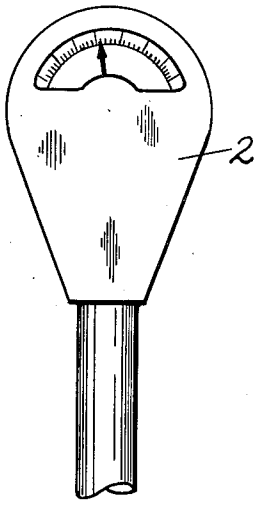
July 6, 1965 L. WALLERSTEIN, JR 3,193,059

FLEXIBLY SUPPORTED POST

Filed Nov. 16, 1960



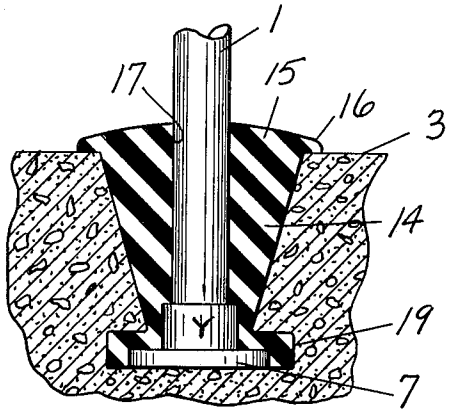


FIG. 2

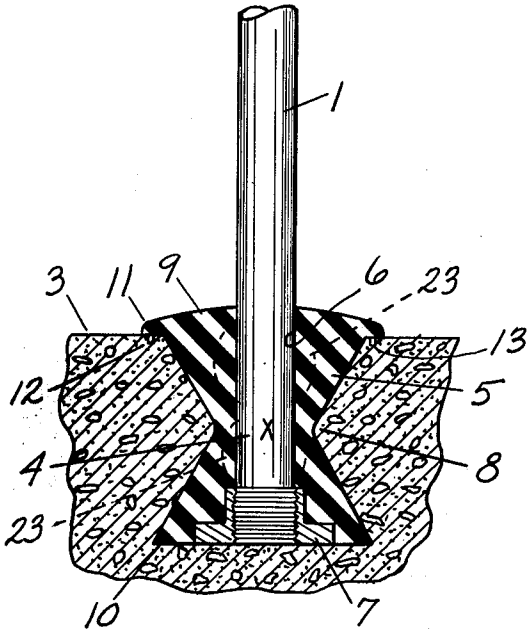


FIG. 1

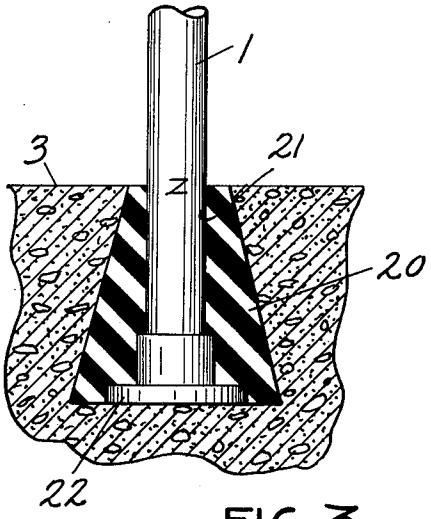


FIG. 3

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FLEXIBLY SUPPORTED POST

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This invention is a post, such as used for parking meters and the like, having a flexible supporting structure adapted to be set in concrete with its upper surface substantially flush with the surface of a sidewalk. When so installed, the post is solidly anchored against theft and yet will yield under the impact of automobile bumpers to an extent sufficient to prevent injury to the post and the surrounding sidewalk.

In the accompanying drawing, FIG. 1 is a sectional elevation of a parking meter on a flexibly supported post and FIGS. 2 and 3 are sectional views of modifications of the flexible support for the post.

The invention is shown applied to the conventional pipe support **1** for a parking meter **2** which is usually mounted curbside in a sidewalk **3** so as to be accessible to motorists and out of the way of pedestrians. The meter is suitably fixed to the upper end of the post as protection against theft and for the same reason, the lower end of the post is usually set in poured concrete. This provides a rigid support for the post which makes both the post and the surrounding sidewalk subject to injury due to impact of automobile bumpers. As protection against such injury, it has been proposed that resilient or flexible joints be located in the post at some point above the surface of the sidewalk but above surface joints are costly and vulnerable to theft.

These disadvantages are overcome by a subsurface joint in which the lower end **4** of the post is supported in a body **5** of rubber or other suitable elastomer. Conveniently, the post may be pressed into a bore **6** in the body which tightly grips the post. If the grip on the post is inadequate, it may be supplemented by an adhesive or a mechanical interlock may be provided between the post and the body. For example, the lower end of the post may be screwed into a flange **7** which provides a mechanical interlock positively preventing lifting of the post out of the rubber body. Other interlocking projections may be used to pin or key or anchor the post to the body. The pipe flange **7** is a conveniently available structure for providing an enlargement at the lower end of the pipe, preventing the removal.

The body **5** is of double conical or hourglass shape having a waist or region of minimum diameter **8** at the center and enlarged upper and lower heads **9** and **10**. The head **9** has an outwardly extending flange **11**, the under surface **12** of which is flush with the upper surface of the sidewalk.

In installation, the rubber body **5** and flange **7** are mounted on the lower end of the post and the body is set in a suitable hole. If the flange **7** is omitted, the body need not be mounted on the post prior to setting in the hole. The post may be assembled into the body at some later time with or without an adhesive. The hole is then filled with concrete and leveled off flush with the surface of the sidewalk. This embeds the rubber body **5** solidly in concrete where it cannot be removed due to the interlock provided by the double conical shape. The underside **12** of the flange **11** may be provided with an annular rib **13** which will be embedded in the sidewalk but this is not essential.

After the concrete has set, the post is solidly anchored and at the same time is flexibly supported so that it and the surrounding sidewalk are protected from injury by impact from automobile bumpers. Under impact, the post pivots about point X, thereby providing the flexibility needed to prevent injury under impact. With this construction, the flexible connection to the post is below the surface of the sidewalk so that it is not vulnerable to theft. The installation of the post at curbside is carried out in the same manner as the conventional parking meter post.

FIGS. 2 and 3 show modifications of the shape of the rubber body. In FIG. 2 the rubber body **14** is of conical shape with the base of the cone uppermost and provided with an enlarged head **15** with a flange **16** overlying the upper surface of the sidewalk. As in FIG. 1, the pipe **1** is pressed into a bore **17** of the body and is screwed into a pipe flange **7**. Around the pipe flange **7** the body **17** has an enlargement **19** which interlocks with the poured concrete and prevents removal.

The installation and operation are similar to FIG. 1. The rubber body **14** and pipe flange **16** are installed on the lower end of the pipe **1** and set in concrete which is leveled off flush with the sidewalk. Here again, the flexible connection to the pipe is below the surface of the sidewalk and is not vulnerable to theft. Under impact, the pipe pivots about point Y, below the surface of the sidewalk.

In the construction of FIG. 3, the rubber body **20** is of conical shape but in this instance the base of the cone is downward. The body has a bore **21** into which the lower end of the pipe is pressed and the lower pipe end of the pipe is screwed into a pipe flange **22**. The enlarged lower end of the body provides a positive interlock with the poured concrete. Under impact, the pipe pivots about point Z, thereby protecting the pipe and the surrounding sidewalk against damage.

Any of the rubber bodies may be provided with cored out openings as indicated in dotted lines at **23** in FIG. 1. All of the rubber bodies have a subsurface enlargement interlocking with the concrete.

In all forms of the invention, the lower end of the post is anchored by friction or adhesive or by mechanical interlock in a rubber body which provides the flexible support and the rubber body is set in concrete in the usual manner. This provides protection against impact and also against theft in a simple and inexpensive manner.

What is claimed as new is:

1. A post for parking meters and the like comprising in combination a conventional pipe post positioned curb side of the sidewalk with the lower end of the pipe depending below the surface of the sidewalk and with the upper end of the pipe extending above the surface of the sidewalk in position to support a parking meter or the like, an elastomeric anchoring body below the surface of the sidewalk having a vertical bore through which the lower terminal end portion of the pipe extends, said body extending downwardly at least to the terminal end of the pipe and completely surrounding said end portion laterally, said end portion having laterally extending anchoring means thereon and within the confines of said body, the wall of the bore completely surrounding and tightly gripping said end portion and said anchoring means for preventing upward withdrawal of the pipe from the body, a mass of poured concrete completely surrounding the body laterally and at its lower terminal surface, said concrete set against the body with the upper terminal end of the body exposed and the pipe extending thereabove from said bore, the upper surface of said concrete and said upper terminal end being adjacent the surface of the sidewalk whereby forces of impact of automobile bumpers on the pipe are cushioned by the elastomer surrounding the pipe and interposed between the pipe and the concrete, said body having a laterally projecting portion with an upwardly directed

surface interlocking with the concrete below the upper surface thereof to solidly anchor the body in the concrete against theft, and said body providing a subsurface yieldable support for the pipe preventing injury to the pipe and the surrounding sidewalk under the impact of automobile bumpers.

2. The post of claim 1 in which the anchoring means for said end portion of the pipe comprises a pipe flange at the lower end of the bore fixed to said end portion of the pipe, said flange being of larger diameter than the bore and providing a mechanical interlock positively preventing upward withdrawal of the pipe from the body.

3. The post of claim 1 in which the upper terminal end of the body has a projecting flange overlying the upper surface of the concrete.

References Cited by the Examiner

UNITED STATES PATENTS

196,561	10/77	Chandler et al.	50—189
260,961	7/82	Flickinger	50—189
440,938	11/90	Anthoni	50—104
557,834	4/96	Kutzner	50—189 X
730,966	6/03	Reed	50—189
880,992	3/08	Hayes	50—189
889,240	6/08	Kanski	189—90
1,118,159	11/14	Smith	50—465
1,726,817	9/29	Franklin.	
1,743,492	1/30	Sipe	50—346 X
1,939,968	12/33	Frei	189—23
2,137,767	11/38	Betcone	50—404 X
2,605,680	8/52	Yeoman	94—8
2,720,374	10/55	Hutton	248—358
2,909,054	10/59	Phillips	50—471
2,987,290	6/61	Haarmann.	

FOREIGN PATENTS

512,894	9/39	Great Britain.
761,922	11/56	Great Britain.
789,873	8/35	France.
1,230,711	4/60	France.
1,234,017	5/60	France.
107,616	6/39	Australia.
562,414	12/57	Belgium.
867,909	2/53	Germany.

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