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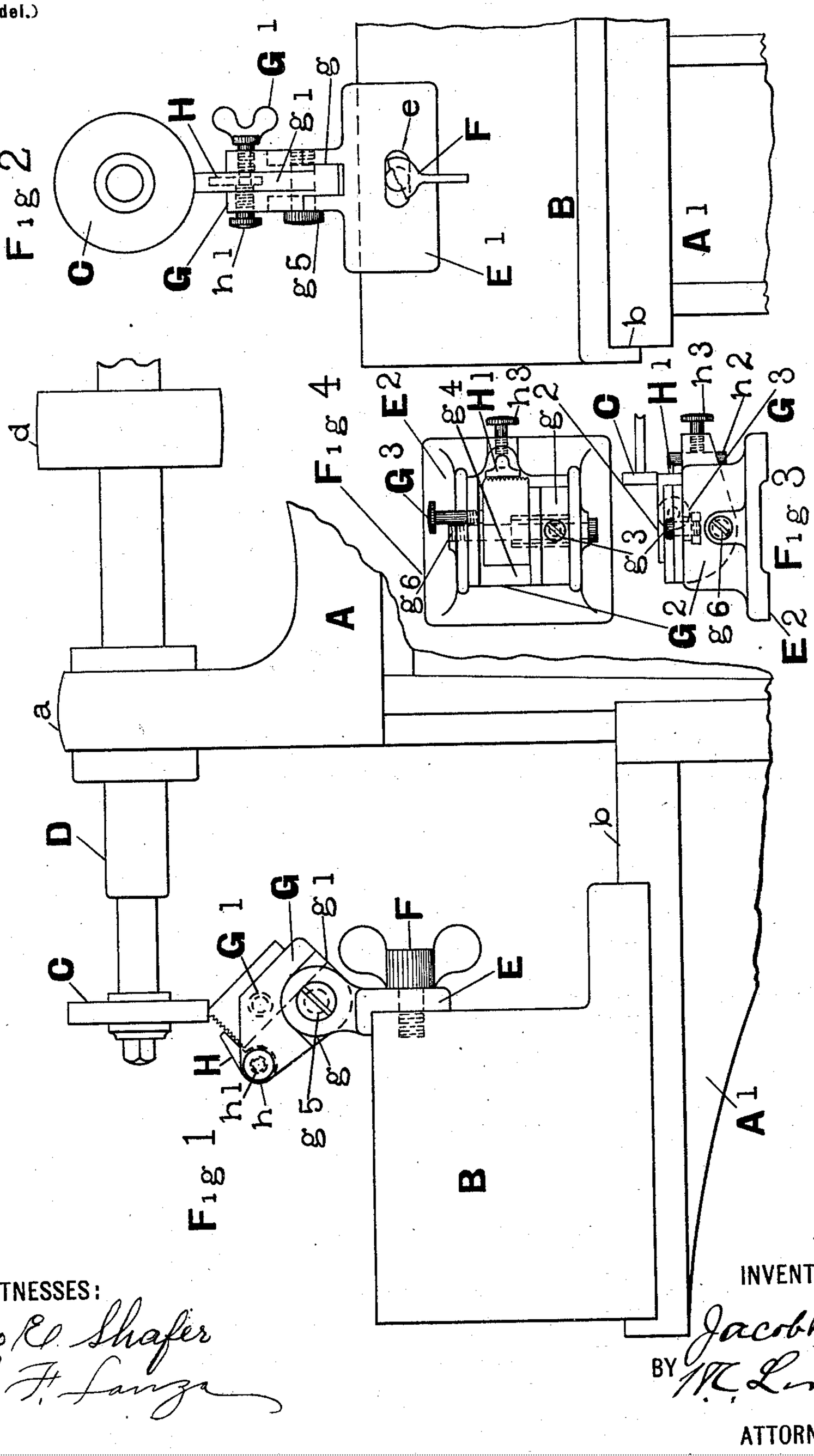
J. B. WALLACE.

CHASER GRINDING MACHINE.

(Application filed May 15, 1900.)

(No Model.)



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JACOB B. WALLACE, OF ERIE, PENNSYLVANIA.

CHASER-GRINDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 664,512, dated December 25, 1900.

Application filed May 15, 1900. Serial No. 16,819. (No model.)

To all whom it may concern:

Be it known that I, JACOB B. WALLACE, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Chaser-Grinding Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to chaser-grinding machines; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The object of the invention is to provide a means whereby a series of chasers may be properly gaged and ground as desired, so that they may be used interchangeably.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 shows a side elevation of the device. Fig. 2 shows a front elevation of the device. Fig. 3 shows a side elevation of an alternative construction. Fig. 4 shows a top plan of the same structure.

A marks the frame of the machine, which may be of any desired construction and has the work-table A′. Arranged on the work-table is the sliding block B, which is arranged to operate upon the guides *b*. The emery-wheel C is mounted upon the shaft D. The shaft D is journaled in the bearings *a a* on the frame. The drive-pulley *d* is provided for driving the emery-wheel. Arranged on the sliding block is a bracket E. This bracket is provided with a face-plate E′, in which is a slot *e*. A set-screw F is passed through this slot, which screws into the block B. A chaser-holder G is secured to the bracket E by means of the joint *g* and is clamped at any desired angle by means of the pivot-screw g^5. The chaser is placed in the slot *g′*, as shown in Fig. 2. A set-screw G′ is passed through the side of the slot *g* and is arranged to come into contact with a chaser in the slot *g′* as it is screwed in. The bottom of the groove forms a guide against which the chaser is placed before the set-screw is applied. In this way the angle at which the chaser is set may be accurately adjusted, so that a set of chasers may be accurately ground at the same angle. At the end of the holder there is arranged a gage H. This gage is arranged on the pivot *h* and is locked in any desired position by means of the screws *h′*. The purpose of swiveling or pivoting the gage H is to bring it into alinement with the tops of the chaser-threads. This is very important where chasers of varying angles are used, because if a stationary gage is employed a variation in the initial thread will so vary the position of the chaser in the clamp as to make a variation in the grinding of the chaser.

The device shown in Figs. 1 and 2 is designed for grinding the mouths of the chasers. In order to vary the clearance of the chaser, as well as the angle at which the mouth is cut, I have provided the slot *e*, which is hereinbefore described. By moving the bracket E along the sliding block B the position of the chaser relative to the axis of the emery-wheel may be so varied as to vary the clearance as desired.

In Figs. 3 and 4 I have shown a construction for grinding the faces of the chasers. In this a block E^2 is used and in the ordinary operation of the device this block is placed upon a flat surface of the machine and moved to its work by hand. Pivoted in this block is the chaser-holder G^2. This may be locked at any angle by the set-screw g^6, which screw forms the pivot. The block has the jaw g^2, which may be adjusted to different widths and set in position by the set-screw g^3. The clamping-screw G^3 passes into the holder opposite the jaw g^2. The chaser is placed in the groove g^4 and is positioned against the gage H′. The gage H′ is provided with a shank h^2, which is pivoted in the holder G^2. A set-screw h^3 is provided for locking the gage in any desired position. The purpose in pivoting the gage H′ is the same as the pivoting of the gage H—that is, to provide for accurately gaging chasers having a taper thread.

What I claim as new is—

1. In a chaser-grinding machine, the combination of a bracket; a chaser-holder pivotally secured thereto; and a pivoted gage on said holder, said gage being adapted to engage the face of a chaser in place in said holder.

2. In a chaser-grinding machine, the combination of a bracket; a chaser-holder pivot-

ally secured thereto; a pivoted gage on said holder; said gage being adapted to engage the face of a chaser in place in said holder, and means for locking the gage at different angles to the chaser-holding means.

3. In a chaser-grinding machine, the combination of the bracket, E; the chaser-holder, G, having the slot, g'; a clamping-screw, g^5; the pivoted gage, H; and means for locking the gage at the angles desired.

4. In a chaser-grinding machine, the combination of the grinding-wheel; the table, A′, having the guide thereon; the sliding block, B; a chaser-holder secured on said block; means for shifting said chaser-holder relatively to a plane passing through the axis of the emery-wheel for the purpose described; and means moving on a pivot perpendicular to the said plane passing through the axis of the wheel for varying the angle of the holder to vary the angle of the cut on the chaser.

5. In a chaser-grinding machine, the combination of the table, A′, having the guide thereon; the sliding block, B; a chaser-holder secured on said block; means for shifting said chaser-holder relatively to the axis of the emery-wheel for the purpose described; and a pivoted gage for positioning the chaser in the holder.

6. In a chaser-grinding machine, the combination of the table, A′, having a guide thereon; a sliding block arranged on said guide; the bracket, E, having the slot, *e;* the set-screw, F, for securing said bracket to the block, B; the chaser-holder, G, provided with a joint for securing it to the bracket, E; means for locking the chaser-holder at different angles; the clamping-screw, G′; the pivoted gage, H; and means for locking the gage at various angles.

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

JACOB B. WALLACE.

Witnesses:
R. F. LANZA,
H. C. LORD.