

UNITED STATES PATENT OFFICE.

WILLIAM RUPP, OF NEW YORK, N. Y.

MANUFACTURE OF PAPER.

SPECIFICATION forming part of Letters Patent No. 296,463, dated April 8, 1884.

Application filed February 20, 1884. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM RUPP, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Improvement in the Manufacture of Paper, of which the following is a specification.

My invention relates to the manufacture of paper generally, but more particularly to the descriptions of paper which are used for absorbent purposes; and the object of my invention is to substitute for a portion of the paper-stock now used a material which shall be cheaper than the stock, and which will also improve the quality of the paper containing it.

The substance which I propose to use, as above stated, is what is known as "infusorial earth," which may be incorporated with the paper-stock during the ordinary process of manufacture in suitable quantities.

In the case of papers for absorbent purposes—as blotting-paper—the addition of infusorial earth will improve the absorbent qualities, for it is well known that this material will take up about three times its weight of water. Another advantage of the use of infusorial earth in absorbent paper is that after the paper containing it has been once wet and then dried it does not become hard and brittle, with diminished absorbent qualities, but remains unchanged, and may be used much longer than papers which contain clay or kaolin or similar material. It is evident, therefore, that infusorial earth may be substituted for a portion of the rag stock with great advantage to the quality of the paper, and as it is very much cheaper than the rag stock a cor-

responding saving is effected. The peculiar cellular structure of infusorial earth will greatly assist in its incorporation with the paper-stock in the process of manufacture, for it allows the particles to engage or felt in with the fibers of the stock in a very complete manner. The stock will thus not only hold a much larger quantity of the earth than it could of kaolin or other ordinary clay which is of smooth crystalline structure, but will hold it more firmly and without the use of sizing or any other binding material. From this it is evident that the infusorial earth is well adapted as a filler to be used in the manufacture of paper generally, as well as being peculiarly qualified to be used in absorbent papers, as before described. The quantity of the earth used will in any case depend upon the description of paper that is desired, and is limited only by the amount which the stock used will hold and the skill of the user.

I am aware that kaolin and other similar clays have been used as filling for paper, and I make no claim to the use of such materials generally.

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

1. Combining infusorial earth with the pulp in the manufacture of paper, for the purpose set forth.
2. In the manufacture of absorbent paper; the substitution of infusorial earth for a portion of the paper-stock.

WM. RUPP.

Witnesses:

JAMES H. STEBBINS,
W. F. HAPGOOD.