B. FLETCHER.

PAPER STRAW.

APPLICATION FILED MAR. 17, 1914.

1,133,717. Patented Mar. 30, 1915.

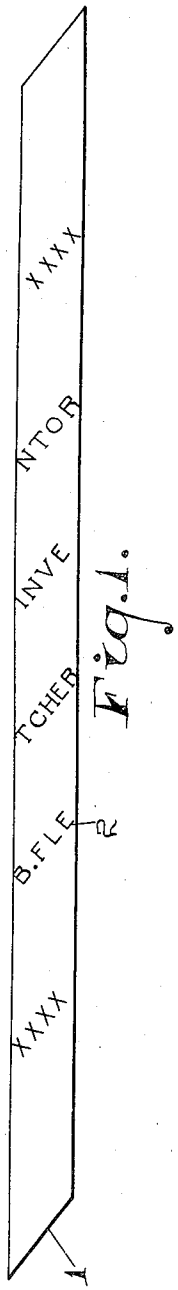


Fig. 1.

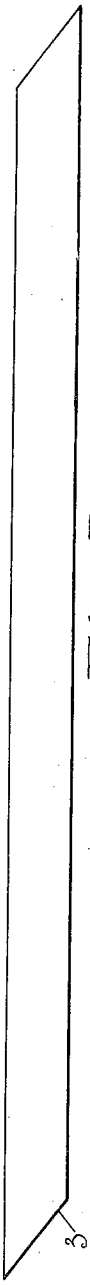


Fig. 2.



Fig. 3.



Fig. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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PAPER STRAW.

1,133,717. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed March 17, 1914. Serial No. 825,439.

To all whom it may concern:

Be it known that I, BENJAMIN FLETCHER, of the city of Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Paper Straws, of which the following is a specification.

This invention relates to the paper straws used in soda fountains and bars and my object is to devise means for applying advertising or other printed matter thereto so that it may be easily read and yet will in no way interfere with the cleanliness and hygienic features of the straw. It is also of importance that the cost of manufacture shall not be materially increased.

I attain my object by forming the straw by winding a strip of paper on which the advertising or other matter has been printed so that the printed matter, when the strip is wound, extends substantially continuously lengthwise of the straw. Over the first strip is wound a second strip which may be an integral part of the first strip and which covers the printing. The straw is then paraffined. The printer's ink is thus completely protected from contact with the mouth or with the fluids imbibed, and owing to the translucency conferred on the paper by the waxing, the printed matter can easily be read.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a plan view of part of one of the strips of paper from which the straw is formed; Fig. 2 a plan view of the strip forming the outer ply of the straw; Fig. 3 a side elevation of a completed straw; Fig. 4 a cross section of the same on an enlarged scale.

1 is the inner strip of paper which is preferably spirally wound on a mandrel with its edges abutting to form a tube. On the surface of this strip which contacts with the covering strip when the latter is in place, is printed ornamental or advertising matter. To enable this to be conveniently read it is necessary that when the tube is formed the printed matter shall run lengthwise of the straw. I therefore arrange this printed matter in a series of substantially equally spaced sections 2 running diagonally across the strip so that when the strip is wound into a tube the sections come into alinement as shown in Fig. 3.

3 is the strip of paper forming the outer ply of the finished straw. This is wound over the tube formed from the inner strip so as to cover the joints thereof. The strip 3 is gummed at its edges so as to adhere to the strip 1.

The printed matter, it will be seen, is on a surface of one of the plies of the tube contacted by the adjacent surface of the other ply so that the printed matter does not come in contact with the mouth of the user or with the fluid in which the straw is being used. After the tube is completely formed it is saturated with paraffin or other wax which renders it water proof and also translucent so that the advertisement or other printed matter is clearly seen through the outer ply of the tube.

It must be understood that the term "wax" must be taken to cover any of the materials commonly employed to impart water proof qualities and translucency to paper straws.

It is not material that the paper of which the straw is composed be formed of independent strips nor that the winding be exactly as described and shown as any other of the means of forming two ply straws now known may be employed.

What I claim as my invention is:

1. A paper straw formed of two plies superimposed the one on the other and each formed of a spirally wound strip of paper, one of said strips having matter printed on the surface next the other ply, said printed matter being applied in equally spaced sections extending diagonally across the strip, and the whole impregnated with wax.

2. A paper straw formed of two plies superimposed the one on the other and each formed of a spirally wound strip of paper, the inner of said strips having matter printed on the surface next the other ply, said printed matter being applied in equally spaced sections extending diagonally across the strip, and the whole impregnated with wax.

Toronto, Ont. this 10th day of March A. D. 1914.

BENJAMIN FLETCHER.

Signed in the presence of—
E. P. HALL,
L. M. LEWIS.