(No Model.)

2 Sheets—Sheet 1.

L. H. SUTTON & A. L. COLLINS.

GRINDSTONE ATTACHMENT.

No. 417,754. Patented Dec. 24, 1889.

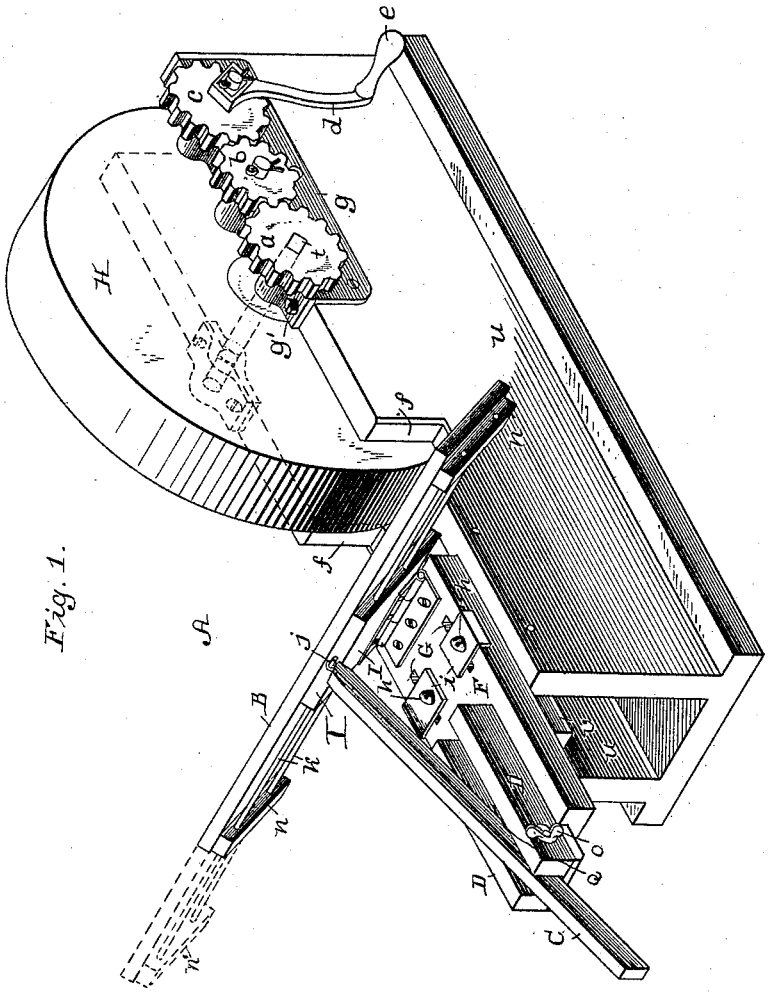

Fig. 1.

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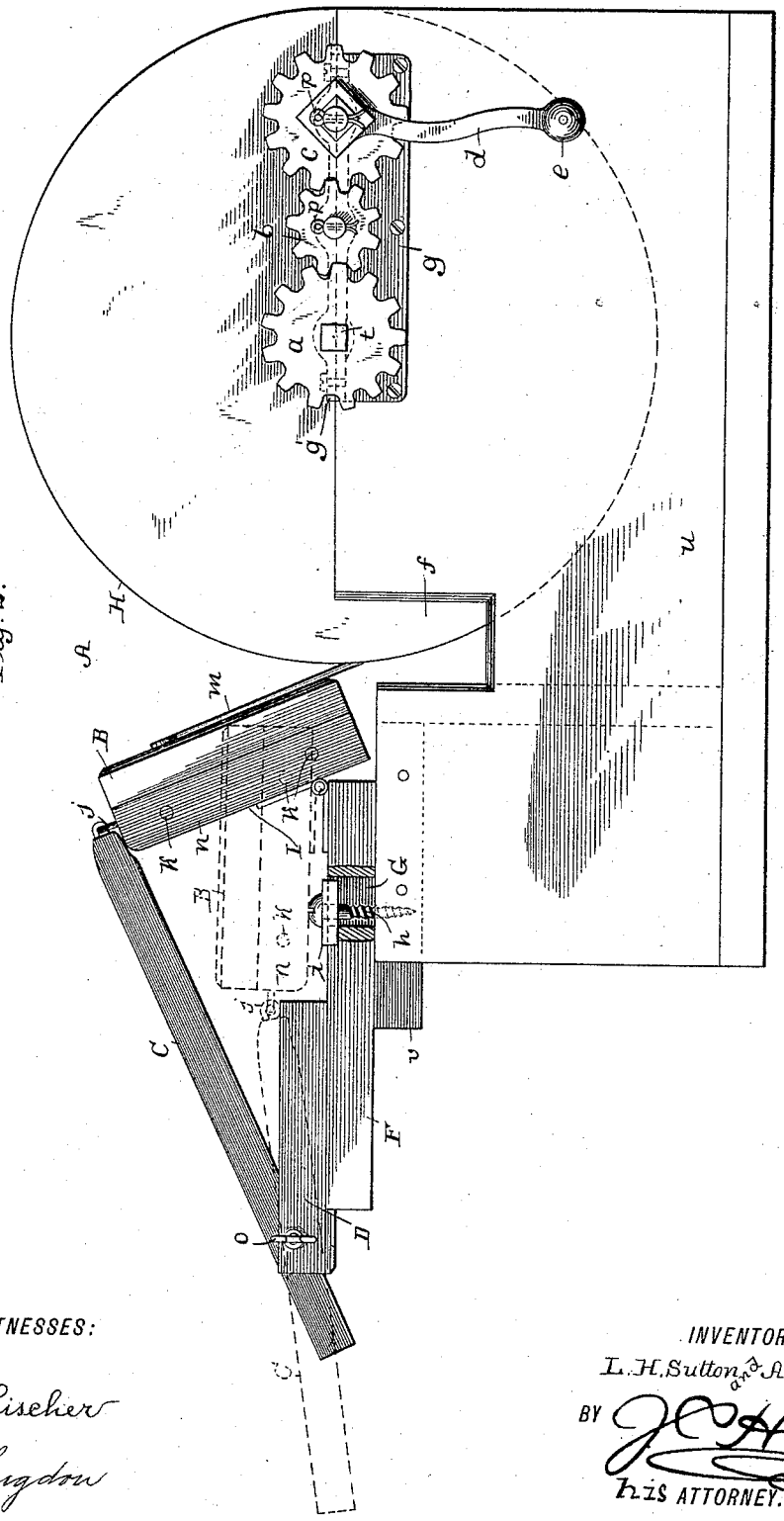
Fig. 2.



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UNITED STATES PATENT OFFICE.

LESTER H. SUTTON AND ALBERT L. COLLINS, OF KANSAS CITY, MISSOURI.

GRINDSTONE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 417,754, dated December 24, 1889.

Application filed June 10, 1889. Serial No. 313,707. (No model.)

To all whom it may concern:

Be it known that we, LESTER H. SUTTON and ALBERT L. COLLINS, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Grind-Stone Attachments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention has relation to improvements in grindstones; and it consists in a certain novel construction and combination of parts, fully described hereinafter, in connection with the accompanying drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a grindstone embodying our improvements, and Fig. 2 is a side view of the same.

The grindstone H is mounted in a suitable frame *u*, and is provided at one end of its shaft *t* with a pinion *a*, and the shaft of the crank *d* is provided with a corresponding pinion *c*, which is geared to the pinion *a* by means of the intermediate meshing pinion *b*. The shafts of the grindstone and the crank and of the intermediate pinion are mounted in bearings *g'* in the casting *g*, which is screwed or bolted to the upper edge of the frame *u*. The opening *f* is formed in the opposite sides of the frame, at the grinding-face of the stone, so as to expose a sufficient amount of surface of the latter for the application of the tools thereto; and it will be seen that the crank *d*, which carries the handle *e*, is removed at such a distance from the said grinding-face of the stone that there is no liability of the hand of the operator coming in contact with the tool which is being ground.

The tool-holding attachment, which is shown at A, is provided with a bed-plate F, to one end of which is hinged a head block or rest I, the said bed-plate being provided with parallel longitudinal slots G G, through which pass adjusting-screws *h*, to engage the frame of the grindstone, whereby the holding attachment may be arranged at any desired distance from the face of the stone. The heads of the said adjusting-screws bear on washers *i i*, which rest on the upper surface of the bed-plate. A longitudinally-grooved guide D is secured to the rear end of the bed-plate, and the adjusting or brace arm C, which is connected to the upper end of the head block or rest by means of a loop-hinge *j*, extends through or rests in the groove Q of the said guide, and is thereby held from lateral play. This brace-arm is engaged and held in the desired position, so as to hold the head block or rest at the desired angle by means of a clamping-screw O, which is mounted in the side of the guide and impinges against the adjusting or brace arm. Blocks *v* are secured to one side of the frame of the grindstone to give the bed-plate a firm bearing.

From the above it will be seen that the head block or rest may be adjusted at any desired angle, to enable the tool, as a chisel, plane-knife, hatchet, &c., to be presented to the surface of the stone at the desired angle; but when a long tool—such as a scythe-blade or planing-mill knife is to be sharpened—said head block or rest is not of sufficient width to afford a firm bearing-surface, and therefore we provide an adjustable or sliding rest B, which is provided at its rear side with parallel guide-rods *k k*, which fit in parallel bores in the head block or rest I. The ends of the said guide-rods are secured to cleats *n n* at the ends of the sliding rest, and the rear surface of the latter bears against the front surface of the said head block or rest, thereby holding the former firm, and at the same time allowing it to be moved laterally to suit the position of the tool which is being operated upon.

The dotted lines, which are shown at *n'* in Fig. 1, indicate the position of the sliding rest when it is moved to one side to accommodate the tool.

Thus we have provided a simple rest, which is capable of angular adjustment, and is designed to maintain small tools in the proper position to be sharpened; and we have also provided a sliding rest mounted on the stationary rest to hold larger tools, the said sliding rest being removable (by withdrawing the guide-rods *k k*) to enable the stationary rest to be used independently thereof.

This device enables the operator to hold the tool in position with one hand and turn the crank with the other, thereby obviating the necessity of two operators, and the crank

is mounted far enough from the grinding or contact surface of the stone to prevent the hand of the operator from coming in contact with the tool which is being ground.

In Fig. 2 our improved rest or holding device is shown in dotted lines in its folded position, as when removed from the grindstone for transportation, the advantage of this being that it may be placed in the tool-chest and carried from place to place by the carpenter. When folded, the bracing-arm rests in the groove of the guide, as clearly shown in the said figure.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In an adjustable rest for grindstones, the combination of a longitudinally-adjustable bed-plate, a head block or rest hinged to the front end of said bed-plate, a grooved guide D, carried by the bed-plate and provided with a clamping-screw, and a brace-arm connected to the head block or rest and fitting at the opposite end in said grooved guide and engaged by the clamping-screw, substantially as specified.

2. In a rest for grindstones, the combination of a bed-plate provided with longitudinal slots and carrying a hinged head block or rest, the set-screws arranged in said slots and engaging the frame of the grindstone, and the brace-arm connected to the head block or rest and engaged by a clamping-screw on the bed-plate, substantially as specified.

3. The rest for grindstones, consisting of an angularly-adjustable head block or rest and the removable sliding rest provided at its rear side with parallel guide-bars which are mounted in bores in the said head block or rest, substantially as specified.

4. In a rest for grindstones, the combination, with an angularly-adjusting head block or rest, of the laterally-adjustable sliding rest provided with end cleats, and the parallel guide-rods *k k*, secured at their ends to the said end cleats and mounted in bores in the said head block or rest, the rear surface of the sliding rest being arranged to bear against the front surface of the head block or rest, substantially as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

LESTER H. SUTTON.
ALBERT L. COLLINS.

Witnesses:
F. G. FISCHER,
A. A. HIGDON.