

No. 723,522.

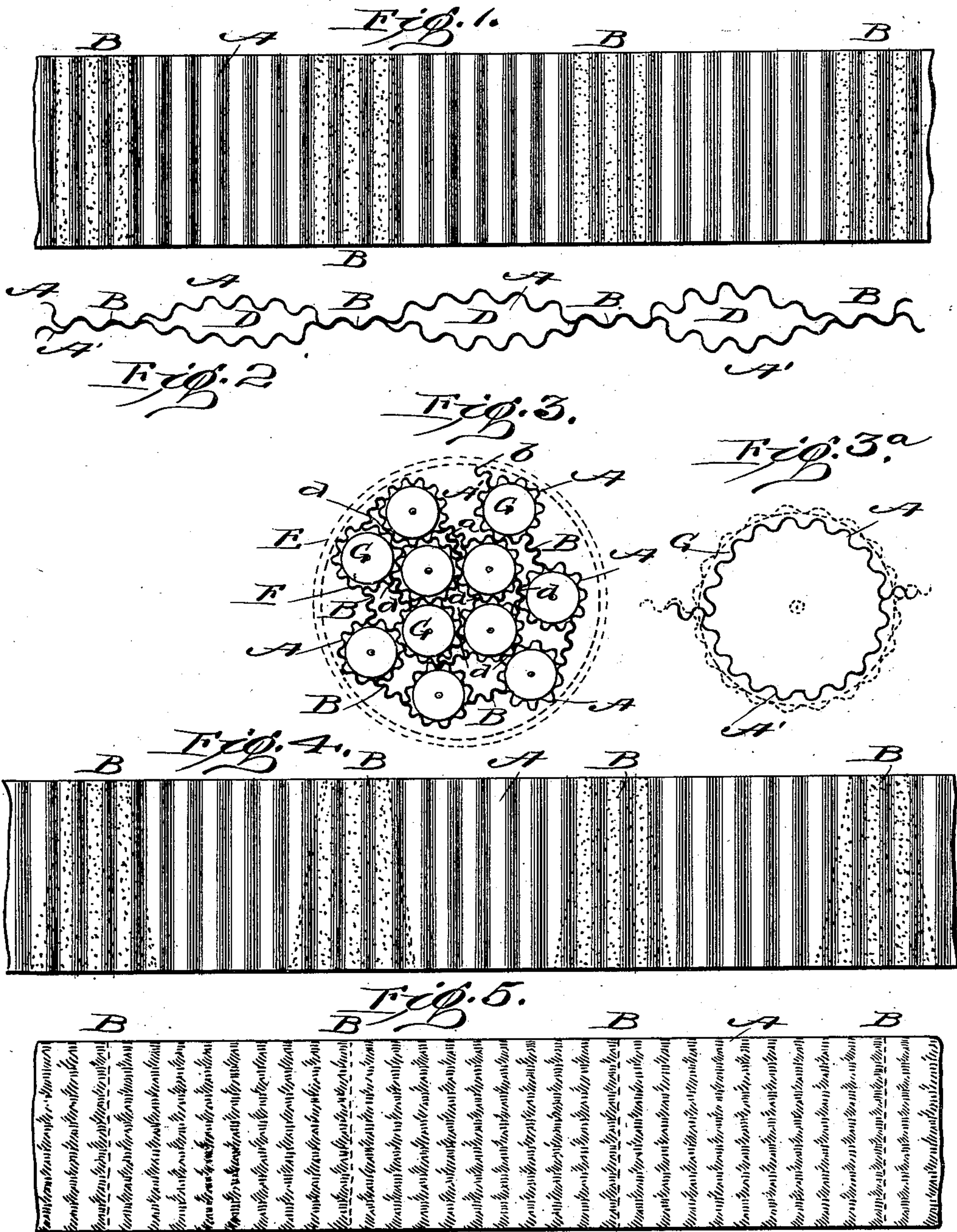
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R. GAIR.

PACKING FOR INCANDESCENT LAMP BULBS OR LIKE ARTICLES.

APPLICATION FILED NOV. 24, 1902.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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PACKING FOR INCANDESCENT-LAMP BULBS OR LIKE ARTICLES.

SPECIFICATION forming part of Letters Patent No. 723,522, dated March 24, 1903.

Application filed November 24, 1902. Serial No. 132,631. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT GAIR, a citizen of the United States, residing at New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Packing for Incandescent-Lamp Bulbs or Like Articles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the material commonly known by the name of "packing," in which incandescent-lamp bulbs and other fragile articles are inclosed or wrapped preparatory to incasing or barreling them for transportation or storage.

The object of the invention is to produce a cellular packing for the purpose stated capable of expanding to receive the articles and conforming closely to their size and shape and to their position with respect to one another when placed in a case or barrel and which shall be adapted to receive and take up the pressure to which the articles are subjected when incased or barreled and interpose an elastic cushion between the articles themselves and between them and the walls of the case or barrel, and thus protect them against injury from the jarring and shaking to which they are exposed during transportation and handling.

The invention consists in an elastic and flexible packing formed of approximately coterminous strips or pieces of elastic and flexible paper or similar material, the strips being put together face to face and glued or otherwise secured together transversely at intervals, so that between the lines of gluing the strips remain unconnected and capable of being opened to form cells or pockets the walls of which are adapted to expand and bend to conform to the shape and size and the position of the articles placed in them, the said packing being also adapted to be wound spirally to form a roll after the articles are placed in the cells or pockets and the roll placed in a barrel or case.

In the accompanying drawings, Figure 1 represents a piece of the improved packing;

Fig. 2, a longitudinal section of the same. Fig. 3 represents the packing with the bulbs in the cells and a strip containing the bulbs placed in the barrel. Fig. 3<sup>a</sup> illustrates the elasticity of the walls of the cells or pockets, showing also how they are made to conform to the shape and size of the article. Fig. 4 is a plan view of a modified form of the packing. Fig. 5 is a plan view of another form of packing.

Referring to the drawings, A A' designate two strips or pieces of corrugated paper which are placed together face to face and glued together at intervals on parallel lines, as at B. Between the glued connections, the strips being free, the parts included between the glued lines can be separated and opened out, and thus form a series of cells or pockets D D, &c., the number of which depends upon their size and the length of the strips. The strips should be coterminous, and their width should be such as to form when opened a cell or pocket having a depth about equal to or a little in excess of the length of the article it is to receive. The packing thus formed is made in any suitable or convenient lengths, and pieces are cut off which when the bulbs are put in the cells and the packing rolled up will form a spiral roll that will fit closely in an ordinary barrel or a packing-case of suitable form.

The mode of using the packing is illustrated by Fig. 3, in which E represents a barrel, and F a roll of packing, with the bulbs in the cells in the barrel. One end *a* of the packing is near the center and the other end *b* is near the circumference, the strips of packing being thus rolled spirally until they form a roll that fits closely against the sides of the barrel. It will be seen that the corrugated sides of each cell touch the corrugated side or sides of the cells or pockets that adjoin them on one or more sides, as at *d d*, &c., so that between proximate bulbs there are two thicknesses of corrugations that form elastic cushions which take up any pressure or jarring or shaking to which they may be subjected. A series of rolls are thus formed and placed in the barrel until it is filled, and between each roll and also at the top and bottom a sheet of corrugated paper is placed to sepa-



rate the rolls from each other and from the top and bottom of the barrel.

The material being both elastic and flexible, the walls of the cells conform to the shape and size of the bulbs, and they thus hug the bulbs closely and afford a support all around the same, and the corrugations form a double elastic cushion or wall between each bulb and those surrounding it. Hence, the pressure being taken up by the corrugations, the bulbs are protected and injury of the carbons by jarring and shaking is avoided. Furthermore, the corrugations on the exterior walls of the pockets or cells cause them to become interlocked where they touch one another, whereby they are held steady and displacement is avoided.

The flexibility of the packing permits it to be rolled into a close roll, as illustrated by Fig. 3. The advantage gained from the elasticity of the material is well shown by Fig. 3<sup>a</sup>, where a bulb G is shown inserted in a cell or pocket D. Here the bulb having a larger diameter than the pocket the walls of the latter expand to admit it, as indicated by the dotted lines, and by thus expanding their combined elasticity and flexibility cause them to conform to the shape and size of the bulb and furnish an elastic support for the same on every side.

The packing is made by placing together two strips of paper of the kind used for corrugating and running the strips through a machine which applies the paste and corrugates the paper at the same time and in one operation.

If it is desired to make the cells or pockets of a tapering form, the glue is applied in lines

B, wider at the bottom than at the top, or vice versa, as shown in Fig. 4.

Instead of corrugated paper a similar material made from paper with indentations stamped in it may be used, and in place of glue the strips may be sewed or fastened together with wire.

I claim—

1. In packing for incandescent-lamp bulbs and like articles, a series of cells and flexible connections between them, the walls of the cells and the flexible connections being made from two strips of corrugated paper and adapted to stretch and bend to admit the bulbs and conform closely to their shape and size and the flexible connections allowing the cells with their contents to be bent around in contact with and to mutually support one another and the corrugations of adjoining cells to interlock, substantially as specified.

2. In packing for incandescent-lamp bulbs and like articles a flexible cellular packing-roll composed of two strips of elastic and flexible corrugated paper placed face to face and fastened together at intervals with the intervening portions disconnected and adapted to be opened to form cells and the lamp bulbs placed in the same the said packing with the articles in the cells being rolled spirally and the corrugations of the adjoining cells interlocked, substantially as specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

ROBERT GAIR.

Witnesses:

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