METHOD OF PACKING ASPHALT

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My invention relates to methods of forming a package for shipment of asphalt, and more particularly to methods of packing blocks of asphalt in an ordinary shipping carton.

There have been many processes and methods of packing asphalt advanced in the past, but none of them have proved successful, aside from the practice of pouring the asphalt into a barrel, which barrel, on the job is broken apart, thereby exposing the asphalt.

The defect with this method of packing is in the first place, that the barrels are thrown away and cause considerable expense. In the next place the barrels are quite heavy, and cannot be handled by one man, and require hoists and the like when used in the construction of buildings. Finally the shipment of a barrel is expensive because of the waste space involved in placing barrels in a boxcar.

It is the object of my invention to use a carton instead of a barrel, thereby saving expense, to make up the asphalt in blocks of around say ninety pounds, thereby making a convenient size for a man to carry with best efficiency and finally to provide a cubical package which can be closely packed in freight cars without loss of space.

In carrying out my object the great difficulty is in getting the asphalt into the carton in such a way that the paper can be stripped away from the asphalt. Asphalt when warm or hot is quite tacky, and will stick to the paper unless there is some protective coating between the two. When it comes to the user, he cannot get the paper away from the asphalt. While some paper is not a disadvantage, if the paper becomes wet, and wet paper is placed in a heating kettle for asphalt, there may occur an undesirable foaming and boiling over of the kettle.

Thus my invention is directed to methods of getting more particularly, good sized cubical blocks of asphalt into cartons to fit them snugly, without causing the asphalt to stick to the paper at the time, and preventing the subsequent sticking, if the package is heated up, as in the summer sun.

Another difficulty attendant upon pouring asphalt directly into a paper carton, is that the hot liquid will run out of any cracks which may be present in the carton, and then when the filled cartons are stacked up to cool and harden, they will stick together, so much that to get them apart often results in severely damaging one of the cartons.

It should also be observed at this point, that if square blocks of asphalt were merely wrapped in a heavy paper, and shipped, that they would not retain their shape when warm, as in the summer time, and would run together into an unwieldy mass. Thus a good heavy carton, such as is specified by the Interstate Commerce Commission for the weight of asphalt shipped in the package, must be used, to surround the block of asphalt, in order to prevent the block from flattening down, when becoming partially soft.

I find that the present day carton shipping case, when fitted smoothly to a block of asphalt, will fully maintain the shape of the block when piled high as in a freight car and subjected to summer heat.

Roofing paper or anything but a self-sustaining, stout shipping case, would not according to my judgment withstand summer heat, in confining asphalt blocks, when piled on each other.

Thus my invention has as its object the premolding of a block of asphalt of cubical shape, and convenient size, dusting or coating it so as to neutralize tackiness on the outside, and then placing it in a carton of the correct size to snugly receive it.

I accomplish my object by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings:

Figure 1 is a top plan view of a form of mold.

Figure 2 is a side elevation of the same.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a perspective of a block of asphalt.

Figure 5 is a like view of a shipping case or carton formed to receive the block.

The asphalt is heated and treated in the desired manner and is then poured into the molds. The six unit mold which I have shown is formed of metal, and made of as thin gauge as practical to facilitate rapid cooling. One of the impractical things of
pouring asphalt direct into a carton, is that it requires three or four times as long to cool, as in a proper thin metal mold.

The mold as made up, in the form selected for illustration, is formed of a base 1, having angle iron strips 2, 3, protecting its edges. Posts 4 are secured to the angle irons at the sides of the base, and extend upwardly where they are threaded to receive clamp nuts 5.

The sides of the mold are formed of plates 6, 6, having flanges formed of angle iron strips 7, extending along the upper edges. These flanges are formed with slots to pass over the posts, and by screwing down on the nuts, the side plates are held in place, since they rest on their lower edges, within the angle iron parts 2, along the base (Fig. 3).

The sides are formed with lugs 8, 8, slightly separated in pairs, and positioned near the top and bottom, to act as guides and holders for partition plates 9, which slide into place. Preferably the sides will be assembled together with the partitions, by means of cross bolts 10, which pass through spaces that are cut off by partitions. Thus the partitions are arranged in pairs, so as to leave mold spaces 11 and intervening air spaces 12, between each mold section. This facilitates cooling and also facilitates getting out the blocks, without having them stick together.

The end closures that co-operate with the sides are preferably formed of plates 13, having the side edges thereof re-inforced with angle iron. The bolts 14 pass through holes or slots in these angle iron pieces, and hold the structure together at the ends (Fig. 1).

As so constructed the plates of the mold are painted with a clay slurry or the like, and then set up, as shown and described, and tightly clamped together. Hot, molten asphalt is then poured into the mold sections and when the mold is full, it is set aside for several hours to cool. The various bolts are then loosened, and the mold taken to pieces, ready to be painted again the blocks of asphalt being formed into the desired cubical shape, and having in adherent condition along their faces (except the top) the clay that was painted onto the plates.

The cartons or shipping cases 15, are provided having the cubical shape of the blocks. A block 16 of the shape noted and weighing around ninety pounds, has been found to be satisfactory, from the point of view of handling.

A handful of clay dust will preferably be sprinkled on the top of each block after it is inserted into its carton, and the carton is ready for shipment.

In use the carton is stripped away, by cutting with a knife, or the block may be dumped out if desired, since it is protected against sticking to the carton by the clay which it has accumulated.

Other means of lubricating or protecting the face of the block in the carton may be used.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

A method of preparing asphalt for shipment which consists in coating the walls of a mold with a lubricating substance, pouring into the mold melted asphalt, allowing the block to solidify, removing the molded asphalt block from the mold, and inserting the molded block in a fiber container of such size as will snugly retain the block wherein the lubricant which the side walls of the molded block have picked up from the walls of the mold will prevent the walls of the block from adhering to the walls of the container.

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