

S. HUNZIKER.
OPERATING PEDALS FOR GRINDSTONES OR THE LIKE.
APPLICATION FILED AUG. 13, 1913.

1,113,441.

Patented Oct. 13, 1914.

2 SHEETS-SHEET 1.

Fig. 1

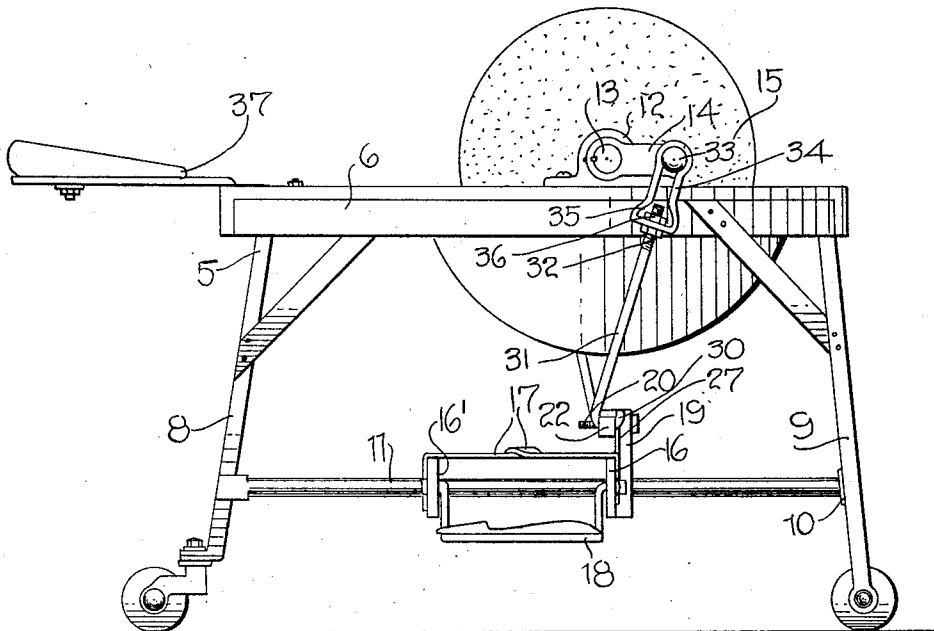
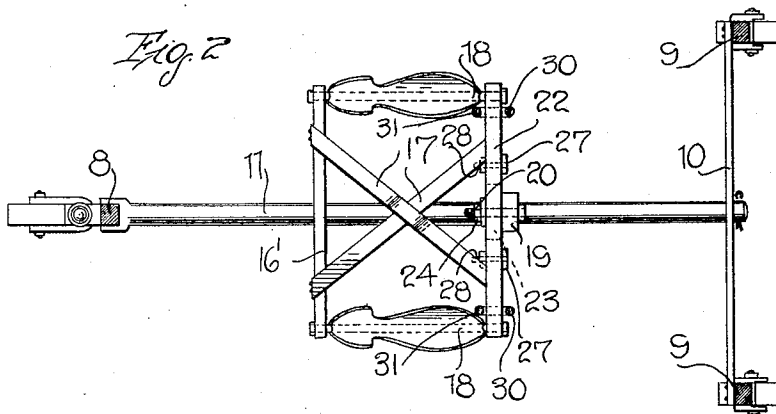


Fig. 2



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Fig. 3

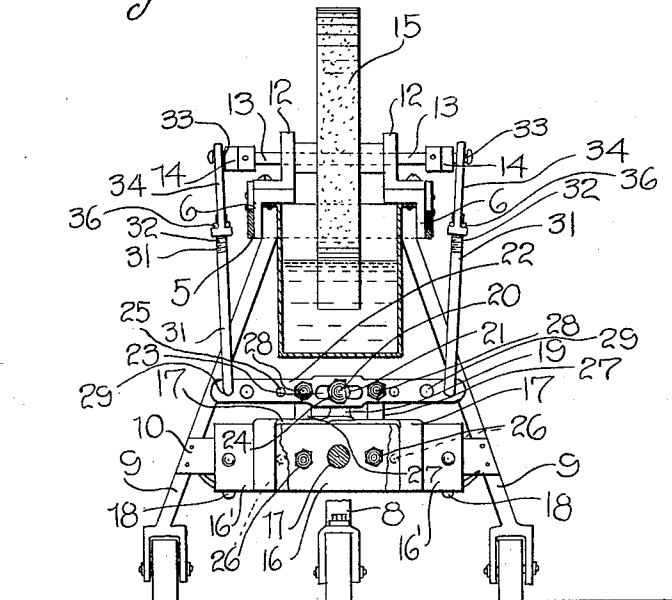


Fig. 4

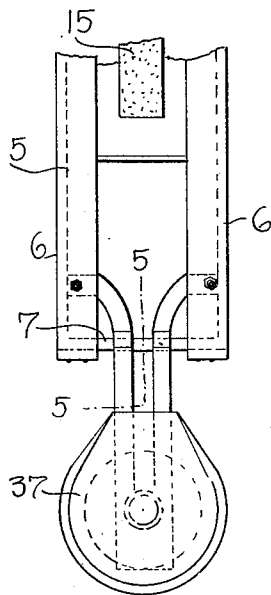


Fig. 5

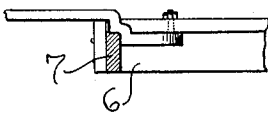
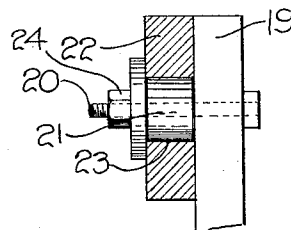


Fig. 6



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UNITED STATES PATENT OFFICE.

SAMUEL HUNZIKER, OF SUTTON, NEBRASKA.

OPERATING-PEDALS FOR GRINDSTONES OR THE LIKE.

1,113,441.

Specification of Letters Patent.

Patented Oct. 13, 1914.

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To all whom it may concern:

Be it known that I, SAMUEL HUNZIKER, a citizen of the United States, residing at Sutton, in the county of Clay and State of Nebraska, have invented certain new and useful Improvements in Operating-Pedals for Grindstones or the like, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in foot operated grind stones, and the like, and an object thereof is the provision of a device of this character in which the grind stone is driven by both feet of the operator, whereby continuous power is transmitted thereto.

Another object of this invention is the provision of a device of this character comprising a supporting frame in which the grind stone is rotatably mounted on a crank shaft, the frame also supporting an oscillating treadle frame, the treadle frame being connected at its opposite ends to the cranks of the crank shaft, whereby motion is transmitted to the grind stone upon downward pressure on either end of the treadle frame.

Still another object of this invention is the provision of a device of this character comprising a supporting frame in which a grind stone is rotatably mounted, the supporting frame also carrying an oscillatory treadle frame, the connections between the treadle frame and the grind stone being adjustable, whereby the length of the stroke of the treadles connected to the treadle frame may be lengthened or shortened, as desired.

With these and other objects in view, this invention consists in the novel construction, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine; Fig. 2 is a longitudinal section thereof; Fig. 3 is a vertical section thereof; Fig. 4 is a fragmentary top plan view thereof; showing the manner of connecting the seat to the frame; Fig. 5 is a section on the line 5—5 of Fig. 4; and Fig. 6 is a detail view partly in said section.

Referring more particularly to the drawings, the numeral 5 designates generally a supporting frame, which comprises a pair of horizontal side bars 6 which are con-

nected at their opposite ends by cross bars 7, a standard 8 being connected to the cross bar at one end of the frame intermediate of its ends, and a pair of standards 9 being connected to the crossbar at the opposite end of the frame at their opposite ends. The standards 9 are connected near their lower ends by a cross bar 10, and a central longitudinal rod 11 is connected at its opposite ends to the cross bar 10, and to the standard 8. Bearings 12 are mounted on the upper faces of the horizontal bars 6 intermediate of their ends, the bearings supporting a crank shaft 13, which is provided with cranks 14 on its opposite ends outwardly of the horizontal bars 6. Secured to the crank shaft 13 intermediate of its ends is a grind stone 15.

Loosely mounted on the rod 11, is a treadle frame which comprises parallel bars 16 and 16' which are suitably connected by crossed braces 17, the bar 16 having treadles 18 loosely connected thereto at their opposite ends. Secured to the rod 11 to one side of the treadle frame is an upstanding bearing plate 19, in the upper end of which a bolt 20 is mounted, the bolt having a roller 21 thereon upon which a link 22 is mounted. The link is formed with a longitudinal slot 23 which receives the roller 21, whereby the link is adapted for movement upon the bolt 20, and is connected thereto by a nut 24 which is threaded upon the free end of the bolt. The bar 16 of the treadle frame is provided with a pair of openings 26 upon each side of the rod 11, and the link 22 is also provided with a pair of openings 25 upon each side of the bolt 20, link rods 27 being connected at their opposite ends to pins 28 which are disposed in one of each pair of openings upon either side of the center of the bar 16 and the link 22. The link 22 is also provided at each end with a pair of relatively larger openings 29 and in one opening of each pair, the hooked end 30 of a pitman rod 31 is loosely mounted, the opposite end of the pitman rod being threaded as at 32. The free end of each crank 14 is provided with an outstanding button or stud 33, on which a slotted plate 34 is mounted, the slot in the plate being enlarged at its lower end, as at 35, so that the head of the button 33 may be passed there-through whereby the shanks of the buttons may be disposed in the reduced portions of the slots in the plates. The threaded ends

32 of the pitman rods are disposed in openings formed in the slotted plates 34, and maintained in connection with the plates by means of nuts 36. A seat 37 is detachably
5 connected to the frame, and in such position that the treadles 18 will be within easy reach of the feet of the person upon the seat.

In the practical use of my device, the operator sits upon the seat 37 and upon oscillation of the treadle frame by the feet of the operator in engagement with the treadles, the grind stone will be rotated through the mechanism hereinbefore described. Assuming that the device is in a position illustrated
10 in Fig. 3 of the drawing, with the link bars 27 connected in the inner openings 25 and 26 in the bar 16 and link 22 respectively, to lengthen the stroke of the treadles, so that it will require less power to rotate the grind
15 stone, it will be merely necessary to engage the link bars 27 in the outer openings upon each side of the pivotal points of the bar 16 and link 22, and also to adjust the length of the pitman rods 31 in accordance therewith.

From the above description taken in connection with the accompanying drawing, it will be seen that I have provided a foot power grind stone, which may be easily operated with minimum effort upon the part of
20 the operator, and in which there is no lost motion, as power is transmitted to the grind stone upon oscillation of the treadle frame in either direction.

It will of course be understood that this
25 mechanism may be used in connection with lathes, sewing machines, or other rotating elements of this character, and that I do not necessarily limit myself to use in connection with a grind stone.

It will be seen that in the practical use of my device, the operator's feet are in a most natural position and that the operation of the machine will not tend to unduly tire him as he will rest in a comfortable position while operating the foot treadles 18. 40

What I claim is:

A device of the character described comprising a frame including a horizontally disposed longitudinally extending rod, a treadle frame mounted for oscillation upon
45 said rod, said treadle frame consisting of a pair of spaced parallel bars mounted intermediate of their ends on said rod, brace members connected at their ends to said parallel bars, an arm projecting upwardly from
50 said rod at one side of said treadle frame, a laterally projecting pin mounted in the upper end of said arm, a link loosely mounted intermediate of its ends upon said pin, said
55 link having a plurality of openings formed therein on opposite sides of the pin, the adjacent bar of the treadle frame being also formed with a plurality of openings on opposite sides of said longitudinal rod, link
60 bars pivotally connected at their opposite ends in one of the openings in said link and said bar on opposite sides of said longitudinal rod, a crank shaft mounted in the frame
65 above the link, means for operatively connecting the opposite ends of said link with the shaft, and a rotatable member mounted
70 on said shaft.

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

SAMUEL HUNZIKER.

Witnesses:

H. C. GRIES,

C. M. BREHM.