

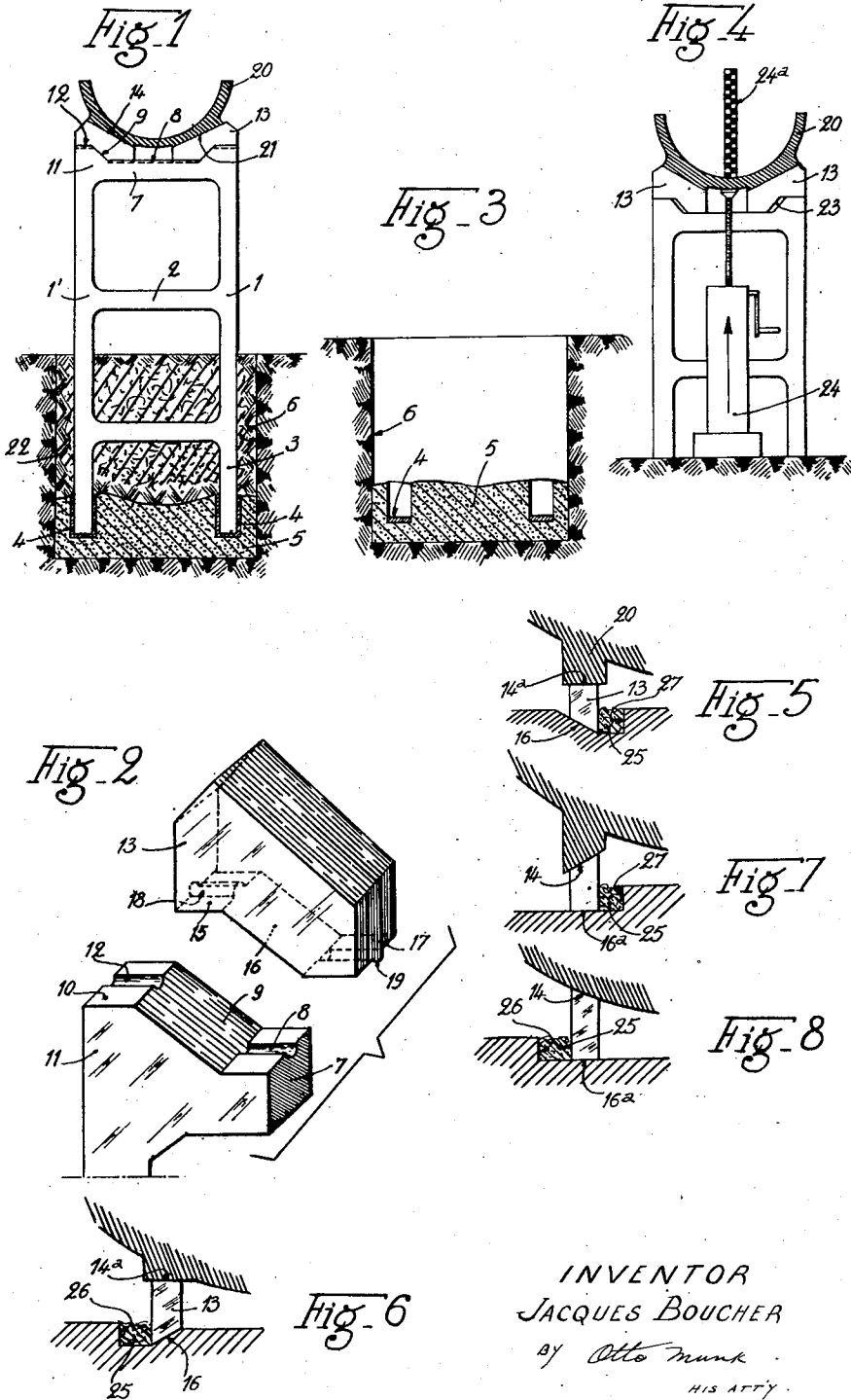
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SUPPORT FOR CONDUIT MEMBERS

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SUPPORT FOR CONDUIT MEMBERS

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The present invention has for its object to provide an improved support for channel, pipe or tube member, enabling an easy and adjustable laying of said member. This support comprises in combination, a leg or equivalent support element and at least a movable distance piece on the top face of said leg, to permit an adjustment of the supported member crosswise and/or elevationally.

The invention is particularly advantageous for the installation of open conduits or channels for which a very exact elevational adjustment is indispensable if it is desired to use the entire section of the conduit without risk of overlapping, as well as for closed conduits for which it is likewise very useful from the point of view of their filling and of their purging of air to keep to a regular longitudinal profile.

Other characteristics will become apparent from the following description.

On the appended drawing, given merely by way of example:

Fig. 1 is an elevational view of a support according to the invention and a vertical cross section of the conduit member which rests on said support;

Fig. 2 is a perspective view of a part of the head of the support on which bears an adjustable sliding wedge;

Fig. 3 shows a vertical section of the excavation intended to receive the support;

Fig. 4 is an elevational view of the device used for the adjustment of the height of the conduit member;

Figs. 5, 6, 7 and 8 show different embodiments of distance pieces and their locking means.

As shown in Fig. 1, the support according to the invention includes a leg forming a support element composed of two vertical reinforced concrete uprights 1, 1', joined by concrete cross-beams 2. Two legs 3 are sealed in cavities 4 made in a thin concrete bed 5 arranged at the bottom of an excavation 6 (Fig. 3).

The top part of the leg (Figs. 1 and 2) includes a cross-beam 7 in the top part of which a lengthwise semi-cylindrical groove 8 is made. At the ends of said cross-beam are arranged two plane surfaces 9 sloped symmetrically and converging downwardly. Finally, the top faces 10 of the extremities 11 of the uprights likewise have a semi-cylindrical groove 12 parallel to groove 8.

Two shiftable distance pieces 13 forming wedges rest on the top part of the support. Each distance piece 13 includes at its top part a sloping plane face 14 so that the combination of the surfaces of both pieces 13 defines two symmetrical planes converging downwardly.

The bottom part of said distance pieces have a profile section which corresponds to one of the extremities 11 of the support on which said bottom part comes to bear. Said part is formed by

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three plane surfaces 15, 16 and 17. The face 15 is provided with a semi-cylindrical groove 18 which comes opposite the groove 12 of the extremity 11. The face 16 is sloped and plane; it is parallel to the face 9 of the extremity 11. Finally, the horizontal face 17 bears on the top face of the cross-beam 7 and is provided with a semi-cylindrical rib 19 which imbeds in the corresponding groove 8 of said cross-beam.

The conduit member 20 rests on the surfaces 14 preferably through the medium of two symmetrical flat parts 21, the slope of which corresponds to that of the faces 14 of the wedges 13.

Said conduit member is laid as follows (Figs. 1 and 3): The excavation is opened, the bottom of which is dug approximately to the desired depth. Thin concrete 5 of a suitable thickness is poured but, before setting, a pattern or the like is driven in so as to shape two recesses 4 for the housing of the feet 3 of the support. The depth of the recesses is preferably adjusted in view of rough-hewing the final adjustment.

After the setting of the concrete, the support is put in place in the excavation and its feet are finally sealed by refilling the recesses with concrete and a strongly rammed packing 22 (Fig. 1) of the excavation.

The sliding distance pieces 13 are then put in place as well as the conduit member 20.

The final adjustment of the level and position of said member 20 is then carried out by a combined judicious moving of the two sliding distance pieces 13 (Fig. 4).

The insertion of one or several temporary feeler distance 23 between the faces 9 and 16 at the extremity of the support and of each of the pieces 13 causes a side movement of said pieces 13; movement guided by the imbedding of the rib 19 in the corresponding groove 8 of the cross-beam 7.

During the course of adjustment, if the side movement of the two distance pieces 13 does not modify their respective distance, the conduit member simply undergoes a corresponding side movement, without elevational movement. If, on the contrary, during the course of adjustment the cross distance of the pieces 13 decrease symmetrically in relation to the axis of the support, by insertion of a same number of feeler distance pieces 23 between the two pieces 13 and the surfaces 9, the conduit member 20 undergoes an elevational movement equal to the side movement of each of the pieces 13 multiplied by the tangent of the angle formed by the contact planes of said pieces 13 with the conduit member.

If only one distance piece 13 is moved, there is an oblique shifting whereby the horizontal and vertical components are equal to half of the above movements.

There would even be a sinking if, instead of

bringing the distance pieces together they were spaced.

The position of conduit member 20 can therefore be exactly adjusted by simply acting on the sliding distance pieces 13, without touching the leg; this last operation would indeed be much longer and more difficult than the first which can be done with the aid of a jack, for example, permitting the raising of the conduit member 20 during the adjustment.

The adjustment being finished, the spaces remaining between the distance pieces and the head of the support are then packed with mortar, after setting, permits the removal of the temporary feeler pieces 23 used for the adjustment. The mortar filling the grooves opposite 18 and 12 ensures a true keying of each wedge on the support element, perpendicularly to the plane of the figures.

In 24^a, on Fig. 4, is shown a sliding staff intended to facilitate the adjustments; it is placed on the bottom of member 20.

According to variations shown in Figs. 5 and 6, the working surface 14^a of the distance piece 13 is horizontal, the bearing surfaces 16 either being turned outwardly (Fig. 5) or else inwardly (Fig. 6).

According to modifications shown in Figs. 7 and 8, the bearing surface 16^a is horizontal, the surfaces 14 either being turned inwardly (Fig. 7) or else outwardly (Fig. 8).

Mortar 25 can likewise be inserted between the outer face of the sliding distance piece 13 and a shouldering 26 of the support (Figs. 6 and 8), or between the inner face of the distance pieces and a shouldering 27 of the cross-beam (Figs. 5 and 7).

Of course, the invention is in no way limited to the embodiments shown and described, which have merely been chosen by way of example.

Thus, the support can be applicable not only to the laying of conduit members 20, but also to the laying of any members, for example pipes.

The bottom surface of the conduits, pipes or other members can include flat parts as shown or, on the contrary, remain cylindrical and rest on the sliding distance pieces, preferably through the medium of a concrete filling made after adjustment and before loading of the conduits or pipes.

The sliding distance pieces can have a horizontal face and a sloped face, or more generally two differently sloping main faces, said pieces preferably being secured laterally by means of a packing acting on the small face placed on the thickest side and bearing on the support or the member to be propped.

The invention applies not only to supports of one or several parts which are manufactured beforehand and assembled on the working site, but likewise to supports which are masoned or molded on the spot where they are used. However, the use of prefabricated members is more advantageous because of the manufacturing output which is better in the factory and because of labor reduction in the work-yards.

Finally, the sliding distance pieces can be guided sideways by means of ribs and grooves as described above, or by any other known method.

The invention can likewise be applied to supports having only a single sliding distance piece, the support itself having an oblique contact surface with the conduit (in other words this comes to making integral one of the two distance pieces in relation to the support). In this case the side

shifting of the single distance piece enables to ensure a correct elevational adjustment of the conduit member at the expense of a slight simultaneous side shifting.

Of course, in the different cases, the dimensions of the support in the perpendicular direction to the figures, that is to say parallel to the longitudinal axis of the carried member can be of any dimension whatsoever. Eventually several sets of distance pieces distributed along said member can be provided.

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

1. The combination of a longitudinal element of canalization and of a support for said element, said support comprising a supporting base of concrete, the top face of which comprises transversely with respect to the longitudinal axis of said element two horizontal upper end portions, a middle horizontal lower portion and two inclined portions between said end and middle portions, the lines formed by the intersection of said end and middle with said inclined portions being parallel to said axis, two wedge pieces interposed between said element of canalization and said supporting base on the horizontal portions of the top face of which they are slidably keyed transversely to adjust the position of said element both in vertical and transversal directions, the lower face of each of said pieces comprising transversely two horizontal end surfaces for resting respectively on one of the upper horizontal portions and on the middle horizontal portion of the top surface of said supporting base and a middle inclined surface which is parallel to the corresponding inclined portion of said top surface, whereas the top face of said piece comprises an inclined surface of contact with the element of canalization, and at least a mortar filling between one of the inclined portions of said top face and the combined inclined surface of the corresponding wedge piece for setting in position said wedge piece with respect to said element of canalization and said supporting base.

2. A support as claimed in claim 1 wherein one of the horizontal surfaces of the lower face of each wedge piece is provided with a transversal rib imbedded in a groove of the corresponding horizontal portion of the top surface of said supporting base, whereas both the other combined horizontal portion and surface of said top face and of said wedge piece are provided with superposed transversal grooves filled with a keying material selected from the group consisting of cement and mortar.

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