# A. G. RYKERT.

## Tool Holding Device.

No. 165,124. Patented June 29, 1875.

Fig. 1

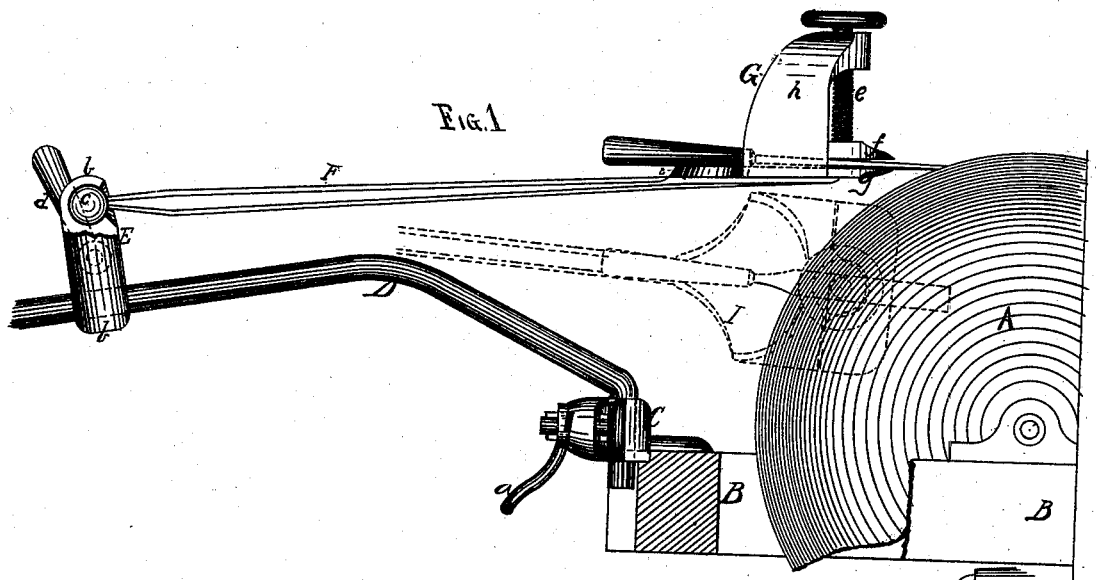



Fig. 2

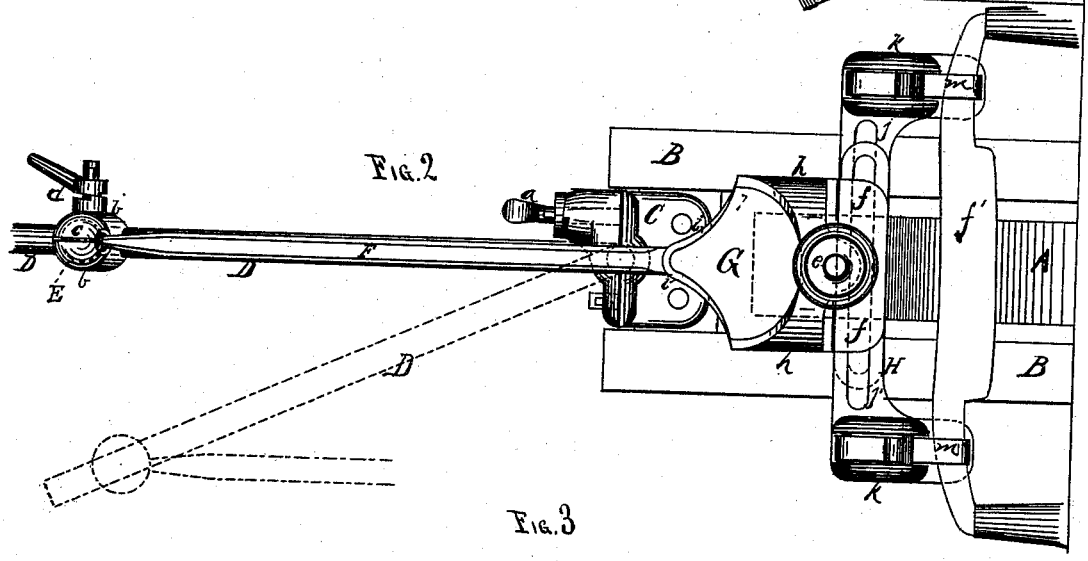
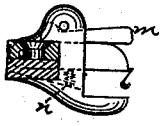



Fig. 3




Witnesses
C. N. Woodward.
T. C. Parsons

Alvaro G. Rykert.
Inventor, By
J. A. Drake, Atty.

# UNITED STATES PATENT OFFICE.

ALVARO G. RYKERT, OF ATTICA, NEW YORK.

## IMPROVEMENT IN TOOL-HOLDING DEVICES.

Specification forming part of Letters Patent No. **165,124**, dated June 29, 1875; application filed March 11, 1875.

*To all whom it may concern:*

Be it known that I, ALVARO GALUSHA RYKERT, of Attica, in the county of Wyoming and State of New York, have made certain Improvements in Devices for Holding Tools for Grinding, of which the following is a specification:

This invention consists in the construction and arrangement of the parts by which any variety of edge-tool is clamped and held at any angle for grinding on the stone, and by which a perfect bevel is obtained, as hereinafter explained.

In the drawings, Figure 1 is a side view; Fig. 2, a plan; and Fig. 3, a cross-section of the clamp for holding drawing-knives, &c.

A represents a grindstone set in the usual frame B. C is a clamping device secured to one end of the frame B, in which a bent rod, D, is held by an inclined cam-holder, *a*, or its equivalent, as shown. This rod D is bent in the form shown, and may be set at any angle desired by swinging to the right or left, as shown in dotted lines in Fig. 2. Another clamping device, E, is formed of two pieces, *b b*, and having a semicircular groove cut in each, between which the rod D is clamped. The upper ends of these pieces have semispherical cavities cut in each piece, which receive between them a ball, *c*, formed on the end of the grinding-rod F. This forms a ball-and-socket or universal joint. Between the rod D and the ball *c* an inclined cam-holder, *d*, is placed, similar to the one for holding the lower end of the rod D, by which the clamp may be secured to the rod D at any point desired, but will be so made that it will not clamp the ball, which must be left loose in order to obtain its proper action. Upon the other end of the grinding rod or bar F is secured a tool-holder, G, which consists of a bottom flat plate, *i*, having an arched top, *h*, through which a screw, *e*, works, provided at its lower end with a flat clamp, *f*, which, acting in conjunction with the lip *g* of the plate *i*, serves to clamp and hold any tool or article which it is desired to grind. By moving the ball-and-socket clamp E forward or back upon the bar D, the tool may be held at any angle with the stone desired, which is an important feature, and a perfect bevel is also obtained. In grinding certain tools, such as cold-chisels, the coarser kinds of drills, &c., and which deface the surface of stones and render them almost unfit for finer work, I turn the rod D off at an angle, as shown in dotted lines in Fig. 2, clamping it there, and then turn the holder G down by means of the universal joint E, so as to bring the tools to be ground against the side of the stone. (See dotted lines at I, Fig. 1.) This preserves the face of the stone for the finer work, while, at the same time, by the use of my device, the side of the stone may be used as well as the face. Another important function of the adjustable clamp is, that it may be turned down at any angle, to enable mowing-machine knives to be held upon the corners of the stone, and thus ground very evenly and quickly. In Fig. 2 a drawing-knife, *f*, is shown fastened in an oblong clamp or holder, H, which, in turn, is held in the clamp G. This clamp consists of two pieces, *j j*, slotted as shown, to enable them to be adjusted by screws, &c., to hold any length of knife or tool desired. The outer ends of these pieces consist of two lugs, *k k*, between which jaws *l l* are pivoted, which extend out beyond the lugs, and, by means of the wedges *m m* above them, clamp or hold the knife to be ground. Springs *n n* serve to throw the jaws open to more readily insert the tool or knife.

The ball-and-socket or universal joint is important, as it allows the operator to turn over the rod F (with the clamps G and H) to see the ground side of the knife while grinding it. The swinging bar D is very important, as it, being adjustable, keeps the blade always at right angles to the face of the stone. Another advantage of the bar D being adjustable at angles is, that butcher and carving knives, and other similar implements, may be ground easily by simply clamping their handles in the holder and allowing the blade to project beyond it. The device can be used for grinding smaller tools with only the tool-clamp G; but when drawing-knives, shaves, and other similar bladed instruments are to be ground, the holder H will be found necessary. The two will hold and guide any kind of mechanical or agricultural tool, blade, or knife. The cam-levers *a d*, used for the sev-

eral clamps, are important, as they do not wear out by grit and rust from the stone. Other devices are apt to.

I claim—

1. The combination of the swiveled bent rod D, ball-and-socket-joint clamp E, grinding-rod F, and a tool-holder, G, substantially as and for the purpose described.

2. In combination with the tool-holder G, the adjustable tool-clamp H, having the pieces *j j*, lugs *k k*, pivoted jaws *l l*, wedges *m m*, and springs *n n*, all as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

A. G. RYKERT.

Witnesses:

J. R. DRAKE,

T. H. PARSONS.