No. 663,626. Patented Dec. 11, 1900.

W. HEALD.

SAND REEL.

(Application filed Mar. 15, 1900.)

(No Model.)

Fig. 1.

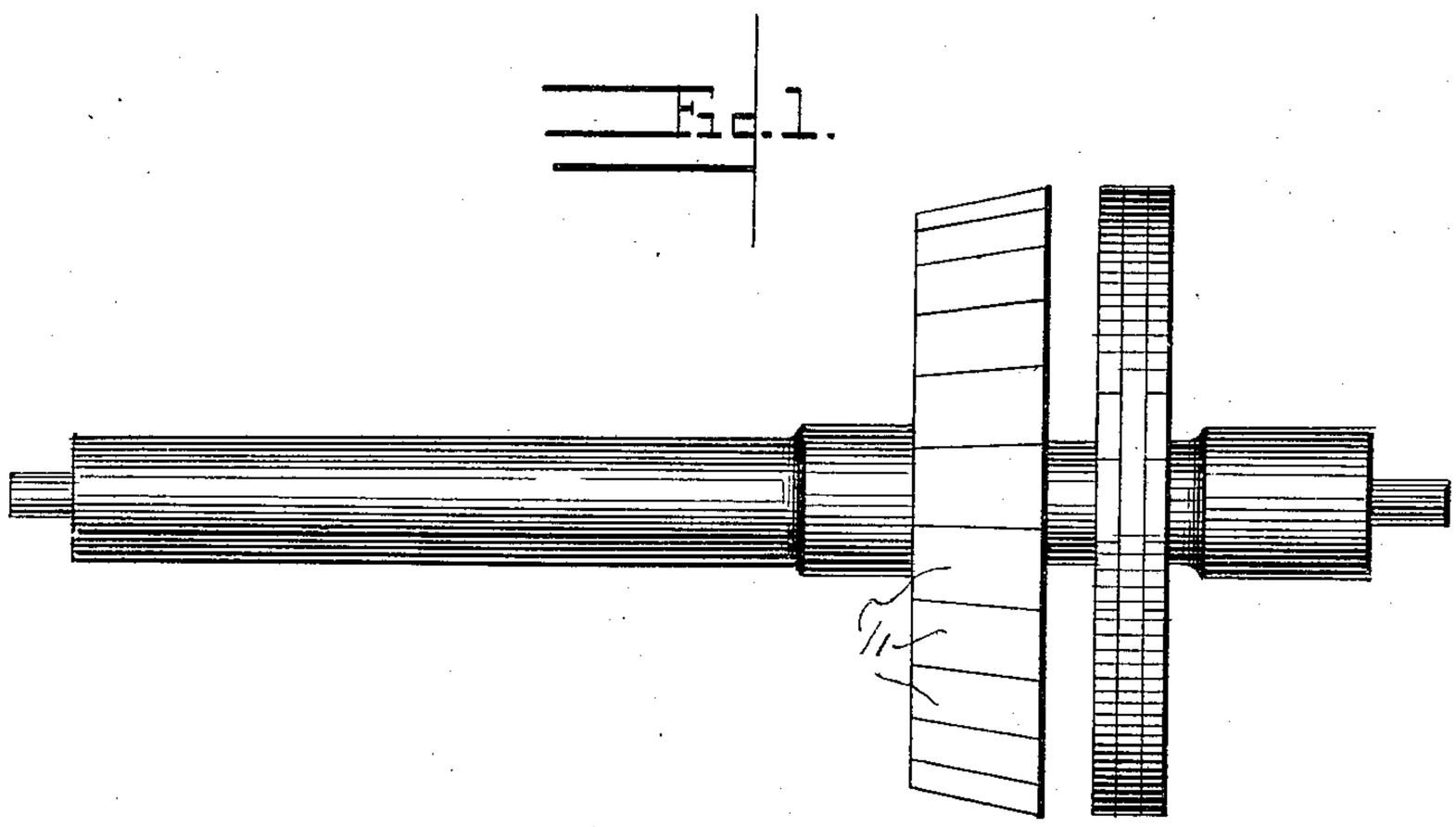
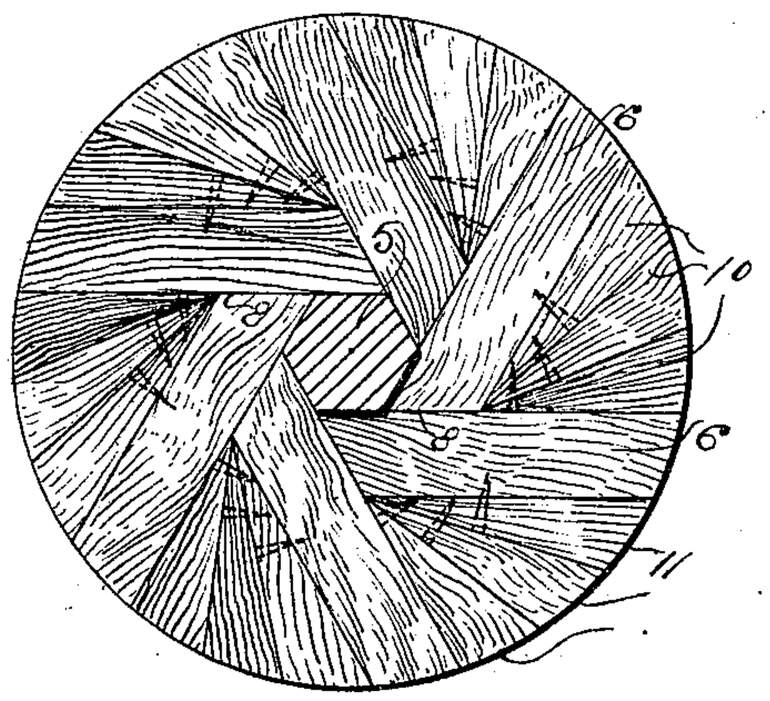


Fig. 2.



Witnesses
Fred. E. Maynard.
Geo. H. Chandlee.

William Heald, Inventor.
By Church & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM HEALD, OF PLEASANTVILLE, PENNSYLVANIA.

SAND-REEL.

SPECIFICATION forming part of Letters Patent No. 663,626, dated December 11, 1900.

Application filed March 15, 1900. Serial No. 8,839. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HEALD, a citizen of the United States, residing at Pleasantville, in the county of Venango and State of Pennsylvania, have invented a new and useful Sand-Reel or Hoisting-Windlass, of which the following is a specification.

This invention relates to gear-wheels in general, and more particularly to friction gear-wheels, the invention in the present instance being shown in connection with a sand-reel, although it will be readily understood that it may be employed wherever practicable.

One object of the invention is to provide a wheel of wood or having a wooden wear-surface wherein the end of the grain of the wood will be presented at all points and chipping of the wheel will be consequently avoided.

A further object of the invention is to provide a construction in which the several parts of the wheel will be held firmly in their correlative positions.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is an elevation of the shaft of a sand-reel provided with a friction-wheel constructed in accordance with the present invention, the periphery of the wheel being shown. Fig. 2 is a face view of the wheel, its shaft or core being shown in section, said view showing the manner of attaching the parts of the wheel with respect to each other and with respect to the shaft or core.

Referring now to the drawings, the wheel of the present invention is built upon a cross-sectionally-polygonal core 5, which in the present instance is the shaft of a sand-reel, the faces of the core being equal, as shown, and against each face is secured a piece of board 6, which is cross-sectionally rectangular and has a width equal to that of the completed wheel, the side edges of these boards forming portions of the side faces of the completed wheel. The faces of the core being of the same dimensions and the several boards being of the same thickness, their outer ends are equally spaced, as shown. The inner end of each board 6 is beveled, as shown at 8, to lie close against the adjacent face of the next board, and said boards are all disposed with the ends of their grain outwardly. Between each pair of boards 6 there is disposed a plurality of wedge-shaped boards 10, with their bases 11 outwardly, and which wedges have the same widths as the boards 6, so that when fitted into the wedge-shaped interspaces between the boards 6 they will lie with their side edges flush with the side edges of the boards. The wedge-shaped pieces are furthermore so formed as to completely fill the interspaces, so that when in place there is presented a complete and composite body. The several sections of the wheel may be held in place by any suitable means, as by nailing, as shown, and the sections thereof are turned, either prior to or subsequent to their final assembly, to present a circular periphery, said wheel being also formed to taper in one direction, so that its general shape is that of the frustum of a cone. With this construction it will be seen that the end of the grain of the wood is exposed at all points of the periphery of the wheel, the wedges 10 being so cut and disposed as to secure this result, the boards 6 forming portions of the periphery of the wheel and the wedges forming the remaining portions. It will be thus seen that any desired bevel may be given to the periphery of the wheel without in any wise increasing the liability of the wheel to chip, as is the case in the usual construction, while a wheel of great strength is secured.

In practice various modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

A wheel comprising a polygonal core, a board disposed against each face of the core, each of said boards lying with its inner end against the face of the adjacent board and with its outer end projected beyond the core, and wedge-shaped blocks disposed in the interspaces between the boards and completely filling them, said boards and blocks lying

with their adjacent faces in mutual contact and with their side edges flush to form the ends of the wheel, the wedges and boards being of wood having the grain thereof disposed radially of the wheel, and the outer ends of the boards and wedges being formed to constitute the periphery of the wheel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM HEALD.

Witnesses:

WILLIAM SPENCER CORWIN,

CLARENCE EMERY HOFFMAN.