May 22, 1928. 1,670,646

A. W. ABRAHAMSEN

FLOOR SCRAPER

Filed April 6, 1927

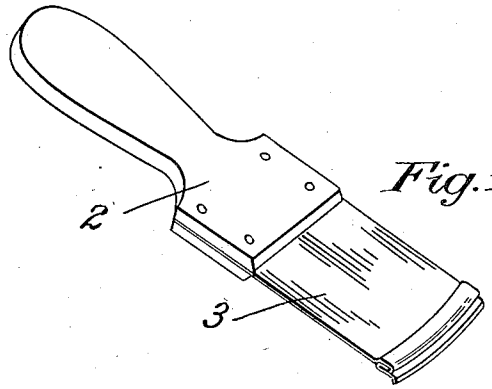


Fig. 1.

Fig. 2.

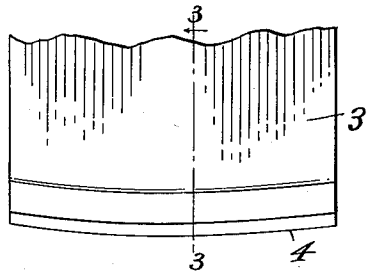


Fig. 3.

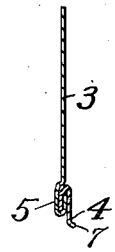


Fig. 4.

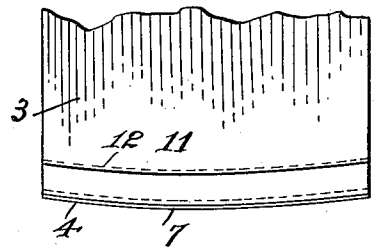


Fig. 5.

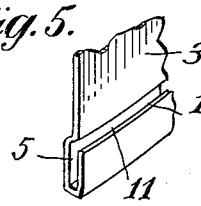


Fig. 6.

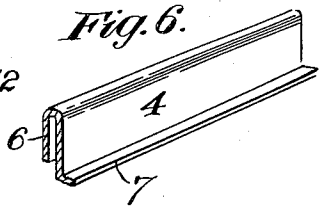
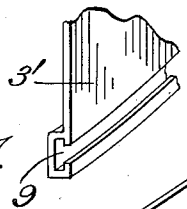


Fig. 7.



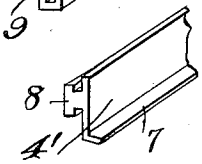


Fig. 8.

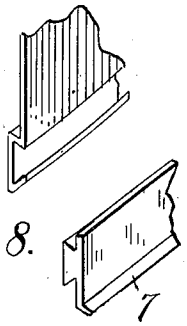
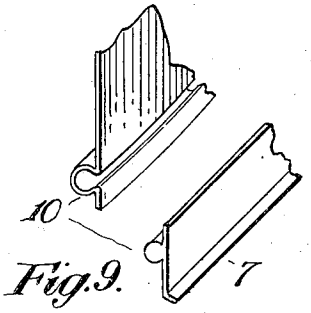


Fig. 9.



Inventor

Alfred W Abrahamsen

By his Attorney

Patented May 22, 1928. 1,670,646

UNITED STATES PATENT OFFICE.

ALFRED W. ABRAHAMSEN, OF QUEENS VILLAGE, NEW YORK, ASSIGNOR OF ONE-HALF TO ANDERS SKARSTEN, OF QUEENS VILLAGE, NEW YORK.

FLOOR SCRAPER.

Application filed April 6, 1927. Serial No. 181,305.

This invention relates to wood scrapers, more particularly floor scrapers adapted for use on hardwood and parquet floors, the object of the invention being to provide an improved floor scraper simple in construction, inexpensive to manufacture, durable in use, and in which the cutter can be readily renewed without the necessity as heretofore of throwing away the entire blade.

Heretofore these floor scrapers for removing the top wood surface of hardwood floors have usually comprised a large blade sharpened at one end and supported in some suitable form of holder. These blades however quickly became dull and time must be taken to resharpen them or else they must be thrown away and new blades substituted. As the blades are of considerable size, the throwing away of the blade involves quite a loss. Therefore, the object of the present invention is to provide a detachable cutter, small in size, inexpensive to make and which when it becomes dull can be thrown away without involving any appreciable money loss.

In the drawings accompanying and forming a part of this specification, Fig. 1 illustrates the present improved floor scraper shown attached to a conventional form of handle, although various forms of handles may be used, if desired; Fig. 2 is a back view of the blade which is shown about full size; Fig. 3 is a sectional view taken on line 3—3 thereof; Fig. 4 is a face view of the blade; Fig. 5 is an enlarged detail view of a portion of the blade shown about twice the size of the actual blade; Fig. 6 is an enlarged detail, partly sectional view of the cutter shown about three times the size of the actual cutter; Fig. 7 illustrates a modified form of the blade and its cutter; Fig. 8 illustrates another modified form thereof and Fig. 9 illustrates a still further modified form thereof.

Similar characters of reference indicate corresponding parts in the several views.

Before explaining in detail the present improvement and mode of operation thereof, I desire to have it understood that the invention is not limited to the details of construction and arrangement of parts which are illustrated in the accompanying drawings, since the invention is capable of other embodiments, and that the phraseology which I employ is for the purpose of description and not of limitation.

As hereinbefore stated any suitable form of handle may be used, this not being an essential part of my invention since the blade and its cutter may be used without such handle. In the handle 2 shown as the conventional form the blade 3 is positioned, and this blade may be permanently or otherwise fixed thereto since it does not have to be renewed unless it should lose its resiliency. This blade 3 heretofore had its lower edge sharpened and as stated when worn either had to be resharpened or the entire blade thrown away. In the present improvement, the lower end of this blade is suitably formed or bent to receive a detachable cutter 4. In the form shown in Figs. 1 to 5, the lower end of the blade is bent upon itself to provide a U-shaped channel 5, and in this U-shaped channel is inserted the detachable cutter 4 shown in Fig. 6, which comprises a similar but inverted U-shaped back 6 for insertion endwise into the U-shaped channel 5 of the blade and a cutting portion 7 bent substantially at right angles to this U-shaped back 6.

In the form shown in Fig. 7 the cutter 4′ is provided with a T-shaped projection 8 for insertion into a similar form of groove 9 located or formed at the lower end of the blade 3′. In Fig. 8, the connection between the blade and its cutter is of dove tail form and in Fig. 9, this connection is also of dove tail form, but the dove tail portions are of circular formation 10. In fact all of the ways for attaching the cutter to the blade may be generally considered as of interlocking or dove tail form especially since all of the grooves in the blade have substantially a U-shaped form.

In practice, both ends of the blades may be similarly formed if preferred for the attachment of cutters whereby one cutter may be used for a rough finish while the other may be used for a finer finish.

It will be observed that the slot 11 formed adjacent the edge of the U-shaped portion of the holder is curved in the direction of its length as at 12. Consequently as the cutter which is more or less resilient is inserted endwise into its holder the cutter is

likewise curved in the direction of its length. The advantage of this is two-fold, first it prevents the ends of the cutter from digging into the wood and secondly by means of the resilient character of the cutter it effectively holds the cutter in place to such an extent that a pair of pliers is necessary to pull it out of the blade so that the cutter is rigidly held against any movement independently of its blade whereby it will effectively perform its work.

Thus, it will be observed that the end of the blade is either formed or bent upon itself to provide a suitable receiving channel for the reception of the cutter which is detachable therefrom by drawing it endwise from the blade and that this cutter simply comprises a suitably formed back and a bent sharpened edge portion for insertion into the similarly formed part of the blade.

The cutter of this floor scraper thus comprises a body or back formed with or having means for interlocking it with a holding member or blade and a cutting edge bent at an angle to the body, this bent cutting edge being preformed,—that is, formed during the manufacture of the cutter and before its attachment to the blade, so that when inserted into its holding member or blade it is ready for use.

It is to be understood that by describing in detail herein any particular form, structure or arrangement, it is not intended to limit the invention beyond the terms of the several claims or the requirements of the prior art.

Having thus explained the nature of my said invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made, or all of the modes of its use, I claim:

1. A floor scraper comprising a blade and an endwise detachable cutter secured to the blade, said cutter and blade having similarly formed connecting or interlocking means for the insertion of one part into the other, one of which is curved in the direction of its length.

2. A floor scraper comprising a blade and an endwise detachable cutter secured to the blade, said cutter and blade having similarly formed connecting or interlocking means for the insertion of one part into the other, said interlocking means comprising dove tail portions extending crosswise of the blade and cutter, and one of which is curved in the direction of its length.

3. A floor scraper comprising a blade and a detachable cutter having means for interlocking the cutter and blade to prevent lateral disengagement while permitting endwise disengagement with the cutter under lengthwise tension.

4. A floor scraper comprising a blade and a detachable cutter having means for interlocking the cutter and blade to prevent lateral disengagement while permitting endwise disengagement and tending to impart lengthwise curvature to the cutter.

5. A floor scraper comprising a blade and a detachable cutter, said blade having a curved portion the two having such engagement that the blade maintains a similar curvature to the cutter when attached to the blade.

6. A floor scraper comprising a blade and a detachable cutter, one formed to receive a similarly formed portion of the other, the blade having a curved portion tending to impart and maintaining a similar curvature to the cutter.

7. A floor scraper comprising a blade having a part shaped or bent upon itself to provide a channel, and a detachable cutter having a cutting edge bent at an angle thereto and a part shaped or bent to conform to that of the blade whereby the cutter will be interlocked to prevent lateral disengagement while permitting endwise disengagement.

8. A floor scraper comprising a blade having a part shaped or bent upon itself to provide a channel, and a detachable cutter having a cutting edge and a part shaped or bent to conform to that of the blade whereby the cutter will be interlocked to prevent lateral disengagement while permitting endwise disengagement, said blade also having means tending to impart and maintaining lengthwise curvature to the cutter.

9. A floor scraper comprising a blade having a U-shaped end and a detachable cutter having a back formed to interlock with the blade and provided with a cutting edge bent at an angle thereto.

10. A floor scraper comprising a blade having a U-shaped end and a detachable cutter having a back formed to interlock with the blade and provided with a cutting edge, said blade and cutter having one means tending to impart and maintaining lengthwise curvature to the cutter on the attachment thereof to the blade.

11. A floor scraper comprising a blade and an endwise detachable cutter having a cutting edge bent at an angle thereto.

12. A floor scraper comprising a blade and an endwise detachable cutter having an edge bent at an angle thereto and curved in the direction of its length.

13. A cutter for a floor scraper comprising a body and a cutting edge bent during the manufacture of the cutter at an angle to the body, said body having means for interlocking it with a holding member.

14. A cutter for a floor scraper comprising a body bent upon itself to form a channel for interlocking it with a holding member and a cutting edge bent during the manufac-

ture of the cutter at an angle to such body.

15. A cutter for a floor scraper comprising a body straight in the direction of its length and bent upon itself to form a channel for interlocking it with a holding member having a curved-formed channel and a cutting edge bent during the manufacture of the cutter at an angle to the body.

16. A cutter for a floor scraper comprising a body straight in the direction of its length and having means for interlocking it with a holding member having a curved-formed channel, and a cutting edge bent at an angle to the body.

Signed at Room 1822, Park Row Bldg., New York, N. Y., this 30th day of March, 1927.

ALFRED W. ABRAHAMSEN.