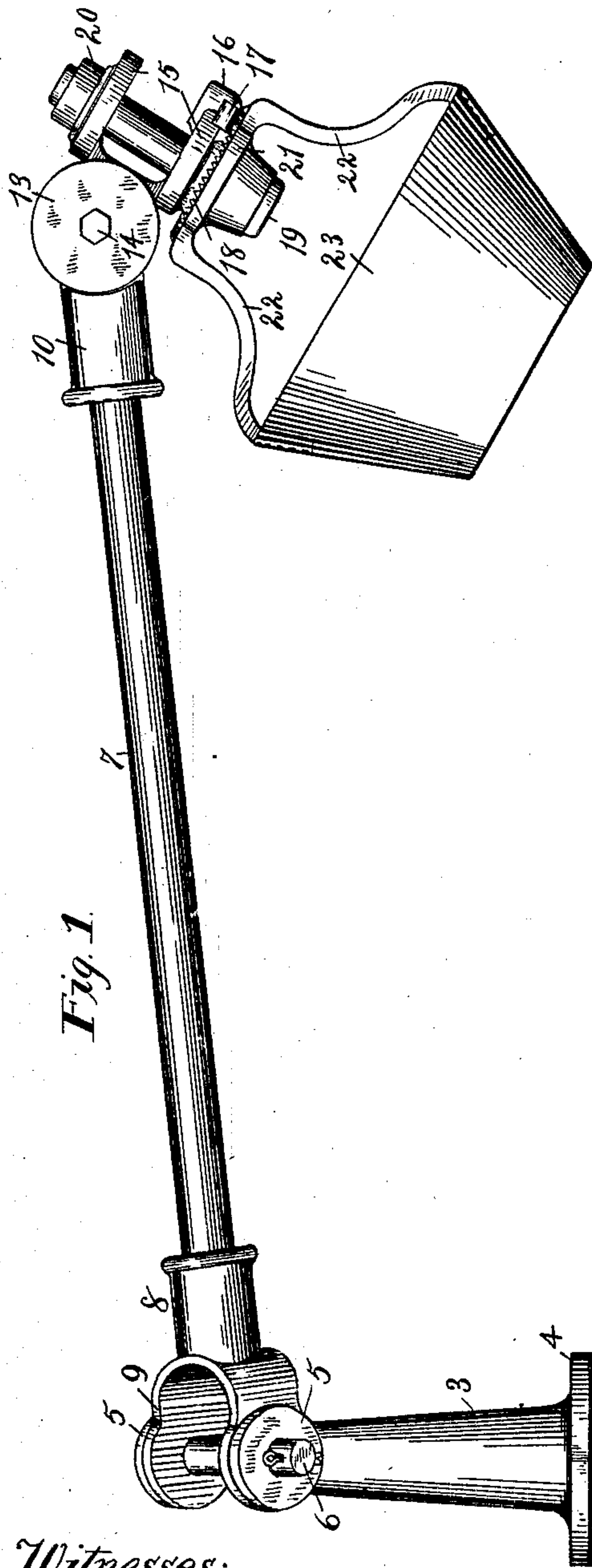


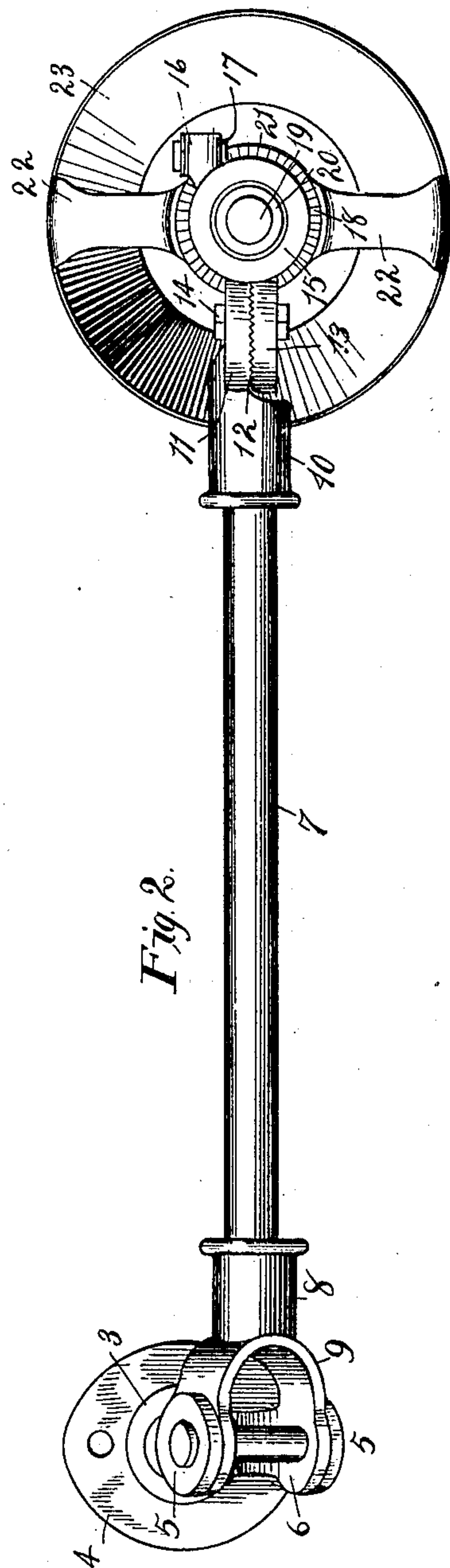
No. 871,533.

PATENTED NOV. 19, 1907.

F. STREICH.  
SPINDLE SHAPER GUARD.  
APPLICATION FILED AUG. 31, 1906.



Witnesses:  
Chas. F. Barnett  
M. Marty



Inventor  
Frank Streich  
By Frederick Benjamin  
Atty.



# UNITED STATES PATENT OFFICE.

FRANK STREICH, OF JOLIET, ILLINOIS, ASSIGNOR TO CHAMPION MACHINERY COMPANY,  
OF JOLIET, ILLINOIS.

## SPINDLE-SHAPER GUARD.

No. 871,533.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed August 31, 1906. Serial No. 332,862.

*To all whom it may concern:*

Be it known that I, FRANK STREICH, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Spindle-Shaper Guards, of which the following is a specification.

This invention relates to improvements in guards or protective devices for wood working machines of the type known as spindle shaper machines.

The especial object of the improvements which form the subject matter of this application, is to provide a guard which will not interfere in any manner with the ordinary use of the machine and which will fully protect the hands of the workman from contact with the cutting spindle.

In the accompanying drawings which form a part of this application I have shown a preferred adaptation of my invention in the following views:—

Figure 1 is a side elevational view of my machine complete, and Fig. 2 is a top plan view of same.

Referring to the details of the drawing, 3 represents a tapering tubular standard having a base flange 4 by which it may be conveniently secured to the top of an ordinary spindle shaper machine. At the upper end of the standard are washers 5 which are preferably formed in an inclined plane as indicated, and are perforated to receive a bolt 6. On this bolt is pivotally mounted a socket 8 having perforated wings 9 through which the bolt 6 passes. Secured in the outer end of this socket is a tube or pipe section 7 on the opposite end of which is secured a socket 10 which is formed with a disk 11, in one face of which are teeth 12. The disk is centrally perforated to receive a bolt 14 upon which is mounted a disk 13 which is integral with a sleeve 15. The face of the disk 13 is provided with teeth corresponding with the teeth 12 of the disk 11. The sleeve 15 is formed with an offset 16 having a pawl 17 on one side, and with a boss 20. Extending through the sleeve and the boss 20 is a bolt 19 on which is mounted the cage 23 which is formed of metal in the trunco-conical shape shown and provided with arms 22 and a central hub 21 supported by said arms. On the upper face of the hub 21 are located teeth 18 which are engaged by the pawl 17. Said pawl is kept in mesh with the teeth 18 by a

spring (not shown) and the function of the pawl is to act as a detent to retain the cage 23 in any of its adjusted positions about its axis of rotation, said detent yielding only when unusual force is applied to rotate said cage.

A device constructed substantially as described will operate as follows:—Assuming that the standard is secured rigidly to the table of the machine and that the cage 23 is arranged above the spindle cutter of the machine so that the cutter may be viewed by the operator through the cage, the piece of wood being cut will be pushed under the lower edge of the cage raising the device so that it will rest upon the wood. As the piece of wood is pushed inwardly, the frictional contact with the edge of the cage will cause the latter to rotate on its axis represented by the bolt 19 and thus permit the free movement of the wood. The chips formed by the cutter will be thrown outwardly through the cage. The angle of the cage relative to the supporting rod 7 may be controlled by adjustment of the cooperating disks 11, 13, in a manner apparent. When it is not desired to use the device it may be moved upwardly and away from the cutter upon its pivot bolt 6.

Having thus described my invention, what I claim is:—

1. A guard, comprising a standard, an arm pivotally mounted on said standard and a cage supported on the outer end of the arm and adapted to be rotated upon its axis.

2. A guard, comprising a standard, an arm pivoted to said standard, a sleeve movably attached to said arm, a spindle carried in said sleeve, and a cage mounted on said spindle.

3. A guard, comprising a standard, an arm pivoted to said standard, a sleeve pivotally attached to said arm, a spindle journaled in said sleeve, a cage mounted to rotate with said spindle and means for adjusting said cage about its axis.

4. A guard, comprising a standard, an arm pivoted to said standard, a sleeve pivotally attached to said arm, frictional means for adjusting said sleeve upon its pivot, a spindle rotatably mounted in said sleeve, a cage attached to said spindle, means for adjusting said cage about its axis, and means for retaining said cage in adjusted position.

5. A guard, comprising a standard, an arm

pivoted on said standard, a sleeve pivotally  
attached to said arm, frictional means for ad-  
justing said sleeve upon its pivot, a spindle  
rotatably mounted in said sleeve, a cage at-  
5 tached to said spindle, means for adjusting  
said cage about its axis, and a yielding detent  
for retaining said cage in adjusted position.

In testimony whereof I affix my signature  
in presence of two witnesses.

FRANK STREICH.

Witnesses:

FRANK J. WISE,  
PHIL. F. CARROLL.