Jan. 24, 1956 C. F. CERKLESKI 2,731,990

BLADE ATTACHMENT FOR ROTARY SHAPER HEADS

Filed Aug. 3, 1953

Fig. 1.

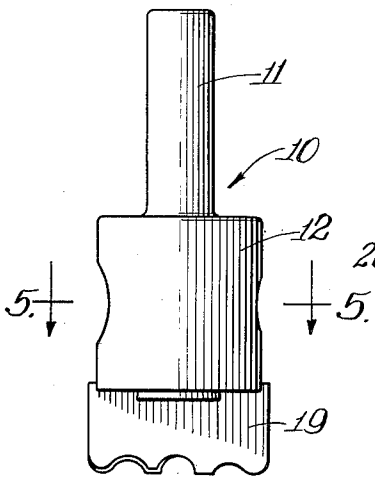


Fig. 2.

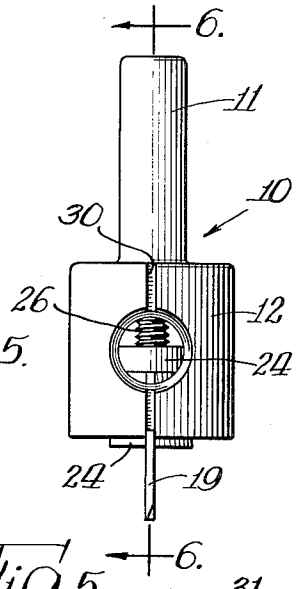


Fig. 7.

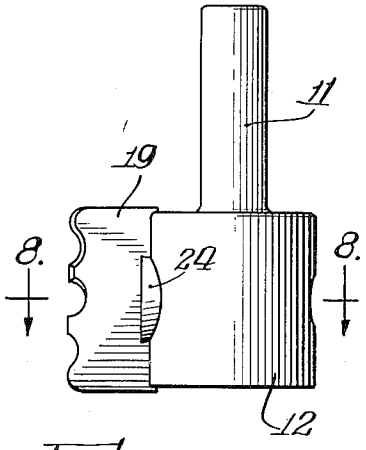


Fig. 3.

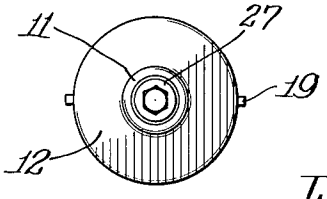


Fig. 5.

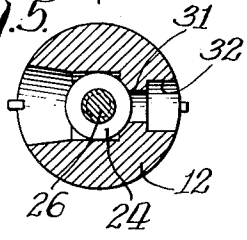


Fig. 8.

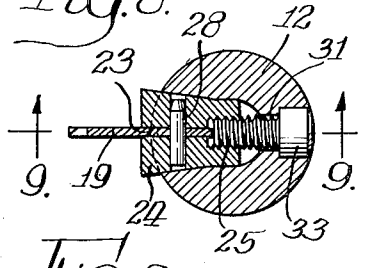


Fig. 4.

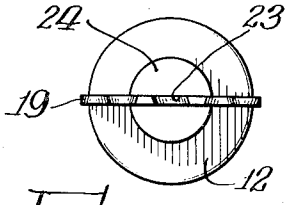


Fig. 6.

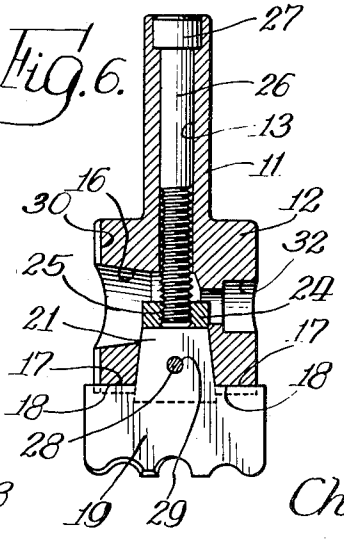


Fig. 9.

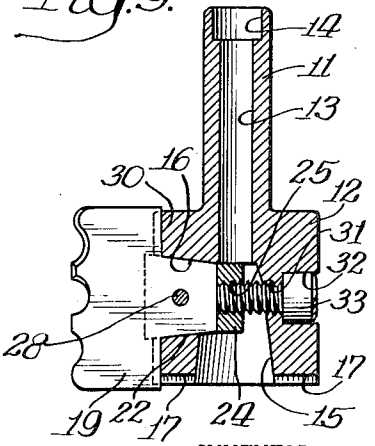
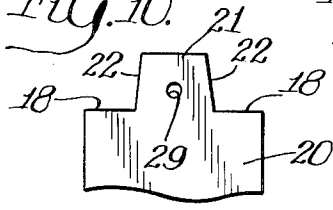


Fig. 10.



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BLADE ATTACHMENT FOR ROTARY SHAPER HEADS

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2 Claims. (Cl. 144—218)

The present invention relates generally to a spindle shaper attachment for drill presses and the like, but more particularly to a novel and improved shaper blade holder in which a variety of blades of different contour or configuration in the work so as to produce different rosettes or different patterns or moldings.

Another object of the invention is to provide a novel and improved spindle shaper attachment which is adapted to detachably and rigidly secure the blades in the holder thereof in two different positions.

A further object of the invention is to provide a novel and improved spindle shaper attachment for drill presses and the like which provides means therein for readily attaching or detaching the blades in the holder thereof.

These and other objects are accomplished by providing a construction and an arrangement of the various parts in the manner hereinafter described and particularly pointed out in the appended claims.

Referring to the drawings:

Fig. 1 is a front elevational view of my shaper blade holder showing a blade detachably secured therein;

Fig. 2 is a side elevational view of the same;

Fig. 3 is a top plan view of the same;

Fig. 4 is an end elevational or bottom view of the same;

Fig. 5 is a cross sectional view taken on the lines 5—5 in Fig. 1;

Fig. 6 is a cross sectional view taken on the lines 6—6 in Fig. 2;

Fig. 7 is a front elevational view of the holder showing the manner in which the detachable blade may be supported on the side of the holder;

Fig. 8 is a cross sectional view taken on the lines 8—8 in Fig. 7;

Fig. 9 is a cross sectional view taken on the lines 9—9 in Fig. 8, and

Fig. 10 is a plan view of a fragmentary portion of one of the blades.

In illustrating one form my invention may assume in practice, I have shown the same as comprising a main frame or tool holder, generally indicated by the reference character **10**, which includes a cylindrical shank **11** suitably adapted to be secured to the chuck of a drill press or the like in the manner well understood in the art. Formed integrally with the shank **11** is an enlarged cylindrical head or blade holder portion **12**. The shank **11** is provided with a longitudinally extending bore **13** which terminates at its upper end in the relatively larger cylindrical recess **14**. The lower end of the bore **13** terminates in a conically shaped bore **15** which is located within the cylindrical head **12** for the reception of a conically shaped blade holder hereinafter described. Communicating with the conically shaped bore **15** in the head **12** is a right angularly disposed conically shaped bore **16**, the axis of which is at right angles to and intersects the axis of the bore **13** and the conically shaped bore **15**. This bore **16** is for the purpose of

holding the blade holder in position on the side of the tool holder **10** in the manner hereinafter more fully described. Located transversely on the lower end of the head **12** and across the diameter thereof is a rectangular recess **17** in which is adapted to be seated the inner edges **18** of a blade **19**. The cutting edges of these blades may assume any configuration, depending on the type or pattern the operator desires to form on the wood or other materials so worked on. For example, Fig. 10 illustrates, as shown at **20**, a different type of blade that might be employed. As a matter of fact, there may be any number of these blades with different contour or configuration which may be attached to the spindle shaper holder.

Formed integrally with each of the blades is an upwardly projecting portion **21** which has tapered sides, as shown at **22**. The portion **21** of each of the blades **19** and **20** are adapted to be inserted in a diametral recess **23** of a conically shaped holder **24**. Located in the axial center of the conically shaped holder **24** is an internally threaded bore **25** in which the threaded end of a bolt **26** is mounted. The bolt is adapted to extend through the longitudinal bore **13** of the shank **11** and is provided with a head **27** which is adapted to be seated in the cylindrical recess **14** of the shank **11**. The head **27** of the bolt **26** may be provided with a hex recess for the insertion of a tool or a transverse screw driver slot may be provided in the head **27** to actuate the bolt for securing the holder **24** together with the blade **19** in position. In order to further secure and prevent displacement of the cutter blade **19** from the holder **24**, a transverse pin **28** may be inserted in the aligned apertures **29** in the blades **19** and the holder **24**.

From the above description it will readily be seen that by securely fastening the bolt **26** into the threaded portion **25** of the conically shaped holder **24**, the tapered walls **15** of the head **12** will rigidly wedge or clamp the knife **19** in the holder **24** in position on the head **12** of the shaper holder and the pin **28** will further insure against displacement of the blade **19** from its position in the holder.

The construction shown in Figs. 1 to 6 inclusive show the manner in which the blade is supported in the lower end of the holder **12** by the bolt **26**. In this position various types of blades may be supported in the holder for cutting various patterns of rosettes. In Figs. 7, 8 and 9 the blade **19** is supported on the side of the holder head **12**. In this connection the head is provided with a vertical rectangular recess **30** on the periphery thereof which extends diametrally across the outer end of the conical recess **16** of the head **12**. Extending in axial alignment with the conical recess **16** is a diametral bore **31** in the head **12**. This bore **31** terminates in a relatively larger concentric cylindrical recess **32** for the reception of a threaded screw **33**. The inner end of the threaded screw **33** is adapted to engage the internal threaded bore **25** of the conically shaped blade holder **24** for securing the blade **19** and the holder **24** in place on the head **12**.

From the above description it will be obvious that when the bolt **26** is removed from the construction shown in Fig. 6, the blade **19** may be transferred from the position shown in this figure to the side of the head **12** to the position shown in Fig. 9 of the drawings and the screw **33** is inserted in the bore **31** for securing the blade **19** and holder **24** in position, as shown in this figure.

Summarizing the construction and functions of operation of my improved spindle shaper attachment, it will be obvious that a very wide variety of shapes or configurations of cutting blades may be mounted in

and rigidly secured and clamped in the lower end of the holder for the cutting of various shapes of rosettes or may be easily detached and placed in the side of the holder so that various configurations or shapes of strips of wood material or the like may be formed by securing the knife on the side of the head as illustrated in Figs. 7 to 9 inclusive of the drawings. The blade holder thus provides a wide range of uses and patterns by merely substituting different blades or by supporting the blades in the two different positions on the holder.

While in the above description I have illustrated and described one embodiment which my invention may assume in practice, it will, of course, be understood that various other modifications may be made without departing from the spirit and scope of the invention as expressed in the following claims.

What I claim as my invention and desire to secure by Letters Patent is:

1. A tool holder comprising a shank and a head, a longitudinal conical bore in said head, a transverse slot across the lower end of said head intersecting diametrically the wider end of said bore, a conical blade holder mounted in said bore and having a diametral slot across the wider end thereof, a blade having a tapered shank and oppositely extending shoulders, said shank extending into the slot in said blade holder with its side edges flush with the conical surface of said holder and said shoulders engaging in said transverse slot of the head, and a bolt extending through said shank and head and engageable with a threaded bore in the narrow end of said conical blade holder for securing said blade and holder to said tool.

2. A tool holder comprising a shank and a cylindrical head, a transverse conical bore in said head, an axially directed slot on one side of said head intersecting the wider end of said conical bore, a conical blade holder mounted in said conical bore and having a diametral slot across the wider end thereof, a blade having a tapered shank and oppositely extending shoulders, said shank extending into the slot in said blade holder with its side edges flush with the conical surface of the holder and said shoulders engaging in the axially directed slot in said head, and a bolt extending through the transverse bore in said head and engageable with a threaded bore in the narrower end of said blade holder for securing said blade and blade holder at right angles with respect to the axis of said head.

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