

No. 760,834.

PATENTED MAY 24, 1904.

C. S. YARNELL.
DUST HOOD FOR BELT SANDING MACHINES.

APPLICATION FILED FEB. 27, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

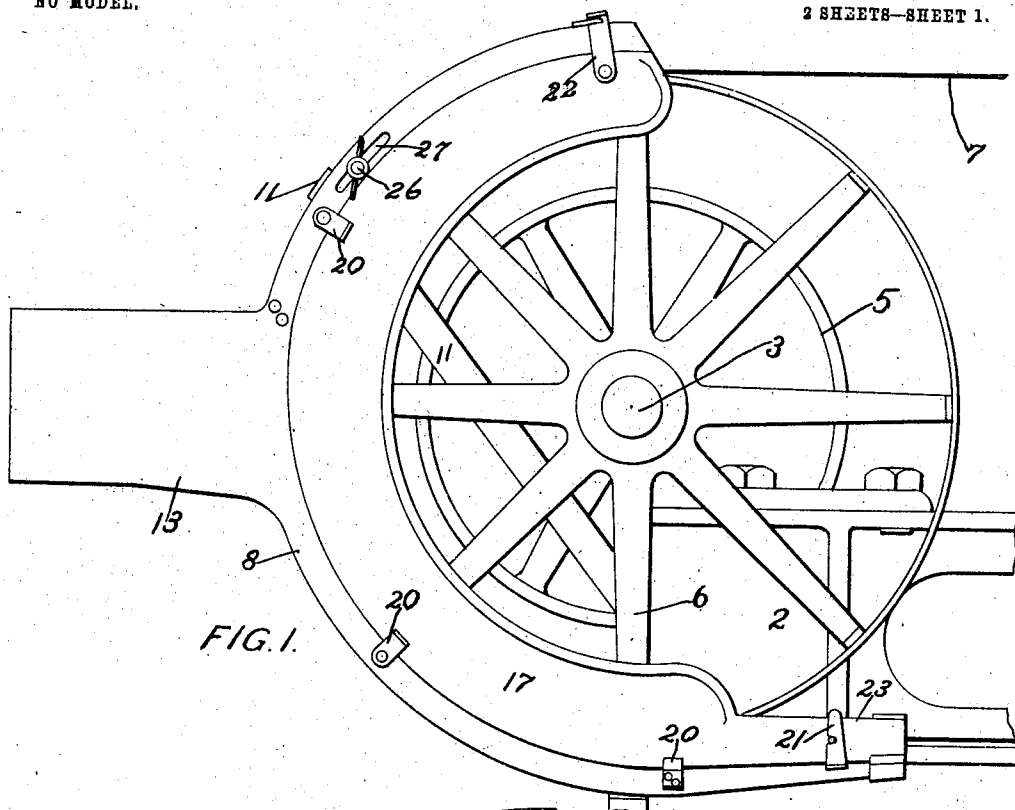


FIG. 1.

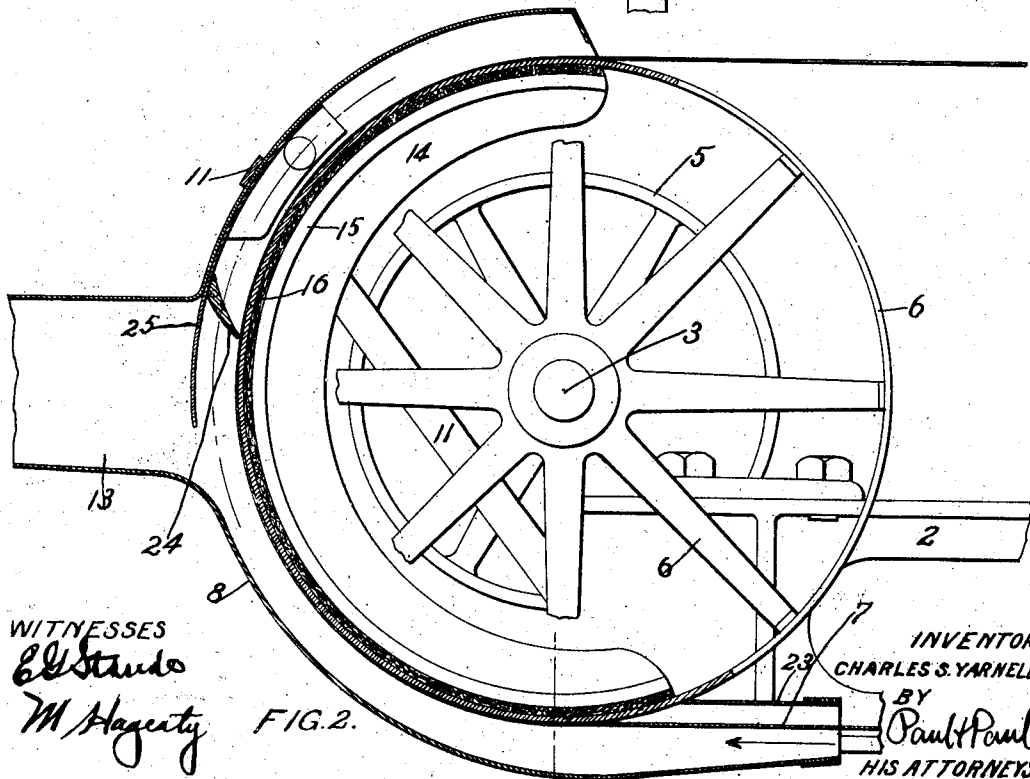


FIG. 2.

WITNESSES
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INVENTOR
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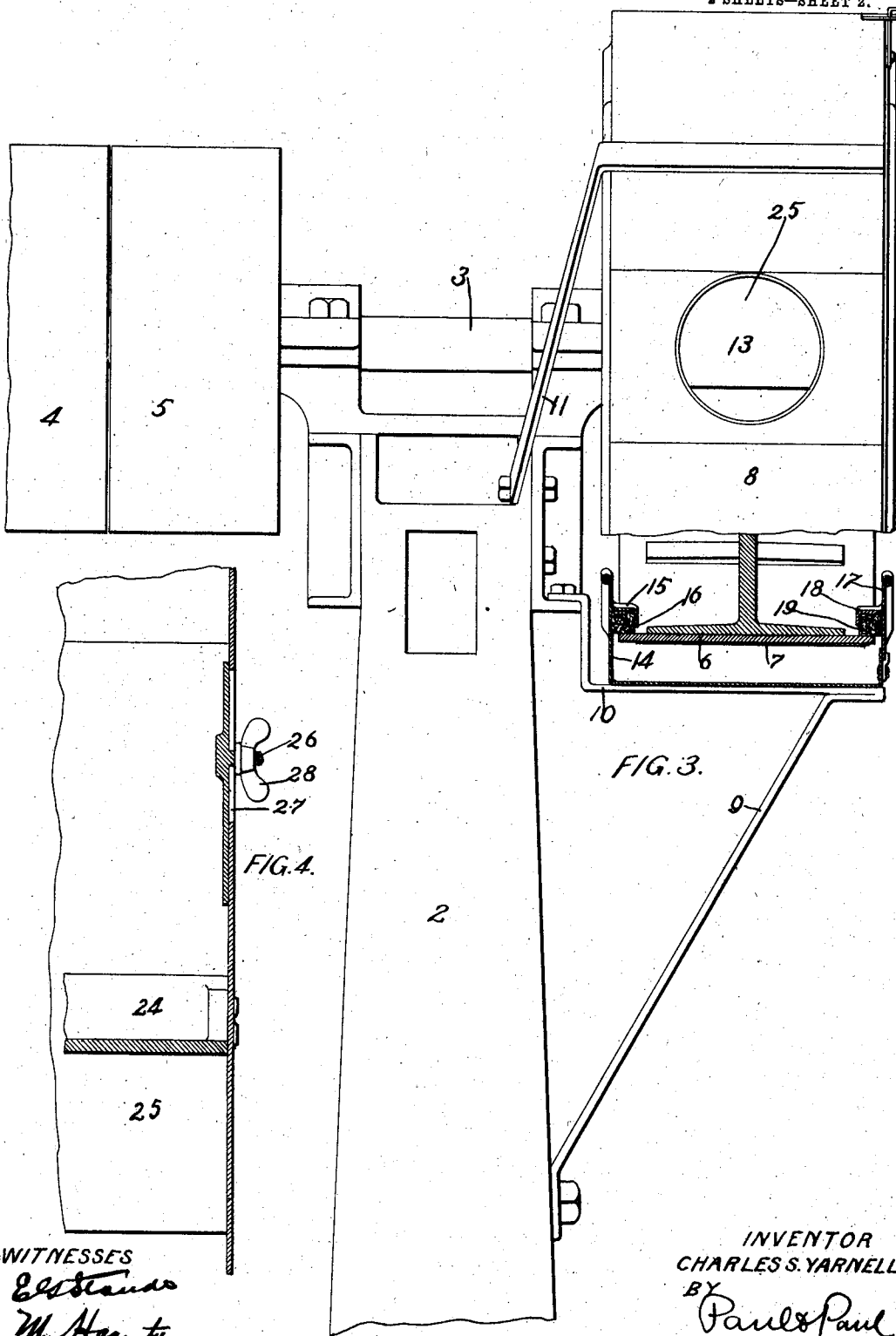
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UNITED STATES PATENT OFFICE.

CHARLES S. YARNELL, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO
MOORE CARVING MACHINE COMPANY, OF MINNEAPOLIS, MINNE-
SOTA, A CORPORATION OF MINNESOTA.

DUST-HOOD FOR BELT SANDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 760,834, dated May 24, 1904.

Application filed February 27, 1904. Serial No. 195,623. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. YARNELL, of Minneapolis, in the county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Dust-Hoods for Belt Sanding-Machines, of which the following is a specification.

This invention relates to improvements in devices designed to be applied to belt-machines adapted for rubbing and polishing wooden surfaces for the purpose of taking up and removing from the machine the dust that is made by the belt.

The invention consists generally in the constructions and combinations hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a dust-hood embodying my invention. Fig. 2 is a section of the same on a plane at right angles to the driving-shaft of the rubbing or polishing machine. Fig. 3 is a transverse sectional elevation of the same. Fig. 4 is a detail of a portion of the casing, showing the means for adjusting the movable cut-off.

In the drawings, 2 represents one of the standards; 3, the driving-shaft; 4 and 5, the fast and loose pulleys thereon; 6, one of the belt-pulleys, and 7 a portion of the polishing-belt of a suitable rubbing and polishing machine to which my improved dust-hood may be applied.

The rubbing and polishing machine may be of any suitable construction—such, for instance, as that illustrated in Letters Patent issued to me November 10, 1903, No. 743,608, or that shown and described in my application filed October 31, 1903, Serial No. 179,274. The main portion 8 of the dust-hood is preferably of substantially semicircular form, and it is supported upon the frame of the machine by the braces 9, 10, and 11. It is preferably a sheet-metal casing conforming to the outer circle of the belt-pulley 6 and arranged at a short distance therefrom. Connected cen-

trally to this casing is the exit-conductor 13, which may be connected to a suitable exhaust-fan. The casing 8 is provided with a flange 14, which projects upward and inward toward the center of the belt-pulley to a distance beyond the inner wall of the rim. An inturned flange 15 extends over the inner wall of the rim and is provided with a packing 16, which makes a close joint with the inner surface of the rim. The opposite side of the casing is provided with a removable flange 17, corresponding in shape and position to the flange 14, and connected to the flange 17 is the flange 18, which holds the packing 19 in position. The removable flange 17 is held in position by suitable lugs 20 and latches 21 and 22. At the under side of the belt-pulley 6 the casing 8 projects forward along the line of the belt and is provided with a top plate 23, arranged over the belt and extending close to the surface of the wheel 6. The belt 7 travels in the direction of the arrow in Fig. 2. Above the mouth of the conductor 13 is a stationary cut-off or stop 24. This is preferably formed of wood, and it projects close to the surface of the belt. A movable cut-off 25 is arranged in the casing 8 and projects across the mouth of the conductor 13. This conductor is provided with a bolt 26, extending through a slot 27 in the wall of the casing, and a thumb-nut 28 on the bolt 26 enables the operator to secure the cut-off 25 in any desired position. The space between the inner wall of the casing 8 and the circumference of the pulley 6 preferably decreases toward the mouth of the conductor 13. This has a tendency to choke down the air-current, and this action may be further regulated by adjusting the cut-off 25. As the sanding or polishing belt is bent or curved in passing around the belt-pulley 6, considerable portion of the dust taken up thereby is released by the opening up of the belt as it passes around the curved surface of the pulley. This dust falls into the space between the belt and the wall of the casing 8, and any of it which reaches the stop 24 is caused to drop back below the end of

the cut-off 25 and is carried out by the air-current through the conductor 13. The dust that is created by the sanding or polishing of the wooden surface being acted upon by the belt and which is free from the belt is drawn by the air-current into the open end of the casing 8 and travels along with the air-current through said casing and enters the conductor 13.

- 10 The details of the construction may be modified in many particulars without departing from my invention.

I claim as my invention—

1. The combination, with the polishing-belt and supporting-pulley, of a dust-hood comprising a casing of substantially semicircular form arranged with a narrow space between its inner surface and the polishing-belt and with flanges extending inward beyond the rim of the pulley, and a suitable conductor connected to said casing, substantially as described.

2. The combination, with the polishing-belt and supporting-pulley, of a dust-hood comprising a casing of substantially semicircular form arranged with a narrow space between its inner surface and the polishing-belt and provided with flanges extending inward beyond the rim of the pulley, a suitable packing between said flanges and said rim, and a suitable conductor connected to said casing, substantially as described.

3. The combination, with the polishing-belt and supporting-pulley, of a dust-hood comprising a casing of substantially semicircular form arranged with a narrow space between its inner surface and the polishing-belt and provided with flanges extending inward beyond the rim of the pulley, a suitable conductor connected to said casing, and a stop-

plate arranged in said casing at one side of said conductor, substantially as described.

4. The combination, with the polishing-belt and supporting-pulley, of a dust-hood comprising a casing of substantially semicircular form arranged with a narrow space between its inner surface and the polishing-belt, and provided with flanges extending inward beyond the rim of the pulley, a suitable conductor connected to said casing, and an adjustable cut-off arranged at the mouth of said conductor.

5. The combination, with the polishing-belt and supporting-pulley, of a dust-hood comprising a casing of substantially semicircular form arranged with a narrow space between its inner surface and the polishing-belt and provided with flanges extending inward beyond the rim of the pulley, of the stop-plate 24 arranged between said casing and the polishing-belt, the adjustable cut-off 25 and the conductor 13 connected to said casing, substantially as described.

6. The combination, with the polishing-belt and supporting-pulley, of a dust-hood comprising a casing of substantially semicircular form arranged with a narrow space between its inner surface and the polishing-belt and provided with flanges extending inward beyond the rim of the pulley, one of said flanges being removable, and a suitable conductor connected to said casing, substantially as described.

In witness whereof I have hereunto set my hand this 24th day of February, 1904.

CHARLES S. YARNELL.

In presence of—

C. G. HANSON,
M. HAGERTY.