

(No Model.)

N. SHAW.
BAND SAW MILL ATTACHMENT.

No. 544,694.

Patented Aug. 20, 1895.

Fig. 1.

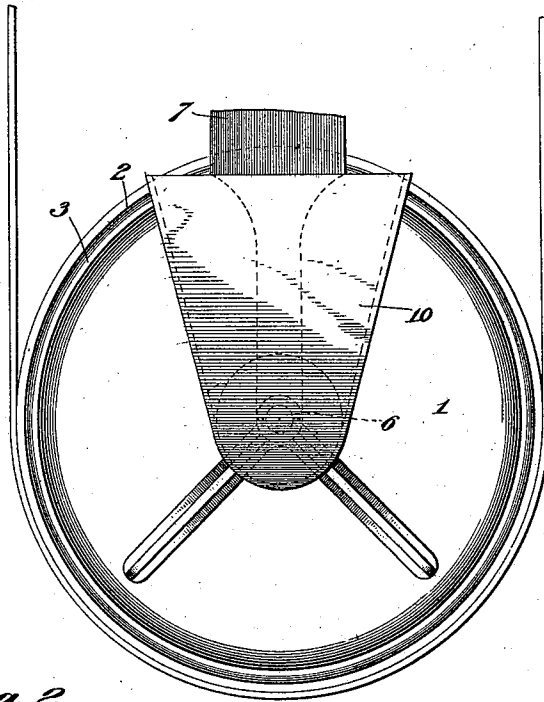


Fig. 2.

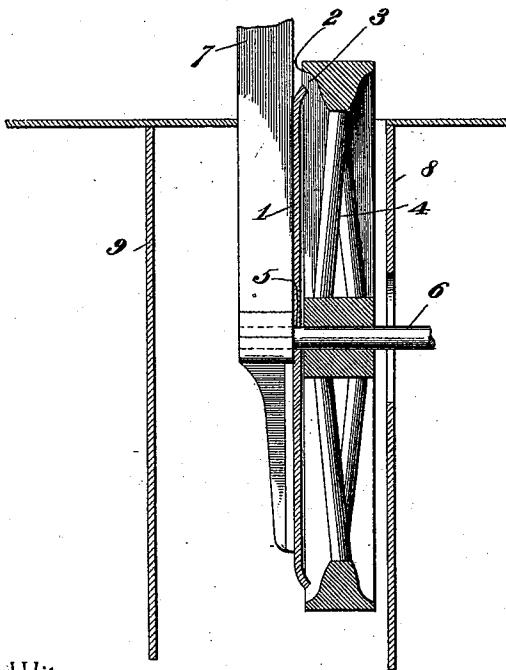
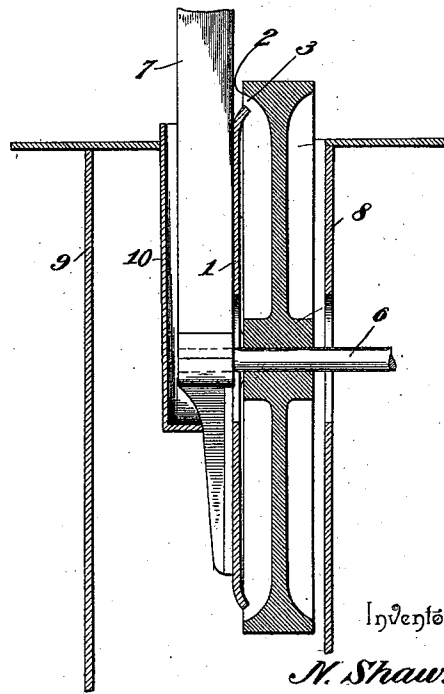


Fig. 3.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

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BAND-SAW-MILL ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 544,694, dated August 20, 1895.

Application filed April 30, 1895. Serial No. 547,690. (No model.)

To all whom it may concern:

Be it known that I, NOAH SHAW, a citizen of the United States, residing at Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented a new and useful Band-Saw-Mill Attachment, of which the following is a specification.

This invention relates to an improvement in attachments for band-saw mills.

The object of the present invention is to provide a device, the nature of which will be hereinafter described, having for its purpose to prevent the fine dust, &c., from entering the center of the lower band-wheel, due to the suction caused by the rapid revolution of said band-wheel.

To this end the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of the lower band-wheel of a band-saw mill with my improvement shown applied thereto. Fig. 2 is a transverse vertical section through a spoked wheel and through the opposite walls or sides of the housing or pit in which said wheel is located. Fig. 3 is a similar view showing the application of my improvement when used in connection with a wheel having an imperforate web.

Similar numerals of reference designate corresponding parts in the figures of the drawings.

This invention contemplates the use, in connection with the lower band-wheel of a band-saw mill, of a disk or circular plate designated by the reference-numeral 1. This disk or plate is made about three inches less in diameter than the inside diameter of the rim of the lower band-wheel, indicated at 2, so as to leave an annular space 3 between the disk and wheel-rim. The outer edge or periphery of the disk 1 is curved inward toward the wheel in such manner as to bring said edge within the side edge of the wheel-rim. Where the band-wheel has arms or spokes 4 the disk 1 is provided with a central perforation 5 and fitted tightly around the band-wheel shaft indicated at 6. The object of this construction is to prevent the fine dust produced by the cut of the band-saw from entering the central

part of the wheel, due to the suction caused by the rapid revolution of said wheel. When the dust is drawn in at the center of the wheel, where no guard is provided, said dust is carried around with the saw and wheel, and, as a result, the outer face of the wheel becomes coated with such fine dust, which causes a great deal of trouble, necessitating the frequent stoppage of the mill in order to clean the face of the wheel. Besides this a quantity of the dust follows the saw in its upward passage to the upper band-wheel and is thrown thereby and scattered upon the sawyer, gradually covering the timber and the surface of the upper portion of the frame of the mill with a substance highly inflammable after it becomes thoroughly dry, which happens in about three weeks. The disk 1, being stationary, may be secured to the usual bearing-hanger 7 or other convenient point.

As band-saw mills are usually constructed the lower band-wheel is incased on all sides and the dust is conveyed therefrom by suction through suitable carrier-pipes. The inside partition of the wheel-pit, as indicated at 8, is beneath the bed of the mill and is usually located in close proximity to the band-wheel, while the opposite or outer wall or partition of said pit is about two feet from the wheel in order to provide the room necessary for changing saws. When the lower band-wheel is constructed with arms or spokes, as indicated in Fig. 2, as before stated, the disk 1 is fitted closely to the wheel-shaft 6, and air is admitted to the center of the wheel through an aperture in the inner partition or wall 8 of the casing or pit adjacent to the center of said wheel. The air thus admitted can pass through between the spokes of said wheel to the opposite side thereof and thence out through the annular space 3 referred to.

In Fig. 3 I have shown the manner in which the disk is applied to a wheel having an imperforate web in lieu of the spokes of Fig. 2. In this case the disk is provided with an aperture adjacent to and surrounding the shaft of the band-wheel, said aperture being of a sufficient size to admit air from that side of the wheel. 10 designates a fresh-air spout which is secured to the outer face of the stationary disk 1 and connected therewith in such manner as to prevent the admission of dust

through the aperture in said disk. The fresh-air spout extends upwardly above the cover of the pit or housing in which the wheel revolves and is open at its top to allow the air
5 to pass down to the aperture in the disk and thence into the wheel, from which it escapes through the annular opening or space 3 between said disk and the rim of the wheel.

The device above described is very simple
10 and inexpensive in construction, but will be found very efficient in practice, effecting, as it does, a great saving in the time of the sawyer, for the reason that the mill requires less attention and cleaning than under the usual
15 arrangement. By supplying air that is free from dust to the center of the wheel the fine dust which enters the pit or housing is not attracted to the wheel and either falls to the
20 bottom of the pit or is immediately carried off by means of the usual devices for this purpose.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

25 1. In a band saw mill, the combination with the band wheel thereof, of a disk disposed at one side of said wheel and having a diameter which is slightly less than the internal diameter of the wheel rim and having its edge

or periphery deflected inward, substantially 30 in the manner and for the purpose described.

2. In a band saw mill, the combination with the lower band wheel thereof, and the usual pit or housing in which the same is mounted, of a disk arranged at one side of the wheel 35 and of smaller diameter than the internal diameter of the wheel rim, said disk also having a central aperture adjacent to and surrounding the wheel shaft, and an air spout arranged outside of said disk and communicating with 40 the central aperture therein, substantially as and for the purpose specified.

3. In a band saw mill, the combination with the band wheel thereof, of a circular plate or disk having a diameter less than the in- 45 ternal diameter of the wheel rim and fitted on one side of the wheel in such manner as to leave an annular space between the periphery of said plate or disk and the wheel rim, for the purpose described. 50

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

NOAH SHAW.

Witnesses:

L. A. SHAW,
W. W. JACKSON,