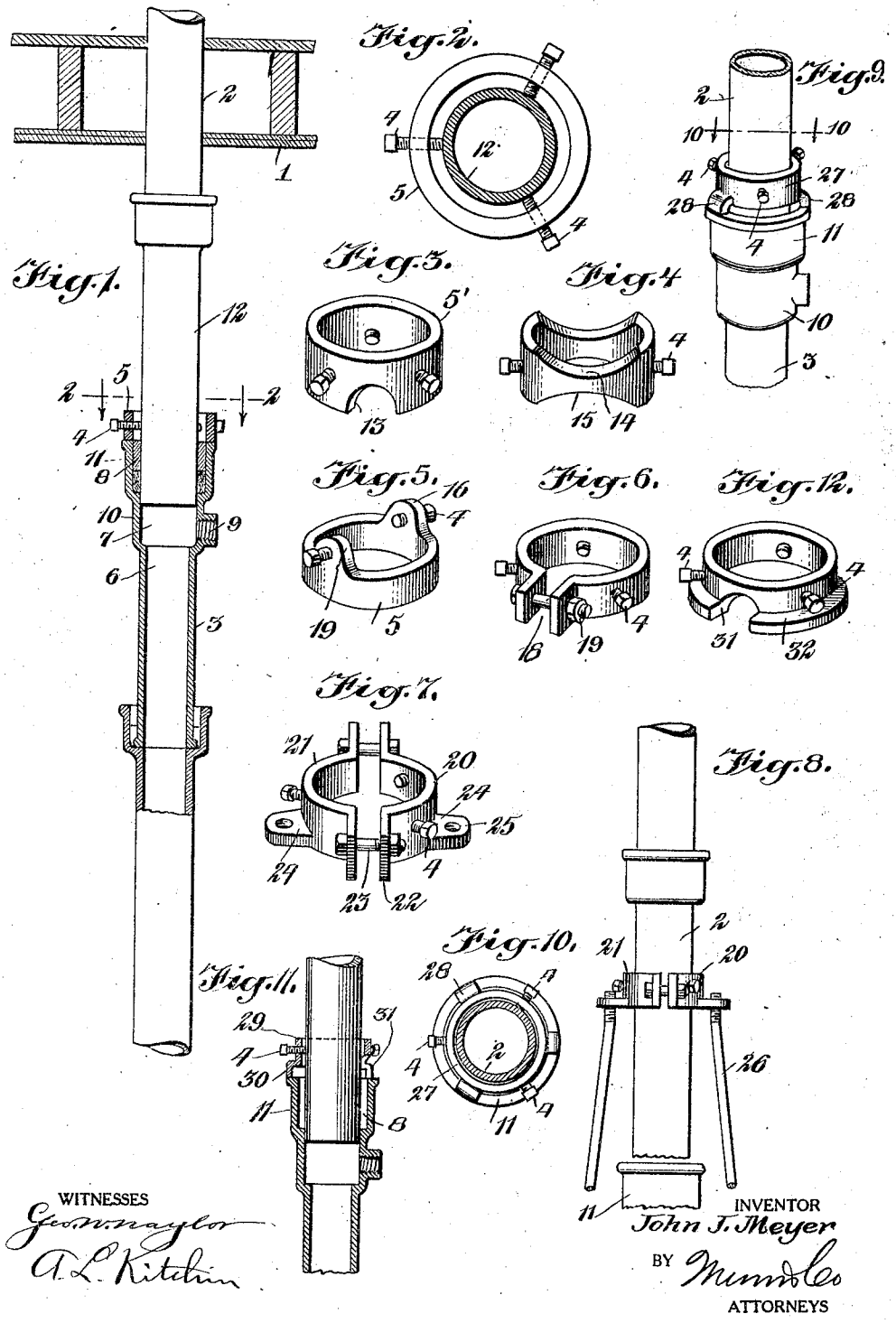
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INSERTABLE JOINT PIPE SUPPORT

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WITNESSES

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INSERTABLE JOINT PIPE SUPPORT.

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To all whom it may concern:

Be it known that I, JOHN J. MEYER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Insertable Joint Pipe Support, of which the following is a full, clear, and exact description.

This invention relates to an improved insertable joint pipe support and has for an object to provide a simple but strong construction whereby the upper part of a soil pipe line or other pipe line may be supported while repairs are being made to the lower part and also while a lower connecting joint is inserted and as a permanent support for the upper part of line on top of a telescoping hub.

Another object of the invention is to provide an insertable joint pipe support wherein a specially constructed pipe section is used in connection with some form of encircling member and clamping screws for engaging the superimposed pipe while the encircling member is engaged and supported by the inserted joint.

A further object of the invention is to provide in an insertable joint, means whereby the superimposed pipes may be supported while ample openings are provided for supporting the pipe while the lead filler is being inserted and to provide openings or spaces through which the top of the filler may be inspected when the support is in permanent position.

A still further object of the invention is to provide an insertable joint and support which is an improvement over my prior application, Serial No. 708,811, and which presents supporting set screws arranged above the calked lead filler.

In the accompanying drawing—

Figure 1 is a fragmentary view showing part of a soil pipe line with an embodiment of the invention applied thereto, said embodiment being shown in section.

Figure 2 is an enlarged sectional view through Figure 1 on line 2—2.

Figure 3 is a perspective view of a slightly modified construction to that shown in Figure 2.

Figure 4 is a perspective view of another modified form of the invention to that shown in Figure 2.

Figure 5 is a modified form of the invention to that shown in Figure 3 wherein upstanding lugs are provided for the set screws.

Figure 6 is a perspective view showing a modified form of the invention as shown in Figure 5, the same illustrating a divided and clamping structure in connection with set screws.

Figure 7 is a modified form of the invention shown in Figure 6, the same presenting a construction formed in two parts.

Figure 8 is a side view illustrating part of a pipe line with the support shown in Figure 1 used to support the superimposed pipe while work is being done below the same.

Figure 9 is a perspective view of another form of the invention to that shown in Figure 1.

Figure 10 is a sectional view through Figure 9, approximately on line 10—10.

Figure 11 is a view of a support illustrating a modified form of the invention to that shown in Figure 9 and showing the same applied.

Figure 12 is a perspective view of a modified form of the invention to that shown in Figure 3.

Referring to the accompanying drawing by numerals, 1 indicates a floor of any desired kind through which a soil pipe line 2 passes. It is, of course, understood that the invention could be applied to other pipe lines without departing from the spirit of the invention and it will, therefore, be understood that when the expression "soil pipe line" is used, other vertically arranged pipe lines are intended also. Sometimes it becomes necessary to remove a section of the line and when this is done the upper or superimposed pipe section must be supported temporarily and then a new joint inserted to permanently support the same as well as make the pipe line continuous.

In carrying out these ideas, after a section has been removed, the inserted joint or section 3 is placed in position as shown in Figure 1 and the set screws 4 of the supporting ring 5 are tightened. Preferably, there are three set screws 4 as shown in Figure 2, though a greater or less number might be used if desired. The inserted joint 3 is made of cast iron in the usual manner and is provided with three different bores, namely, bores 6, 7 and 8. Bores 7 and 8 are formed in the hub bore 7 permitting the sec-

tion 3 to be placed in position and removed when desired while the bore 8 acts as means for receiving a lead filler or other filler as desired. A threaded member 9 is also provided in the reduced hub portion 10, said threaded section being adapted to receive a side pipe line, or if this is not desired, a plug may be inserted to close the opening. The bore 8 is arranged in the regular hub portion 11 which is of a proper size to receive a lead filler which is adapted to be calked therein in the usual manner. If screws or other means are mounted in the hub portions 11 or 10, the same would not be entirely satisfactory by reason of the cast structure of these members.

To prevent breakage by reason of the cast structure of the members just described, the ring 5 preferably of malleable iron is provided, said ring having an opening of substantially the same diameter as bore 8. The set screws 4 are preferably of some form of steel and act to firmly clamp or grip the superimposed pipe section 12 and hold the entire superimposed pipe line in place permanently. The bore of ring 5 is made as just described in order that the parts may be properly adjusted as shown in Figure 1 and then the lead filler inserted and calked into place afterwards. It will thus be seen that the ring 5 rests upon the top of the hub portion 11 and carries the weight of the superimposed pipe line telescoped into the hub. It will also be noticed that the set screws 4 are positioned above the lead filler.

In Figure 3, a modified form is shown wherein the ring 5′ is formed with an opening 13 on one side to permit inspection and to facilitate the filling and calking of the joint.

Figure 4 shows another form of ring wherein preferably there are only two set screws used and wherein the ring is cut away at points 14 and 15 on opposite sides whereby the amount of metal used is reduced but an ample support is presented.

Figure 5 shows a further form of ring wherein the ring body 5 is provided with integral upstanding lugs 16 and 17, said lugs carrying the respective set screws 4.

Figures 6 and 7 show other forms of supporting rings, Figure 6 showing a ring open at point 18, said opening being adapted to be somewhat closed by the tension bolt 19 while the set screws 4 function in the usual manner.

In Figure 7, the ring is divided into two sections, namely, sections 20 and 21, said sections being provided with set screws 4 acting in the usual manner while each section is provided with a pair of ears 22 and the ears are connected by suitable clamping bolts 23. In addition, each section is provided with a supporting ear 24 which has a threaded aperture 25 and into this aperture the threaded end of one of the rods 26 may be inserted when the device is used as a temporary support for the superimposed pipe sections. This is illustrated in Figure 8 and shows the sections 20 and 21 clamped to the pipe section 2 near the upper part thereof. After the desired change or repair has been made below the section 2 and a new section 3 inserted, the rods 26 will be removed and the supporting ring will be lowered until it rests on top of the hub 11 and then the parts again tightened. From this it will be observed that this construction acts as a temporary support for the superimposed pipe line and later as a permanent support therefor.

In Figures 9 and 10 another form of the invention is shown wherein the ring 27 loosely fits the superimposed pipe 2, said ring having a number of extending portions 28 which are in effect supporting feet, said feet resting on the hub portion 11. The set screws 4 in this form of the invention function in the usual manner. By providing only a few feet, as for instance, three, there is ample space between these feet to insert the lead filler and to calk the same in place.

Figure 11 shows a further form of the invention wherein a ring 29 is provided with the usual set screws 4 and also provided with an offset annular portion 30 resting on the hub portion 11. This offset portion 30 is cut away at 31 to provide an opening for inspection and ready tamping of the lead filler in the bore 8.

Figure 12 shows a modified form to that shown in Figure 11. In this form of the invention the structure is identical with that shown in Figure 11 except that the annular portion 30 is eliminated and the flange 32 is caused to rest on top of the hub portion 11. The opening 31 is present in this form of the invention so that the lead filler may be inspected or calked as desired.

In all forms of the invention, it will be observed that some form of encircling ring is provided which is supported by the hub of section 3 and which carries clamping set screws functioning above the lead filler 9. Where the set screws enter the lead filler, it is difficult to provide a water tight connection and also difficult to properly calk the filler. The ring 5 or other supporting members described, functions with the encircling joint 3 which presents a coupling structure for coupling the lower and upper portions of the pipe line whereby the pipe line is made continuous and whereby only one section need be removed when repairing or inserting a new section at any point.

All of the figures show means for temporarily holding up the pipe line. Props made of wood or pipe rods may be placed under the heads of the set screws 4 or under

the collar 5 and feet 28, flange 32, 30, 22 as well as the ears 25. The main object of the invention, however, is the supporting of the upper pipe by a collar independent of the pipe and the hub and the resting of the collar directly on the upper end of the hub to support the collar and its supported pipe. By reason of the collar being separate from the hub, the insertable hub joint may be made of cast iron as usual while the collar may be made of malleable iron or the like to withstand a pressure greater than cast iron will permit.

What I claim is:

1. The combination with an insertable pipe joint formed with a hub and a superimposed pipe section terminating with a spigot telescoped in said hub, of a support for said superimposed pipe section comprising an encircling member independent of said pipe section removably secured thereto and resting by gravity on the exterior of said hub.

2. The combination with an insertable pipe joint provided with a hub and a superimposed pipe terminating in said hub, of a support for said superimposed pipe comprising a supporting ring resting on said hub and surrounding said superimposed pipe said ring having a bore of substantially the same size as the hub whereby the hub may be provided with a filler and calked without molesting the ring, and a plurality of set screws carried by the ring above the filler in the hub, said set screws clamping said superimposed pipe section.

3. The combination with an insertable pipe joint provided with a hub and a superimposed pipe terminating with a spigot telescoped in said hub, of a support for said superimposed pipe comprising a supporting ring resting on the exterior of said hub and surrounding said superimposed pipe, and a plurality of screws for clamping said ring to said superimposed pipe.

4. In combination with a vertical pipe line, having a telescoping hub joint of the filler type, a separate supporting collar secured to said pipe line at a point above said hub for holding the end of the upper portion of said line at different heights within said telescoping hub, said pipe being loosely mounted in said hub, said supporting collar resting on the hub and forming the sole support of the said pipe.

5. The combination with an insertable pipe joint formed with a filler joint hub and a superimposed pipe section terminating above the bottom in said hub, of a supporting member independent of said hub and said superimposed pipe for supporting said superimposed pipe above the bottom of said hub and said supporting member resting by gravity on the exterior of said hub, and means for clamping said supporting member to said superimposed pipe at a point above the hub.

6. The combination with an insertable pipe joint formed with a filler joint hub and a superimposed pipe section terminating above the bottom in said hub, of a support for supporting said superimposed pipe section above the bottom in said hub, comprising an encircling member independent of said hub and said superimposed pipe, removably secured to said superimposed pipe above the hub and resting by gravity on the exterior of said hub.

JOHN J. MEYER.