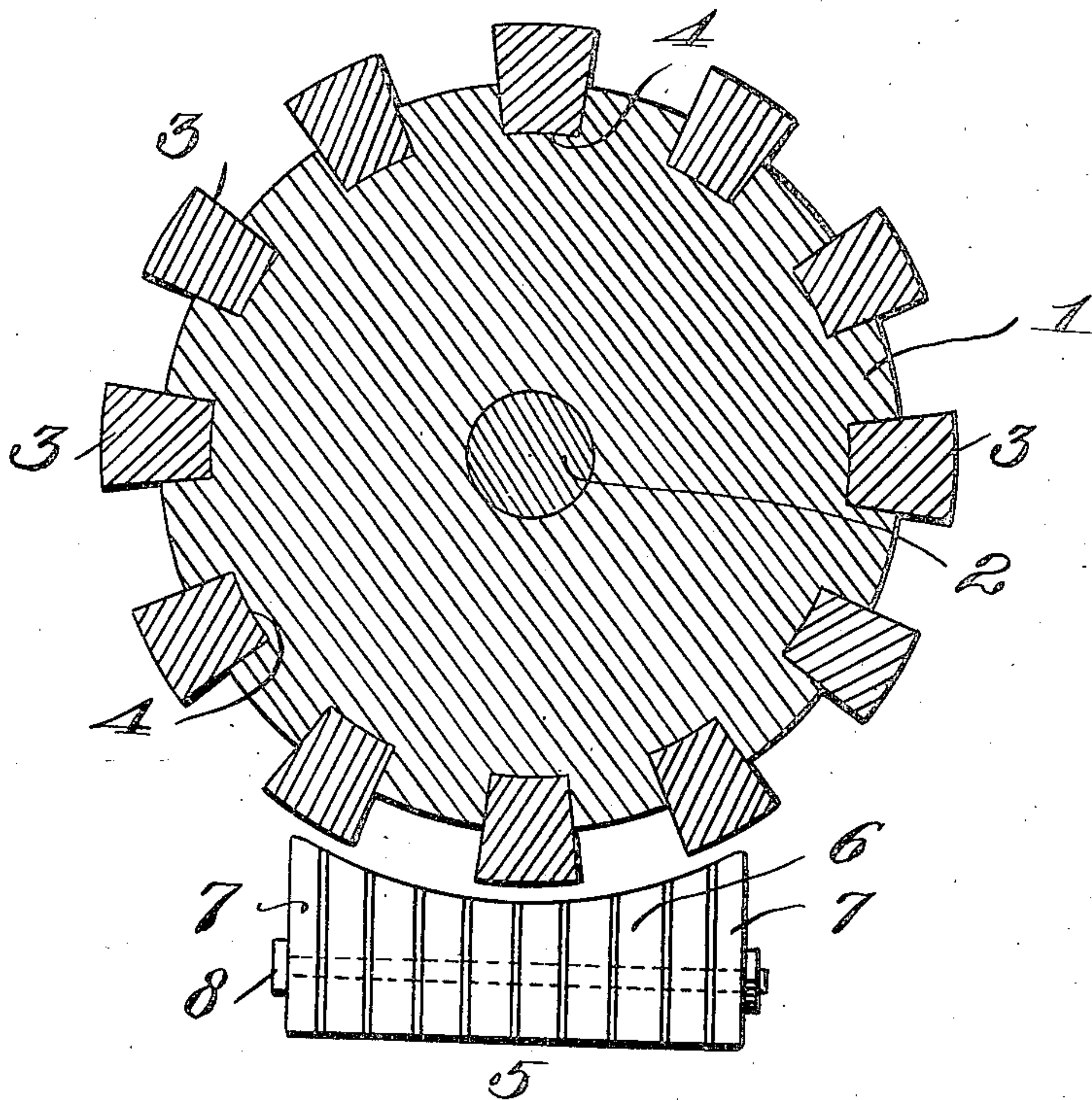


No. 829,746.

PATENTED AUG. 28, 1906.

S. R. WAGG.
FIBER TREATING ENGINE.
APPLICATION FILED JAN. 15, 1904.



Witnesses:
C. D. Kessler
James L. Morris, Jr.

Inventor
Solomon R. Wagg
By James L. Morris, Jr.
attys

UNITED STATES PATENT OFFICE.

SOLOMON R. WAGG, OF APPLETON, WISCONSIN.

FIBER-TREATING ENGINE.

No. 829,746.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed January 15, 1904. Serial No. 189,197.

To all whom it may concern:

Be it known that I, SOLOMON R. WAGG, a citizen of the United States, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented new and useful Improvements in Fiber-Treating Engines, of which the following is a specification.

This invention relates to improvements in machines for treating fiber for use in the manufacture of paper, and has for its object to provide a machine capable of subjecting the fiber to the beating action of two sets of grinding or beating members, one of which is relatively soft as compared with the other and movable with respect thereto. The specific object of the invention relates to the provision of an engine having cooperating wooden and stone bars.

In order that the invention may be clearly understood, I have illustrated the same in the accompanying drawing, in which the figure represents a cross-section through the roll and bed-plate of an ordinary Holland or beating engine.

1 represents the roll or cylinder of the engine, 2 the shaft upon which it is supported to rotate, and 3 a series of wooden bars which are secured at regular intervals around the roll 1 in longitudinal grooves 4, provided for the purpose and secured in place in any preferred manner, as by wedging, bolting, or the like.

5 indicates the bed-plate, which is composed of stone bars 6, which may be held in position by clamping them between side plates 7, of metal or any other preferred material, by means of bolts 8.

I find that by subjecting fiber to the action of two sets of bars, one of which is relatively soft as compared with the other, that the fiber is reduced or drawn out in a gentle, smooth, and easy manner, and there is practically an entire absence of all cutting of the fiber, which latter is invariably the case where metal bars have been employed on the roll and in the bed-plate, as has heretofore been customary. The result is that the finished product will produce paper of a high degree of uniformity both as to smoothness

and toughness—that is to say, the fibers constituting the sheets of paper will be relatively long as compared with the fibers of paper which have been treated to the action of metal blades, and thus the parts of the finished sheet of paper will be more firmly bound together, whereas when the fibers are short the paper will be more brittle and will consequently break more readily. In other words, the action of the wooden bars cooperating with the stone bed-plate will be to draw the fibers out as contradistinguished to cutting them.

While I have described my invention in connection with an ordinary Holland or beating engine, I wish it distinctly understood that I may use the same in connection with what are known as “refining” or “Jordan” engines.

It will be readily apparent that I can vary the arrangement of the wooden and stone bars from that described herein and illustrated in the drawing without departing from the spirit of my invention. Thus, for instance, the wooden bars may be placed in the bed-plate and the stone bars in the roll, or the wooden and stone bars can be placed in the roll and wooden and stone bars can be placed in the bed-plate.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fiber-treating engine, for use in the manufacture of paper, provided with cooperating wooden and stone bars, one set of said bars being arranged to be rotated in proximity to the other set.

2. In a fiber-treating engine, for use in the manufacture of paper, in combination with a rotary member provided with wooden bars, a cooperating stationary member presenting a stone surface.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SOLOMON R. WAGG.

Witnesses:

GEO. H. PEERENBOOM,
P. L. SCHNELLER.