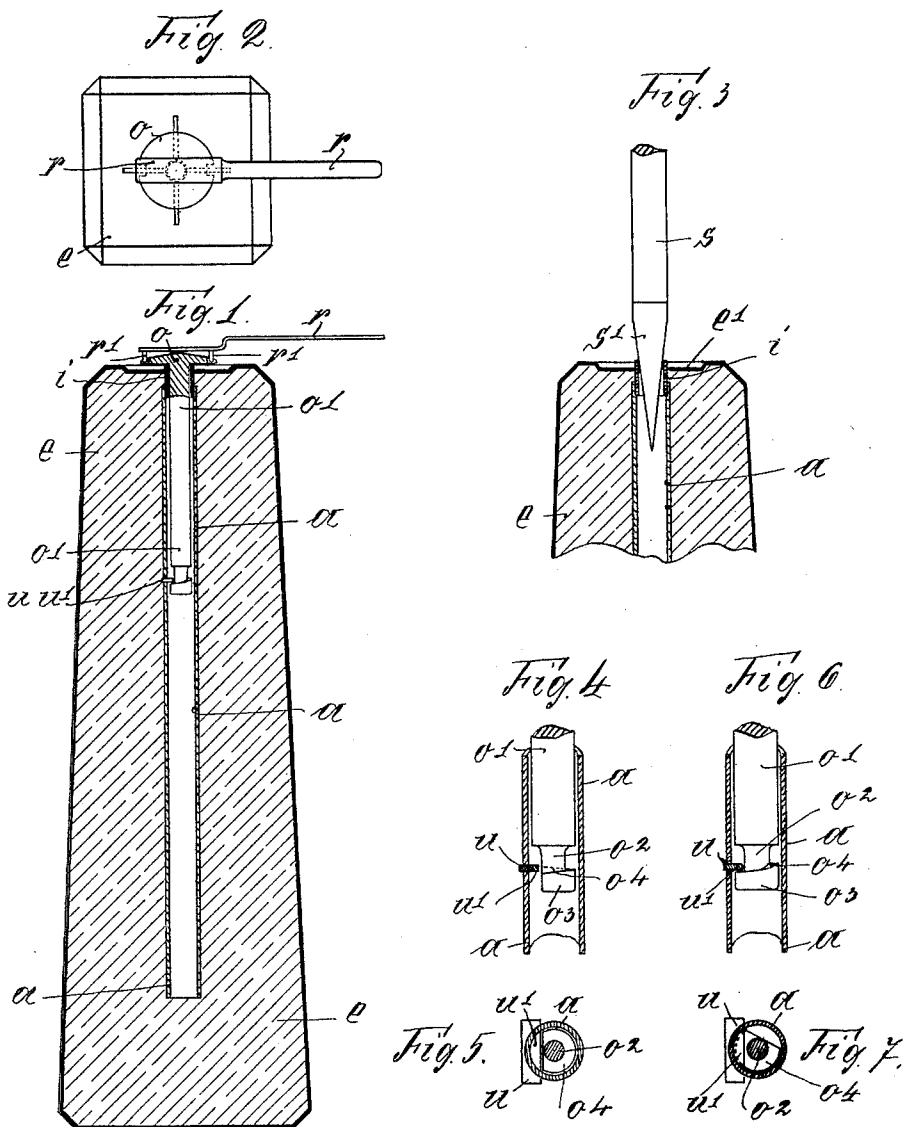


(No Model.)

C. BRANZKE.
BOUNDARY STONE.

No. 595,038.

Patented Dec. 7, 1897.



WITNESSES:

Emil Kayser

Paul Wollenberg.

INVENTOR

Carl Branzke

BY

Wm E. Brulker
ATTORNEY.

UNITED STATES PATENT OFFICE.

CARL BRANZKE, OF MÜNCHEN, GERMANY.

BOUNDARY-STONE.

SPECIFICATION forming part of Letters Patent No. 595,038, dated December 7, 1897.

Application filed January 27, 1897. Serial No. 620,978. (No model.)

To all whom it may concern:

Be it known that I, CARL BRANZKE, a subject of the King of Prussia, German Emperor, and a resident of München-Gladbach, in the Province of the Rhine, German Empire, have invented certain new and useful Improvements in Boundary-Stones, of which the following is an exact specification.

This invention refers to boundary-stones, and relates to making such stones able to serve as surveying-stones. In other words, the boundary-stone shall be able to receive the surveying pole or staff and to hold it in proper position. I attain that object in general, first, by providing the boundary-stone with a vertical tube arranged in the median portion of the stone and extending down into the same, and, second, by providing said tube with a closing device. The tube is to receive and to hold the surveying pole or staff and the closing device is to prevent the tube from getting filled with sand, dust, and the like during the time of its not being used. The boundary-stone is to serve as a surveying-stone for a very long time, and provisions must therefore be made to keep it in a useful condition for such length of time. This is the reason for furnishing the stone with a pipe instead of with a corresponding hole only, or for lining such hole with a pipe, respectively, and for furnishing the latter with a closing device, as aforesaid.

In order to make my invention more clear, I refer to the accompanying drawings, in which similar letters denote similar parts throughout the different views, and in which—

Figure 1 is a vertical section through my improved boundary-stone. Fig. 2 is a top view of the same. Fig. 3 shows the upper portion only of the stone, together with the lower portion of a surveying pole or staff. Figs. 4 and 6 show portions of the internal tube *a* of the stone and portions of the rod *o'*, the positions of this rod with regard to the tube being different in the two figures in question. Figs. 5 and 7 are horizontal sections through Figs. 4 and 6, taken on lines 8 9 and 10 11 of said figures.

In the form of construction shown as an example in the accompanying drawings the tube *a* extends nearly through the whole length or height of the stone *e* and terminates

at both ends in a slight distance from the respective surfaces of the same. The lower end of the tube is closed by the material of the stone. The upper end is open and is provided with a short piece of tube *i*, consisting of a non-rusting material. The purpose of said piece of tube *i* is to secure the iron tube *a* against easily rusting. I do not make a point, however, of thus securing the tube *a*, but I may dispense with the piece of tube *i* and let the tube *a* extend upward correspondingly higher. As to securing the tube *a* to the stone I prefer to cast the latter from a suitable material—for instance, so-called “cement-beton.” The mold intended to receive the material is prior thereto furnished with the tube *a*, when the latter is surrounded by and inclosed within the stone while the stone is thus formed.

The closing device employed in the form of construction shown consists of a plate *o*, having a downwardly-extending rod *o'*. The latter takes into the tube *a* and terminates at its lower end into a pivot *o''*, having a one-sided head *o'''*, Figs. 4 and 6. The latter forms an incline *o''''*, Figs. 4 to 7, which is to take below the inwardly-projecting portion *u'* of a plate *u*, fixed within a suitable slit of the tube *a*. When sinking the rod *o'* down into the tube *a*, the position of the head *o'''* must be such that the latter can freely pass the plate *u* or the portion *u'* of the same, respectively. (See Figs. 4 and 5.) Thereafter the rod is turned by means of its top plate *o*, when the inclined portion *o''''* of the head *o'''* will take below the portion *u'* of the plate *u*, so as thereby to draw the top plate *o* down upon the top surface of the stone.

I prefer to turn the rod *o'* not directly by the plate *o*, but by means of a key *r*, Figs. 1 and 2, having lugs *r'*. The latter may be put into recesses provided in the rim of the plate *o* and arranged one diametrically opposite to the other.

The top surface of the stone has a circular shallow cavity *e'*, Fig. 3, into the bottom of which is engraved a cross. (Shown in dotted lines in Fig. 2.) The central portion of said cross is formed by the projecting portion of the piece of tube *i*, and the center proper of the cross is formed by or coincides with the center line of the tubes *a* and *i*.

The stone is of course so driven into the earth that the imaginary point of intersection of the legs of the cross is situated in the respective boundary-line.

- 5 To use the boundary-stone in surveying, the tube *a* is made free by removing the plate *o* and the rod *o'* by means of the key *r*, when the pointed end *s'* of the pole or staff *s*, Fig. 3, need simply be put into the piece of tube *i*
10 and the upper portion of the tube *a*, as shown.

- Marking boundaries by my improved stones offers great facilities for the surveying. First, much time is saved by doing away with the repeated transplantation of the pole or staff,
15 because the latter receives from the beginning its proper and ultimate position. Second, a stony ground or frozen earth cannot hinder the staff from being put in position, because the condition of the ground or earth
20 is not any more of any importance whatever.

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

A boundary-stone having a vertical tube adapted to receive a surveying pole or staff, 25 a plate adapted to rest upon the top of said stone, and a rod secured to said plate, and reaching down into said tube; said rod having at its lower end a reduced portion *o*², a portion *o*³ projecting from said reduced portion, 30 and an incline *o*⁴ forming part of said portion *o*³; the tube having an inner projection, such as *u'*, for the purpose as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 35

CARL BRANZKE.

Witnesses:

LUDWIG PFÄFFLE,
WILLIAM ESSENWEIN.