C. F. LANDOLT.

GUARD FOR EMERY WHEELS.

APPLICATION FILED MAY 20, 1913.

1,079,180.

Patented Nov. 18, 1913

2 SHEETS—SHEET 1.

Fig. 1.

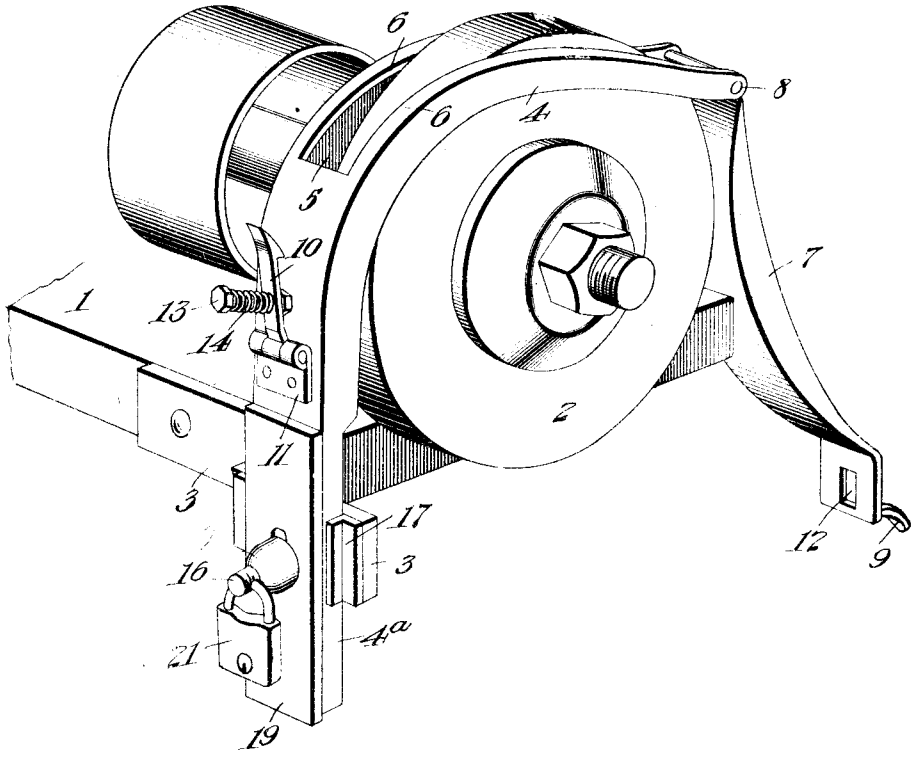
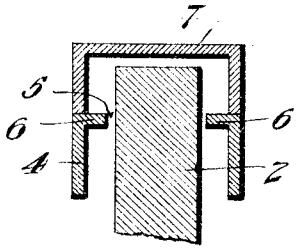


Fig. 4.



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2 SHEETS-SHEET 2.

Fig. 2.

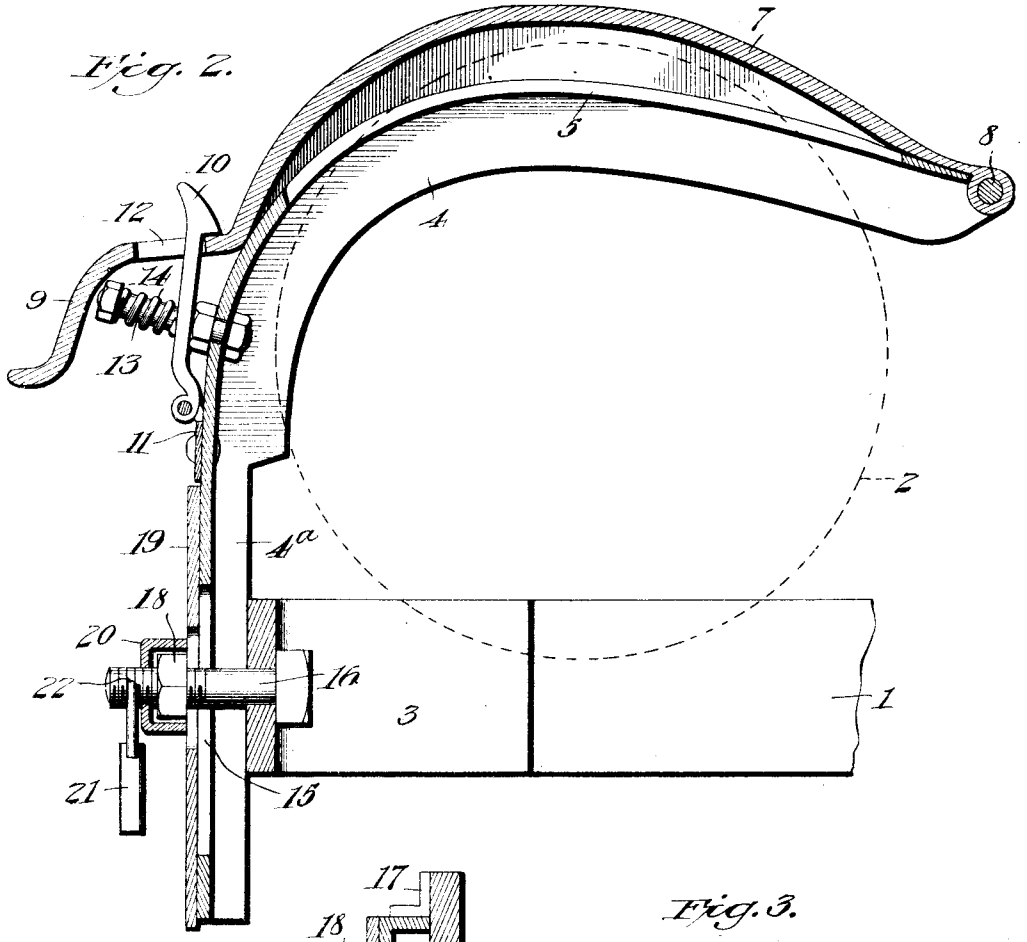
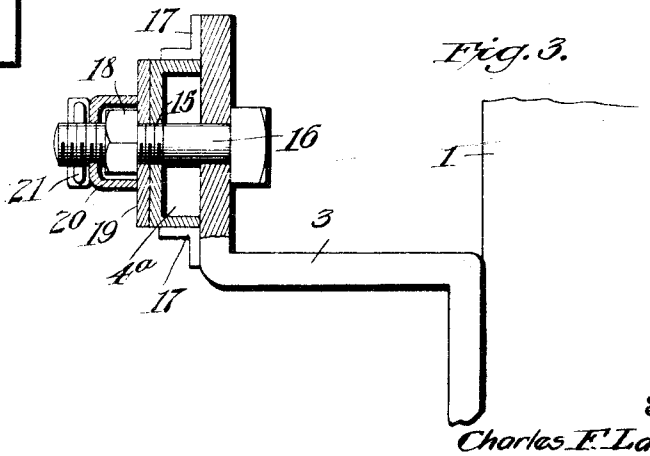


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES F. LANDOLT, OF YOUNGSTOWN, OHIO, ASSIGNOR OF ONE-THIRD TO ADOLF H. SCHAFFERT AND ONE-THIRD TO EMIL KERNER, BOTH OF YOUNGSTOWN, OHIO.

GUARD FOR EMERY-WHEELS.

1,079,180. Specification of Letters Patent. Patented Nov. 18, 1913.

Application filed May 20, 1913. Serial No. 768,888.

To all whom it may concern:

Be it known that I, CHARLES F. LANDOLT, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Guards for Emery-Wheels, of which the following is a specification.

The present invention relates to a guard for emery wheels and like devices which may require some protective agency to prevent injury or accident to workmen and employees in the shop where the emery wheels are installed, the object of the invention being to provide a guard of this character which embodies novel features of construction whereby an effective shield is provided for the emery wheel, and whereby unauthorized tampering with the guard is rendered impossible.

Further objects of the invention are to provide a guard for emery wheels which is comparatively simple and inexpensive in its construction, which can be readily applied to the emery wheel or removed therefrom, which can be adjusted according to the requirements of various sizes of emery wheels and also to compensate for wear, and which may be locked in position so as to prevent tampering with or unauthorized removal thereof.

With these and many other objects in view, which will more readily appear as the description of the case proceeds, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated, and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of a guard for emery wheels constructed in accordance with the invention, the cover being thrown forward to expose the top of the wheel for grinding purposes. Fig. 2 is a longitudinal sectional view through the device. Fig. 3 is a horizontal sectional view through the locking mechanism for preventing tampering with the adjustment. Fig. 4 is a transverse sectional view through the body portion of the guard.

Referring to the drawings, the numeral 1 designates the stand or support upon which the emery wheel 2 is mounted, the said members being or any conventional or approved construction. Any suitable means may be provided for mounting the guard upon the stand 1, although in the present instance, a bracket 3 is provided for this purpose. This bracket is shown as having a substantially Z-shaped formation, one of the arms of the bracket being bolted or otherwise secured to the stand 1, while the other arm has the guard applied thereto.

The guard proper comprises a body portion 4 which is adapted to extend over the emery wheel and is preferably slightly curved, although the degree of curvature is less than that of the emery wheel. A slot or cut-away portion 5 is provided in the body portion 4 and a portion of the periphery of the emery wheel 2 projects or extends through this slot so as to be exposed above the guard. Side flanges 6 project inwardly from opposite edges of the body portion 4 along the sides of the emery wheel 2 and serve both as a reinforcing means for the guard and as an increased shield for the emery wheel.

According to the embodiment of the invention suggested in the drawings, it will be observed that the slotted part 5 of the guard proper is designed to be inclosed and covered by a suitably mounted cover capable of being moved to a position entirely out of the way when it is desired to have the upper portion of the emery wheel freely exposed through the slot 5. Various kinds of covers may be utilized for this purpose, as well as covers mounted in different ways, but a preferred and practical embodiment of this feature of the invention is shown in the drawings wherein the cover 7 is illustrated as being of a hollow or channeled formation, having one end thereof hinged upon a pivot pin 8 located at the end of the guard body, while the opposite end of the cover is extended outwardly as at 9 to provide a finger piece. Referring to the functions of the said cover 7 in connection with the slotted part 5 of the guard, it is to be noted that the said slot 5 is designed to permit the upper portion of the emery wheel to project through it, thereby permitting an operator to grind such work on the top of the emery wheel as can not be ground upon the front portion thereof. Under these conditions, that is when the emery wheel is being used at the top por-

tion thereof, the hollow or channeled cover 7 is thrown forward so as to give the necessary access to the top portion of the wheel, while at the same time covering or guarding the front portion of the wheel as may be plainly seen from Fig. 1 of the drawings. Precisely the same conditions prevail when the operator desires to grind on the front side of the emery wheel, because when the wheel is to be used in this way, the cover is closed over the slotted upper portion of the guard as plainly shown in Fig. 2 of the drawings thereby guarding the top portion of the wheel, and at the same time permitting the free use of the front portion thereof. It will, therefore, be observed that in both of the above described uses, the emery wheel is so guarded that not more than one portion thereof is exposed at any one time and that not more than one person can grind on one wheel at the same time, with the result of maintaining a maximum condition of safety in the use of an emery wheel. While different expedients may also be resorted to for securing or holding the cover in its closed position over the slotted part of the guard 7, a preferable means employed for this purpose is to utilize a suitable latch. For illustrative purposes, one form of latch that may be employed is shown in the drawings and designated by the numeral 10. This latch 10 is shown as hinged to a plate 11 which is secured to the guard 4, the nose of the latch being adapted to project through an opening 12 in the outwardly extended finger-piece 9 of the cover 7 and to engage the edge of the said opening to hold the cover in a closed position. A guide bolt 13 projects outwardly from the guard 4 and passes loosely through an opening in the latch 10, a coil spring 14 which surrounds the guide bolt being interposed between the head thereof and the latch, for the purpose of holding the latch yieldingly in an operative position. The end of the nose or latch is beveled in the usual manner for engagement with the edge of the opening 12 to force the latch outwardly against the action of the spring 14 preparatory to the engagement of the latch with the edge of the opening when the cover 7 is swung into a closed position. When it is desired to open the cover for the purpose of obtaining access to the top portion of the emery wheel, it is merely necessary to draw the latch 10 rearwardly and to swing the cover into an open position.

The body portion 4 of the guard is formed with a downwardly projecting extension 4^a which is adjustably connected to the bracket 3 to admit of the guard being vertically adjusted to compensate for the wear of the emery wheel or to make proper adjustment for various sizes of emery wheels. This extension 4^a is slotted at 15 to receive a clamping bolt 16 which projects from the bracket 3. Guide flanges 17 are also provided upon the bracket 3 for engagement with opposite sides of the extension 4^a, the said guide flanges serving to hold the extension 4^a in an upright position and to prevent rotation thereof about the clamping bolt 16. A nut 18 is applied to the bolt 16 and after the guard has been properly positioned this nut is tightened to clamp the guard in position. In the present instance, a slotted plate 19 is shown as interposed between the clamping nut 18 and the extension 4^a, although this plate may be omitted if found desirable.

It is also contemplated to provide means for preventing any tampering with the adjustment of the guard or the complete removal thereof from the emery wheel by an unauthorized workman. For this purpose, a hollow shield 20 is provided, the said shield having an opening to receive the bolt 16 and being adapted to completely house the clamping nut 18. After this hollow shield 20 has been placed in position, the shackle of a pad-lock 21 is inserted through a transverse opening 22 in the end of the bolt. This pad-lock holds the hollow shield 20 in position upon the bolt 16, and it is then impossible to apply a wrench or other tool to the clamping nut 18 for the purpose of loosening the same. It will thus be obvious that any tampering with the adjustment of the guard or unauthorized removal thereof is impossible.

From the foregoing, it will be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention, and it will also be understood that various structural modifications may be employed, both as to the character and mounting of the cover and as to the latching and locking means therefor without affecting the essential features of the invention herein pointed out.

I claim:

1. A guard attachment for emery wheels, including a member adapted to be arranged adjacent the exposed top portion of the wheel, and a movable cover mounted on said member and arranged to occupy either of two positions for shielding the front or top portions of the wheel.

2. A guard for emery wheels, including a body portion adapted to extend over the wheel and having a cut-away portion through which the periphery of the wheel is exposed, a protective cover mounted upon the body portion, and fastening means for the cover.

3. A guard for emery wheels, including a flanged body portion adapted to extend over the wheel and provided at an intermediate

point with a slot through which the periphery of the wheel projects, a hollow cover hinged to the body portion and adapted to shield the part of the wheel which is not in use, and latch means for holding the cover in a closed position.

4. A guard for emery wheels, including a body portion adapted to extend over the wheel and formed with a slot through which the periphery of the wheel projects, a cover hinged at one end thereof to the body portion and having the opposite end thereof provided with an outwardly extending finger-piece, the said cover being adapted to shield the portion of the wheel which is not in use, a latch adapted to engage the finger-piece to hold the cover in one position, a guide pin projecting from the guard and loosely engaging the latch, and a spring mounted upon the guide pin and engaging the latch to hold the latch yieldingly in an operative position.

5. An adjustable guard for emery wheels, including the guard proper, clamping means for holding the guard proper in an adjusted position, a removable housing inclosing the clamping means, and locking means for securing the housing in place.

6. An adjustable guard for emery wheels, including a clamping nut for holding the guard in an adjusted position, a hollow shield inclosing the nut to prevent tampering therewith, and means for holding the hollow shield removably in position.

7. An adjustable guard for emery wheels, including a bolt having an opening in the end thereof, a clamping nut threaded upon the bolt, a hollow shield applied to the bolt and adapted to inclose the nut to prevent tampering therewith, and a pad-lock having the shackle thereof inserted through the opening of the bolt to hold the hollow shield in position.

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

CHARLES F. LANDOLT.

Witnesses:
H. R. GLENN,
O. D. KAISER.