K. C. LIKNESS.

GEARING.

APPLICATION FILED APR. 1, 1912.

1,082,349.

Patented Dec. 23, 1913.

Fig. 1.

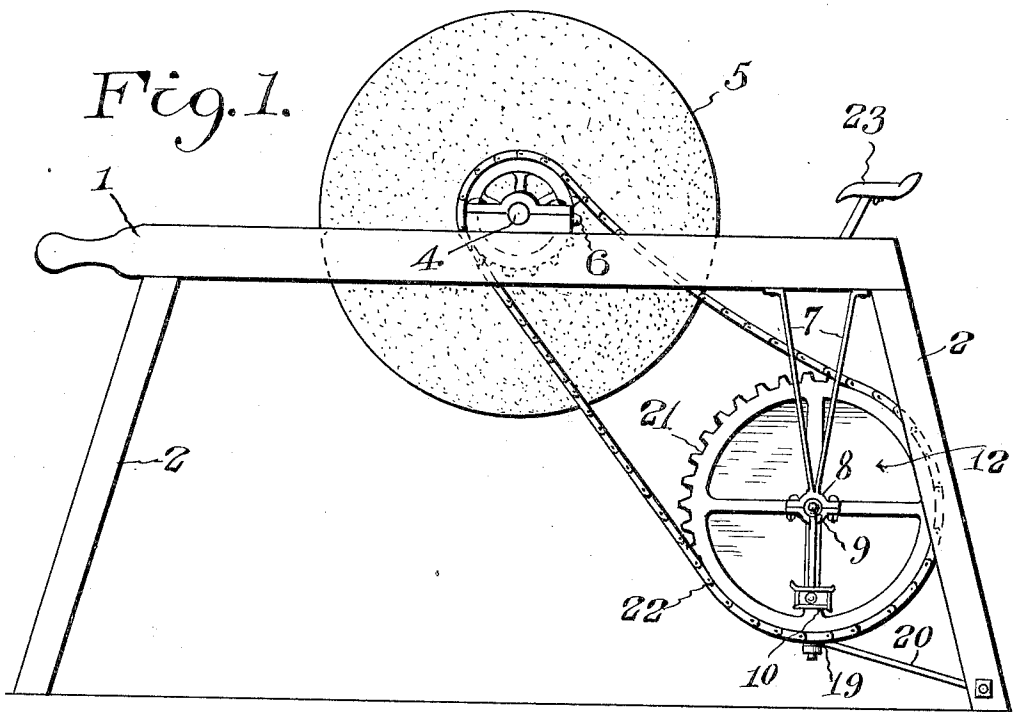


Fig. 2.

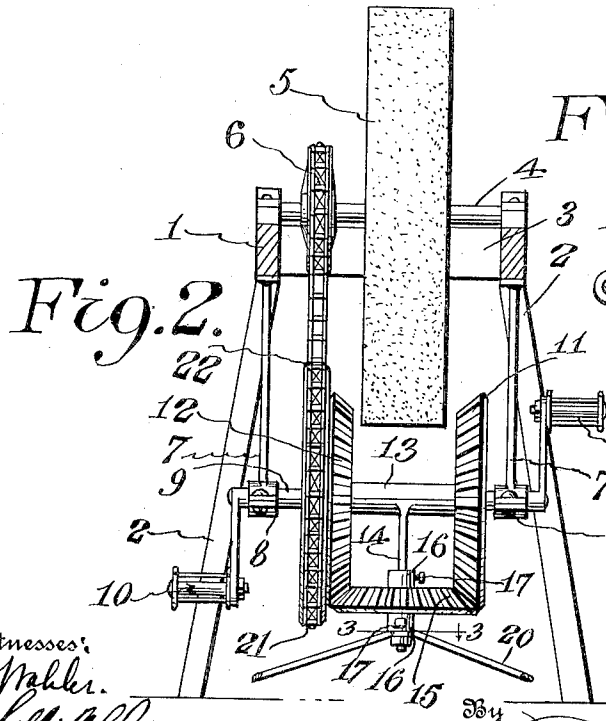
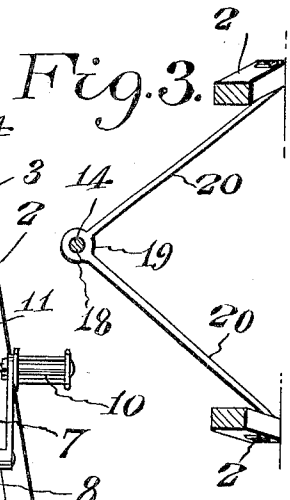


Fig. 3.



Witnesses:

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KNUTE C. LIKNESS, OF LANGFORD, SOUTH DAKOTA.

GEARING.

1,082,349. Specification of Letters Patent. Patented Dec. 23, 1913.

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To all whom it may concern:

Be it known that I, KNUTE C. LIKNESS, a citizen of the United States, residing at Langford, in the county of Marshall, State of South Dakota, have invented certain new and useful Improvements in Gearing; 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.

This invention relates to foot operated grindstones, and has for its object to provide a device of this character so that the operator will have free use of both hands when grinding tools.

A further object of the invention is to so construct the device that the operator may be comfortably seated during the grinding operation.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter fully described and claimed.

In the drawing: Figure 1 is a side elevation of a grindstone equipped with the foot power mechanism. Fig. 2 is a rear elevation of the same. Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Referring to the drawing, the numeral 1 designates the frame, having the supporting legs 2 for supporting the sills 3, all of which being of the usual construction. Arranged transversely of the sills 3 is an axle 4, and to which is rigidly connected the grindstone 5. Keyed to the axle 4 is a sprocket wheel 6, the purpose of which will appear later. Secured near one end of the sills 3 are hangers 7, said hangers being provided at their lower ends with boxes 8 for rotatably supporting the shaft 9, the outer ends of said shaft being provided with pedals 10. Keyed to the shaft 9 is a beveled gear 11, the same being held spaced from a similar gear 12, which is loosely mounted on said shaft, by a sleeve 13 which is supported by said shaft. Depending from the sleeve 13 is a vertical shaft 14 upon the lower end of which is revolubly mounted a beveled gear 15 which is in mesh with the gears 11 and 12. The gear 15 is held against vertical movement on the shaft by collars 16, each of which being provided with a set screw 17 for engaging the shaft 14.

The shaft 14 has its lower end seated in a recess 18 formed in the casting 19. Radiating from the casting 19 are arms 20, each of which have their outer ends bolted near the lower ends of the legs 2 of the frame 1, thus firmly bracing the shaft 14. Fixed to the gear 12 is a sprocket wheel 21, the same being greater in diameter than the sprocket 6, hereinbefore mentioned. Trained around the sprockets 6 and 21 is a sprocket chain 22, which imparts rotary movement to the shaft 4 and grindstone 5 when the shaft 9 is rotated, thus rotating the grindstone in a direction toward the operator. A seat 23 is provided and is mounted upon the frame 1 so that the operator may conveniently engage the pedals for turning the grindstone.

What is claimed is:

The combination with a frame, of a driving shaft supported by the frame, hangers carried by the frame and having boxes formed at their lower ends, a rotary shaft journaled in said boxes, pedals carried by said shaft, a beveled gear loosely mounted on the shaft, a similar gear keyed to the shaft, a sleeve carried by the shaft, a vertical shaft depending from the sleeve, a beveled gear carried by said shaft and adapted to mesh with the first named gears, a sprocket connected to the shaft, a second sprocket fixed to the loosely mounted gear, a sprocket chain connecting said sprockets, a casting having a recess for receiving the lower end of the vertical shaft, arms radiating from said casting and adapted to have their outer ends secured to the legs of the frame.

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

KNUTE C. LIKNESS.

Witnesses:
G. A. LINDQUIST,
B. E. COLBY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."