

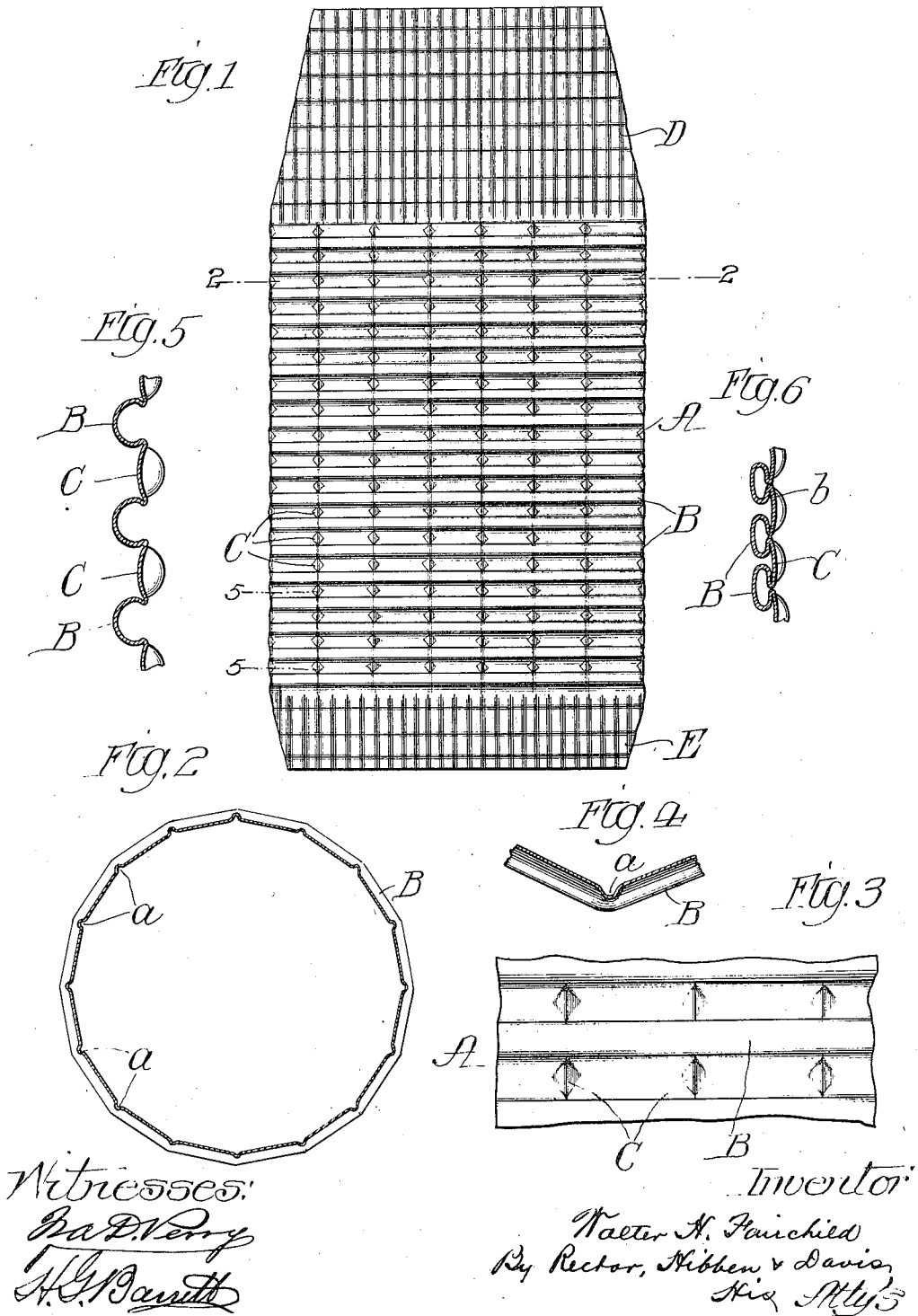
W. H. FAIRCHILD.

PAPER WRAPPER.

APPLICATION FILED JULY 18, 1908.

1,013,143.

Patented Jan. 2, 1912.



UNITED STATES PATENT OFFICE.

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PAPER WRAPPER.

1,013,143.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed July 18, 1908. Serial No. 444,266.

To all whom it may concern:

Be it known that I, WALTER H. FAIRCHILD, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Paper Wrappers, of which the following is a specification.

My invention relates to paper wrappers intended more particularly for the packaging of bottles and the like, although I contemplate using said invention wherever applicable.

The object of my invention is to produce a paper wrapper of the corrugated paper type, which is so formed that the corrugations are prevented from flattening out due to any pressure, with the result that the strength and protecting qualities of the wrapper are maintained.

In the accompanying drawing Figure 1 is an elevation of my paper wrapper in its preferred form; Fig. 2 a section of my paper wrapper when the same is distended, as when placed around a bottle or the like, the section being on line 2—2 of Fig. 1; Fig. 3 an enlarged detail view showing the corrugations and the crimps running at right angles to the corrugations; Fig. 4 a detail view showing one of the lines of scoring in the interior of the paper wrapper; Fig. 5 an enlarged section taken on line 5—5 of Fig. 1 illustrating somewhat diagrammatically the normal relation of the crimps and the corrugations; and Fig. 6 a similar view but on a smaller scale, illustrating the relationship of said crimps and corrugations when pressure is applied, tending to flatten the corrugations.

Referring to the present embodiment of my invention as illustrated in the drawing, my paper wrapper is made from a sheet or blank of paper A of the proper size and thickness as desired. In practice this blank is passed through a corrugating machine to form corrugations B transversely of the blank and is then scored with a series of score lines on that side of the blank which is to become the inside of the completed wrapper, such score lines running at right angles to the corrugations. The corrugations thus run transversely of the wrapper and consequently around the article to be placed therein, while the score lines run

longitudinally of the wrapper, as clearly indicated in Fig. 1 of the drawing. The longitudinal edges of the blank are secured together in any suitable manner as by lapping and gluing the same and a tube open at both ends is thereby formed, but it will be understood that such tube is adapted to collapse into flat form, in which it remains until put to actual use.

As a result of the scoring of the inside surface of the wrapper and the corrugating of the wrapper at right angles to the series of lines of scoring, there is formed between the corrugations the series of crimps C which are outwardly bent or curved and which serve as braces between the corrugations, thereby holding the latter in their proper and intended condition. These crimps not only hold the corrugations distended, but more particularly prevent the corrugations from being flattened out, as would otherwise be the result. This flattening of the corrugations is prevented by the crimps, inasmuch as the ends of each crimp enter into the side of the corrugations, which are bent back thereupon as indicated in Fig. 6. It will now be obvious that any tendency of the corrugations to flatten and to draw apart is resisted by the pressure and friction of the under sides *b* of the corrugations upon the ends of the crimps which enter therein.

By preference both ends of the wrapper are provided with corrugations D and E running longitudinally of the wrapper, although if desired only one end of the wrapper may be thus corrugated. In practice the wrapper is corrugated and then scored longitudinally, after which the ends are corrugated at right angles to the corrugations B. The advantage of such end corrugating is to enable the top of the wrapper to be readily folded or drawn inwardly around the article, such as the neck or upper portion of the bottle, which is of less diameter than the body portion, while the corrugated lower end of the wrapper, which becomes slightly contracted in the last corrugating operation, causes the wrapper to fit closely upon or hug the bottle, thereby keeping the wrapper in place.

A paper wrapper embodying my invention possesses great strength and rigidity

considering its weight, and maintains its proper protecting and cushioning functions throughout its period of use.

I claim:

- 5 1. A paper wrapper comprising a tube scored longitudinally and corrugated transversely as to its body portion and corrugated longitudinally as to an end thereof; substantially as described.

2. A paper wrapper comprising a tube scored longitudinally and corrugated transversely as to its body portion and corrugated longitudinally as to both ends thereof; substantially as described.

WALTER H. FAIRCHILD.

Witnesses:

J. B. BROWN,
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