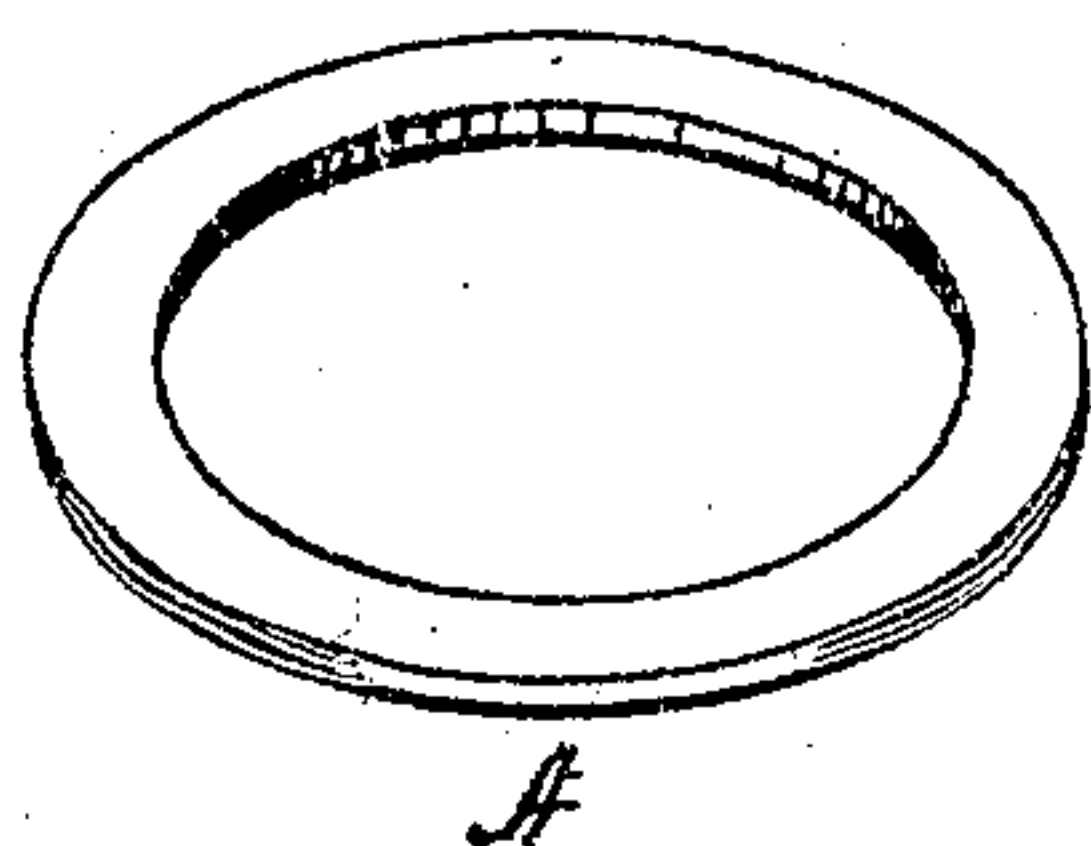


EDMUND S. HANNA.

Improvement in Paper Washer.

No. 119,604.

Patented Oct. 3, 1871.



Attest;

R. C. Wenshall

James I. Kay

Inventor;

Edmund S. Hanna

by his Attorneys

Bakewell Christy & Kerr

UNITED STATES PATENT OFFICE.

EDMUND S. HANNA, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND COLUMBUS WEST, OF SAME PLACE.

IMPROVEMENT IN PAPER WASHERS.

Specification forming part of Letters Patent No. 119,604, dated October 3, 1871.

To all whom it may concern:

Be it known that I, EDMUND S. HANNA, of Pittsburg in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Paper Washers for Wagons, Carriages, and operative machinery; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention consists in making washers, for use on the axles of carriages and other vehicles, and on the operative parts of machinery of all kinds, of paper, as a new article of manufacture.

To enable others skilled in the art to make and use my invention, I will describe its construction and manner of use.

I cut the washer A, shown in the drawing, out of paper of the desired thickness by means of a stamp or cutter of circular shape. The paper does not require any particular preparation to fit it for this use, although it may be desirable to saturate it with oil or grease of some kind when the washer will be exposed to water, for the purpose of preventing the water from penetrating and rotting it; the oil put on carriage-axles and machinery for the purpose of lubrication, rubbing against the washer, is sufficient for this purpose, no further application being necessary.

This washer does not wear away and roughen by use, but hardens and becomes smooth. It is much cheaper than either iron or leather washers, and more durable than the leather, either raw or prepared.

I design it for use on carriages, wagons, and other vehicles, and on operative machinery, to secure a noiseless operation. It can be made of any kind of paper or paper board in ordinary use, whether treated with oil or not, or from paper prepared by any special process; as, for instance, such as is described in Letters Patent No. 113,454, or in any way whatsoever. The washers may be made of any desired size or thickness.

What I claim as my invention, and desire to secure by Letters Patent, is—

As a new article of manufacture, a paper washer for use on wagons, carriages, and other vehicles, and on operative machinery, as hereinbefore described.

In testimony whereof I, the said EDMUND S. HANNA, have hereunto set my hand.

EDMUND S. HANNA.

Witnesses:

W. N. PAXTON,
JAMES I. KAY.

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