

E. C. HAWKINS.
SHARPENING AND GRINDING TOOL.
APPLICATION FILED JULY 7, 1909.

950,914.

Patented Mar. 1, 1910.

Fig. 1.

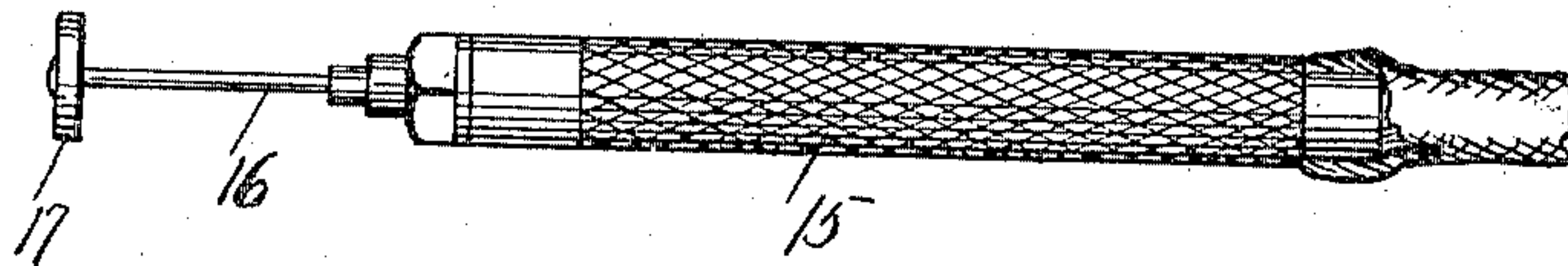


Fig. 2.

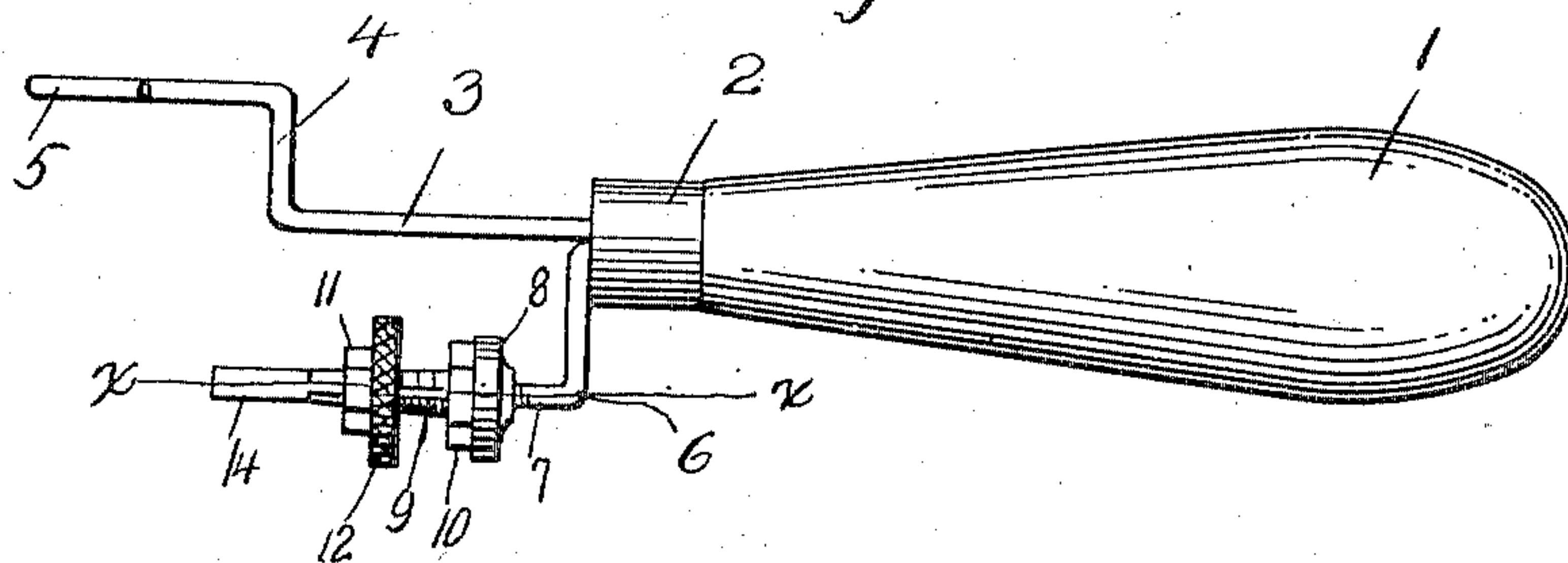


Fig. 3.

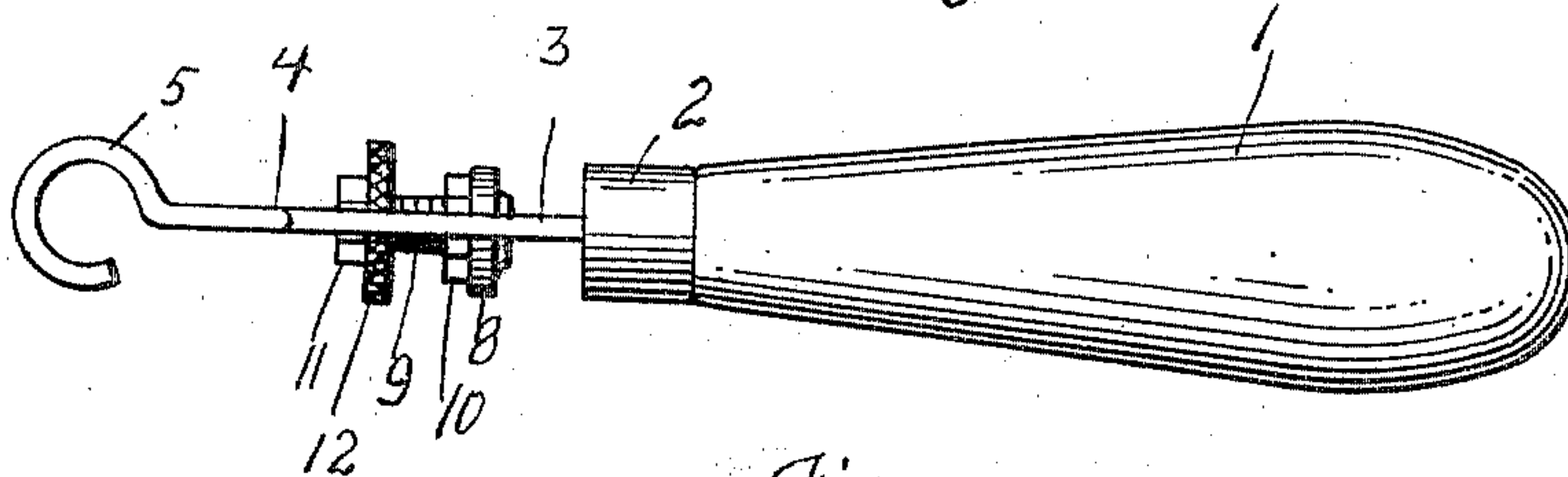
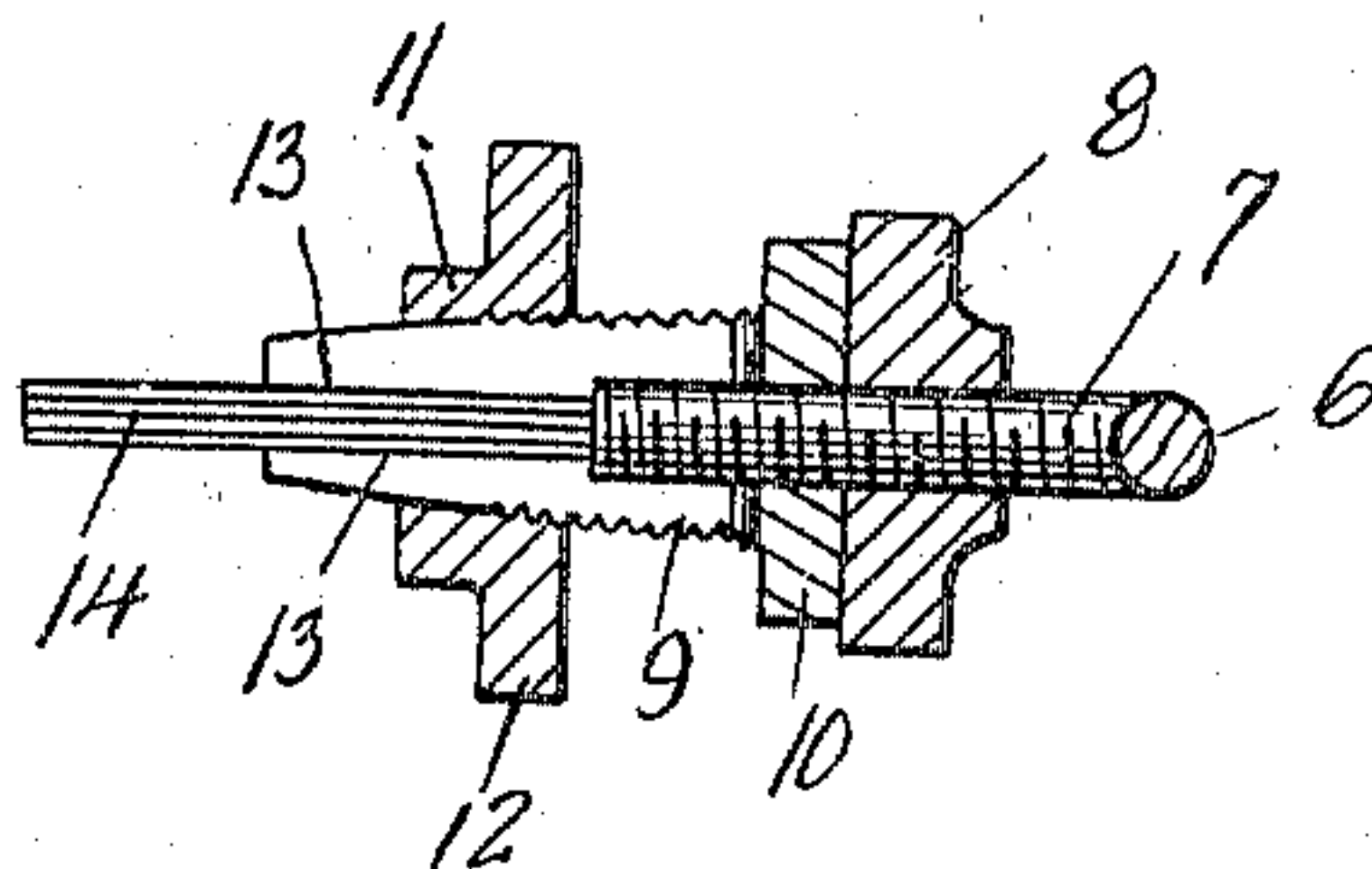


Fig. 4.



Witnesses

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SHARPENING AND GRINDING TOOL.

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To all whom it may concern:

Be it known that I, EDWARD C. HAWKINS, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Sharpening and Grinding Tools, of which the following is a specification.

This invention relates to sharpening and grinding tools, and more particularly to a tool adapted to be used by dentists for sharpening and grinding polishing wheels, as used for grinding the teeth.

The primary object of the invention is to provide a simple and inexpensive tool with one or more sharpening or grinding elements, which are detachably and adjustably held by the tool for engaging a polishing or grinding wheel.

Another object of this invention is to provide a tool that can be conveniently used by a dentist for cleansing and removing foreign matter from the periphery of a polishing or grinding wheel.

The above and other objects are attained by a tool comprising a suitable handle provided with a rest and an adjustable truing device. The rest is designed to steady the polishing or grinding wheel relative to the truing tool, this being accomplished while the grinding wheel is being revolved by an ordinary treadle machine or motor through the medium of a flexible shaft, this machine being common in the practice of dentists.

My invention will be hereinafter considered in detail and then claimed, and reference will now be had to the drawing forming a part of this specification wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed as to the size, shape and manner of assemblage without departing from the spirit of the invention.

In the drawings: Figure 1 is an elevation of the tool holder of a treadle machine, Fig. 2 is a side elevation of my improved sharpening and grinding tool, Fig. 3 is a plan of the same, and Fig. 4 is an enlarged longitudinal sectional view of the adjustable sharpener holder.

In the drawings, 1 denotes a handle having the reduced end thereof provided with a ferrule 2 to prevent the handle from splitting, and in the reduced end of said handle is mounted a tool rest and a sharpener

holder. The tool rest comprises an arm 3 off set as at 4, with the end thereof bent to form a hook 5. The sharpener holder comprises a horizontal arm 6 having the end thereof bent upwardly into parallelism with the arm 3 and threaded, as at 7. The arms 3 and 6 can be made of one piece of strong and durable wire or of a rod bent upon itself, whereby the bent end will fit in the reduced end of the handle 1.

8 denotes a jam nut screwed upon the threaded end of the arm 6, and 9 denotes a conical shaped or exteriorly threaded sleeve, which is interiorly threaded to receive the threaded end of the arm 6. The lower or large end of the sleeve 9 is provided with an integral nut 10 whereby the sleeve can be easily rotated upon the threaded end of the arm 6, and adapted to screw upon the conical shaped sleeve 9 is a lock nut 11. This lock nut is knurled, as at 12, whereby said nut can be easily rotated. The outer or smaller end of the conical sleeve 9 is split and provided with confronting gripping faces 13 to receive a plurality of sharpeners 14. These sharpeners are preferably made of spring metal and one or more can be used, according to the nature of the work to be performed by said truing device. The lock nut 11 is adapted to hold the sharpeners 14 in the conical shaped sleeve 9, said sleeve serving functionally as a chuck. After the sleeve 9 has been adjusted upon the threaded end 7 of the arm 6, the jam nut 8 is adjusted to hold said sleeve in position. It will thus be observed that the sharpeners 14 can be adjusted relative to the hook 5 of the arm 3, and the manner of using the tool is as follows:—

With the sharpening tool gripped in one hand and the tool holder 15 of a treadle machine in the other hand, the spindle 16 detachably mounted in the holder 15 is placed in the hook 5, and the grinding wheel 17 of said spindle thrown into engagement with the sharpeners 14. These sharpeners are of a sufficient width to grind a flat surface upon the polishing wheel 17, or the periphery of the grinding wheel can be shaped according to the manner in which the wheel is presented to the sharpeners.

The arm 3 comprising the rest facilitates an operator in properly holding the grinding wheel in engagement with the sharpeners, thereby it would be an extremely difficult matter to properly hold the grinding

wheel, since the rapidity at which the wheel is revolved would have a tendency to cause the same to glance from the sharpeners. It would thus be almost impossible to evenly
5 cleanse or grind the grinding wheel.

Having now described my invention what I claim as new, is:

1. A tool of the type described comprising a handle, arms carried by said handle,
10 one of said arms being bent to provide an off-set hook adapted to steady a tool holder having a reduced grinding wheel, a conical shaped split sleeve adjustably mounted upon the other of said arms, a plurality of sharp-
15 eners arranged in the split end of the sleeve and adapted to engage the grinding wheel of the tool holder held in engagement with the other of said arms, a nut screwed upon said conical sleeve for locking said sharpen-
20 ers therein, and a jam nut screwed upon the arm to hold said adjustable sleeve in a fixed position.

2. In a tool of the type described, the combination of a handle, a pair of arms car-
25 ried by the handle, a sharpener mounted upon one of the arms, and means upon the opposite arm for engaging the spindle of a rotatable tool for holding the tool accurately in engagement with the sharpener.

3. In a tool of the type described, the com-
30 bination of a handle, a pair of arms carried by the handle, a split sleeve adjustably mounted upon one of the arms, a sharpener fitted within the said split sleeve, a clamp-
35 ing nut threaded upon the split sleeve for

locking the sharpener in position therein, and means upon the opposite arm for engag-
ing the spindle of a rotatable tool for hold-
ing the tool accurately in engagement with
the sharpener.

4. In a tool of the type described, the com-
40 bination of a handle, a pair of arms carried by the handle, a split sleeve threaded upon one of the arms, a jam nut for locking the split sleeve in position, a sharpener received
45 within the said split sleeve, a clamping nut threaded upon the split sleeve for clamping the sharpener securely in position therein, and means upon the opposite arm for en-
50 gaging the spindle of a rotating tool for holding the tool accurately in engagement with the sharpener.

5. In a tool of the type described, the com-
bination of a handle, a pair of parallel arms
55 carried by the handle, a split sleeve adjustably threaded upon one of the arms, means for locking the said split sleeve in position, a sharpener received within the split sleeve, a clamping nut threaded upon the split
60 sleeve for clamping the sharpener securely in position therein, and a hook upon the op-
posite parallel arm for engaging the spindle of a rotatable tool for holding the tool ac-
curately in engagement with the sharpener.

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

EDWARD C. HAWKINS.

Witnesses:

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