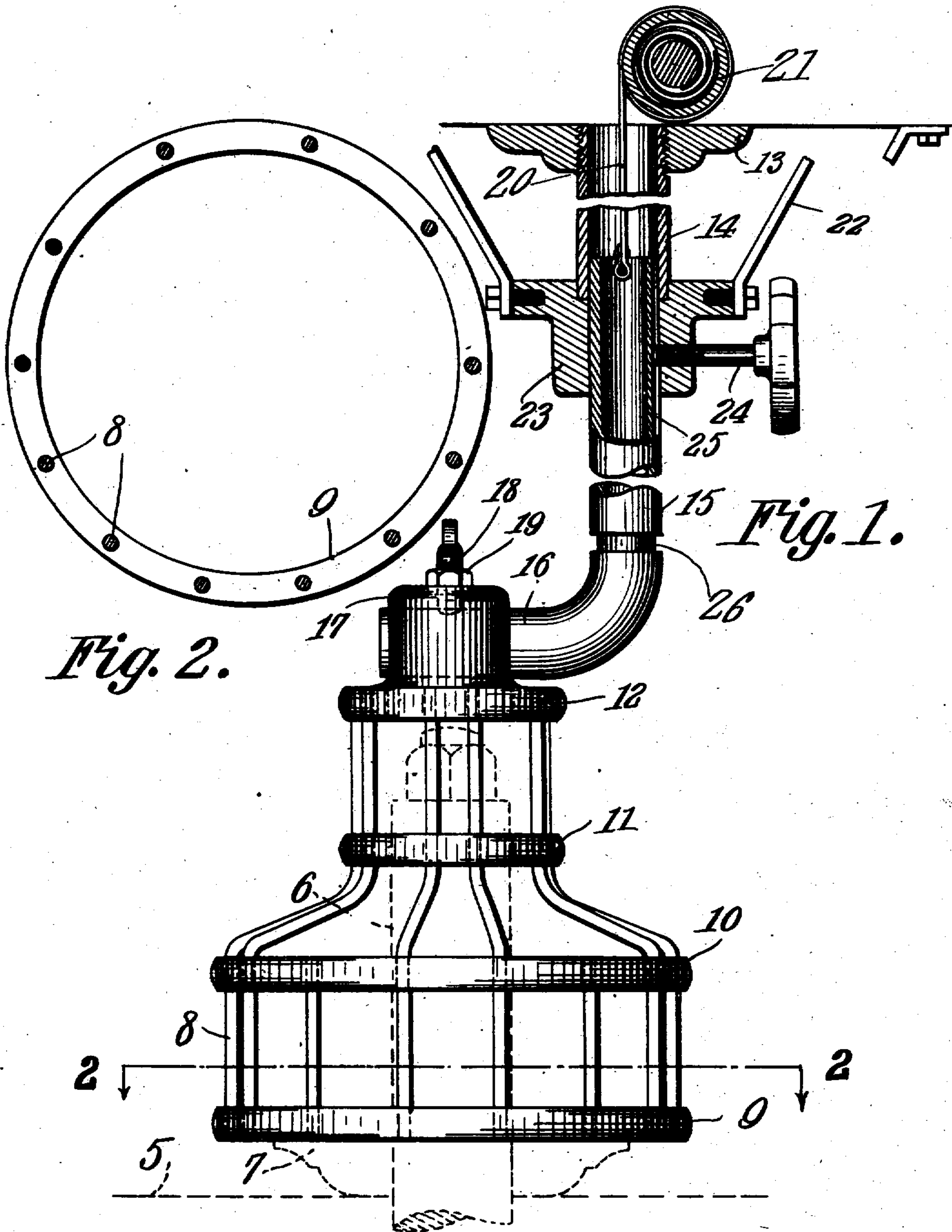


A. F. W. ZASTROW.
GUARD FOR WOODWORKING MACHINES.
APPLICATION FILED JUNE 20, 1910.

973,837.

Patented Oct. 25, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

AUGUST F. W. ZASTROW, OF LYONS, IOWA.

GUARD FOR WOODWORKING-MACHINES.

973,837.

Specification of Letters Patent.

Patented Oct. 25, 1910.

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To all whom it may concern:

Be it known that I, AUGUST F. W. ZASTROW, a citizen of the United States, residing at Lyons, in the county of Clinton and State of Iowa, have invented a new and useful Guard for Woodworking-Machines, of which the following is a specification.

This invention relates to improvements in guards for wood working machines having vertical cutter heads rising from the table of the machine, and it is the object of the invention to provide an improved guard to protect the fingers and hands of the operator against accidentally coming in contact with the blades of the cutter heads.

The invention also has for its object to provide a guard which does not obstruct the vision of the operator, and which leaves the work in full view.

Another object of the invention is to provide a guard which can be readily placed in operative position, and removed when the work is finished.

The invention is illustrated in the accompanying drawing forming a part of this specification, in which,

Figure 1 is an elevation of the guard and its support, the latter being shown partly in section. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1.

In the drawing, 5 denotes the table of the machine, and 6 is one of the cutter heads rising therefrom, said head carrying blades 7 which operate on the work to be shaped. The guard for the cutter head is in the form of a cage suitably dimensioned so that the cutter head may extend thereinto as shown in Fig. 1. The cage is cylindrical in form, and is composed of a series of spaced wires or rods 8 carried by a series of vertically spaced rings which determine the outline of the cage. At the bottom of the cage is a ring 9, and a suitable distance above the same is another ring 10 having the same diameter as the ring 9. Above the ring 9 are rings 11 and 12 respectively, which are spaced apart, and of the same diameter, said diameter being less than the diameter of the rings 9 and 10. This arrangement of the rings makes the cage larger at its lower end than at its upper end.

The guard herein described is suspended from the ceiling of the workroom in which the machine is located. On said ceiling is mounted a plate 13 having a screw threaded

opening into which screws a tube 14, said tube depending from the plate, and being of a suitable length. Within the tube is telescopically mounted a tubular rod 15, said rod entering the lower end of the tube. The rod 15 has at its lower end a lateral bend 16; which bent portion of the rod passes through an opening in a head 17 carried by the ring 12. A set screw 18 threaded through the head to engage the part 16 passing there-through, rigidly secures the cage to the rod 15, the set screw being provided with a lock nut 19.

For the purpose of normally holding the guard elevated, there is fastened to the upper end of the rod 15, a steel band 20 which is secured to and wound on a spring roller 21 suitably mounted on the ceiling, or at any other convenient place overhead. The band 20 passes through the tube 14. Secured to the ceiling by bracket arms 22, is a guide collar 23, having a central opening in which the rod 15 works. This guide collar also supports the lower end of the tube 14. Threaded sidewise into the collar 23 is a set screw 24, said set screw being adapted to be screwed against that portion of the rod which is located within the central opening of the collar, and when thus screwed against the rod, it holds the same rigidly in position. The rod has a longitudinal groove 25 on the outside, into which the set screw is adapted to be screwed, whereby the rod is held against rotary movement. The lower end of the groove 25 opens into an annular groove 26.

In operation, the set screw 24 is operated to release the rod 15, and the same is then lowered sufficiently so that the guard may be placed over the cutter head as shown in Fig. 1, after which the set screw is operated to lock the guard in this position. After the work is finished, and it is desired to remove the guard from the cutter head, the set screw 24 is operated to release the rod 15, whereupon the spring roller 21 through the band 20 pulls the said rod upwardly, and thus removes the guard from the cutter head. The bend 16 locates the guard outside the longitudinal axis of the rod 15, in view of which the guard can be swung to one side of the cutter head in case the space directly above the same is needed. The guard may be swung into this position by rotating the rod, the latter being elevated until the set

screw 24 enters the groove 26, the set screw being backed sufficiently so as not to bind the rod and prevent its rotation.

The spring device provides immediate and convenient power for disposing of the guard when the work is finished, and the construction allows quick adjustment of the guard when it is needed.

The guard is not in the way when not in use, and it effectually serves the purpose for which it is designed, complete protection being afforded, without obstructing the view of the work. The guard is removable from the stem 15, and will be made in different sizes, so that a guard of a proper size may be selected, and placed in position for use, in case different size blades or knives are applied to the cutter head.

What is claimed is:

1. A guard for cutter heads comprising an open cage surrounding said cutter head, and an overhead support for the cage, said support comprising a stationary member, and a member carried thereby and movable in the direction of the cutter head, said movable member carrying the cage and having longitudinal and circumferential grooves therein, resilient means connected to the movable member for elevating the same, and means engaging said grooves for locking said movable member in adjusted position.

2. A guard for cutter heads comprising an open cage surrounding the same, and an overhead support for said cage, said support comprising a stationary tube, a rod telescoping in said tube, said rod carrying the cage and having longitudinal and circumferential grooves therein, resilient means connected to the rod for moving the same in a direction to remove the cage from the cut-

ter head, and means engaging said grooves for locking the rod.

3. A cutter head guard comprising an open cage into which the cutter head extends, and an overhead support for said cage, said support comprising a stationary member, and a member carried thereby and movable in the direction of the cutter head, said movable member being rotatable on its longitudinal axis, and having a lateral bend to which the cage is connected, and means for locking the movable member.

4. A cutter head guard comprising an open cage into which the cutter head extends, and an overhead support for the cage comprising a stationary tube, a rod telescoping in said tube, and carrying the cage, a stationary guide collar in which the rod works, a set screw threaded through said collar to engage the rod, and resilient means connected to the rod for moving the same in a direction to remove the guard from the cutter head.

5. A cutter head guard comprising an open cage into which the cutter head extends, and a rotatable overhead support for the cage, said support having longitudinal and circumferential grooves and said cage being located outside the axis of rotation of said support, a collar surrounding said support, and a set screw in said collar and adapted to engage either groove of the support.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

AUGUST F. W. ZASTROW.

Witnesses:

WILLIAM W. SCOTT,
SAMUEL C. SCOTT.