF READING, MICHIGAN, ASSIGNOR TO ANDREW M. R. FITZ-SIMMONS, OF SAME PLACE.

CARPET-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 452,508, dated May 19, 1891.

Application filed February 18, 1890. Serial No., 340,883. (No model.)

To all whom it may concern:

Be it known that I, DAVID RICE, a citizen of the United States, residing at Reading, in the county of Hillsdale and State of Michigan, have invented certain new and useful Improvements in Carpet-Stretchers; and I 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 appertains to make and use the same.

This invention relates to an improvement in carpet-stretching devices, the object of the invention being to provide a simple, complete, and efficient device whereby carpets may be stretched in a proper, satisfactory, and suitable manner without injury to the carpet and with the expenditure of but little labor on the part of the user of the device; and the invention consists, essentially, in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and then claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of my improved carpet-stretcher, illustrated in the position that it occupies when doing the practical work of stretching the carpet. Fig. 2 is a top plan view of the same. Fig. 3 is a detail sectional elevation of the cross-bar, showing its series of teeth.

Like letters of reference designate corresponding parts throughout the different figures of the drawings.

A denotes the main bar or shaft of my improved carpet-stretching device. It is preferably a rectangular metallic bar of suitable length and size, although its precise form and structure may vary as desired. This main bar A is provided at one end with a couple of curved prongs *a a*, having ends more or less sharpened, which adapt them to catch into the floor and thus grip or lay hold of the same in such a manner as to anchor the device at this point when it is being used.

B denotes the cross-bar located at right angles to the main bar or shaft A. This cross-bar is of suitable length and is so constructed that the main bar A passes loosely through it, thus permitting the cross-bar to slide upon the main bar. In that precise

form of the invention indicated in the drawings the cross-bar B is provided with a lift or supplemental block B', which has the rectangular opening through which the shaft A passes; but I am not confined to any such construction as this, but can fix the cross-bar in any manner which will enable it to slide easily and freely upon the main bar. This cross-bar is provided on its under surface with a series of teeth, prongs, pins, or other sharpened projections or devices *b b b*. (See Figs. 1 and 3, particularly Fig. 3.) These prongs or sharpened teeth will be of such a character that they can readily lay hold of the edge of the carpet, as indicated in Fig. 1, although they must be so constructed and arranged as not to injure or disfigure the carpet.

Having now observed the structure of the main bar and the mode of anchoring the same when the device is in operative position and having seen also the sliding tooth-provided cross-bar which grasps the carpet, it is necessary for us next to explain the construction and arrangement of the device whereby the cross-bar is slid or moved upon the main bar for the purpose of drawing or stretching the carpet.

C is the lever-handle, which is grasped by the operator when the device is in practical use. The lower end of this lever is provided with a pair of curved or otherwise shaped arms or prongs *c c*, which lie on each side of the main bar A.

On the main bar A and mounted movably thereon are two vertical dog-bars D and E, each of which is provided with a square or other suitably-shaped slot or opening, through which passes the main bar A. Thus it will be seen that these two dog-bars are free to move upon the main bar A and that they have their upper portions rising vertically above the main bar, while their lower portions extend vertically downward beneath it.

D is the dog nearest to the anchoring-prongs *a a*, while E is the dog nearest to the tooth-provided transverse bar.

The arms or prongs *c c* on the operating-lever C are pivoted to the lower end of the dog-bar D. (See Figs. 1 and 2.) The upper end of said dog-bar D is provided with a

spring *d*, consisting of a flat piece of metal, which bears firmly upon the upper side of the main bar A, as shown. This spring serves to keep the dog D from locking itself upon the main shaft A when the lever C is thrown downward for the purpose of propelling the dog forward toward the forked end, as will be hereinafter seen when we come to explain the operation of the device. The spring also serves to brace this dog when the lever-handle is thrown upward for the purpose of drawing the cross-bar toward the forked end of the main bar. The curved arms or prongs *c c* are, furthermore, connected to the dog E at a point slightly below the main bar A by means of the links G G. The lower end of the dog-bar E is pivoted between the ends of the inclined braces or strips F F, which are firmly secured to the edge of the cross-bar B, as shown.

I will now proceed to describe the use and operation of the device. Suppose it to be located in the position shown in Fig. 1, where the curved prongs have embedded their sharpened ends into some permanent or stationary object, such as the floor, while the pin or tooth-provided cross-bar is placed with its teeth engaging the edge of the carpet to be stretched. The exact points at which the cross-bar, as well as the two dogs D and E, will be located upon the main bar A at this time will of course be determined more or less by the distance it is desired to stretch the carpet. The cross-bar may be located at the extreme end of the main bar A, and thus the dogs also correspondingly removed from the prong-provided end of the main bar. Suffice it to say that in any instance probably the cross-bar and the dogs will be removed at some distance from the prongs.

The handle now being in the position shown in Fig. 1, the operator will lift it vertically, pursuing the direction of the arrow in said figure. As he lifts the handle the dog D will bind on the bar, thus remaining firm and immovable, and the connecting-links G G will draw upon the dog E, which, as we have seen, is connected to the braces F F, that are secured to the cross-bar B, and thus the cross-bar will be drawn forward, and with it the carpet, which of course will thus be stretched a certain amount. Next the operator will allow the handle C to fall into the position it before occupied, as shown in Fig. 1, and as it is lowered the dog E will lock itself upon the main bar, there being the backward pressure of the stretching carpet exerted through the braces F F upon the lower end of the dog-bar E, which of course will slightly incline said dog-bar and firmly lock it to the main bar. The dog E thus being locked, the result of the lowering of the handle will be to push the dog D along upon the main bar toward the prongs *a a*, the spring *d* serving at this time to keep the dog D from becoming locked upon the main bar, although the pushing pressure which is being exerted upon said dog-bar is

exerted at its lower end, and might, if there were no spring *d*, result in locking the said dog-bar upon the main bar. The dog D having thus been shifted in position, it is evident that if the operator again lifts the handle C he can draw forward the cross-bar B another distance, and thus stretch the carpet somewhat more. By alternately raising and lowering the handle, therefore, it will be at once seen that the user of the device can continue to stretch the carpet by drawing the same forward a succession of distances until the dog D is moved to its limit upon the cross-bar, when the carpet may be tacked and the device shifted for another stretch, or any other course which may be demanded by the circumstances of the individual case pursued in order to accomplish desired results.

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

1. In a carpet-stretcher, the combination of the main bar having at one end sharpened prongs adapted to grip the floor, the cross-bar at right angles to the main bar and sliding laterally thereon, said cross-bar being provided on its under surface with a series of sharpened pins or teeth adapted to lay hold of the carpet, the two vertical dog-bars D and E, mounted movably upon the main bar, which passes through suitably-shaped openings in the dog-bars, the operating-lever C, having its lower end provided with a pair of arms or prongs *c c*, which lie on each side of the main bar and are pivoted to the lower end of the dog-bar D, the spring *d*, connected to the upper end of dog-bar D and bearing firmly upon the upper side of the main bar, the rigid inclined braces or strips F F, secured to the sliding cross-bar and between the ends of which the lower end of the dog-bar E is pivoted, and the links G G, pivoted to the curved arms *c c* and also to the dog-bar E at a point below the main bar, substantially as described.

2. In a carpet-stretcher, the combination of the main bar A, having prongs *a a*, the laterally-sliding cross-bar mounted upon the main bar and having upon its under side series of teeth *b*, adapted to engage the carpet, the dogs D E, arranged to lock alternately on the main bar, the lever-handle C, having its lower end pivoted to the lower end of the dog-bar D, the spring *d*, connected to the upper end of said dog-bar D, the links G G, pivoted to the lever and the dog-bar E, and the braces rigid on the cross-bar and between which the lower end of dog-bar E is pivoted, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID RICE.

Witnesses:

A. M. R. FITZSIMMONS,
O. K. FITZSIMMONS.