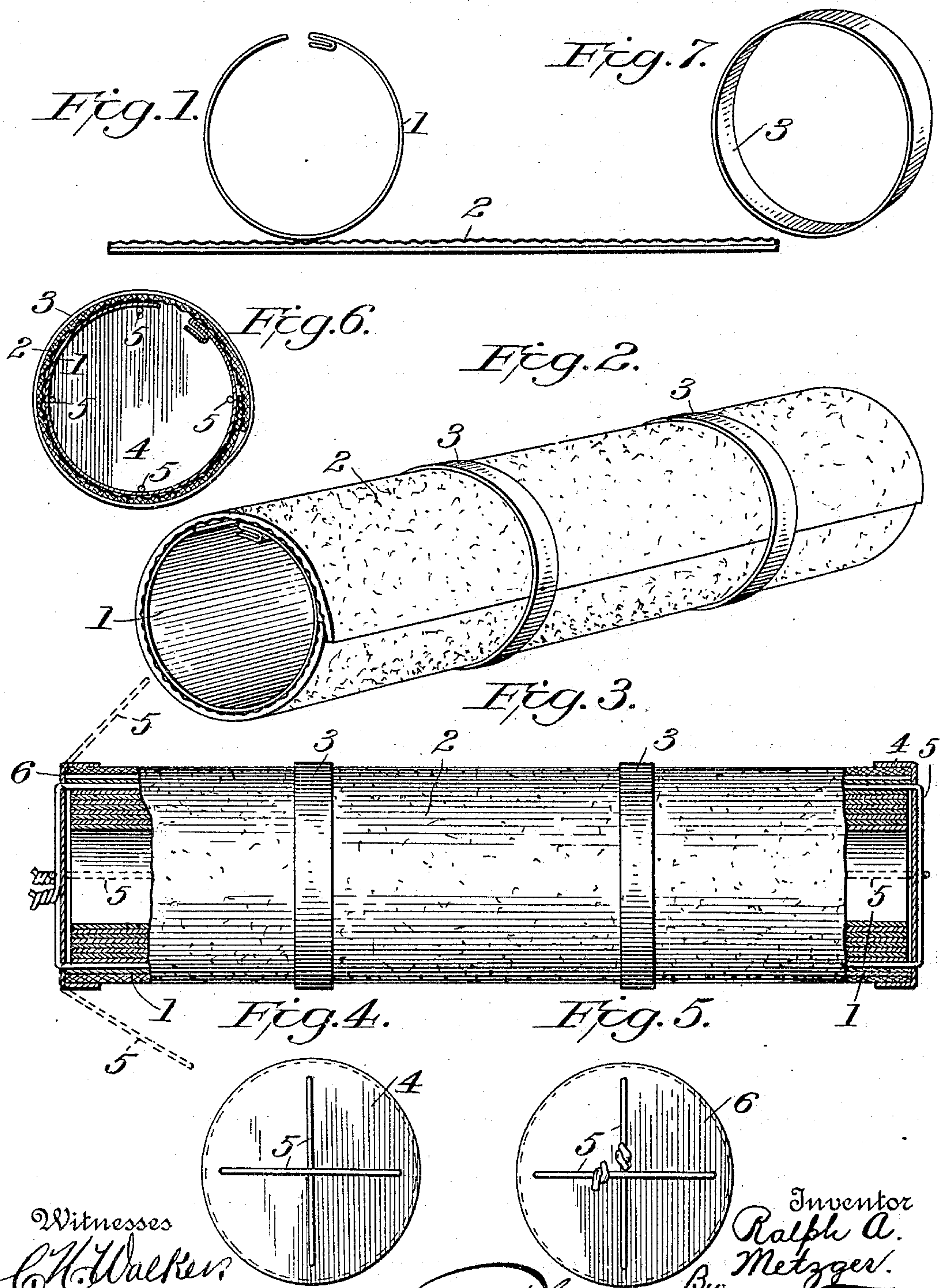


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 PACKAGE OF NESTED OR KNOCKDOWN STOVEPIPE JOINTS.
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Witnesses
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UNITED STATES PATENT OFFICE.

RALPH A. METZGER, OF NEW PHILADELPHIA, OHIO, ASSIGNOR TO THE OHIO STOVE PIPE AND MANUFACTURING COMPANY, OF NEW PHILADELPHIA, OHIO, A CORPORATION OF OHIO.

PACKAGE OF NESTED OR KNOCKDOWN STOVEPIPE-JOINTS.

No. 929,618.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RALPH A. METZGER, of New Philadelphia, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Package of Nested or Knockdown Stovepipe-Joints; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in the art of package of nested or knockdown stove pipe joints and the like for transportation or storage.

The invention is particularly designed for use in shipping knockdown or nested stove pipe, which pipe is formed in sections or "joints" bent into approximately cylindrical shape and provided with interlocking means on the longitudinal meeting edges whereby such edges can be easily locked together in condition for use, but which can be left unlocked during shipment or transportation of the joints so that a large number of such joints can be readily nested together into a comparatively compact roll so that a considerable length of pipe or number of such joints can be put up in a small package or bale, and a large quantity of pipe can be stored or shipped in a comparatively small space. Heretofore it has been customary to ship such pipe in wooden crates or boxes and the objects of the present invention are to dispense with the use of such boxes, to reduce the size of the package for a given quantity of pipe; to lessen the cost of such package and to facilitate the packing of the pipe.

I will now describe the invention with reference to the accompanying drawings which illustrate the manner of packaging the pipe and the resultant package.

In said drawings—Figure 1 is a side view of the parts preparatory to forming the package. Fig. 2 is a perspective view of the partially formed package before the end caps are applied. Fig. 3 is an elevation partly in section of the complete package. Figs. 4 and 5 are views of opposite ends of the package. Fig. 6 is a transverse sectional view of the package. Fig. 7 is a detail view of one of the retaining bands.

In carrying out the invention I first take a joint of pipe 1 and lay it upon a sheet 2 of

paper board; I preferably use corrugated pasteboard, the corrugations running longitudinally of the pipe. I then roll the board around the pipe letting the edges of the board lap, and roll it sufficiently tight to enable one or more metal bands 3 to be slipped endwise over the roll of paper. The sheet 2 forms a cylindric wrapper or casing for the pipe.

The bands 3 are of such internal diameter that they permit the casing and inclosed pipe to expand, the pipe holding the casing closely against the bands. The pipe joint 1 being used as a distender for the casing 2; and the bands 3 being held tightly on the casing by the distending or expansive action of the contained pipe joints. I then place a cap 4, which may be of metal, over one end of the casing as indicated in Fig. 3; and to this cap are attached wires 5, which may be U-shaped wires having their bends passed through the perforated end of the cap as indicated in Figs. 3 and 4. The wires extend through the casing and lie closely against the joint 1. The free ends of the wires are then bent down over the edge of the container as shown in dotted lines in Fig. 3; and then a number of other pipe joints or sections similar to joint 1 are placed within the casing thus formed. In practice 24 pipe joints are usually placed within one of my casings or packages exclusive of joint 1. The casings or packages will however accommodate satisfactorily any number of pipe joints from 10 to 25. The diameter of my casing or package may be varied to accommodate different sizes of pipe joints. In practice a casing or package 8 inches in diameter will accommodate 25 pipe joints either 6 inches or 7 inches in diameter; a casing or package 6 $\frac{3}{4}$ inches in diameter will accommodate 25 pipe joints either 5 inches or 5 $\frac{1}{2}$ inches in diameter; a casing or package 6 inches in diameter will accommodate 25 pipe joints either 4 inches or 4 $\frac{1}{2}$ inches in diameter; a casing or package 4 inches in diameter will accommodate 25 pipe joints 3 inches in diameter.

The inner pipe joints hold the wires 5 closely against the outer joint 1 and after the package is filled with joints the free ends of wires 5 are turned up and a second cap 6—similar to cap 4 and perforated for the passage of the free ends of the wires—is strung on the wires 5 and slipped onto the open end of the casing as indicated in Fig. 3, and the free ends of the wires are then twisted to-

gether so as to tension the wires 5 and fasten cap 6 securely in place, as in Figs. 3 and 5. The wires 5 form a bond or tie between the caps 4 and 6 and prevent their slipping off the ends of the package. The caps in turn prevent the pipe sections slipping out of the package; and the pipe sections in turn expand the paper wrapper or casing and cause the bands 3 and caps 4 and 6 to securely bind the package circumferentially, and the contained sections also reinforce each other and the outer casing 2 so as to prevent the latter being crushed under any ordinary transportation conditions. The package thus formed is very compact, strong and cheap. Access can be easily had to the joints by simply untwisting the ends of the wires 5 and removing cap 6; after any desired number of joints are removed the cap 6 can be replaced and the package resealed. This package will carry the pipe in much better condition than the old fashioned wooden crates; it is not necessary to remove the casing from the pipe in order to remove any number of joints from the package; all that it is necessary to do is to remove one cap then remove the number of joints desired and replace the cap. In this manner the remaining joints are left undisturbed within the package and protected from the atmosphere. Another great advantage of this package is its lightness, as in actual practice there is a difference of about two pounds in weight between my package and the wooden crates ordinarily used for packaging six-inch pipe, and when such pipe is shipped by car loads the resultant saving in freight is material, as there are from seven to eight hundred crates in a car load. The package also economizes room, as more pipe put up in my packages can be stored in a given space than could be done if the pipe was packed in the ordinary wooden crates or boxes.

While the invention is particularly intended and designed for use in shipping nested metal stove pipe, I do not wish to be

limited exclusively to that purpose as it might be usefully employed for shipping other articles which could be rolled or partially rolled without injury thereto.

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

1. The herein described package consisting of a wrapper and sheets of contained material rolled to form a cylinder, removable bands on such cylinder to limit expansion thereof, said bands being retained in position by the expansion of the cylinder, a cap on one end of the cylinder, wires connected to said cap and extended through the cylinder; a cap on the other end of the cylinder and secured thereto by means of said wires, substantially as described.

2. The herein described shipping package for nested stove pipe joints comprising a nested series of pipes, a flexible casing wrapped around said pipes, bands encircling the casing and confining the casing around the pipes and also preventing undue expansion of the pipes, caps removably fitted over the ends of said casing, and means for retaining the said caps in position on the casing.

3. The herein described package for shipping nested stove pipe joints comprising a nested series of pipe joints, a wrapper of corrugated pasteboard around said pipes, bands encircling the wrapper and confining the same around the pipes and also confining the pipe joints against undue expansion, metal caps removably fitted over the ends of said wrapper and wires extending through the package and connecting the said caps to retain them in position.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

RALPH A. METZGER.

Witnesses:

J. F. GREENE,

J. F. STEPHENSON.