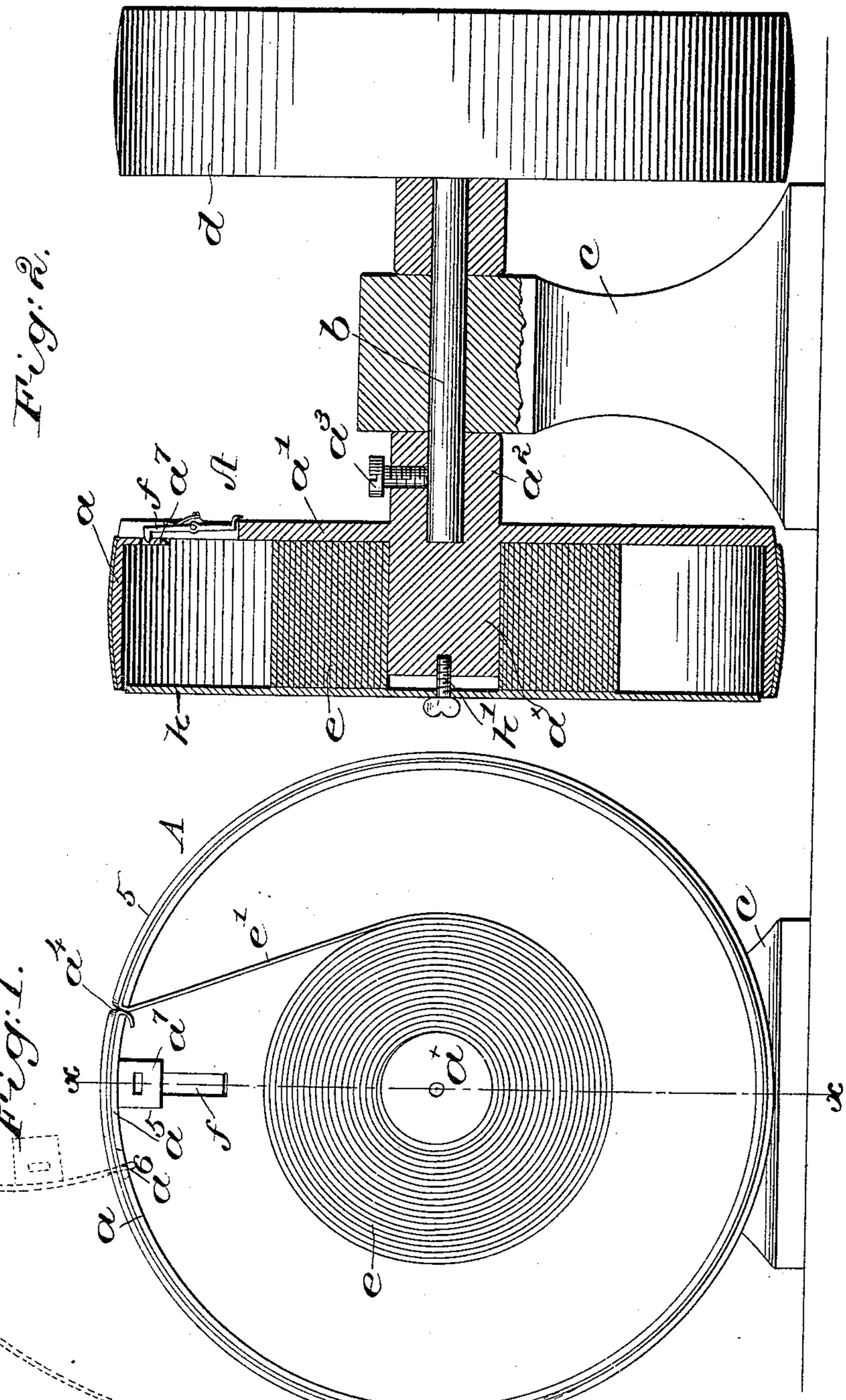
(No Model.)

J. A. EVERETT & J. FINN, Jr.

SANDPAPERING ROLL.

No. 481,938. Patented Sept. 6, 1892.



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UNITED STATES PATENT OFFICE.

JOHN A. EVERETT AND JOHN FINN, JR., OF NATICK, MASSACHUSETTS.

SANDPAPERING-ROLL.

SPECIFICATION forming part of Letters Patent No. 481,938, dated September 6, 1892.

Application filed February 8, 1892. Serial No. 420,673. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. EVERETT and JOHN FINN, Jr., of Natick, county of Middlesex, State of Massachusetts, have invented an Improvement in Sandpapering-Rolls, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to provide a sandpapering-roll, by the use of which the waste of paper incident to constant use may be reduced to the minimum.

Our improved roll or wheel is made hollow, so that it may receive a roll of sandpaper, and is provided with a central support upon which said sandpaper-roll is placed, one end of the latter being led out through a suitable opening in the rim or periphery of the roll and carried about the same, its end being clamped in suitable manner. When the paper thus carried about the periphery of the roll is worn out, it may be torn off, leaving a short end of the worn-out portion protruding through the opening in the periphery of the roll, and by engaging this short end additional paper drawn from within the roll and about the roll, as before, the worn-out or protruding end of the strip being turned in or clamped to hold the fresh portion in place. By this method there is practically no waste, for one end of the strip of paper is constantly held by the roll of paper within the wheel or roll, while the free end of the strip is always clamped by the worn-out or protruding portion left when the old strip is torn off.

By the term "sandpaper" we mean to include any abrasive paper or cloth having sand, emery, or other equivalent surface.

In the drawings, Figure 1 represents in face view a sandpapering roll or wheel embodying this invention; and Fig. 2, a vertical section of the same on the dotted line $x\ x$, Fig. 1.

Referring to the drawings, a represents the rim or periphery of a sandpapering roll or wheel A, which may be of any usual or desired shape or size and which may be rotated in any usual or suitable manner. In the present instance of our invention the roll or wheel is shown as an annular plate a', having a flange at one side, which constitutes the periphery a of the roll or wheel, the latter having a hub a^2 socketed to receive the end of any suitable shaft, as b, the hub being herein shown as clamped upon the end of the shaft by means of a set-screw a^3, said shaft in the present instance being represented as mounted in a suitable bearing c and at its end opposite the roll a as having a pulley d, by which the shaft and sandpapering-roll may be rotated.

In accordance with this invention the sandpapering-roll is adapted to receive within its periphery a a quantity of sand or emery paper or cloth or any equivalent material e of the desired width and preferably arranged in the form of a coil, the latter being shown as placed upon and supported by a suitable boss or support $a^\times$, which may, if desired, be part of the hub a^2, as shown in Fig. 2, the outer or free end of the coil being passed out through a suitable opening a^4 in the periphery of the roll or wheel, a sufficient amount of paper being drawn from the coil through the said opening to extend completely about the roll or wheel back again to the opening a^4, as represented in Fig. 1, where said free end is held or clamped.

Any suitable device may be provided for clamping the free end of the strip to the roll; but an arrangement which is well adapted for the purpose is represented in Fig. 1, wherein a portion a^5 of the periphery or rim a at one side of the opening a^4 is separated from the rim proper to form a clamp and is hinged thereto, as at a^6, the hinged portion or clamp being turned back into its dotted-line position when the strip has been carried about the roll or wheel, the end of the strip being shown as doubled over the end of the clamp and the latter as pressed down into its full-line position, thereby clamping the free end of the strip against that portion of the strip passing out through the opening a^4, the strip being thereby held firmly in place upon the periphery of the roll or wheel. The clamp a^5 is preferably retained in its full-line or clamping position by a suitable locking device, herein shown as a spring-actuated latch f, adapted to co-operate with an ear a^7 on the under side of the clamp a^5. Assuming the strip to have been passed about the periphery of the roll or wheel and clamped as described, the shaft b may be rotated and the sandpaper or emery strip upon the periph-

ery of the roll or wheel may be utilized for smoothing or finishing any desired object for which the shape of the roll is adapted—either leather, wood, metal, or other material. The abrasive strip having become worn out, the latch *f* will be withdrawn from the ear a^7 and the clamp a^5 turned back on its hinge to release the strip, when the latter will be unwound from the periphery of the roll or wheel and be torn off or cut, preferably, at or about the point 5, leaving a protruding end of the worn-out portion of the strip between the point 5 and the opening a^4, which end may be grasped and the strip drawn out through the opening a^4 from the coil *e* within the roll or wheel, said end being carried about the periphery of the roll, as before, the worn-out end 5 being turned over the end of the clamp a^5 and the latter pressed down and locked in its full-line position, as shown, thereby again clamping a fresh portion of the strip about the periphery of the roll in readiness for use. This operation may be carried on until the coil of paper within the roll A is exhausted, when a new coil may be substituted.

In rolls such as heretofore used much of the abrasive strip has been wasted by tearing off a new strip either too short or too long. In the latter case the excess must be thrown away, as it cannot be utilized. In this our improved roll or wheel after the strip has once been clamped in place there is practically no waste, for only sufficient paper is drawn out from within the roll to pass about the periphery thereof, and consequently there is no end to be torn off and thrown away, nor is any fresh paper wasted, for the end 5 of the old or worn-out portion is left attached to the fresh portion, in order that it may be utilized to clamp the fresh portion about the roll, so that after a short end of the fresh paper is first passed under the clamp a^5, as when a new coil of paper is placed within the roll, no fresh paper is thereafter wasted until the coil is exhausted.

In practice we prefer to employ a device to hold the coil of paper *e* in place within the wheel or roll and prevent the same unwinding or wabbling during the rotation of the wheel or roll, and referring to Fig. 2 we have shown one form of device for accomplishing the purpose, such being shown as a plate or disk *h*, which may be clamped against the coil of paper *e* within the roll by means of a suitable clamping-screw *h'*, this plate holding the coil in proper position and permitting the roll to be rotated at any desired speed.

This invention is not limited to the particular construction of roll or wheel shown, as the same may be varied in many particulars without departing from the scope of the invention, the gist of the invention lying in a sandpapering roll or wheel capable of receiving a coil of sandpaper or equivalent material and having an opening in its periphery through which the paper or other abrasive strip may be drawn and passed about the exterior of the roll or wheel.

We claim—

1. A sandpapering-roll capable of receiving an abrasive strip in coil form, said roll having a central support integral with it and upon which said coil is placed, and an opening in the periphery of the roll through which the outer or free end of the strip may be drawn, substantially as described.

2. A sandpapering-roll capable of receiving an abrasive strip in coil form, said roll having a central support integral with it and upon which said coil is placed, a socket in said central strip at one end of the roll to receive the driving-shaft, and a clamping device secured to the said central support at the opposite end of the roll to act upon and retain said coil in position, and an opening in the periphery of the roll through which the free end of the paper strip may be drawn, substantially as described.

3. A sandpapering-roll capable of receiving an abrasive strip in coil form and having an opening in its periphery through which the free end of the strip may be drawn, combined with a clamping device, and means to clamp the same against the edges of the strip in the coil and press the latter against the end plate of the roll to thereby hold the coil in position clamped edgewise between the roll and clamping device, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN A. EVERETT.
JOHN FINN, JR.

Witnesses:
FREDERICK L. EMERY,
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