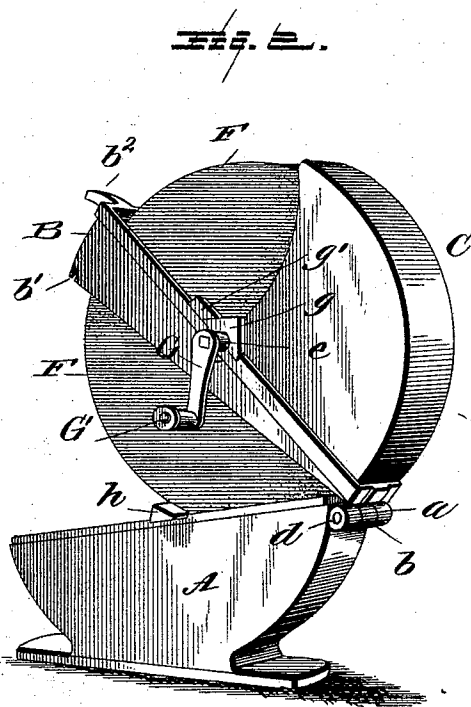
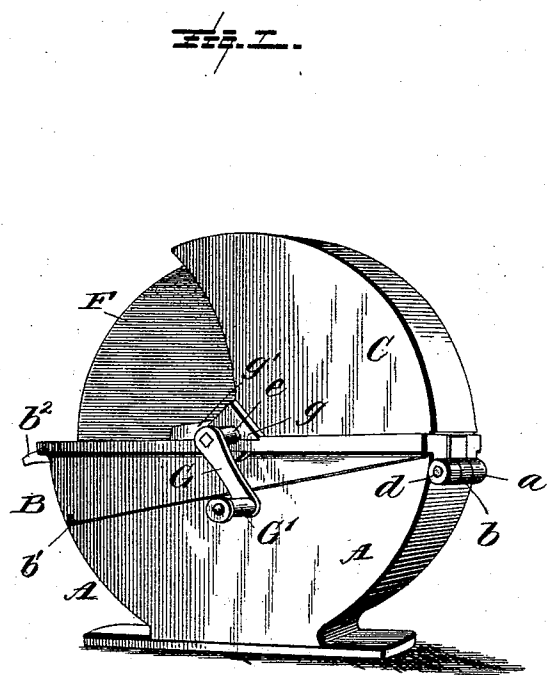


(No Model.)

C. GRAF-LINK.
CASING OR TROUGH FOR GRINDSTONES.

No. 498,647.

Patented May 30, 1893.



Witnesses

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UNITED STATES PATENT OFFICE.

CHRISTIAN GRAF-LINK, OF ROMANSHORN, SWITZERLAND.

CASING OR TROUGH FOR GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 498,647, dated May 30, 1893.

Application filed October 20, 1892. Serial No. 449,481. (No model.) Patented in Switzerland March 24, 1892, No. 4,766.

To all whom it may concern:

Be it known that I, CHRISTIAN GRAF-LINK, a citizen of Switzerland, residing at Romanshorn, Switzerland, have invented certain new and useful Improvements in Casings or Troughs for Grindstones, (for which I have obtained Letters Patent of Switzerland, No. 4,766, dated March 24, 1892;) 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.

My invention relates to certain new and useful improvements in casings or troughs for grindstones, and especially to troughs applicable to that class of grindstones used by jewelers and opticians, and in which the stone or wheel is partially submerged in the water.

The main object of the invention is the provision of a trough of such construction that when not in use the stone can be supported out of contact with the water in said trough.

The great disadvantage arising from the employment of grindstones now in use in the shops of mechanics, watch-makers, jewelers, opticians, &c., is that the stones soon become uneven, by reason of holes, and cannot be used until they are turned anew. This operation, however, is toilsome, and has to be frequently repeated, which causes the stone to wear out in a short time. This uneven wearing of a stone is due to the fact that a portion of its surface is constantly in the water, and, as it never has a chance to dry thoroughly, it soon softens. Consequently, when the stone is in use, this part constantly in the water wears away faster than those portions of the stone which are exposed to the air and which remain dry when not in use. I have also found that those portions of the stone which are thus submerged in the water in the trough gradually disintegrate and dissolve, and thus render the stone unfit for long service.

Another disadvantage arising from the use of the present grindstones is that when an eye-glass or other small article drops into the trough the whole grindstone must be taken apart before the article can be removed.

The present invention is intended to overcome these disadvantages, and is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a casing

or trough constructed in accordance with my invention, and with the stone in position for use; and Fig. 2 is a similar view showing the stone supported out of contact with the water in the trough.

Like letters of reference indicate like parts in both views.

A is the trough for the stone, and may be provided with a flat base, as shown, or mounted upon a suitable support. This trough is preferably made higher at the rear than in front, so that the top edges thereof slope slightly downward, as shown. To the back or rear edge of the trough is secured the knuckle *a* of a hinge. The frame B carries the other knuckle *b* of said hinge; and the trough and the frame are secured together by the pintle *d* passed through the registering openings in the two knuckles. This frame is provided at the centers of its side edges with the lower semi-bearings for the reception of the shaft *e* carrying the grinding stone or wheel F. A casing or hood C is mounted upon the frame B to cover the rear upper portion of the stone and to prevent escape of the water thrown from the face thereof. A crank G and handle G' are also provided for the purpose of turning the stone. The upper semi-bearings for the shaft are formed in the extensions or tongues *g* of the hood C. These tongues are cast integral with the hood and are adapted to engage and co-operate with undercut recesses, formed in the frame B by the overhangs *g'*, to lock the hood to the frame.

As shown in the drawings it will be seen that the frame B is practically a continuation of the trough A, and that the meeting-edges of the two parts form a water-tight joint. The lower front edge of the frame B is also provided with catches *b'*, for the purpose of securing the frame and the trough still more firmly together. A handle *b²* is also formed upon the upper front edge of the frame for the purpose of raising the same out of engagement with the trough, and thereby preventing contact of the stone with the water in the trough when the stone is not in use.

The operation of my invention will be readily understood from the above description. When in use the grindstone is in the position shown in Fig. 1, with a portion of the stone

submerged in the water in the trough A. When not in use the frame B is raised by means of the handle b^2 until the stone F is out of contact with the water, and the stone 5 is then held in its raised position by means of a stave h laid across the top of the trough, as shown; or it may be held in any other desired manner—as, for instance, by elbow-joint connections between the trough and the 10 frame.

In a grindstone constructed in accordance with my invention the stone can be kept out of contact with the water at all times when not in use. By this means I prevent softening—and consequently uneven wearing or 15 disintegration—of the portion of the stone that ordinarily is in contact with the water when not in use. The advantage of this will be apparent, especially when it is considered 20 that the water contained in the trough usually holds in solution acid impurities—derived from articles ground by the stone—sufficient to disintegrate mineral substances exposed to their action. Besides, when a lens 25 or other small article that is being ground drops into the trough it can be removed readily—without pouring out the water in the trough and turning the grindstone upside down—by simply raising the frame from the 30 trough.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A casing or trough for a grindstone, comprising a trough proper having a suitable base 35 or support, and a frame normally resting upon said trough and hinged thereto at one end and adapted to support a grinding stone or wheel, substantially as described.

2. A casing or trough for a grindstone, comprising a trough proper having a suitable base 40 or support; a frame normally resting upon said trough and hinged thereto at one end and adapted to support a grinding stone or wheel; and a hood mounted upon said frame 45 and adapted to be raised therewith, substantially as described.

3. A casing or trough for a grindstone, comprising a trough proper having a suitable base 50 or support; a frame mounted upon said trough and hinged thereto and having lower semi-bearings adapted to receive the shaft of the grinding stone or wheel; and a hood mounted upon said frame and having corresponding 55 upper semi-bearings, substantially as described.

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

CHRISTIAN GRAF-LINK.

Witnesses:

T. SCHWEIZER,
T. BANNAM.