

(No Model.)

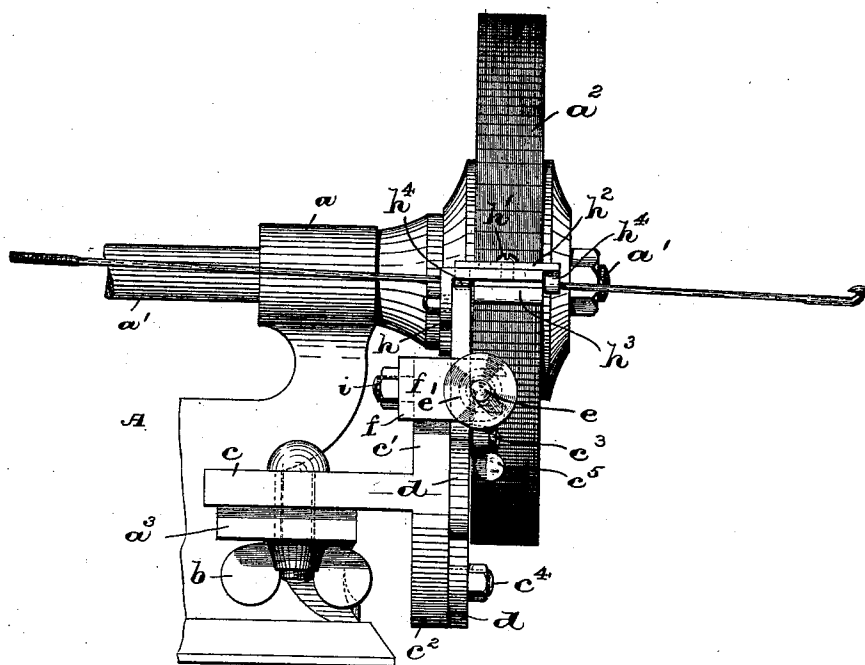
2 Sheets—Sheet 1.

F. A. PHILLIPPI.

ATTACHMENT FOR POLISHING OR BUFFING MACHINES.

No. 568,545.

Patented Sept. 29, 1896.



(No Model.)

2 Sheets—Sheet 2.

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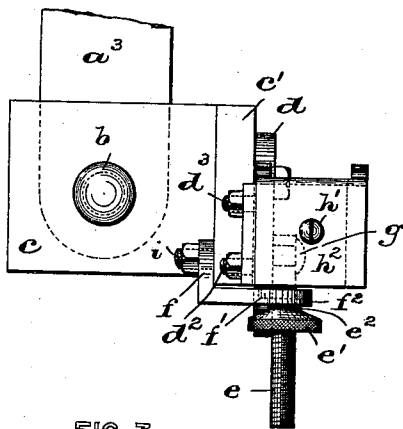


FIG. 3

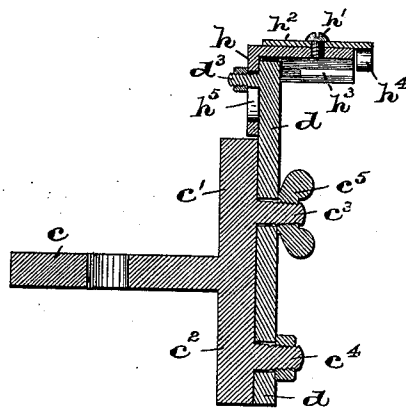


FIG. 4

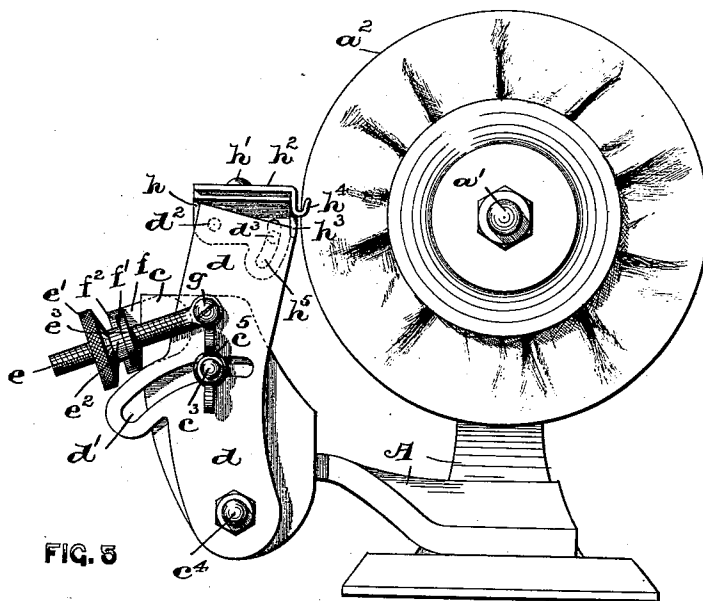


FIG. 5

WITNESSES:

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ATTACHMENT FOR POLISHING OR BUFFING MACHINES.

SPECIFICATION forming part of Letters Patent No. 568,545, dated September 29, 1896.

Application filed January 29, 1896. Serial No. 577,222. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. PHILLIPPI, a citizen of the United States, residing at Pottstown, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Attachments for Polishing or Buffing Machines; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has reference more particularly to a novel form of attachment for buffing or polishing machines, and is adapted for the holding of bicycle-spokes or other straight pieces of wire, such as needles, which are to be polished, against the periphery of the polishing or buffing wheel of the machine.

The primary object of my invention, therefore, is to construct a simple and compact device or attachment for holding the spokes or other straight pieces of wire in such a manner against the polishing or buffing wheel that they will be properly and uniformly polished.

Another object of this invention is to provide an attachment for the purpose hereinabove stated, but which is provided with an adjustable mechanism for bringing the wire or spoke against the buffing-wheel when the latter is running at a high speed.

The novelty of my invention therefore consists in the construction, various adjustments, and arrangements of parts, such as will be hereinafter fully set forth, and finally embodied in the clauses of the claim.

In the accompanying sheets of drawings, Figure 1 represents in front elevation a buffing or polishing wheel, the spindle thereof and the standard and bearing of the machine of the usual and well-known forms of construction, but being represented only in part, and said view clearly representing in front elevation my novel construction of holding and polishing device attached to the standard or frame of the machine. Fig. 2 is a side view of all of said parts. Fig. 3 is a top view of the attachment and part of a bracket which extends from the side of the standard of the

machine and to which said attachment is secured. Fig. 4 is a vertical section of the attachment, taken on line *x* in Fig. 2. Fig. 5 is a view similar to that illustrated in Fig. 2, but showing the holding attachment in an adjusted position against the circumferential edge of the buffing or polishing wheel when the latter has become smaller by constant wear.

Similar letters of reference are employed in all of said above-described views to indicate corresponding parts.

In said drawings, *A* indicates the usual form of standard of a buffing-machine, provided with the bearings *a*, only one of which is shown in the drawings, and the spindle *a'*, running in said bearings. On said spindle *a'* is secured any one of the well-known forms of buffing or polishing wheels *a''*, substantially as illustrated in Figs. 1, 2, and 5.

Extending from one side of the standard *A* of the machine is a suitable projection *a'''*, provided with a perforation, as clearly illustrated in dotted outline in said Figs. 1 and 2. Upon this projection I have secured, by means of a suitable thumb-screw or other screw-bolt *b*, my novel form of attachment for supporting the spoke or other wire and bringing it against the buffing-wheel to be polished. Said attachment or device comprises therein an arm or plate *c*, having a perforation which is brought directly over the perforation in the projection *a'''*, and the plate and projection are then firmly secured together by means of said thumb-nut *b*, or in any other well-known manner. Said arm or plate *c* is provided at its forward end with an upwardly-extending arm *c'* and a downwardly-extending arm *c''*, which are respectively provided with the screws *c'''* and *c''''*, as clearly illustrated in Fig. 4. Said screws may be formed integral with said arms *c'* and *c''*, or they may be independent thereof, and may be arranged in screw-threaded holes in said arms, as will be clearly evident. Pivotally arranged on said screw or post *c'''* is a suitable plate *d*, having a curved slot *d'*, into and through which said screw or post *c'''* on the arm *c'* projects, substantially as illustrated in the several figures of the drawings. A thumb-screw or other suitable nut *c'''* on said screw or post *c'''* is employed to

lock said pivotal plate d in any one of its adjusted positions. To cause the pivotal movement of said plate d on said screw or post c^4 , I have pivotally arranged on a suitable pin or screw i in the side of said arm c' (see more especially Fig. 3) an L-shaped guide-plate f , which has a recessed portion f' and a forked end f^2 , as clearly shown in dotted outline in Fig. 1.

Pivotally arranged on a screw or pin g on the side of the plate d is an adjusting-screw e , which is provided with a suitable nut or other like operating device e' . Said nut is provided with a knurled rim for turning it on said screw e , and has its cylindrical portion e^2 arranged between the two fingers of the forked end f^2 of the guide-plate f , while an annular projection e^3 on said portion e^2 of the nut e' fits into said recessed portion f' of the plate f , substantially as shown in Figs. 2 and 5. Thus it will be seen that when the thumb-nut on the screw or post c^3 is partially unscrewed and the operating-nut e' is turned the adjusting-screw e is moved forward or backward at the will of the operator, thereby bringing the upper portion of said plate d nearer to or farther away from the edge of the buffing or polishing wheel, as will be clearly evident. Secured to the upper portion of said plate d in any well-known manner, but preferably in the manner to be fully described hereinafter, is a plate h , to which is secured by means of a small screw h' a supporting-plate h^2 , having the downwardly-extending flange or lip h^3 and at the opposite ends thereof the hook-shaped holding or supporting portions h^4 , into which the spokes or other wire to be polished are placed and brought against the polishing-surface of the wheel, which runs at a great speed between said hook-shaped supporting portions h^4 , as clearly illustrated in Figs. 1, 2, and 5. Said downwardly-extending flange or lip h^3 is preferably made of hardened steel, or any other suitable material, and highly polished to prevent the cutting off of the plating on the spoke or wire being polished. At the same time said extension or lip h^3 acts as a guide to the spoke as the latter is being turned by the operator in said supporting portions h^4 . Said plate h , as well as the supporting-plate h^2 , which, by the way, may be formed in one piece, if desired, are preferably pivotally secured to said upper end of the plate d , whereby said plates can be properly adjusted when the polishing edge of the wheel becomes worn down, and whereby said plates can be slightly inclined, as will be clearly evident, to throw the spoke or other wire supported in said hook-shaped holding portions h^4 forward against the polishing-surface of the polishing or buffing wheel. Said means for pivotally securing the said plates h and h^2 to the plate d will be clearly understood from an inspection of Figs. 2, 3, 4, and 5, and consists, essentially, of a screw or post d^2 , on which I have pivotally arranged said plate h . A second screw or post d^3 on said plate d ex-

tends into and through a curved slot h^5 in said plate h , which allows of an upwardly and downwardly sliding movement of said plate h on the plate d , and which can be securely held in its properly-adjusted positions when the nuts on the respective screws or posts d^2 and d^3 are tightened up.

As the edge of the buffing or polishing wheel wears away the thumb-nut e^5 can be loosened and the screw e can be properly manipulated to make the adjustment while the buffing-wheel is running at a high speed without the least danger of the plate d and mechanism connected therewith being thrown forward and destroying the buffing-wheel or breaking some of the parts of the attachment.

It is a well-known fact that in polishing bicycle-spokes or other like wire by hand the operation is a very tedious one to the workman, in that the article to be polished soon becomes intensely heated and it is impossible for the workman to hold the same any longer. In this manner many of the spokes are dropped on the floor or are taken from time to time from the polishing-wheel, whereby an imperfectly-polished surface is the result. This cannot happen where my attachment is employed, since the spoke will be at all times held in polishing contact with the surface of the polishing-wheel, while all that is necessary on the part of the operator is to turn said spoke without any danger of dropping the same, said spoke receiving its support from said hook-shaped portions h^4 on the plate h^2 , as will be clearly evident.

I am fully aware that many changes may be made in the details of construction and in the minor arrangements and combinations of the several parts without departing from the scope of my present invention. Hence I do not limit myself to the exact arrangements and combinations of the parts as herein shown and described.

Having thus described my invention, what I claim is—

1. The combination, with the frame of a polishing or buffing machine, and its spindle and polishing or buffing wheel, of a holding attachment pivotally connected with said frame, and provided with means, consisting essentially of a plate, as h^2 , having an extension or lip h^3 , and hook-shaped portions h^4 , for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

2. The combination, with the frame of a polishing or buffing machine, its spindle and polishing or buffing wheel, and a projection on said frame, of a plate, as c , attached to said projection, a plate d connected with said plate c and provided with means, consisting essentially of a plate, as h^2 , having an extension or lip h^3 and hook-shaped portions h^4 , for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

3. The combination, with the frame of a

polishing or buffing machine, its spindle and polishing or buffing wheel, and a projection on said frame, of a plate, as c , attached to said projection, a plate d pivotally connected to said plate c , means on said plate c for adjusting said plate d , and means, consisting essentially, of a plate, as h^2 , having an extension or lip h^3 and hook-shaped portions h^4 for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

4. The combination, with the frame of a polishing or buffing machine, its spindle and polishing or buffing wheel, and a projection on said frame, of a plate, as c , attached to said projection, a plate d pivotally connected with said plate c , a guide-plate f having a forked end and a recessed portion, a screw e secured to said plate d , and an operating-nut e' on said screw, and means on said plate d for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

5. The combination, with the frame of a polishing or buffing machine, its spindle and polishing or buffing wheel, and a projection on said frame, of a plate, as c , attached to said projection, a plate d pivotally connected with said plate c , a guide-plate f having a forked end and a recessed portion, a screw e secured to said plate d , and an operating-nut e' on said screw, and means on said plate d , consisting essentially, of a plate h , pivotally secured to said plate d , a plate h^2 , having an extension or lip h^3 and hook-shaped portions h^4 for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

6. The combination, with the frame A of a polishing-machine, having a projection, as a^3 , of a plate c secured thereto, having screws or posts c^3 and c^4 , a plate d pivotally arranged on said screw or post c^4 , and having a slot d' , a thumb screw or nut c^5 on said screw or post c^3 , and means on said plate for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

7. The combination, with the frame A of a polishing-machine, having a projection, as a^3 , of a plate c secured thereto, having screws or posts c^3 and c^4 , a plate d pivotally arranged on said screw or post c^4 , and having a slot d' , a thumb screw or nut c^5 on said screw or post c^3 , and means, consisting essentially, of a plate h , pivotally secured to said plate d , and a plate h^2 having an extension or lip h^3 and hook-shaped portions h^4 for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

8. The combination, with the frame A, of a polishing-machine, having a projection, as a^3 , of a plate c secured thereto, having screws or posts c^3 and c^4 , a plate d pivotally arranged on said screw or post c^4 , and having a slot d' , a thumb screw or nut on said screw c^3 , a guide-plate f on said plate c having a forked end and a recessed portion, a screw e secured to said plate d , and an operating-nut e' on said screw, and means on said plate d for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

9. The combination, with the frame A, of a polishing-machine, having a projection, as a^3 , of a plate c secured thereto, having screws or posts c^3 and c^4 , a plate d pivotally arranged on said screw or post c^4 , and having a slot d' , a thumb screw or nut on said screw c^3 , a guide-plate f on said plate c having a forked end and a recessed portion, a screw e secured to said plate d , and an operating-nut e' on said screw, and means, consisting essentially, of a plate h , pivotally secured to said plate d , and a plate h^2 , having an extension or lip h^3 and a hook-shaped portion h^4 for supporting a bicycle-spoke or other like wire, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 27th day of January, 1896.

FRANK A. PHILLIPPI.

Witnesses:

FREDK. C. FRAENTZEL,
W. H. REIFSNYDER, Jr.