May 20, 1924. 1,494,346

F. H. EASTMAN ET AL

SHIM STRIP PACKAGE

Filed Jan. 14, 1920

Fig. 1.

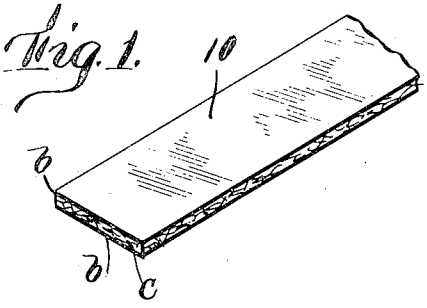
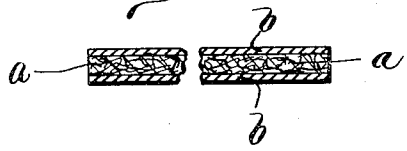


Fig. 2.



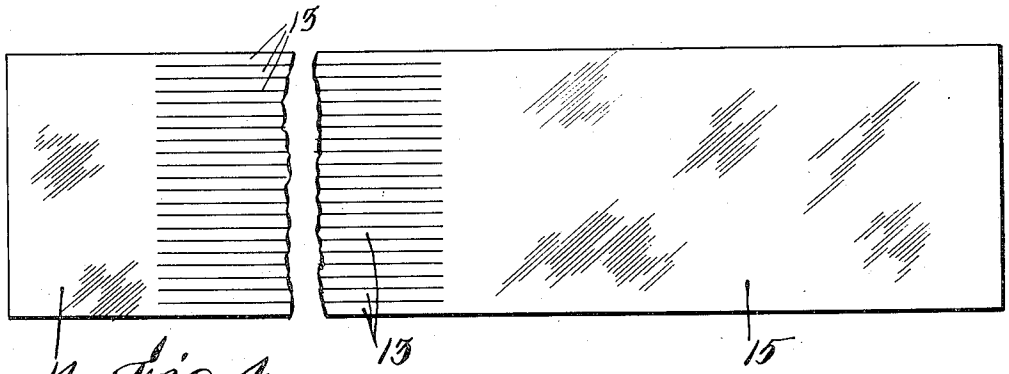
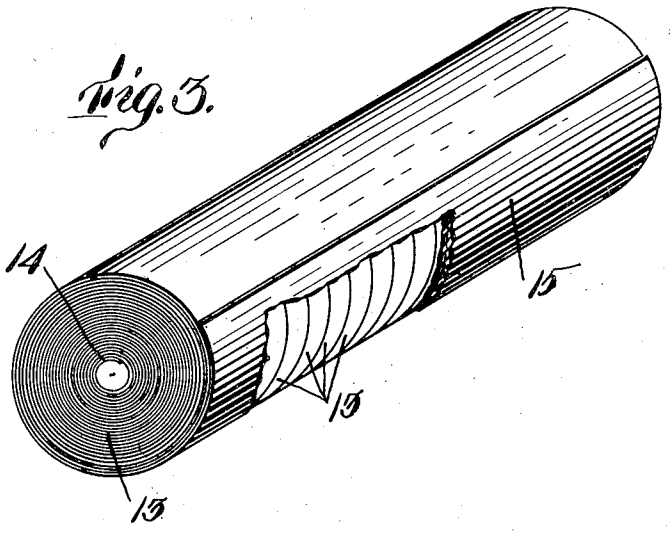


Fig. 4.

Fig. 3.



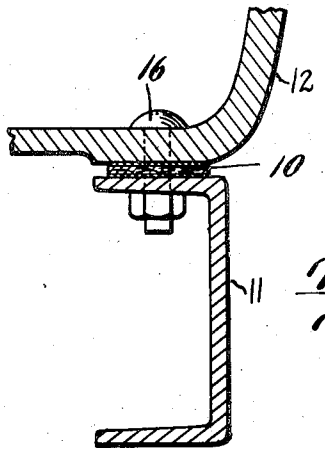


Fig. 5.

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Patented May 20, 1924. 1,494,346

UNITED STATES PATENT OFFICE.

FOREST H. EASTMAN, OF DETROIT, MICHIGAN, AND GERALD R. STARK, OF BAY SHORE, NEW YORK, ASSIGNORS TO THE FLINTKOTE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

SHIM-STRIP PACKAGE.

Application filed January 14, 1920. Serial No. 351,457.

To all whom it may concern:

Be it known that we, FOREST H. EASTMAN and GERALD R. STARK, citizens of the United States, and respectively residing at Detroit, in the county of Wayne and the State of Michigan, and at Bay Shore, in the county of Suffolk and State of New York, have invented new and useful Improvements in Shim-Strip Packages, of which the following is a specification.

This invention has for its object to provide a new article of manufacture, namely a merchantable package containing "shim strips," so-called, namely strips of cushioning material employed in automobiles between the body and the chassis.

As pointed out in a copending application Serial No. 351,456, filed January 14, 1920, concurrently herewith by one of us, viz. Forest H. Eastman, such shim strips may consist of narrow strips of felt or other suitable fibrous cushioning material, saturated or impregnated with a waterproofing compound such as pitch, asphalt or other bituminous composition of relatively low melting-point and coated on both faces with a fairly thick or heavy layer of a higher-melting-point bituminous compound.

The present invention consists of a roll of such strips, so formed as to protect the strips against injury and to ensure their being delivered in bulk to the consumer.

On the accompanying drawing,—

Figure 1 illustrates an individual shim strip detached from the package.

Figure 2 represents conventionally an enlarged cross section of the same.

Figure 3 illustrates a roll of shim strips embodying our invention.

Figure 4 illustrates the sheet of strips ready for rolling into a marketable mass or roll.

Figure 5 illustrates in section a portion of a car body, and a bar of the frame or chassis, with a shim strip interposed between them.

As pointed out in said copending application, each shim strip 10 may consist of a fibrous material *a*, such as felt, of the desired width and thickness. The fibrous foundation or body is saturated or impregnated with a relatively low-melting-point bituminous compound, such as pitch or asphalt, and on both faces it is coated with a relatively thick layer *b* of higher-melting-point pitch or asphalt, which will not be so softened by solar or atmospheric heat as to run or flow. Each strip is preferably produced of such length that it may be cut into pieces to fit any desired location. In Figure 5, there is illustrated, more or less conventionally, an angle bar 11 forming a part of the chassis or frame of an automobile, and a portion 12 of the car body, which is made of wood, and between them is located the shim strip 10. When the parts are in this location, the bolts 16, which unite the body to the frame, may be easily driven through the fibrous strip. If desired, the asphaltic coatings of the strip may be slightly softened by the application of heat, but ordinarily this is not necessary, as the weight of the car body is sufficient to cause the coating to flow into and fill any irregularities in the surfaces of the body and the frame bars. The coating is sufficiently plastic, under pressure, to adhere firmly to the said surfaces and prevent any slip between the body or the frame and the shim strip. Any relative movement between the body and the supporting bars is absorbed by the fibrous body of the strip itself, and thus there is prevented any friction between the car body and the supporting bars, and any disagreeable noises or squeaks ordinarily due to such friction are eliminated. Notwithstanding that the felt body of the strip is impregnated with a bituminous compound, it is capable of compression and serves as a cushion between the car body and its supporting frame.

We have found it desirable to supply the shim strips, say 1½ inches in width and 104 feet in length, although, of course, these dimensions may be varied according to the requirements of the car builders.

In Figure 3, we have illustrated a roll of shim strips embodying our invention, ready for shipment, and in Figure 4 we have illustrated a sheet comprising the strips ready to be rolled into the package shown in Figure 3. The sheet consists of the fibrous felt foundation which has been saturated with low-melting-point bituminous compound or other equivalent waterproofing composition, and provided on its faces with a relatively thick layer of pitch or asphalt of the character hereinbefore referred to. By means of suitable slitting cutters, the said sheet be-

tween its ends is longitudinally slit to provide a plurality of parallel strips 13 which at their ends are integrally connected and united with the unslit ends of the sheet, which are thus continuous transversely from edge to edge. One end of the sheet is indicated at 14 for a distance, approximately 1 foot 6 inches, is left unslit, and it serves as the core of the roll or package about which the strips are rolled or coiled. The other end of the sheet, which is indicated at 15, is likewise unslit, and it is of sufficient length that it may constitute the last convolution of the roll so as to afford a protective covering for the roll. If the entire sheet is approximately 111 feet long, the unslit end 15 may be approximately 6 feet 6 inches in length, and the strips themselves may be approximately 104 feet long. For example, the sheet itself may be approximately 31½ inches in width and the individual strips 1½ inches in width. By means of a suitable mandrel, to which the end 14 of the sheet is attached, the entire sheet is wound into a roll or package, as illustrated in Figure 3. On removing the mandrel, the inner end 14 serves as the core of the roll and the end 15 of the sheet serves as the wrapper or protective casing, within which the individual strips are enclosed or encased. The individual strips are clamped and maintained in parallelism between the core of the roll and the outer unslit convolutions so that the roll or package may be transported and shipped without injury to the strips. An automobile manufacturer, purchasing the roll, uncoils the end 15 of the sheet, thus exposing the strips so that they may be severed and used as occasion demands. Of course, the roll itself may be enwrapped, if desired, in a sheet of paper or other material containing advertising matter and printed directions for the use of the strips.

In initially preparing the sheet to be slit and rolled, it is first saturated with the plastic bituminous compound by passing it through a tank containing such compound in a molten fluid state. The surplus compound is removed by squeeze rolls and the sheet is then passed between coating rollers by which the harder compound is applied thereto while in a molten and plastic condition. The sheet is then cooled until the coating sets, after which it may be subjected to the operation of slitting instrumentalities, as has been already described.

Having thus explained the nature of our said invention and described a way of making and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what we claim is:

1. As a new article of manufacture, a sheet of waterproofed fibrous cushioning material, slit longitudinally between its ends to provide a plurality of narrow shim strips each connected with the end portion of the sheet, and adapted to be wound into a roll with said end portion of sufficient length to form the last convolution of such roll.

2. As a new article of manufacture, a sheet of waterproofed fibrous cushioning material, slit longitudinally to provide a plurality of narrow shim strips each attached to an unslit end of the sheet, said sheet being in roll form, with the unslit end forming the outer convolution of the roll and constituting an enclosing wrapper therefor.

3. As a new article of manufacture, a plurality of rolls of narrow strips wound about a common axis, and a common continuous wrapper for said rolls integrally connected with and constituting an extension common to all the outer ends of said strips.

4. As a new article of manufacture, a sheet of fibrous material, slit longitudinally between its ends to provide a plurality of narrow strips each connected with the unslit ends of the sheet, said sheet being in a roll in which one unslit end constitutes the core about which said strips are coiled, and the other unslit end forms the last convolution of the roll and constitutes a wrapper for the strips.

5. As a new article of manufacture, a sheet of fibrous material impregnated with a bituminous compound and coated on both faces with a bituminous compound, said sheet being slit longitudinally between its ends thereby providing a plurality of parallel shim strips connected with the unslit ends of said sheet, said sheet being in a roll of which the core is formed by one unslit end of the sheet, and the outer convolution is formed by the other unslit end of the sheet and constitutes a wrapper for the intervening coiled strips.

6. A roll made from a blank, the intermediate portion only of which is prepared for use as shim strips, one end portion constituting the core of the roll and the other end portion constituting the wrapper for the roll.

In testimony whereof we have affixed our signatures.

FOREST H. EASTMAN.
GERALD R. STARK.