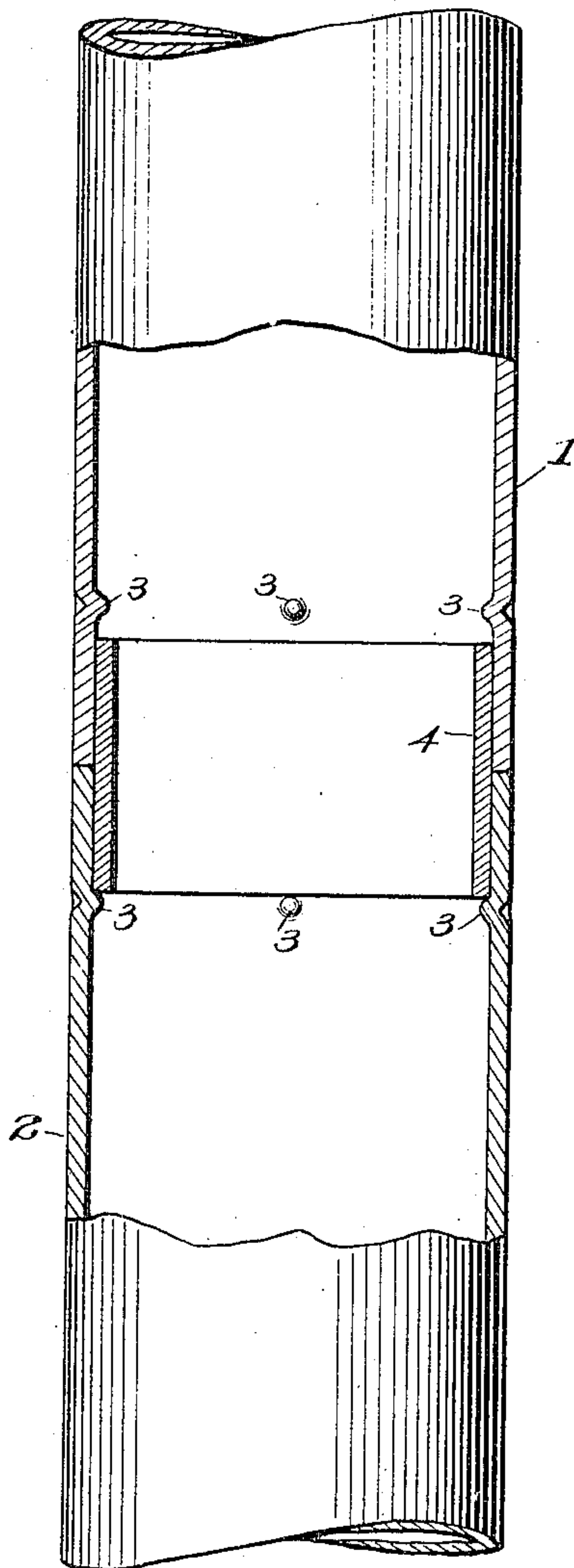


959,546.

J. KENNY.
JOINT FOR TUBES.
APPLICATION FILED JUNE 14, 1909.

Patented May 31, 1910.



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UNITED STATES PATENT OFFICE.

JOHN KENNY, OF NEW YORK, N. Y., ASSIGNOR TO JOHN SIMMONS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

JOINT FOR TUBES.

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Specification of Letters Patent.

Patented May 31, 1910.

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To all whom it may concern:

Be it known that I, JOHN KENNY, a citizen of the United States, residing at New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Joints for Tubes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to certain improvements in joints for tubes.

In tube work, such, for instance, as driving the tubes employed for forming cement piles for foundation and other similar work, it is customary to drive down a section of tube. When this tube is nearly flush with the surface of the earth, a second section is placed thereon, the two sections being driven down until the second section is nearly flush with the surface, after which a third section is mounted thereon and the three sections driven down, this operation being repeated until the tube has been driven down to the required depth, which is frequently fifty feet or even more. When the tube is to be used for a pile, the earth in the interior of the tube having been washed out, it is filled with concrete or cement which hardens and forms the pile. The tube thus employed is not particularly relied upon for strength but serves principally as a mold or casing for the concrete. Cheapness in the cost of the tube is, therefore highly desirable.

35 In carrying out the operations to which reference has been made, considerable difficulty has been experienced in maintaining the tube sections in line, so that they may drive truly. Although various constructions have been devised for this purpose, they have been objectionable either on account of defective operation or high cost.

45 The present invention has for its object to produce an improved joint for tubes which shall be very cheap in construction and positive and certain in its operation.

With this and other objects not specifically referred to in view, the invention consists in a certain construction and improvement to be hereinafter described and then specifically pointed out.

55 The figure of the accompanying drawing represents, in sectional elevation, two sections of tube united by the improved coupling.

In this figure 1 indicates a tube section and 2 a second section. These sections are arranged with their proximate ends abutting, as shown, and each section is substantially of the same exterior diameter throughout, that is to say, the sections are not provided with any exterior flanges or collars which are more or less expensive to make and which, when the sections are to be used for pile and similar work, would interfere with the driving. In constructions embodying the invention, furthermore, each section is provided near its end with a stop or stops. While the stops may be formed in various ways, they may be effectively and cheaply formed by indenting the walls of the tubes with a punch. In the particular construction illustrated, the tube sections are provided near their abutting ends with four indentations 3 thus formed.

75 Constructions embodying the invention will also include a guide the purpose of which is to insure the exact register of the abutting ends of the tube sections whereby they are positively and certainly held in position. While the construction of this guide may be varied, in the best constructions embodying the invention it will consist of a short length of tube 4 located across the joint of the tube formed by the two sections. In the best constructions, furthermore, this interior guide when it consists, as shown, of a piece of tube will engage each of the tube sections with a driving fit, thus making an air and water tight joint which enables the tube thus formed to be used in work when such conditions are desirable.

90 In practicing the invention, after a tube section has been driven, or otherwise positioned the guide will be inserted in the end of the tube sections and driven in until it nearly or quite strikes the lower stop 3, after which the upper tube will be mounted over the guide and driven upon it.

100 It is not important that the interior stops be accurately located, that is, it is not important that either end of the interior guide engage the stops when the guide is in position. It is only necessary to so position the stops that if the guide moves, as it may during the operation of positioning the section, it will not travel sufficiently far in either direction so that its end passes the joint formed by the abutting ends of the tube sections. Usually, however, the stops will be so 110

positioned as to permit only a slight movement of the interior guide.

It will be observed that the strains set up in positioning the tube sections are entirely borne by the section, the office of the guide being simply to maintain the sections in register. Further, the construction is such that it can be made very cheaply, no fitting being necessary and it also enables a very cheap class of pipe to be used for the tube sections, particularly in pile work. While the construction will be found valuable in many kinds of work, a practical test of it has shown that it is extremely efficient in pile work, as it enables the sections to be driven very rapidly and with absolute accuracy.

Changes and variations may be made in the construction by which the invention is carried into effect, and the invention is not, therefore, to be limited to the precise construction hereinbefore described and illustrated in the accompanying drawings.

What is claimed is:

1. In a joint for tubes, the combination with a plurality of tube sections each section being substantially of the same exterior diameter throughout and the sections being provided near their proximate ends with stops, of an interior guide engaging the ends of the sections and located wholly between the stops.

2. In a joint for tubes, the combination

with a plurality of tube sections each section being substantially of the same exterior diameter throughout and the sections being provided near their proximate ends with stops, of an interior guide engaging the ends of the sections and located wholly between the stops, the ends of the sections being arranged to abut.

3. In a joint for tubes, the combination with a plurality of tube sections each section being of substantially the same exterior diameter throughout its length and the sections being provided near their proximate ends with stops, of an interior guide engaging the ends of the sections with a driving fit, said guide being located wholly between the stops.

4. In a joint for tubes, the combination with a plurality of tube sections each section being of substantially the same exterior diameter throughout its length and the sections being provided near their proximate ends with stops formed by indenting the walls of the sections, of an interior guide engaging the ends of the sections and located wholly between the stops.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

JOHN KENNY.

Witnesses:

A. WHITE,

JAMES Q. RICE.