

J. C. MOHR.
GRINDING MACHINE.
APPLICATION FILED MAY 20, 1911.

1,006,258.

Patented Oct. 17, 1911.

3 SHEETS—SHEET 1.

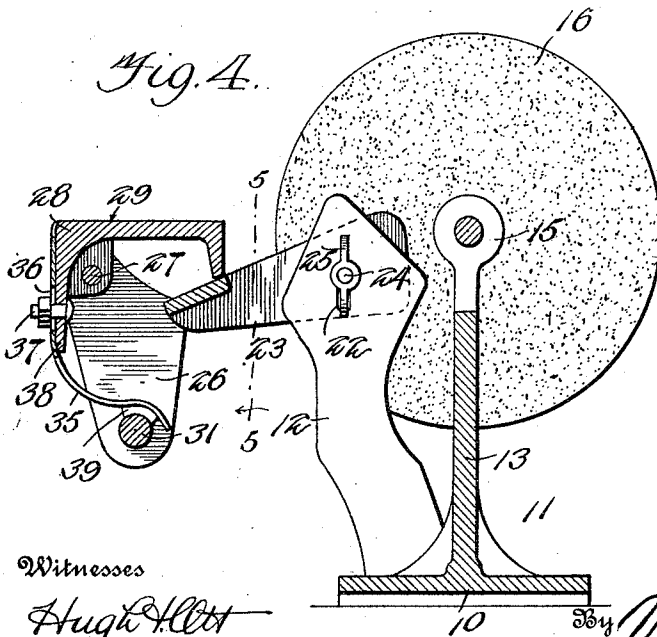
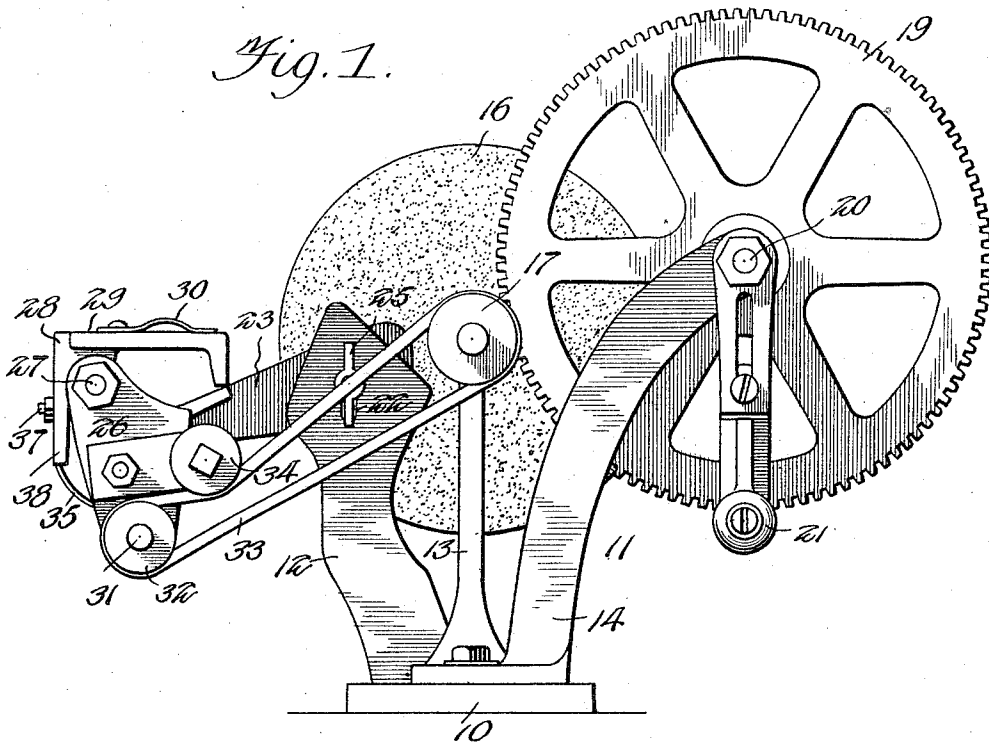
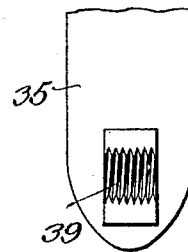


Fig. 6.



Witnesses

Hugh H. Holt
P. A. Foster

Inventor
John C. Mohr

By *Victor J. Evans*
Attorney

J. C. MOHR.
GRINDING MACHINE.
APPLICATION FILED MAY 20, 1911.

1,006,258.

Patented Oct. 17, 1911.
3 SHEETS—SHEET 2.

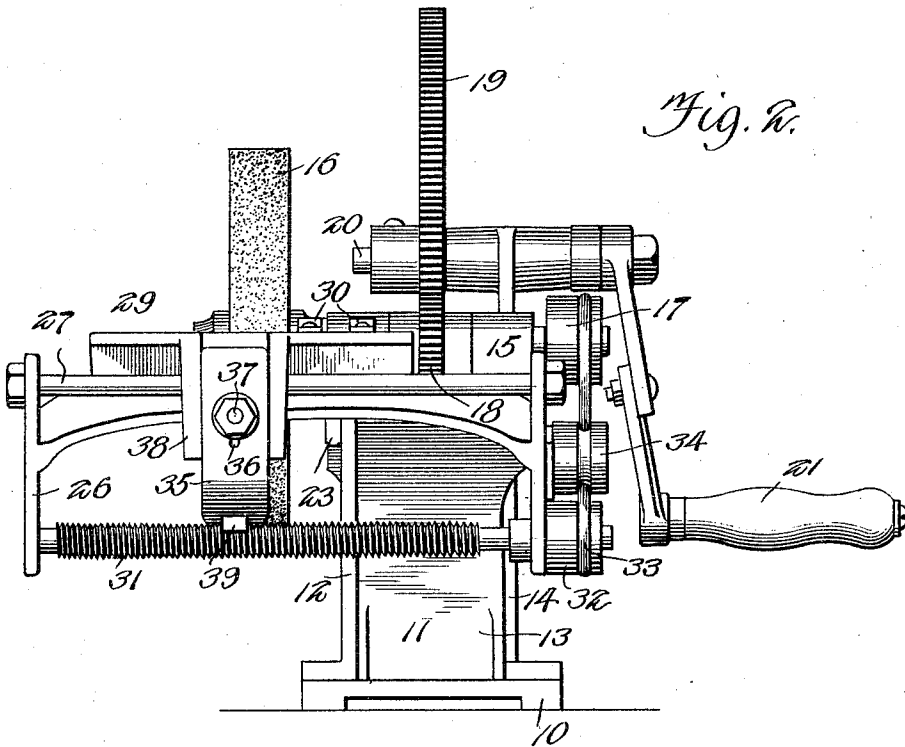
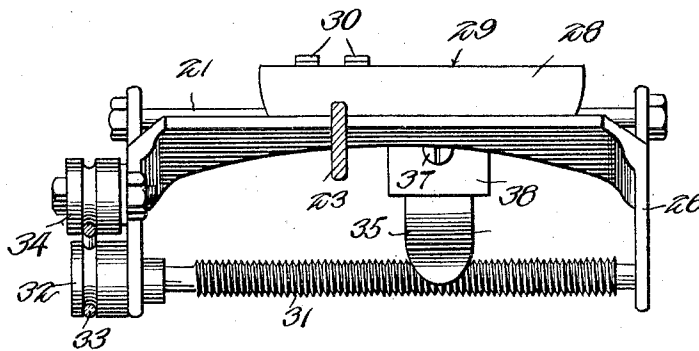


Fig. 5.



Witnesses

Hugh H. Hottel
W. A. Hottel

Inventor

John C. Mohr

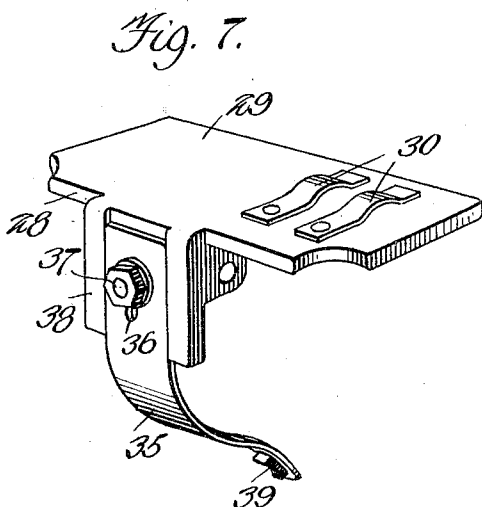
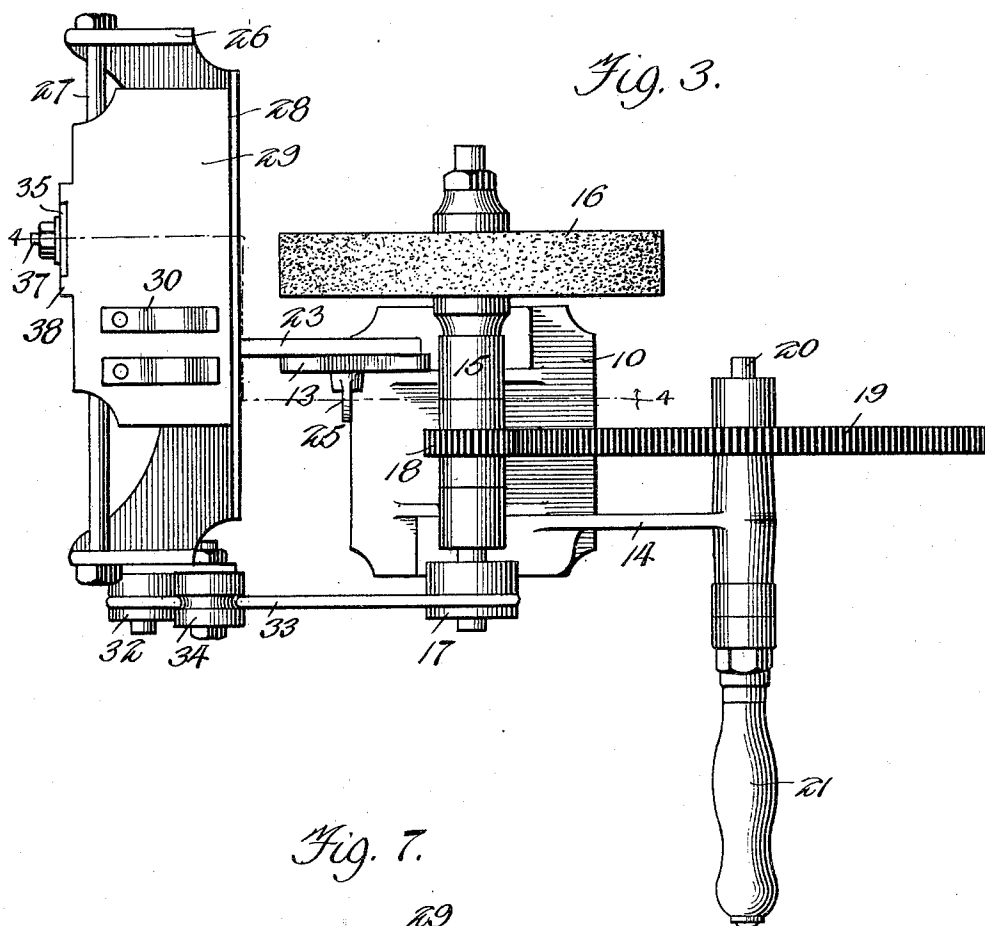
Victor J. Evans

Attorney

J. C. MOHR.
GRINDING MACHINE.
APPLICATION FILED MAY 20, 1911.

1,006,258.

Patented Oct. 17, 1911.
3 SHEETS—SHEET 3.



Witnesses

Hugh Kott
R. A. Foster

Inventor

John C. Mohr

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JOHN C. MOHR, OF ALLENTOWN, PENNSYLVANIA.

GRINDING-MACHINE.

1,006,258.

Specification of Letters Patent.

Patented Oct. 17, 1911.

Application filed May 20, 1911. Serial No. 628,523.

To all whom it may concern:

Be it known that I, JOHN C. MOHR, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented new and useful Improvements in Grinding-Machines, of which the following is a specification.

An object of the invention is to provide a grinding machine for sharpening shears and like cutlery.

Among other features the invention embodies a device in which the shears or articles to be sharpened are automatically fed across the grinding wheel coincidentally with the mechanism for operating the grinding wheel and the means adapted to receive the article to be sharpened are adjustable to various angles relatively to the grinding wheel.

To accomplish the desired result, use is made of a frame, a mandrel journaled on the said frame, a grinding wheel keyed on the said mandrel, means operable on the said frame for driving the said mandrel to operate the said grinding wheel, a carriage mounted on the frame and adapted to receive the article to be ground or sharpened, means for adjusting the said carriage and means whereby the said carriage will be automatically fed across the grinding wheel when the grinding wheel is operated.

Reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation of my device. Fig. 2 is a front elevation of my device. Fig. 3 is a plan view. Fig. 4 is a vertical section taken on the line 4—4 in Fig. 3, looking in the direction of the arrow. Fig. 5 is a vertical section taken on the line 5—5 in Fig. 4, looking in the direction of the arrow. Fig. 6 is a view looking at the under side of the feeding tongue. Fig. 7 is a perspective view of the carriage.

Referring more particularly to the various views I employ a base 10 on which is mounted a frame 11 consisting of a series of uprights 12, 13 and 14. Journaled at the upper end of the upright 13 is a mandrel 15 having secured to the outer end thereof a carborundum or grinding wheel 16. A pulley 17 is secured to the other end of the mandrel 15 and keyed on the mandrel between the wheel 16 and the pulley 17 is a gear wheel 18 in mesh with a larger gear

wheel 19 keyed to a shaft 20 journaled on the upright 11, the said shaft 20 having an adjustable handle 21, secured to the outer end thereof.

The upright 12 is provided with a slot 22 at the upper end thereof and an arm 23 is provided to swing on the upright 12, a screw 24 provided with a thumb nut 25 being passed through an aperture in the arm 23 and through the slot 22 of the upright 12 so that the arm 23 can be rigidly held relatively to the upright 12 and can be adjusted by operating the thumb nut 25. The arm 23 terminates in an auxiliary frame 26 having a rod 27 horizontally secured thereto and on which is mounted to slide and swing a carriage 28. The carriage 28 has an upper plain surface 29 on which is mounted a plurality of clips 30 adapted to receive the article to be sharpened.

Journaled on the auxiliary frame 26 and extending horizontally thereto is a screw 31 having a pulley 32 keyed to one end thereof and a belt 33 is passed over the pulley 32 and the pulley 17 on the mandrel 15, an idler 34 being adjustably mounted on the auxiliary frame 26 and adapted for engagement with the belt 33 to adjust the frictional tension of the belt relatively to the pulleys 17 and 32.

A tongue 35 is provided having a slot 36 in the upper end thereof and the said tongue is connected to the carriage 28 by means of a screw 37 passed through the slot 36 and engaging a depending portion 38 of the carriage 28 so that the tongue 35 can be adjusted relatively to the carriage 28. Secured to the under side of the tongue 35 at the lower end thereof is a plate 39 having a plurality of threads thereon and the said plate is adapted for engagement with the screw 31 for a purpose that will be hereinafter more fully disclosed.

In the use of my device a shear blade or the like is secured on the face 29 on the carriage 28 by means of the clips 30 and the handle 21 is then operated to revolve the gear wheel 19 which in turn will cause the grinding wheel 16 to rotate as will be readily understood. The carriage 28 is now slid on the rod 27 so that the said carriage will be positioned at the right hand end of the auxiliary frame 26 and by pressing downwardly on the top of the carriage the threaded plate 39 of the tongue 35 will be moved into engagement with the screw rod

31. As the handle 21 is operated to turn the grinding wheel 16, a rotating motion will be imparted to the screw rod 31 by the belt 33 connecting the mandrel 15 with the screw rod 31, thus causing the carriage 28 to slide on the rod 27 so that the shear blade will come in contact with the grinding wheel 16 and a smooth edge will be ground on the shear blade. When the carriage has reached the other end of the auxiliary frame 26, the plate 39 is disengaged from the screw rod 31 and the carriage is returned to its initial position after which it is again permitted to again feed across the auxiliary frame 26 and a new edge will be ground upon the shear blade held by the clips 30. By operating the thumb screw 25, the angle of the auxiliary frame will be adjusted relatively to the grinding wheel 16 so that the angularity of the cutting edge of the shear blade can be regulated at all times. The tongue 35 is preferably made of a springy material and by manipulating the screw 37, the tongue 35 can be adjusted relatively to the carriage 28.

From the foregoing description, it will be seen that a device is provided for automatically feeding a shear blade across the face of a grinding wheel and in which the position of the shear blade can be at all times

adjusted relatively to the grinding wheel, the feeding speed of the carriage having the shear blade thereon being proportional to the speed of the driving means for the grinding wheel and the connections between the carriage and the initial driving means.

Having thus fully described the invention, what I claim as new, is:—

A grinding machine comprising a frame, a grinding wheel journaled on the frame, driving means for operating the said grinding wheel, an auxiliary frame connected with the said frame, means for adjusting the angle of the auxiliary frame relatively to the said frame, a carriage mounted to operate over the auxiliary frame and adapted to receive thereon the article to be sharpened, means for operating the said carriage over the said auxiliary frame when the said driving means are operated to rotate the said grinding wheel and means for adjusting the angle of the said carriage relatively to the said grinding wheel.

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

JOHN C. MOHR.

Witnesses:

GEORGE W. GORSER,
SAMUEL H. THOMAS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."