

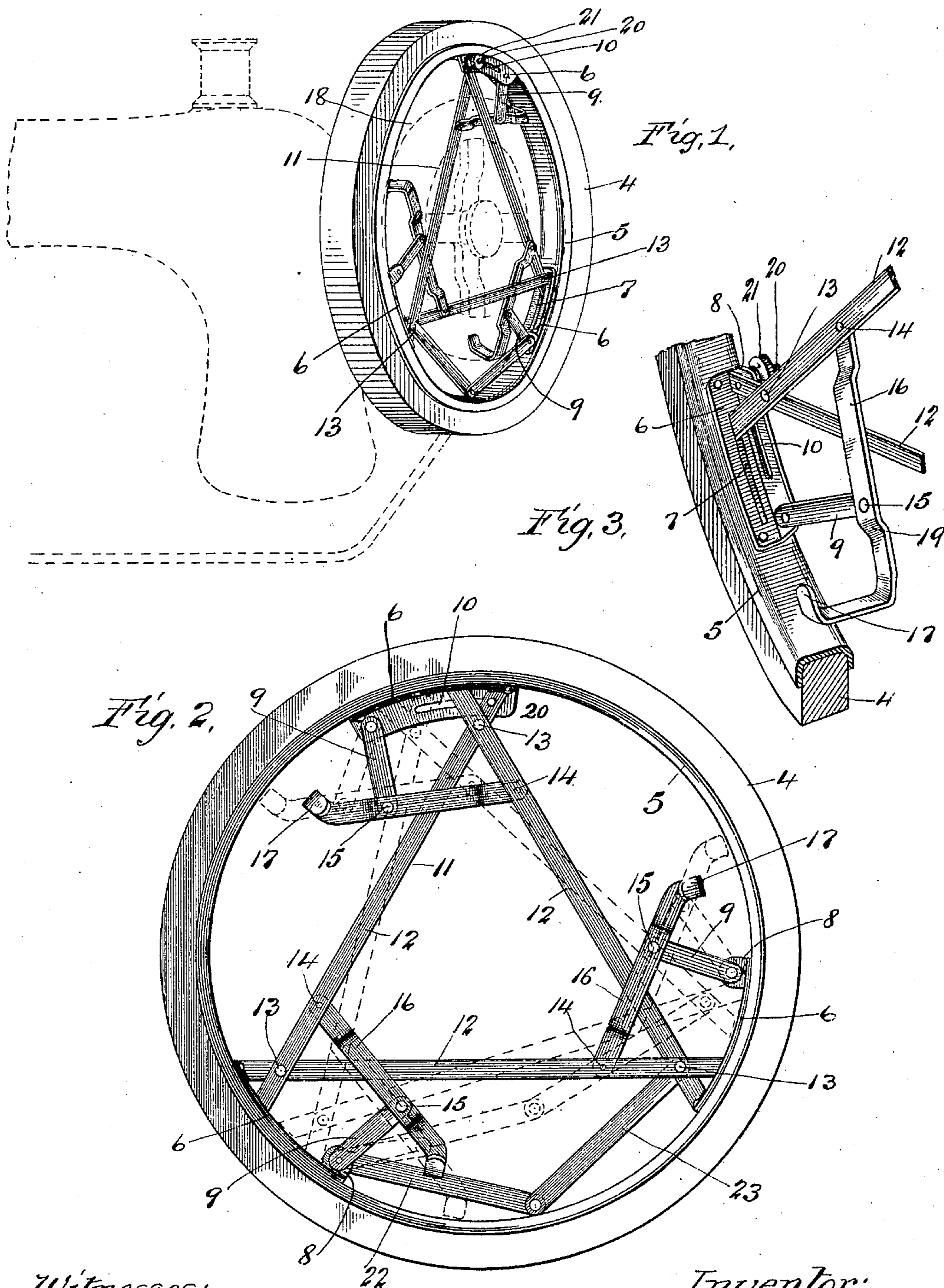
No. 692,335.

Patented Feb. 4, 1902.

W. E. PARKER.
GRINDING OR POLISHING ATTACHMENT.

(Application filed May 20, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WALTER EDWARD PARKER, OF ST. LOUIS, MISSOURI.

GRINDING OR POLISHING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 692,335, dated February 4, 1902.

Application filed May 20, 1901. Serial No. 61,067. (No model.)

To all whom it may concern:

Be it known that I, WALTER EDWARD PARKER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have
5 invented certain new and useful Improvements in Grinding or Polishing Attachments; and I do declare the following to be a full, clear, and exact description of the invention, such
10 as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 My invention relates to a novel annulus for grinding or polishing made out of emery or any other suitable substance and provided with a clamping mechanism by which it can be readily and securely clamped over or sub-
20 stantially over the periphery of a wheel, the clamping mechanism being so shaped and located as to cooperate with both sides of the wheel to which it is secured and preferably so constructed as to be adapted to cooperate
25 with wheels of different diameters within certain limits.

Referring to the accompanying sheet of drawings, in which the same reference characters are used to designate identical parts in
30 all the figures, Figure 1 is a perspective view showing the attachment secured to the fly-wheel of a sewing-machine, the portion of the sewing-machine illustrated being shown in dotted lines to prevent confusion between the
35 parts of the machine and the attachment. Fig. 2 is an inside elevation of the attachment with the clamping mechanism shown in its closed position in full lines and in its open position in dotted lines, and Fig. 3 is a per-
40 spective view of a portion thereof on a larger scale.

The annulus 4, which is composed of emery or any other desired abrading or polishing material, is secured in any suitable manner
45 in the channel of the shallow U-shaped rim 5, which is preferably made of metal. Secured on the under surface of the channel 5 at equidistant intervals are a series, preferably three, of guiding-strips 6, which are secured
50 to the rim in any suitable manner, as by riveting them thereto. These strips 6 are provided with the elongated recesses 7 therein,

which form guiding-channels for the purpose to be described. These strips 6 are also provided with the inwardly-projecting ears 8, to
55 which are pivoted the links 9, for a purpose to be described. One of these strips has the ear 8 extended the length thereof and provided with the slot 10 therein, which is concentric with the rim, which is employed for a
60 purpose to be described. It will be apparent that instead of employing a separate strip 6 I might form it integral with the rim 5 or even form the channel 7 in the rim itself. Mounted to rotate within the rim is a frame 11,
65 which is preferably triangular and preferably composed of three strips or bars 12, which cross each other near their ends and are riveted or secured together, as by the rivets 13. One end of each of the bars preferably takes into the
70 channel 7, so that the frame will be guided thereby, and the adjacent end of the other strip is cut off at such a length and at such an angle that it will rest on the strip 6 and form an additional bearing and guide. Pivoted to
75 each of the bars 12 at 14 and to each of the links 9 at 15 is a clamping-lever 16, which has its free end in the form of a hook, its extreme outer end 17 being so arranged as to have its inner surface bear on the inner side of the wheel
80 18 of the machine to which it is attached. It is offset, as seen at 19, so that the other side of the wheel to which it is attached instead of contacting with the clamping-lever 16 will contact with the bar 12, to which the
85 clamping-lever is pivoted. As the frame 11 is turned from the dotted-line position of Fig. 2 to the full-line position it will be seen that the bearing portions of the clamping-levers 16 will be drawn somewhat closer together,
90 the movement, especially during the innermost motion thereof, being substantially tangential relative to the wheel 18, to which it is to be attached. It will be apparent that the amount of play given to the parts will
95 permit of the clamping-levers adjusting themselves to different sizes of wheels within a certain limit, and it will be apparent that the limit of movement in either direction will be controlled by the length and position of
100 the channels 7.

To secure the attachment in the position in which it is set, I provide a screw-threaded pin 20, which is rigidly secured to or formed

integral with the end of one of the bars 12 in the proper position to project through and slide in the slot 10 as the frame is rotated. A thumb-nut 21, coöperating with this screw-threaded pin 20, serves to securely clamp the frame in any desired position of adjustment. As a convenient means of rotating the frame I pivot to the opposite side of one of the lugs 8 from that to which the link 9 is pivoted a link 22, which in turn is pivoted to a link 23, which in turn is pivoted conveniently to one of the pivots 13, so that the links 22 and 23 will have a toggle action in rotating the frame in either direction.

By the employment of the clamping mechanism herein shown it will be seen that I have produced an extremely simple and yet effective clamping device, which will secure the annulus herein shown or any equivalent mechanism to a wheel, accurately centering it thereon.

While I have shown my invention as applied to the attachment of a grinding or polishing annulus to a wheel, such as the fly-wheel of a sewing-machine, it will be understood that the movement could be employed in other clamping mechanisms for other purposes.

While I have shown my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that I do not desire to be limited in the interpretation of the following claims to the exact details of construction herein shown and described, but only so much as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a device of the class described, the combination with the rim, of the frame mounted to rotate therein, and clamping members pivotally connected to said frame and adapted to swing about their pivots to bring said members nearer to or farther from a central point; substantially as described.

2. In a device of the class described, the combination with the rim, of the frame mounted to rotate therein, the clamping members connected to said frame to be moved thereby relative to a central point, and means for locking said members in any desired position of adjustment, substantially as described.

3. In a device of the class described, the combination with the rim, of the frame mounted to rotate therein, the clamping members connected to said frame to be moved thereby relative to a central point, and means for locking said frame and thereby said members in any desired position of adjustment.

4. In a device of the class described, the combination with the rim, of the frame mounted to rotate therein, and clamping members

connected to said frame and rim and movable to clamp a wheel or disk between said members and said frame; substantially as described.

5. In a device of the class described, the combination with the rim, of the frame mounted to rotate therein, the clamping members pivoted to said frame, the links pivoted to the rim and to the clamping members, and means for locking said frame in any desired position of adjustment; substantially as described.

6. In a device of the class described, the combination with the rim carrying the guide-channels 7, the frame 11 having its corners adapted to enter said channels and to be guided thereby as it rotates relative to the rim, and clamping members connected to said rim and said frame; substantially as described.

7. In a device of the class described, the combination with the rim, of the frame mounted to rotate relative to said rim, clamping members connected to said rim and frame and adapted to be moved thereby, and the toggle-levers connected to said rim and said frame for rotating the frame; substantially as described.

8. In a device of the class described, the combination with the rim having the ear 8 with the slot 10 therein, of the frame mounted to rotate relative thereto and having the pin 20 projecting through said slot 10, the clamping members connected to said frame and rim so as to be moved by the rotation of the frame, and the thumb-nut 21 coöperating with the screw-threaded pin 20 to clamp the frame in any desired position of adjustment.

9. In a device of the class described, the combination with the rim, of the frame mounted to rotate relative to said rim, the links 9 pivoted to the frame, and the clamping members 16 pivoted to the frame and to the links 9 and having the hooked end with the portion 17 adapted to bear against one side of a wheel while the other side thereof is pressed against the frame; substantially as described.

10. In a device of the class described, the combination with the rim, of the frame mounted to rotate relative to said rim, the links 9 pivoted to the frame, and the clamping members 16 pivoted to the frame and to the links 9 having the hooked end with the portion 17 adapted to bear against one side of a wheel while the other side thereof is pressed against the frame, and means for securing said frame in any desired position; substantially as described.

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

WALTER EDWARD PARKER.

Witnesses:

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