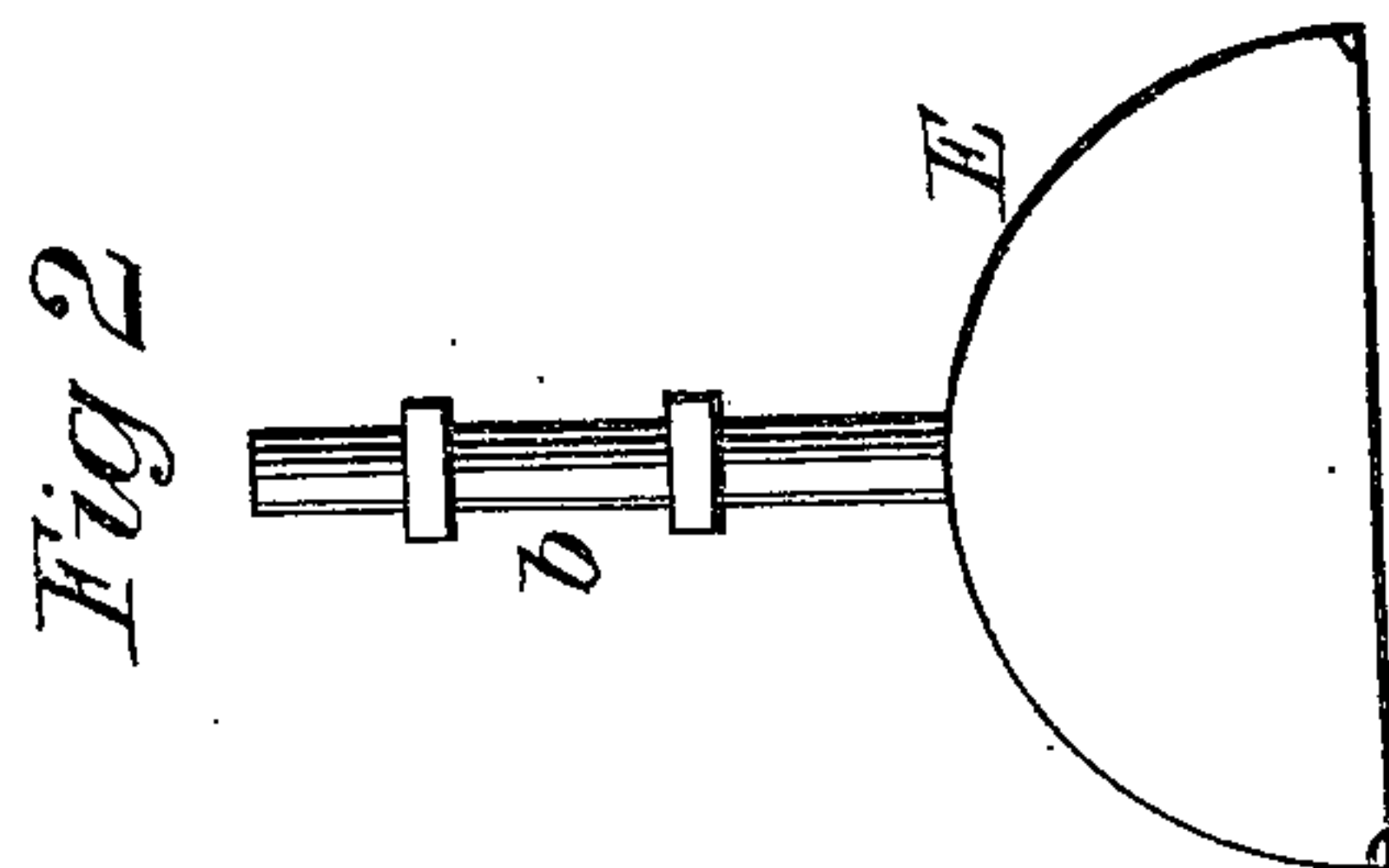
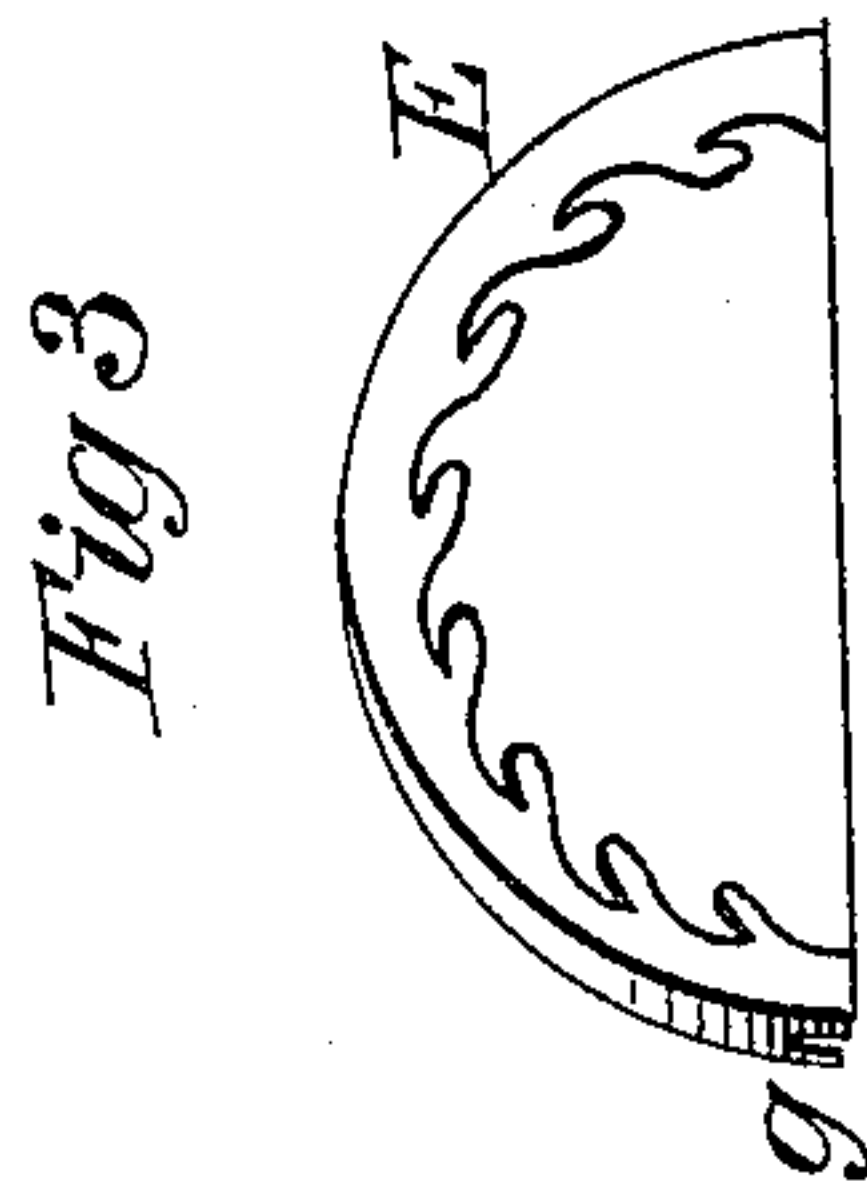
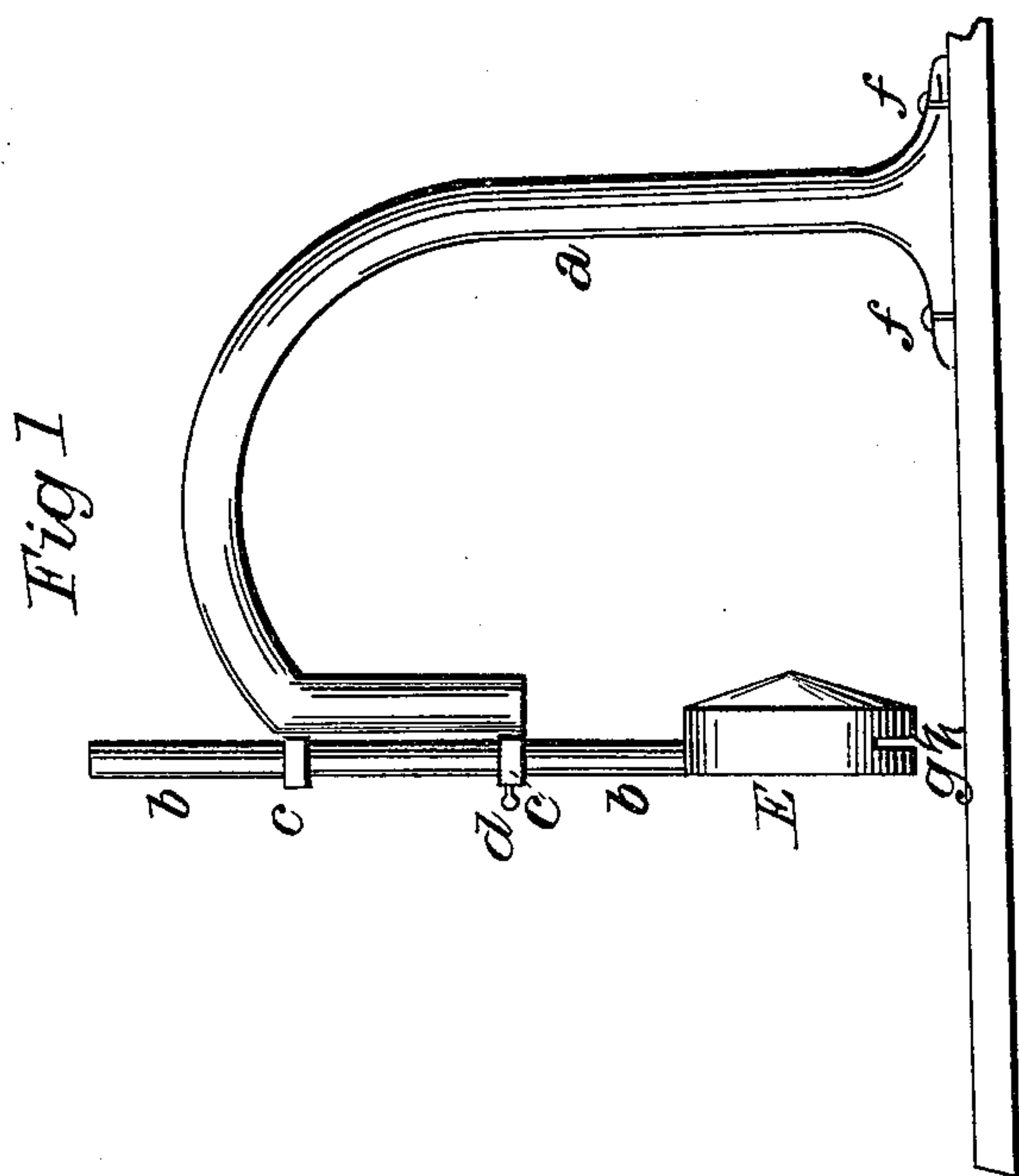


H. Gross,
Saw-Mill Appliance.
N^o 14,957. Patented May 27, 1856.



UNITED STATES PATENT OFFICE.

HENRY GROSS, OF TIFFIN, OHIO.

IMPROVED GUARD FOR CIRCULAR SAWS.

Specification forming part of Letters Patent No. 14,957, dated May 27, 1856.

To all whom it may concern:

Be it known that I, HENRY GROSS, of the city of Tiffin, in the county of Seneca and State of Ohio, have invented a new and useful apparatus to prevent injuries to workmen while using circular saws, and also to aid in securing the stick or board from raising up while being sawed, of which the following is a specification.

The circular saw is now used in all departments of modern manufacture, and is daily being introduced into some new department, bringing in contact with it a very considerable number of our best and most energetic working men and mechanics, who are continually suffering from the worst of injuries received while using this kind of saw. Not a shop in the States where the circular saw is used but what has connected with its history a catalogue, long or short, in proportion to the time of its standing or number of saws used, of names of such as have been maimed and crippled for life by the loss of fingers, hands, and sometimes of an arm arising from accidents while using the saw, and not unfrequently life itself is destroyed.

To provide against these accidents is the primary object of the invention aforesaid, and of which the following is a full and exact description, reference being had to the accompanying drawings and letters of reference marked thereon, also accompanying model.

The apparatus or invention aforesaid consists of a cast or wrought iron arm attached to the bench (in which the circular saw is confined) by screws, and may be set any required distance from the saw. This arm extends or projects over the saw, and to which is attached an upright shaft movable up and down through two clasps, to the lower end of which is attached the saw-guard, being a metal cap, of cast or wrought iron, sufficiently large to cover the saw entirely at its periphery and the side next the workman when using it, the opposite side being left open.

Figure 1 shows a side view of the arm, upright shaft, and saw-guard. Fig. 2 shows the closed side of the guard and shaft attached. Fig. 3 shows the open side of the guard, and which is opposite the workman when using the saw.

The circular-saw guard may also be attached to a vertical wooden shaft attached to

the frame-work of the building above the saw in any case where the arm would be an obstruction.

In constructing and using the circular-saw guard the arm *a*, Fig. 1, is firmly attached to the bench by screws *f f*, and which is bent forward in a curved line to *c* when it changes to *a*, perpendicular. At *c c* are two clasps through which the upright shaft *b* slides, and in the lower one is a thumb-screw by which the height of the guard or cap is adjusted. *E* is this cap, sufficiently large, as before stated, to cover the saw, with sufficient play to the saw, and is open on the inner side, as shown in Fig. 3, with a rim on the top and around the entire cap (except the base) about two inches wide. At each end of the cap is a slot, (seen at *g*, Fig. 3,) through which the teeth of the saw can be seen for the purpose of adjusting the gage when using the saw. At this point a small friction-roller is also used to aid in carrying forward the stick which is being sawed and to prevent it from lodging against the cap should it by any means come in contact with it.

When using this guard, the cap is raised up the required height, which is in proportion to the thickness of the plank or stick to be used, and secured in its place by the thumb-screw *d*, Fig. 1, and by which screw the cap can be adjusted at any height needed. When not in use, the cap can be dropped entirely down upon the bench, covering the saw and affording to it complete protection.

The cap of the saw-guard, besides affording or providing ample protection to the workmen against the common and daily injuries arising directly from the teeth of the saw, will keep the plank or stick from rising up at the coming-out end, when the workman is obliged to release his hold on account of the near approach of the saw. Accidents of a very serious nature often occur from this cause, and it is believed that this guard will effectually remove the difficulty.

It will be seen that by no possible means can the hands or fingers of the workman be drawn into the saw by means of the coat or shirt sleeve, as is so common when the saw is open, as he cannot get his hand within an inch of the saw-teeth if he would, unless he purposely do it by reaching over upon the opposite side, or by putting his fingers into

the slot *g*; and it will also be seen that the cap is no obstruction to the working of the saw, as the gages on the stuff to be worked can be seen at all times through these slots.

Having fully described my said apparatus, I claim the mechanical construction and arrangement of the circular-saw guard, to wit:

The whole, in combination as a useful and novel invention, to protect the workman from

injury while working the saw, thereby keeping his hands and person away from the saw-teeth, and also preventing injury to him by keeping down the ends of the plank or stick while the saw is passing through it.

HENRY GROSS.

Witnesses:

R. G. PENNINGTON,
J. P. C. GRAFF.