June 2, 1964 P. E. BOURASSA 3,135,363

TELESCOPIC ANTENNA

Filed Dec. 9, 1959 2 Sheets-Sheet 1

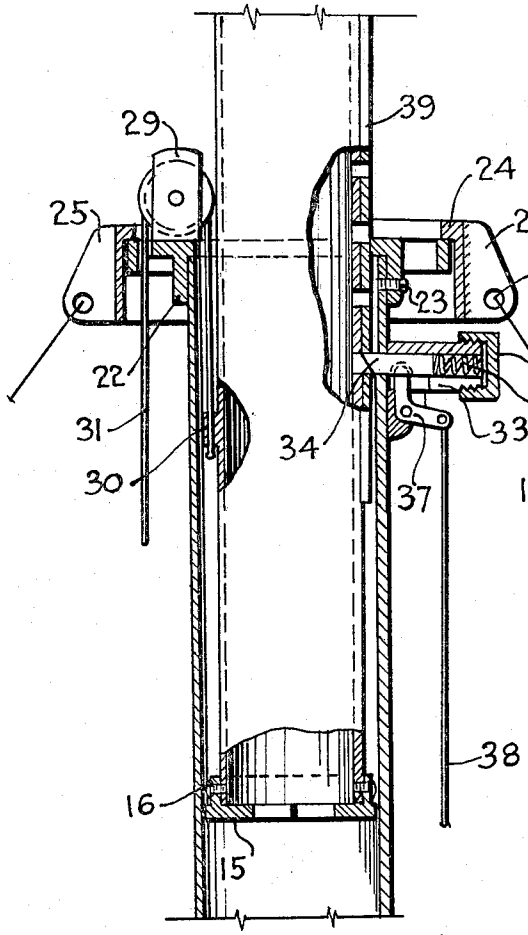


Fig. 1

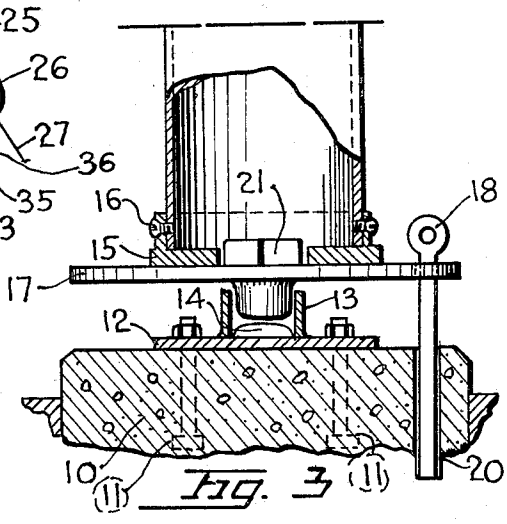


Fig. 3

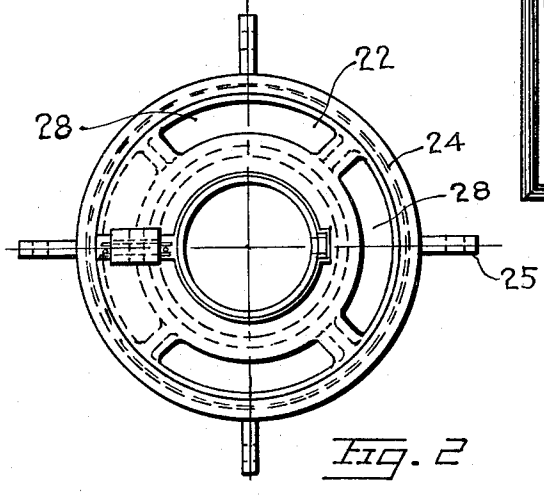


Fig. 2

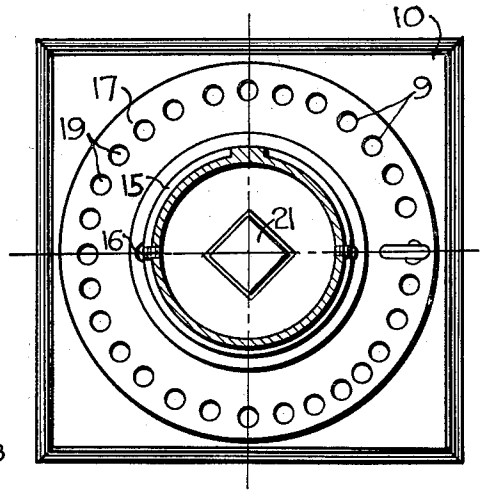


Fig. 4

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TELESCOPIC ANTENNA

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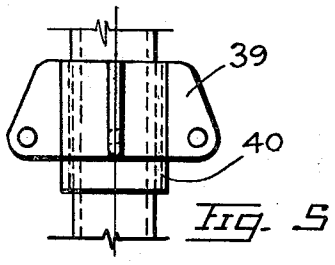


Fig. 5

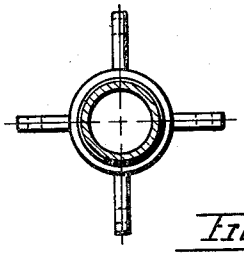


Fig. 6

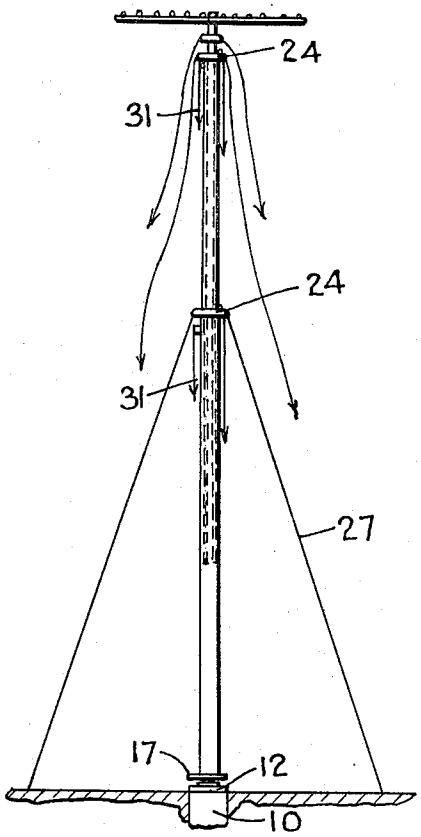


Fig. 7

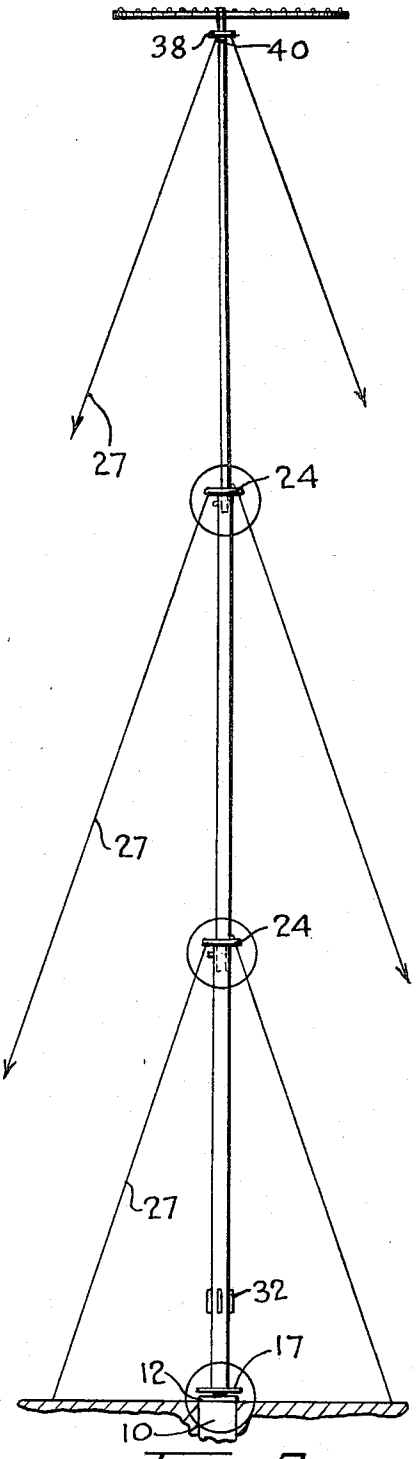


Fig. 8

United States Patent Office 3,135,363 Patented June 2, 1964

3,135,363

TELESCOPIC ANTENNA

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Filed Dec. 9, 1959, Ser. No. 858,507
1 Claim. (Cl. 189—26)

This invention relates to new and useful improvements in antenna and more particularly to a telescoping antenna adapted to be mounted on ground level.

Several types of tower antenna are in use but, in all cases the antenna is mounted, and secured to roofs of houses. This condition is not desirable since roofs are frequently damaged either by the antenna base or by guy wires used to secure the said antenna.

In the present invention the tower is mounted on ground level on a concrete base on which the tower is manually rotatable to line up the antenna in any desired direction.

In the accompanying drawing the mast is shown in three sections but I do not wish to restrict myself since two or more sections could be used to form a complete antenna mast.

Broadly, the invention comprises a concrete base, a base plate anchored to said base a footstep centrally located on said base plate, a pintle riding on said footstep, a direction regulator disc manually rotatable, locking means for said regulator and telescoping masts mounted over said regulator, a ring carrying guy line eyes is secured to the upper extremity of each section so that each section is properly anchored when extended.

The primary object of the invention is therefore the provision of a telescoping antenna which is mounted on the ground surface and which can be extended well above the height of the building.

A secondary object is the provision of a mast antenna which could easily be erected in a vehicle for demonstrating the type of reception which can be received at a particular location.

Another important object is the provision of locking means for holding the telescoping sections of the mast in extended position.

Other apparent objects are the dependability, the sturdiness, the durability, and the ease of operation of a mast antenna constructed in accordance with the present invention.

With these and other objects in view that may appear as the description proceeds, the invention consists in the novel arrangement of co-operating elements as hereinafter more specifically set forth, claimed and shown in the accompanying drawing forming part of this application, and in which:

FIGURE 1 is a fragmental front elevational sectional view of the section raising and locking mechanism;

FIGURE 2 is a plan view of FIGURE 1;

FIGURE 3 is a sectional elevational view of the base, the lower section and the manually rotating mechanism;

FIGURE 4 is a plan view of FIGURE 3;

FIGURE 5 shows the rotatable collar formed with a plurality of guy line plates;

FIGURE 6 is a plan view of FIGURE 5;

FIGURE 7 shows the antenna partially elevated, and

FIGURE 8 shows the antenna fully extended.

Referring more in detail to the drawings in which similar reference characters designate corresponding parts throughout the several views, it will be seen the invention comprises a concrete base **10** provided with anchor bolts **11** for securing a base plate **12**. Centrally of the base plate is formed a footstep housing **13** within

which is a footstep **14**. The tower comprises a plurality of telescoping sections mounted over a bottom plate **15** secured to the section by means of lock screw **16**. Directly over the base is a direction regulator disc **17** held in a selected position by means of a lock pin **18**. The regulator disc is formed with a plurality of holes **19** through which the lock pin is threaded and into a hole **20** formed into the concrete base. A square stud **21** is formed integrally with the regulator disc **17** and a rectangular hole is formed in the bottom plate **15** to register with said stud to cause the tower to rotate when the regulator disc is rotated.

The mast comprises a plurality of telescoping sections and the top extremity of each section except the uppermost section is constructed as hereinafter described and illustrated in FIGURE 1 of the drawing. At the upper extremity a bearing plate **22** is set over the pipe and held in position by spaced apart lock screws **23**. A bearing ring **24** formed with a plurality of spaced apart eye plates **25** is disposed over and rotates freely on said bearing plate **22**. A hole **26** is formed in each plate to secure a guy line **27**. The bearing plate is formed with spaced apart openings **28** to allow passage of the hoist wires which will be hereinafter detailed. A pulley and casing **29** is mounted on the bearing ring **24** for the purpose of hoisting the next section. Near the lower extremity of the next section a hoist cable clamp **30** of suitable design is formed and a hoist cable **31** is secured thereto. The said cable is threaded through the pulley **29** and down through is opening **28**. When the section is raised, the free extremity of the hoist cable is wound around a cleat **32** formed around the lower end of the bottom section. The hoisted section is retained at the desired height by means of a spring loaded lock pin. The said lock pin mechanism comprises a casing **33** formed with a square hole therethrough, a square lock pin **34** slidable therein, a compression spring **35** at the rear of the pin to urge the said pin forward and a threaded cap **36** to hold the spring in position. A lever **37** is fulcrumed beneath the pin and a lock string **38** is secured to the lever. A metal strip **39** is welded on the upper pipes and square holes at close proximity to each other are formed through said strip annd pipe wherein the lock pin **34** fits to secure the section at any desired height. To lower the section, the lock string **38** is actuated to disengage the lock pin and the section is lowered by releasing the hoist wire **31**. Each section other than the lower section is raised and lowered by means of a similar mechanism secured at the upper extremity of each section. The upper most section is guyed by means of a rotating guy wire ring **39** supported in position by means of a sleeve **40** welded in position. With the guy line rings free to rotate on their respective section it is possible to raise the mast to the desired height and rotate the antenna in any desired direction.

It is believed that the construction and advantages have been fully set forth and that further detailed description is not necessary.

While the preferred embodiment has been disclosed, it is to be understood that minor modifications may be resorted to without departing from the spirit of the invention and the scope of the appended claim.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

I claim:

A support for an antenna comprising a mast having a socket in its lower end, a disk of greater diameter than said mast having a stud in the center thereof for en-

gagement in the socket of said mast releasably connecting the mast and disk together, a base member, a base plate of less diameter than said disk mounted on said base member, a footstep bearing mounted in the center of said base plate surrounded by an annular collar, a pintle pin depending from the center of said disk in rotatable bearing engagement with said footstep bearing, and a lock pin insertable through one of a series of apertures formed in said disk adjacent its peripheral edge, said pin being adapted to engage in a hole formed in said base member to secure said mast in adjusted position.

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