

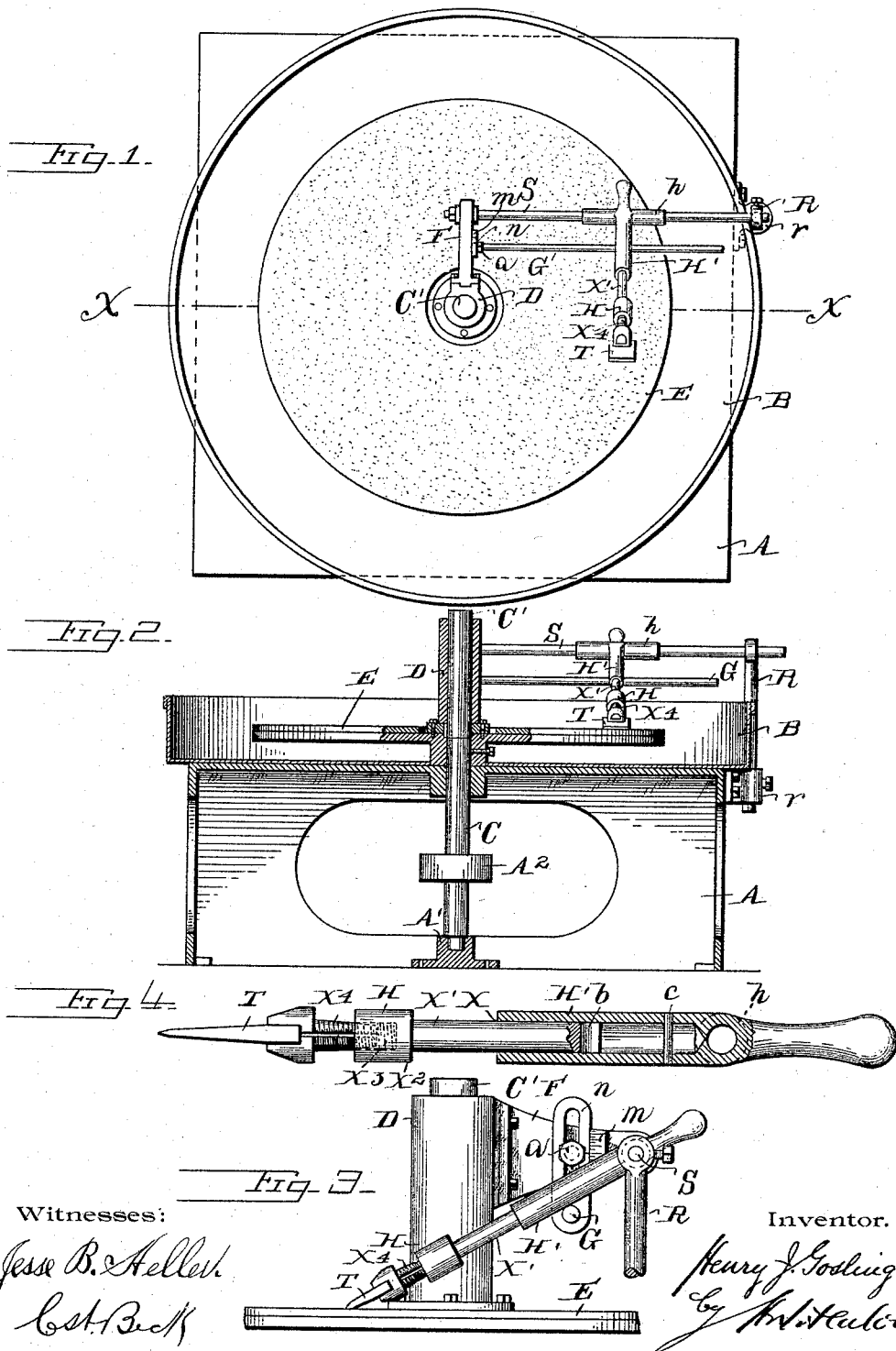
(No Model.)

H. J. GOSLING.

MACHINE FOR WHETTING CUTTING FACES OF CHISELS.

No. 526,571.

Patented Sept. 25, 1894.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR WHETTING CUTTING-FACES OF CHISELS.

SPECIFICATION forming part of Letters Patent No. 526,571, dated September 25, 1894.

Application filed September 5, 1893. Serial No. 484,813. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY J. GOSLING, a citizen of the United States, residing in the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Machines for Whetting the Cutting-Faces of Chisels and other Edge Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to mechanical devices for whetting the cutting faces or edges of file making chisels and other edge tools.

Said device at present usually consists of a disk-like plate adapted to be rotated and mounted in a stationary receiving pan which is supported in a suitable housing or stand, the pan being centrally recessed, and through which recess passes a vertical shaft secured to the under face of the disk and driven by appropriate actuating devices; and my improvements thereon consist of a shaft or stand extending upward from the disk, and a sleeve mounted on said shaft, the sleeve having a bracket arm which carries a graduating device, a rest and a holder supported therein for maintaining the chisel in position, said parts being constructed as hereinafter described whereby the edges or faces of the chisel are adjustably supported and at a proper and fixed angle, in contact with the disk-like plate upon which emery or other grinding mixture is applied.

My invention also consists in the construction of the holder for the chisel.

The object or purpose to be attained by the invention is uniformity of angle in the edge of tools whetted by said disk and the adaptation of the holder to grasp edge tools of varying sizes.

In the accompanying drawings, illustrating my invention, Figure 1 is a plan view, showing the frame, the pan, the disk, the sleeve, its bracket arm, the holder and its rest, and means to retain the sleeve and bracket in position. Fig. 2 is a sectional view through the line  $x-x$  of Fig. 1. Fig. 3 is an elevation of the device above the disk-plate; and Fig. 4 is an enlarged view, partly in section, of the chisel holder.

In the machine shown in the drawings, it is constructed as heretofore so far as respects the frame A, the pan B, the rotating disk E, with means such as shaft C, and pulley A<sup>2</sup> to rotate it. To provide the best result in the operation of such devices, the action of the whetting parts should be positive, and capable of producing with certainty or regularity the same degree of angularity of edge on all tools whetted thereby; otherwise the result would be that no two chisels or edge tools whetted thereby would be produced with the same angularity of edge on the cutting faces or edges thereof. With my device the chisel holder is adapted to slide by gravity in its handle, which in turn is fixed or set at a predetermined angle upon its resting bar by means of a graduating device. Hence the action of the machine is positive and every tool is produced with whetted faces or edges of the same angle.

In the drawings is shown a cast iron frame A which supports a pan or other like receptacle B in which is maintained a metallic disk E. A vertical shaft C is stepped in the bottom of the frame A at A', and is rotated by the pulley A<sup>2</sup>. The shaft C passes up through corresponding recesses in the frame and in the pan and is keyed to the disk E in a recess on its under face. The disk is made of two plates, the lower one of iron and the top one of lead. A stand or shaft C' is also secured to the disk on its top face, and is practically a combination of the shaft C secured to the under face of the disk. A sleeve D is maintained loosely upon and by this stand or shaft C' and is provided with a projection or bracket F, upon the extremity of which is secured fast an arm S extending to the circumference of the pan B, and carrying upon its end a rod R, with a screw nut  $r$  whereby the sleeve D and its bracket F and the tool holder or handle H, and the arm S on which it is mounted may be fixed relatively to the rotating disk.

Proceeding from the bracket F and parallel with the arm S, is a rod G operating as a rest for the body of the handle or holder H. A link  $n$  is maintained around the said rod and by a set screw  $a$  to the bracket F and on said bracket is fastened a graduating rule  $m$  (see Fig. 3), said parts being arranged rela-

tively to each other so that the resting rod G, the link *n*, and the graduating rule *m* will be in the same or parallel vertical planes.

The handle H' of the holder is provided with a sleeve *h* whereby it may be slid along the arm S and also be capable of partial rotation thereon. The handle part H' is recessed longitudinally at X in order to enable the shaft X' of the holder H to slide freely therein. This holder end portion X' has an enlarged end X<sup>2</sup> which is longitudinally recessed in the form of a frustum of a cone, so that the screw thread within the recess is a tapering screw threaded recess X<sup>3</sup>. Divided jaws X<sup>4</sup> X<sup>4</sup> have ends which jointly take the form of a frustum of a cone, screw-threaded on their exterior and adapted to fit in the tapering screw threaded recess X<sup>3</sup> of the holder. Hence the chisel T grasped between the divided jaws X<sup>4</sup> is firmly held therein when these jaws are screwed into the recess X<sup>3</sup> of the handle, the device being by this construction adapted to grasp chisels or other tools of varying size as to thickness; and the holder itself, by means of the part X' sliding in the part X of the handle, is adapted to hold chisels or other edge tools of varying lengths. The end of the part X may be recessed or slitted at *b* so that when the handle is lifted up it will be caught by the pin *c* (Fig. 4). By these means the angle of the handle H relatively to the disk can be adjusted and fixed to produce uniformity in the angles to be given to the cutting devices or edges of the chisels or other tools whetted by the said machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a whetting machine consisting essentially of a rotating disk, a pan or receptacle in which the same is mounted, a vertical actuating shaft and means to drive the said shaft to rotate the disk, of supporting mechanism for the holder maintained centrally over the disk, consisting of the stationary sleeve D

having bracket F, means for maintaining the same in a fixed position such as arm S and rod R with nut *r*, and a holder for the tool to be whetted; substantially as described.

2. In a whetting machine consisting essentially of a rotating disk, a pan or receptacle in which the same is mounted, a vertical actuating shaft and means to drive the said shaft to rotate the disk, of supporting mechanism for the holder maintained centrally over the disk, consisting of the stationary sleeve D having bracket F, means for maintaining the same in a fixed position such as arm S and rod R with nut *r*, a holder for the tool to be whetted, provided with a sleeve-like part *h* to adapt it to be slid on said rod S and also partially rotate thereon; means such as rod G to support the body of the holder, the adjusting link *n*, and graduating rule *m* whereby the device may be set to produce uniformity of angle on the edge of tools whetted by said disk; substantially as described.

3. In a whetting machine, a holder for maintaining the edge of the tool to be whetted in contact with the disk, by gravity, consisting of a handle H having a transverse sleeve-like recess *h* to adapt it to be slid sidewise as well as partially rotated upon a supporting arm or other fixture; and having also a longitudinal sleeve-like recess X in combination with a shaft X' adapted to slide freely in the said longitudinal recess, and having its free end provided with a screw threaded recess X<sup>3</sup> and a pair of divided jaws X<sup>4</sup> X<sup>4</sup> having screw threaded ends adapted to be maintained and adjusted thereby in the recess X<sup>3</sup> of the shaft; the same being constructed and operating substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 18th day of August, A. D. 1893.

HENRY J. GOSLING.

Witnesses:

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