To all whom it may concern:

Be it known that I, THOMAS JOHNSTON, a resident of Albany, in the county of Albany and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Rotary Planer Heads, of which the following is a specification.

My invention relates to improvements in rotary planer heads, and one object of my invention is the provision of a head which will permit easy and ready adjustment of the knives or cutters and which will insure the use of such cutters until they have been entirely worn out.

Another object of my invention is the provision of a cutter head which will permit ready adjustment of the knives or cutters for the purpose of sharpening or adaptation to the work to be performed and which will absolutely retain such cutters in proper position.

Another object of my invention is the provision of a planer head which will permit easy adjustment of the cutters according to the service required and which will be composed of few and simple parts, to insure strength and durability, cheapness of production and general efficiency and usefulness.

With these objects in view, my invention consists of a rotary planer head embodying novel features of construction and combination of parts for service, substantially as described and defined by the claims, and as shown in the accompanying drawings, in which:

Figure 1 represents a view of the complete cutter head taken on the line $a-a$ of Fig. 2, being for the purpose of clearness, partly in elevation and partly in section.

Fig. 2 represents a view in elevation of the complete planer head, shaft and driving pulley to show the entire structure generally.

Figure 3 represents a vertical, sectional view of a modified form of my invention. Figures 4 and 5 represent perspective views of the clamping members of my invention.

In the drawings, the numeral 1 designates the driving shaft, 2 the driving pulley on said shaft, and 3 the cutter head as a whole mounted to revolve with said shaft.

This cutter head may be made of any cutter or knife capacity desired and in this instance the head is constructed with six cutter or knife receiving channels 4, which are of curved formation having one wall 5, provided with a recess 6 and its opposite wall 7, formed with a curved channel 8.

Fitting in the knife receiving channels are the curved split rings 9, one end 10 of which bears against the stop or recess 6, and whose other portion 11 fits in the knife receiving channel and is formed on its outer edge with a rack 12, arranged to receive the tooth 13, on the inner end of the knife or cutter 15, which is thus disposed in the channel 8, of the head and is adjustable to bring its cutting edge 16, in proper place according to the character of work.

From this construction it will be noted that the curved clamping rings are mounted in the channels of the head and that the cutters are adjustable in the channels and with reference to said rings, and for the purpose of clamping the rings and said cutters in proper place and holding them to their work, the said rings are formed with keys 17, which fits the rib 18, of the plate 19, against which bears the lower end 20, of the adjusting and clamping screw 21, which is disposed in the clamping block or member 22, which acts to bind and retain the cutter in the proper adjustment. The said member 22 is formed with a rib 22', which fits in a groove $N'$ of the curved split ring 9, and serves to anchor the member 22 in the most advantageous position with reference to associated parts, and forms an important and novel feature of my invention.

It will be noted that the rolling forward of the knives or cutters to bring their bevelled cutting edges into the plane of rotation so that all of the knives may be sharpened, which is normally set tangent to the plane of rotation, in one operation by simple revolution of the planer head, and which, after the knives are sharpened, may be rotated back into their original position, the knife edges thus automatically taking their proper position for cutting, and thus doing away with the necessity for individual sharpening of the knives, which latter results often in the dwindling of most of the knife edges before they are actually used for planing purposes.

From the foregoing description taken in connection with the drawings, the operation and advantages of my invention will be readily understood and it will at once be...
apparent that the knives or cutters can instantly be adjusted to the character of work; that the knives or cutters may be used until they have been entirely worn out insuring a long service and a great saving in expense; that the adjustment assures the cutters being held to their work and removes the possibility of their working loose; and that generally in every respect the improvements will insur a desirable, efficient and practical invention of this character.

I claim:

1. In combination with a rotary planer head having a series of channels, a series of split rings fitting said channels, a series of knives or cutters adjustable with reference to said split rings, clamping members having a pair of bearing faces, adjusting devices mounted in said members, and rigid supports for said adjusting devices, said adjusting devices consisting of screws passing through said clamping members having a head on their outer end and plates anchored in said rings to support the inner ends of said screws.

2. In combination with a rotary planer head having a series of channels, a series of split rings fitting in said channels, stops for engagement between the rings and channels, racks formed on one wall of said rings, cutters having a tooth to engage said racks to adjust said cutters, clamping blocks to secure the rings and cutters in proper position, plates anchored in said rings and forming supports and adjusting screws mounted in said clamping members and having their lower end resting on said supports.

In testimony whereof I hereunto affix my signature.

THOMAS JOHNSTON.