E. B. ALMSTRUM.

CHIP CATCHER FOR TOOLS.

APPLICATION FILED FEB. 12, 1921.

1,396,909. Patented Nov. 15, 1921.

Fig. 2.

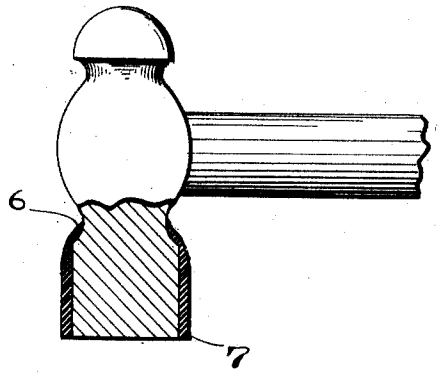


Fig. 1.

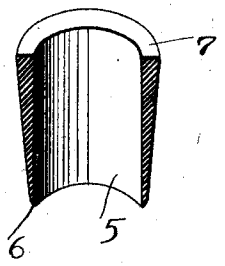
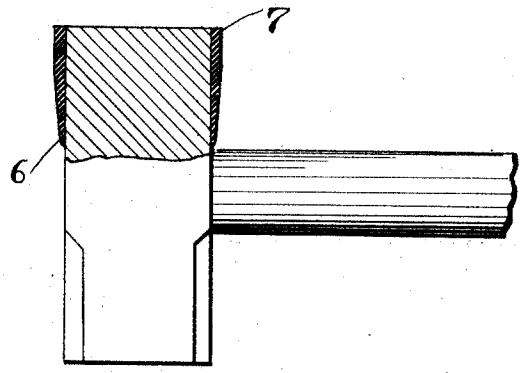


Fig. 3.



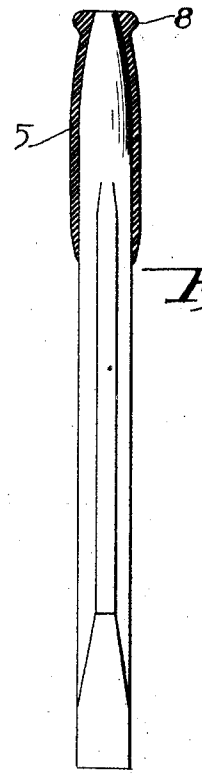


Fig. 4.

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CHIP-CATCHER FOR TOOLS.

1,396,909. Specification of Letters Patent. Patented Nov. 15, 1921.

Application filed February 12, 1921. Serial No. 444,484.

To all whom it may concern:

Be it known that EDWIN B. ALMSTRUM, a citizen of the United States, residing at Grand Island, in the county of Hall and State of Nebraska, has invented certain new and useful Improvements in Chip-Catchers for Tools, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a workman's protecting device and particularly to a device to prevent damage by flying chips.

Numerous accidents are caused each year by pieces or chips of flying steel from tools caused by the breaking of the edge of the tool when subjected to a blow. The steel thus separated from the tool is projected with great force and in view thereof seriously injures the workman that it strikes.

It is therefore an object of the invention to provide novel means which protects the workman from such injury without requiring the workman to wear any device for the protection of the body such as goggles, etc.

A still further object of the invention is to provide a device of this character capable of being applied to the end of a tool adapted to receive the force of a blow so that in case the tool is chipped, the separated particles of steel will be caught by the device.

A still further object of the invention is to provide a device of this character which also protects the edge of the tool to a great extent by preventing the edge of the tool from receiving the direct force of a glancing blow.

A still further object of the invention is to provide a device of this character adapted to surround the blow receiving end of a tool and so positioned that it does not interfere with the contact of a hammer or like power implement with the end of the tool.

With the above and other objects in view, the invention consists in the improved construction and arrangement of the different parts to be hereinafter more particularly described, fully claimed and illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective and longitudinal sectional view of the chip catcher constructed in accordance with an embodiment of the invention.

Fig. 2 is an elevation and sectional view showing the catcher applied to one form of tool.

Fig. 3 is an elevation and sectional view showing the catcher applied to another form of tool.

Fig. 4 is a sectional view of another form of the protector applied to a tapered end tool.

Referring to the drawings, 5 designates a protector or chip catcher constructed from pliable rubber or like flexible material, said protector being tubular. The outer surface of the sleeve is tapered longitudinally so as to permit the small end 6 to readily conform to the contour of a tool while the broad end 7 is of a thickness to prevent piercing thereof by a metal chip.

In Fig. 2, the protector is shown as applied to a machinist hammer, the end 6 of the protector being adapted to conform to the shape of the hammer head. In this way the entire side surface of the hammer is protected. In Fig. 3, the sleeve is shown applied to a sledge hammer, the flexibility of the protector permitting the same to conform to the various sides of the hammer head. It will be noted that the end 7 is disposed flush with the end of the tool, or in other words, flush with the striking face of the hammer. In this way, the protector does not interfere with the force of the blow delivered by the hammer, and in view of the fact that the end 7 is the only portion of the device which would be liable to come in contact with the head of the tool being struck, the force of the blow will slightly compress said end so that no resistance is offered. At the same time should the hammer strike an object in such a way as to chip the edge of the hammer, the particles of steel will be caught by the protector and held between the same and the head of the hammer thereby preventing the chip from being projected and preventing considerable damage.

In Fig. 4 another form of the invention is shown. This form consists in enlarging the end 7 to provide a bead 8, and constructing the protector relatively long. This form of the device is intended for use in connection with tools having tapered ends, the length of the protector preventing the same from working off the end of the tool while the bead 8 serves to reinforce the inner surface of the protector as chips from a tool of this character in view of the particular form of the end of the tool are larger than chips from a tool having straight sides. In addi-

tion to this the bead 8 assists the end 7 in conforming to the tapered end so that it is impossible for any particle of metal that is separated from the tool to leave the tool after being severed. In this form of the invention similar to the form first described, the end 7 is disposed flush with the end of the tool adapted to receive the blow so that contact of the power implement or tool with the end of the tool provided with the protector is not interfered with. In view of the flexibility of the protector, there is no danger of the same becoming accidentally disengaged from the tool as it is not subjected to any strain. If desired, glue or like adhesive material may be used to secure the sleeve to the tool.

From the foregoing it will be readily seen that this invention provides a novel form of metal chip catcher which may be applied to all forms of tools and protects the workman at all times from injury due to flying chips.

What is claimed is:—

1. A chip catching device for tools comprising a sleeve of pliable rubber adapted to be engaged upon and to conform to the contour of the sides of a blow receiving or delivering end of a tool, said sleeve having a bore of uniform diameter and being externally tapered whereby its wall will be wedge shaped in longitudinal section, the thick end being designed to be flush with the end of the tool and the thin end possessing greater pliability whereby to automatically conform to the tool.

2. A chip catcher for tools consisting of a sleeve formed from pliable rubber and adapted to conform to the contour of the sides of a blow receiving or delivering end of a tool, said sleeve being tapered longitudinally, the broad end of said sleeve being disposed flush with said end of the tool.

In testimony whereof I hereunto affix my signature.

EDWIN B. ALMSTRUM.