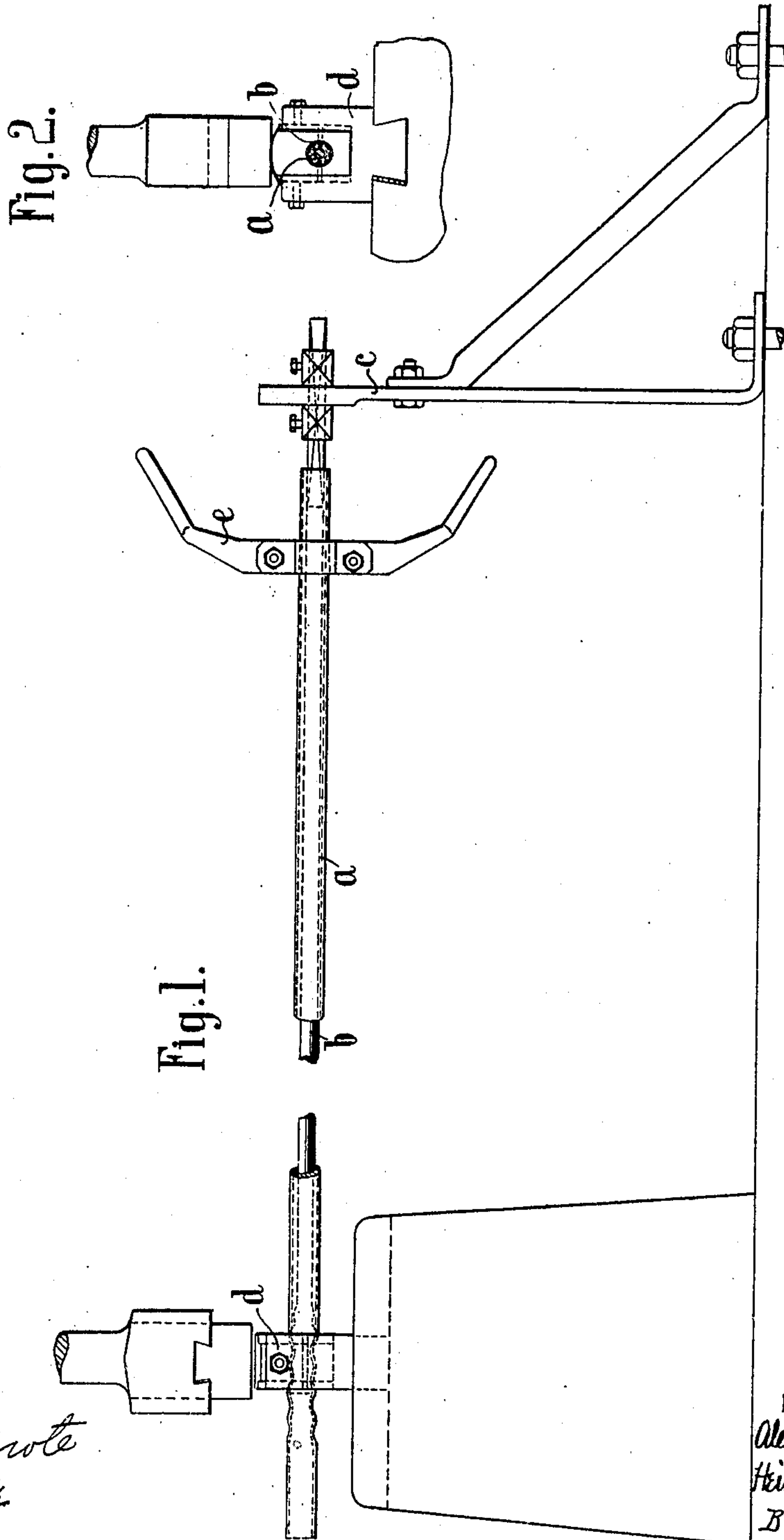


A. POGANY & H. LAHMANN.
 APPARATUS FOR PRODUCING CORRUGATED TUBES.
 APPLICATION FILED MAY 14, 1909.

918,469.

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WITNESSES
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ALEXANDER POGANY, OF BUDAPEST, AND HEINRICH LAHMANN, OF KOMOTAU, AUSTRIA-HUNGARY.

APPARATUS FOR PRODUCING CORRUGATED TUBES.

No. 918,469.

Specification of Letters Patent.

Patented April 13, 1909.

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To all whom it may concern:

Be it known that we, ALEXANDER POGANY, a subject of the King of Hungary, and a resident of Budapest, Austria-Hungary, and HEINRICH LAHMANN, a subject of the King of Prussia, and a resident of Komotau, Austria-Hungary, have invented a new and useful Apparatus for Producing Corrugated Tubes; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this description.

This invention relates to the manufacture of corrugated tubes. It has been suggested to corrugate tubes by means of a tool fitted with rollers.

According to another method portions of the circumference of the tube are provided with corrugations between two swaging dies so that corrugations running around the circumference of the tube have to be produced in several stages. It has also been proposed to corrugate tubes by means of a die and mandrel respectively formed with internal and external threads. In practice, long and expensive threaded mandrels are necessary for this method, and a jamming of the tube on the mandrel frequently occurs, thus rendering the removal of the tube, which is effected by unscrewing it, very difficult or impossible.

The essential feature of the present invention is that the tube is rotated on the stationary mandrel during the corrugating operation and is thus advanced or fed through the die so as to subject further parts of the tube to the operation and prevent jamming of the tube on the mandrel.

An apparatus for carrying out the invention according to one mode is shown in the accompanying drawing.

A mandrel *b* is fixedly mounted at one end from the die *d*, in a suitable frame *c*. The mandrel is provided at the end which enters the opening of the die *d*, with a few helical threads corresponding to the corrugations to be produced, the length of which threads is the same as that of the dies.

According to one form of construction

the die is constructed in two parts and its parts have female threads on the inside corresponding to the corrugations in the mandrel.

The tube *a* is provided with a handle *e*, which is clamped on to the tube for rotating the same. The die *d* is mounted in a guide-saddle or yoke fastened or dovetailed in the bed or anvil of a steam-hammer the upper part of the bi-partite die resting loosely on the lower part or on the guide-saddle so that it may be raised to a certain extent so as to allow of the passing through of the tube.

The process of corrugating the tube is effected by operating the hammer, the tup of the hammer striking on the upper half of the die *d*. The tup is therefore not connected with the latter. The tube *a* is slightly rotated during the striking of the hammer until the required length of corrugated tube is obtained.

As the tubes to be corrugated according to the present process possess at the commencement an inside diameter which is larger than the outside diameter of the mandrel the tube may be easily rotated on the mandrel and drawn off from the same.

The corrugation process of the tube is worked cold. The die may also be operated by other mechanical means instead of using a steam hammer and the die may also consist of more than two parts. The rotation of the tube on the mandrel may also be effected mechanically.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. In apparatus for corrugating tubes, a die to form external and a mandrel to form internal threads upon the tube, in combination with means to turn the tube on the mandrel, said mandrel being stationary during the corrugating process, and means to press said die upon the tube.

2. In apparatus for corrugating tubes, a die having separable parts threaded to form external threads upon the tube passing between said parts, a mandrel threaded to cooperate with said die to form internal threads on said tube, in combination with means to turn the tube upon said mandrel, the latter

being stationary during the corrugating process, and means for pressing said die into the tube.

3. In an apparatus for corrugating tubes, the combination of a die and a mandrel respectively provided with internal and external threads, a frame for bearing the mandrel and the tube and means for rotating the tube upon the mandrel, the latter being stationary during the corrugating process, substantially as described.

4. In an apparatus for corrugating tubes, the combination of a die constructed in two parts, said parts having female threads on the inside, a mandrel threaded to cooperate with said die, a frame for bearing the mandrel and the tube and means for rotating the tube on the mandrel, the latter being stationary during the corrugating process, substantially as described.

5. In an apparatus for corrugating tubes, the combination of a threaded mandrel, a die constructed in two parts, said parts having female threads on the inside corresponding

to the corrugations in the mandrel, a yoke bearing the parts of the die and fastened in the anvil of a steam hammer, the upper part of the bi-partite die resting loosely on the lower part, a frame for bearing the mandrel and the tube and a handle for rotating the tube on the mandrel, substantially as described.

6. In apparatus for corrugating tubes, a threaded mandrel stationary during the corrugating process and around which the tube is rotated, in combination with means cooperating with said mandrel to form external and internal corrugations on the tube, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses.

ALEXANDER POGANY.
HEINRICH LAHMANN.

Witnesses:

FRANZ WALURTANY,
RUDOLF JOCHY.