Aug. 28, 1951 M. CONFORTO 2,565,841

BLADES FOR ROOFER'S SLAG SCRAPER

Filed June 17, 1947 2 Sheets-Sheet 1

Fig. 1.

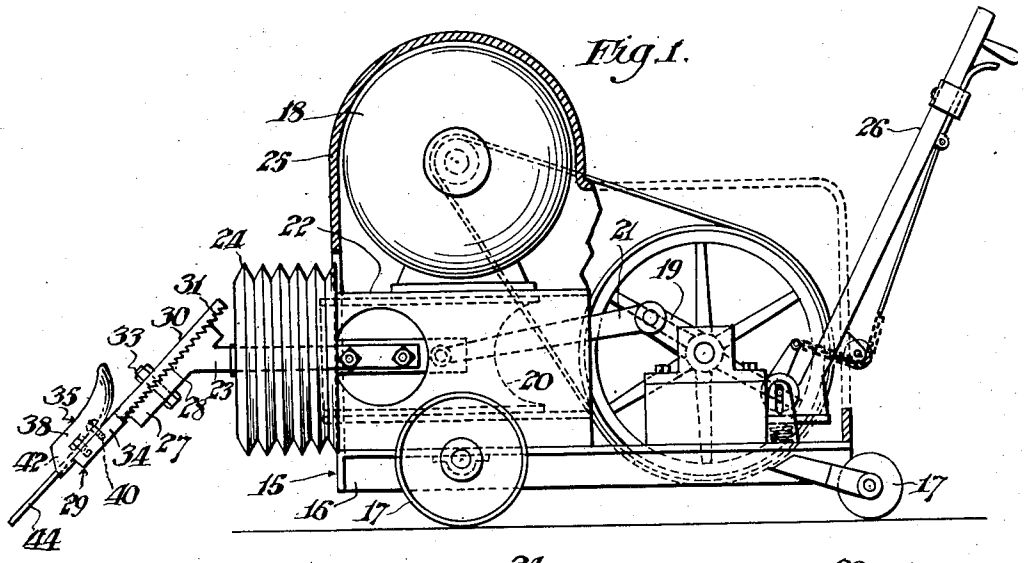


Fig. 2.

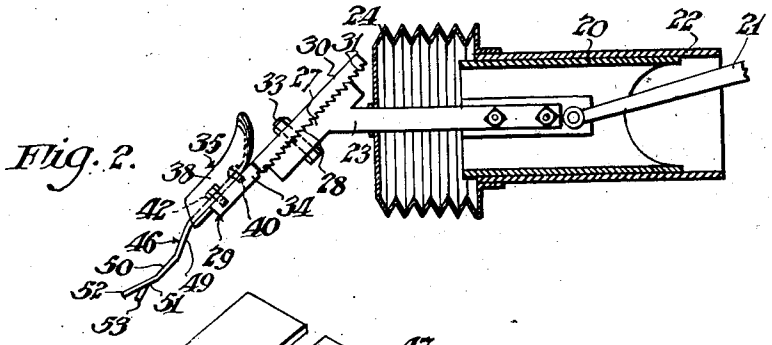


Fig. 3.

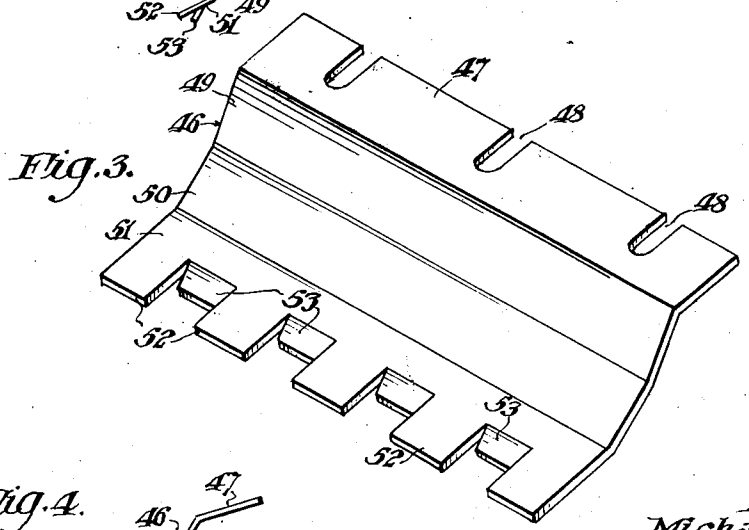
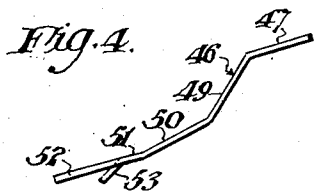


Fig. 4.



Inventor
Michael Conforto,
By W. W. Williamson
Attorney.

Aug. 28, 1951 M. CONFORTO 2,565,841

BLADES FOR ROOFER'S SLAG SCRAPER

Filed June 17, 1947 2 Sheets-Sheet 2

Fig. 5.

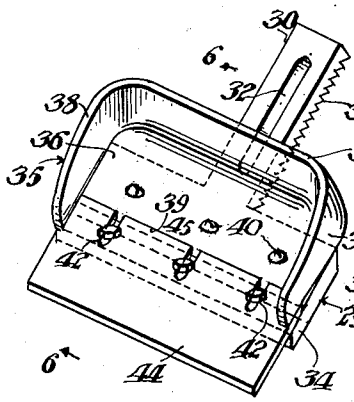


Fig. 6.

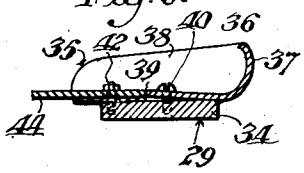


Fig. 7.

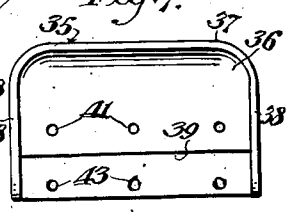
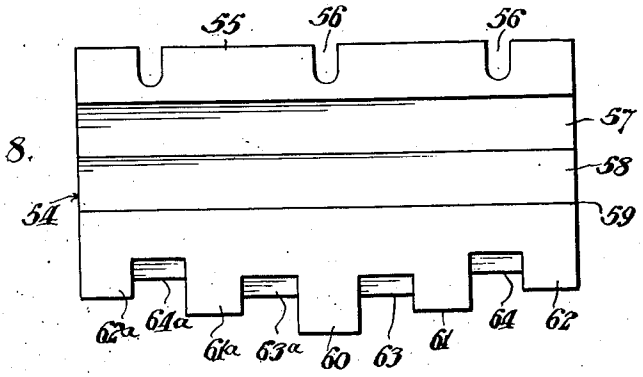


Fig. 8.



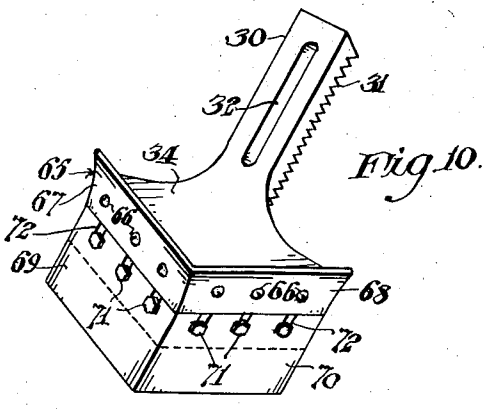


Fig. 10.

Fig. 9.

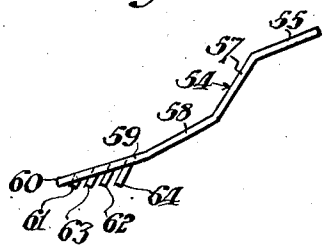
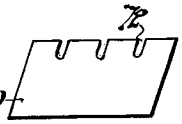


Fig. 11.



Inventor
Michael Conforto
By W. W. Williamson
Attorney.

Patented Aug. 28, 1951 2,565,841

UNITED STATES PATENT OFFICE

2,565,841

BLADES FOR ROOFER'S SLAG SCRAPER

Michael Conforto, Philadelphia, Pa.

Application June 17, 1947, Serial No. 755,096

3 Claims. (Cl. 262—8)

1

My invention relates to new and useful blades for roofer's slag scrapers and has for one of its objects to provide specially constructed scraping blades for use in connection with the machine disclosed in my copending application Serial No. 719,391, filed December 31, 1946.

Another object of the invention is to provide blades in combination with and interchangeably connected to a shield of unique construction.

Another object of the invention is to provide blades having serrated forward or working edges.

Another object of the invention is to construct blades of the kind mentioned in which the teeth are in different locations on the blade lip with their working edges in substantially the same horizontal plane.

Another object of this invention is to provide a blade especially adapted for use in hot weather in which there are two sets of teeth, one set to the rear of the other and both sets projecting from the blade lip and terminating in the same horizontal plane.

Another object of the invention is to provide a blade particularly adapted for use on roofing muck in which the teeth are arranged in angular positions on the blade lip and all projecting downwardly and terminating in substantially the same horizontal plane.

Another object of this invention is to provide blades arranged in pairs to produce a plow-like scraper, the blades of the pair being reversible and interchangeable with each other to relocate the worn surfaces and thereby increasing the life thereof.

A further object of the present invention is to provide a shield which functions somewhat like a scoop to move debris forwardly and to prevent, to some extent, particles of old roofing materials from entering the machine mechanism.

A still further object of this invention is to provide the shield with a stop or shoulder on the bottom wall against which the rear edge of a blade is to abut to maintain the blade in proper position.

With the above and other objects in view this invention consists of the details of construction and combination of elements hereinafter set forth and then designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same I will describe its construction in detail referring by numerals to the accompanying drawings forming a part hereof, in which:

Fig. 1 is a side elevation of the roofer's slag scraper with a portion of the cover broken away and illustrating one form of blade and the shield mounted thereon.

2

Fig. 2 is a longitudinal sectional view of the slide mechanism with the shield and another form of blade connected therewith.

Fig. 3 is an enlarged perspective view of the hot weather blade.

Fig. 4 is an end or side edge view of the same.

Fig. 5 is a perspective view on a reduced scale of the adjustable arm and the shield and one form of blade mounted thereon.

Fig. 6 is a section on the line 6—6 of Fig. 5.

Fig. 7 is a top plan view of the shield.

Fig. 8 is an enlarged top plan view of a modified blade.

Fig. 9 is an end or side edge view thereof.

Fig. 10 is a perspective view of a modified form of blade and support structure.

Fig. 11 is a face view of one of the blades used in the structure of Fig. 10.

In carrying out my invention as herein embodied 15 represents the roofer's slag scraper described in my copending application Serial No. 719,391, filed December 31, 1946, and embodying, in general, a chassis 16 mounted on wheels 17 and supporting a motor 18 which drives a crank 19 to reciprocate the hollow piston 20 through the medium of the connecting rod 21. The piston is slidably mounted in the cylinder 22 also supported by the chassis and a blade supporting arm 23 is mounted on said piston and projects forwardly beyond the front end thereof. Said blade supporting arm moves in and out of the cylinder to a limited extent and imparts a reciprocating motion to any blade attached to said blade supporting arm. In order to protect the sliding surfaces of the cylinder and piston from dirt, dust and debris, a dust hood 24 of bellows formation is attached to the forward end of the cylinder 22 and to the blade supporting arm 23 in order to close the end of the cylinder and permit unrestricted movements of the blade supporting arm. The main working parts which are mounted on the chassis may be enclosed by a cover 25. A handle 26 is attached to the chassis for moving the machine about as desired.

The outer end of the blade supporting arm 23 is fashioned to provide a downwardly and outwardly projecting angular leg 27 with a series of teeth 28 on its outer longitudinal face. A holder 29 of T-shape includes a shank 30 which is adjustably mounted on the leg 27 and has a series of teeth 31 on its under side for cooperation with the teeth 28 which take the thrust when

the scraping actions are in progress. Said shank **30** has a longitudinal slot **32** for the reception of a fastening device **33**, such as a bolt and nut, that is situated in a fixed location on the angular leg **27**. In addition to the shank **30**, said holder includes the head **34** which may be straight and at right angles to the shank **30**, as plainly shown in Fig. 5 or it may be of triangular formation as illustrated in Fig. 10.

A shield **35**, Figs. 1, 2, 5, 6 and 7 is scoop shape and includes a bottom wall **36**, a back **37** and sides **38** terminating at the forward edge of the bottom wall. The back **37** is curved upwardly and inwardly to baffle any material that might have a tendency to pile up and fall over the top edge of said back. The bottom wall **36** has a transverse slit adjacent the forward edge and the areas of the bottom wall on both sides of said slit, at least contiguous said slit, are in different planes to provide a shoulder **39**, Figs. 5 and 7, facing in the same direction as the forward edge of the shield. This shield **35** is removably mounted on the holder **29** by fastening devices **40**, such as bolts, projected through holes **41** in the rear portion of the bottom wall **36** and into the head portion of said holder. Additional fastening devices **42**, such as bolts are also projected through holes **43** in the bottom wall of the shield, ahead of the shoulder **39**, and into the head of the holder **29** for a purpose to be presently described.

In Figs. 1 and 5 I have shown a flat, straight edged blade **44** for general use and this blade has notches **45** in the rear edge to register with the fastening devices **42** and pass beneath the heads thereof when said fastening devices are loosened. The notches are deep enough to permit the blade to be slipped back until the rear edge engages the shoulder **39** thus properly locating the blade relative to the other parts of the blade supporting elements and providing a stop to prevent sliding of the blade during scraping operations. This flat blade can be inverted from time to time as the front edge wears away. The width of the blade is such that it will project into the shield between the sides of the latter.

Another type of blade **46** is illustrated in Figs. 2, 3 and 4 which is generally known as a hot weather blade because it is especially adapted for use in hot weather when the slag or other roofing material may be soft. The blade **46** is fashioned to provide a flange **47** with notches **48** in the rear edge for registration with the fastening devices **42** on the blade holder, a downwardly and slightly forwardly projecting angular upper body portion **49**, a forwardly and slightly downwardly projecting angular lower body portion **50** and an outwardly and downwardly projecting lip **51** having a serrated forward edge. The serrations are, preferably, in two sets, the outer ones **52** being formed by partially cutting out sections of the lip and bending said sections down to produce the second set of serrations **53** with the lower, working or cutting edges of both sets in substantially the same horizontal plane, as depicted in Fig. 4. The formations of the body portions at obtuse angles to one another and to the lip produces a highly resilient blade which is very effective in "tearing" up slag roofing materials and the serrations being staggered and one set behind the other small strips of the roofing materials are alternately torn away and the loosening of the first sections then assists or makes easier the subsequent removal of adjacent sections.

A type of blade **54**, known as a muck blade is illustrated in Figs. 8 and 9 which is also produced from a single piece of flat metal fashioned to provide a flange **55** having notches **56** in the rear edge for registration with the fastening devices **42** on the blade holder, a downwardly and slightly forwardly projecting angular upper body portion **57**, a forwardly and slightly downwardly projecting angular lower portion **58** and an outwardly and downwardly projecting lip **59** having a serrated forward edge. The serrations are in two groups, each group receding from the center towards the side similar to a spear head, as shown in Fig. 8, and each group is composed of two sets of serrations with the center one common to the identical sets of both groups. The lip **59** has alternate sections partially cut out and bent down leaving sections which comprise the central serration **60** and the spaced serrations **61** and **62** on one side and similarly spaced serrations **61***a* and **62***a* on the other side of said central one. These serrations form those of one set in both groups and the ones other than said central one are bent downwardly so that their bottom or working edges are all in one substantially horizontal plane. The sections of the lip which are partially cut out and bent down from the other set of teeth of both groups and are designated **63** and **64**, and **63***a* and **64***a*, respectively. The secondary serrations **63**, **63***a*, **64** and **64***a* have their bottom or working edges situated in the same plane as the primary serrations.

From the foregoing it will be apparent that the serrations are in staggered relation to adjacent ones as well as being grouped in receding angles and by this arrangement mucky or soft and deteriorated roofing materials can be more readily scraped up without sticking to the blade.

In Figs. 10 and 11 I have shown a further modification in which the head **34** of the blade holder **29** has beveled canted surfaces to which the canted, vertically curved shield **65** is secured by the fastening devices **66**. This shield includes two panels **67** and **68** which may be made as an integral unit or as separate elements. The shield panels being mounted on the faces of the blade holder the lower edges of said panels provide shoulders against which the upper edges of the blades **69** and **70** will engage said shoulders when removably mounted on the blade holder by the fastening devices **71**.

The blades each comprise a rhomboid shaped plate with notches **72** in its upper edge to register with the fastening devices **71** which are mounted on the head of the blade holder below the shield. The forward ends of the blades cooperate and because of the angular formation of said forward ends a plow-like apparatus is produced which will open up a crevice in the roofing material and then lift the material on both sides of the opening. The blades **69** and **70** can be changed by inverting each one and interchanging their positions. This is done to vary the wear on the working edges.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the scope of the appended claims without departing from the spirit of my invention.

Having described my invention what I claim as new and useful is:

1. A blade for a roofer's slag scraper comprising a flange having notches in the rear longitudinal edge, an angular downwardly and slightly forwardly projecting upper body portion extending from the flange, and angular forwardly and

slightly downwardly projecting lower portion extending from the upper body portion, a lip projecting forwardly and downwardly from said lower body portion, the front edge of said lip extending angularly in opposite directions rearwardly from the center, and two sets of serrations on said lip, one set being along each angular edge and the other set to the rear thereof in parallelism with the first set, the serrations of the two sets being in staggered relation and the working edges of all serrations being in the same horizontal plane.

2. A blade of the kind described including a sheet metal body having a lip formed therefrom at an angle thereto, and a plurality of serrations formed from said lip in different angular planes with their forward edges in substantially the same horizontal plane.

3. A blade of the kind described comprising a sheet of metal fashioned to provide a flange having notches in its rear edge for registration with fastening devices on a blade holder, an angular

downwardly and slightly forwardly projecting upper body portion extending from the flange, an angular forwardly and slightly downwardly projecting lower body portion extending from the upper body portion, a lip projecting forwardly and downwardly from said lower body portion, and serrations projecting from the lip in staggered relation with the working edges all in the same horizontal plane.

MICHAEL CONFORTO.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
288,812	Howland	Nov. 20, 1883
2,062,908	Jepsen	Dec. 1, 1936
2,084,589	Odgers	June 22, 1937
2,245,544	Miller	June 10, 1941
2,279,454	Fisher	Apr. 14, 1942