

Sept. 4, 1928.

1,683,247

V. G. H. GROTHE

SCREED SUPPORT

Filed March 19, 1927

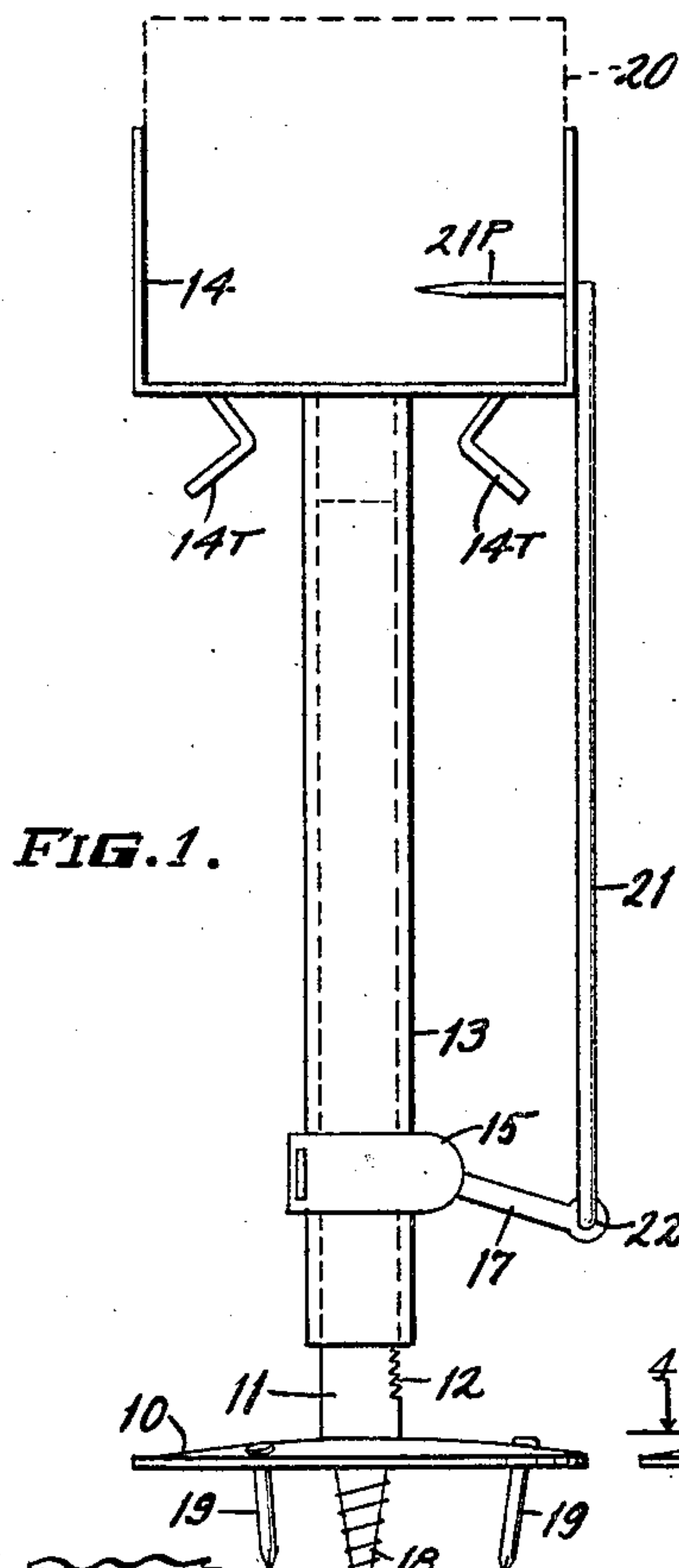


FIG. 1.

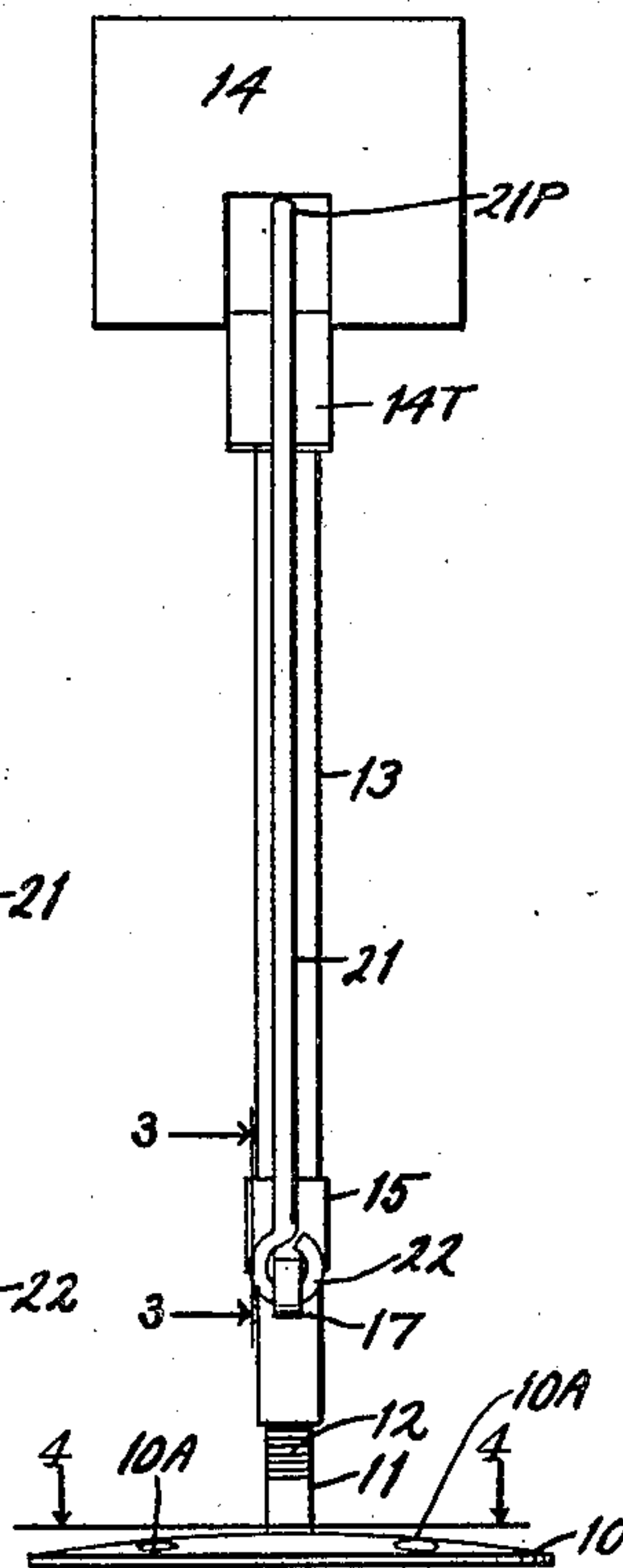


FIG. 2.

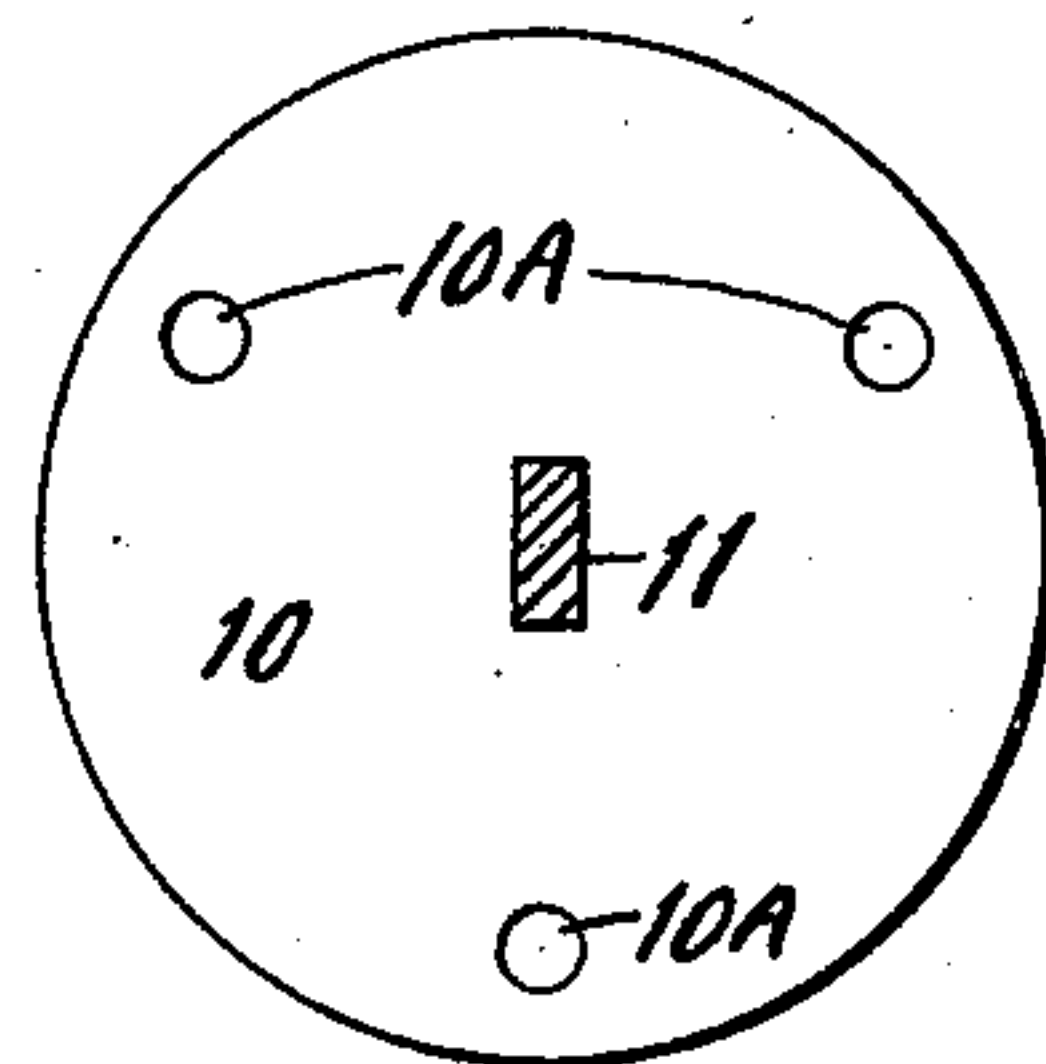


FIG. 4.

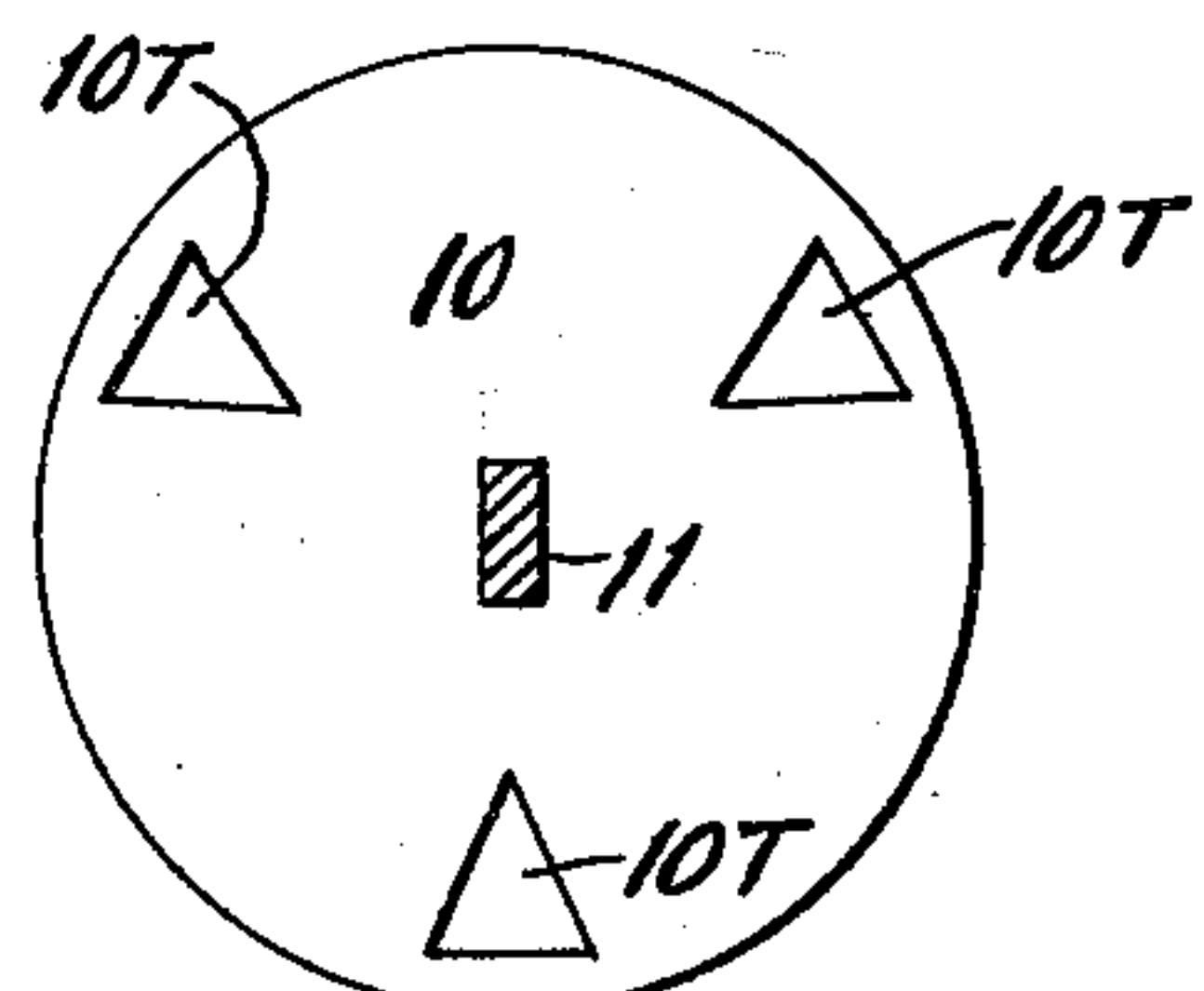


FIG. 5.

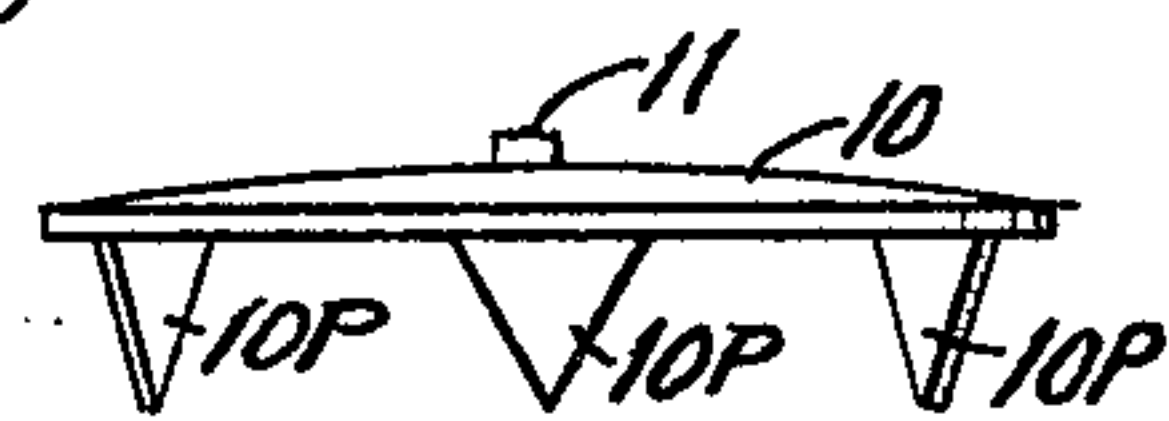


FIG. 6.

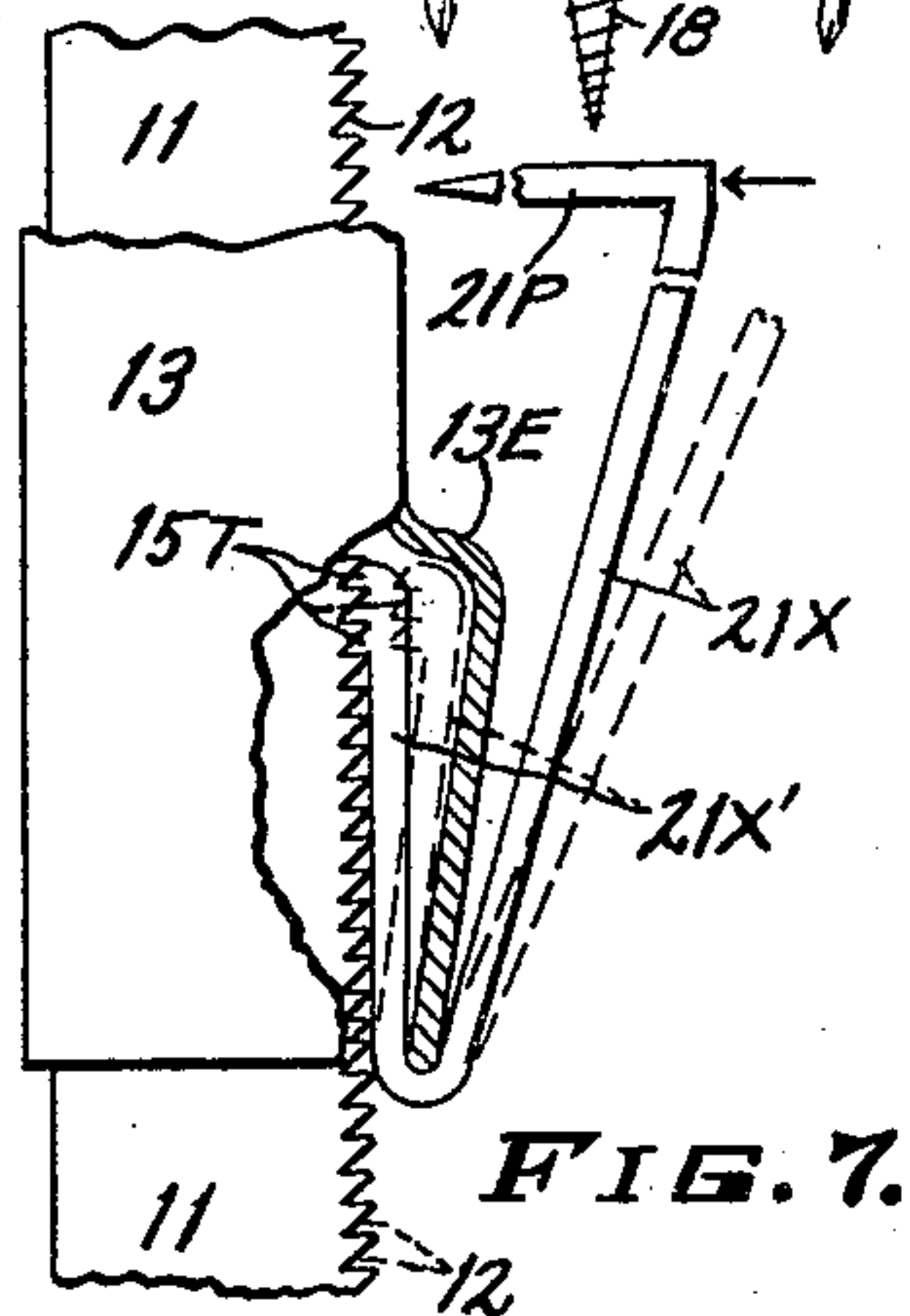


FIG. 7.

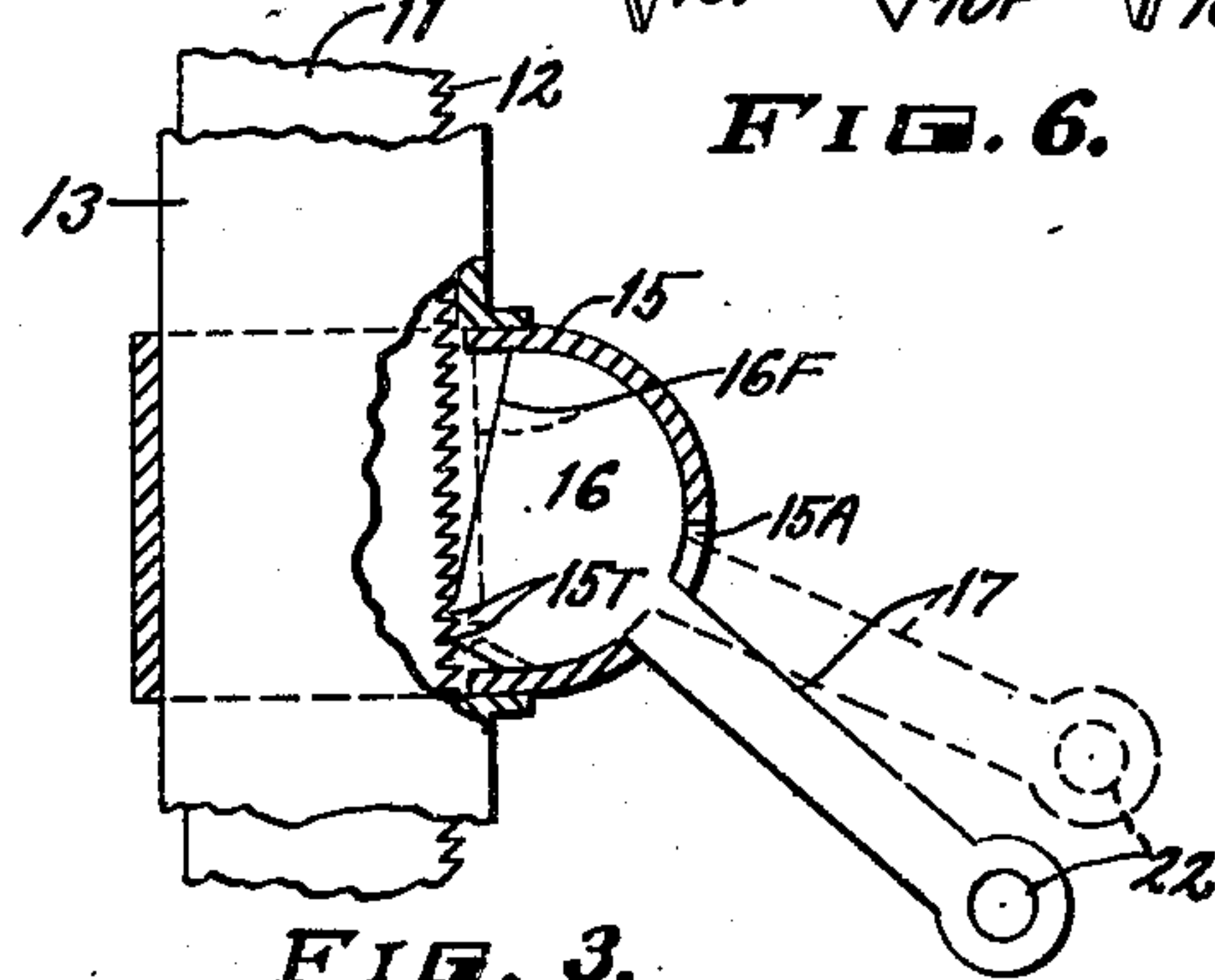


FIG. 3.

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Patented Sept. 4, 1928.

1,683,247

# UNITED STATES PATENT OFFICE.

VERNER G. H. GROTHE, OF ST. PAUL, MINNESOTA, ASSIGNOR TO HAROLD L. FAGLEY,  
OF ST. PAUL, MINNESOTA.

## SCREED SUPPORT.

Application filed March 19, 1927. Serial No. 176,805.

My invention relates to screed supports used in concrete construction and the object is to provide a simple, efficient and easily adjusted device of said kind. Another object is to further improve on my United States screed support Patent Number 1,592,681, issued July 13, 1926.

In the accompanying drawing:

Fig. 1 is a front elevation and Fig. 2 a side elevation, (slightly modified) of my improved screed support.

Fig. 3 is an enlarged partly sectional detail about as on line 3—3 in Fig. 2.

Fig. 4 is a sectional view as on line 4—4 in Fig. 2 showing a top view of the base of my device.

Fig. 5 is a modification of Fig. 4 and Fig. 6 is a side elevation of Fig. 5.

Fig. 7 is a side elevation of the telescoping members of my device, partly in section, and including details of the locking bar of my device.

Referring to the drawing by reference numerals: 10 designates a preferably circular base plate which may be raised or "dished" upwardly and has an integral vertical post 11 with a rack 12 in one side. 13 is a tubular post member slidable on the post 11 and its upper end has secured to it an upwardly opening L-shaped clip 14 of sheet metal. A portion of each wall and adjacent its lower edge is punched out to form in said clip two downwardly extending tongues 14T for a purpose to be described.

In Figs. 1, 2 and 3, 15 is a metal housing fixed about the lower end of tube 13 and projecting outwardly to encase a semi-circular tiltable cam 16 having an arm 17 projecting outwardly through a slot 15A in the housing. Said cam has an interior straight face 16F the lower part of which is formed with inwardly directed teeth 15T adapted to engage the teeth of the rack 12 when said cam arm 17 is lowered as to full line position in Fig. 3, but said teeth being non-engaging when the cam and arm is raised to dotted position shown. The teeth 15T may, of course, be engaged with the rack to hold member 13 and its clip 14 at any desired elevation.

In Fig. 1, 18 is a wood screw projecting downwardly concentrically from the base 10 to be screwed into the wooden floor supporting forms (not shown) used in concrete floor construction. The base may also have round apertures 10A as in Figs. 2 and 4 for draw-

ing nails 19 into such floor form, or triangular holes 10T may be punched in said base and the triangular piece of metal bent down to form a prong 10P, also for the same purpose of holding the base rigid.

20, shown dotted in Fig. 1, represents a floor screed laid in the clip 14 and resting on the bottom of the latter. Several screed supports may be necessary to support one screed and it is obvious that all of them may be adjusted until the screed is absolutely level. Parallel rows of screeds may thus be laid parallel and in a common plane.

21, is a heavy wire or metal arm normally upright and having its lower end suitably pivotally connected as at 22 to the outer end of the cam arm 17, and its upper end is formed with an inwardly directed prong 21P. Said prong may be driven into the screed after the clip 14 is set to a predetermined height, through the aperture from whence the tongue 14T has been bent.

In Fig. 7 the lower end of tube 13 has an enlargement 13E adjacent the tooth rack 12 said enlargement being tapered downwardly and having an opening adjacent the bottom end of said tube, to form the pivot point engaging in the bottom of the V-shaped lower part of the adjustment bar 21X. This bar has an inner arm 21X' within said enlarged part 13E the upper end of said arm having inwardly directed teeth 15T' to be swung into and out of engagement with the rack 12. When the prong 21P is driven into the screed, it is obvious that the rack is securely engaged by said teeth 15T'.

In the use of my device, it will be readily understood that a number of my devices are secured in the floor supporting forms, screeds laid in the clips thereof and all adjusted to proper level. Then concrete is poured in the form to a level just below the bottoms of the clips 14, so that the tongues 14T of the latter serve as anchors to support the upper parts of the screed supports when the concrete hardens about them. It is further obvious that when the concrete has hardened or "set" the screeds will remain in a true plane and flooring may subsequently be laid on the screeds. It will be understood that the small prongs 10P of Fig. 6, or the nails 19 or screw 18, Fig. 1, will project below the ceiling after the form-boards are removed, but these are readily chipped off after the concrete has hardened.

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I claim:

1. A screed support comprising a base with an integral vertically disposed post, an upper tubular member slidable on said post and having a screed supporting U-shaped clip at its top end, the said post having a toothed rack, rack engaging means on the tubular member adapted to engage the rack at any desired elevation, said latter means comprising further an upright element with a horizontally directed prong adapted to be driven into a screed supported by the device.

2. The structure specified in claim 1, in which said rack engaging means comprises a cam with teeth adjacent the rack, said cam oscillable within a housing formed on said tubular member and having an outwardly directed arm to be engaged for oscillating said cam into and out of engagement with the rack.

3. The structure specified in claim 1, in which said rack engaging means comprises a cam with teeth adjacent the rack, said cam oscillable within a housing formed on said tubular member and having an outwardly directed arm to be engaged for oscillating said cam into and out of engagement with the rack, said upright element comprising a bar with its lower end pivotally connected with said cam arm and its upper end comprises an integral inwardly directed prong, for the purpose described.

4. The structure specified in claim 1, in which said U-shaped clip is formed with two integral tongues struck out from the metal in the sides of said clip and each bent downwardly from the bottom of said clip; said prong spaced with relation to the said cam arm to register with one of the openings in the clip formed by said struck-out metal, for the purpose described.

5. A screed support comprising a normally upright member, means for securing said member upon a substantially horizontal support for concrete, a screed holder adjustable vertically upon said member, toothed means extending longitudinally on said member, means associated with said screed holder and movable into and out of engagement with said toothed means for retaining the holder at a predetermined height and an upwardly projecting arm operatively connected to said

tooth engaging means and projecting above the normal level of concrete upon said form whereby said engaging means may be operated to adjust the height of said holder.

6. A screed support comprising a screed spacing member, means for securing one end of said member upon a form for concrete, a screed holder adjustable toward and away from said form upon the other end of said member, teeth disposed longitudinally on said member, means movable into and out of engagement with said teeth for retaining said holder in predetermined position upon said spacing member, an arm operatively connected to said tooth engaging means and projecting out from the normal surface of concrete upon said form and means on the outer end of said arm for retaining said tooth engaging means in engagement with said teeth.

7. A screed support comprising a post, means for securing an end of said post upon a support for concrete, a U shaped screed holder upon the other end of said post, telescoping members of said post adapted to be extended and retracted to adjust the spacing of said holder relative to said support, means for retaining said holder in predetermined positions relative to said support and manually operable means connected to said retaining means and projecting out from the normal surface of concrete upon said form whereby said retaining means may be operated to adjust the relative positions of said holder and support after concrete has been poured in said support.

8. A screed support comprising a post, means for securing an end of said post upon a support for concrete, a screed holder upon the other end of said post, telescoping members of said post adapted to be extended and retracted to adjust the spacing of said holder relative to said support, means for retaining said holder in predetermined position relative to said support and an arm connected to said retaining means and projecting out from the normal surface of concrete upon said form whereby said retaining means may be operated to adjust the height of said holder without removing a screed held in said holder.

In testimony whereof I affix my signature.

VERNER G. H. GROTHE.



CERTIFICATE OF CORRECTION.

Patent No. 1,683,247.

Granted September 4, 1928, to

VERNER G. H. GROTHE.

It is hereby certified that the above numbered patent was erroneously issued to "Harold L. Fagley, of St. Paul, Minnesota," whereas said patent should have been issued "one-half to Fred C. Holman, of St. Paul, Minnesota, and one-half to Healy-Ruff Company, of St. Paul, Minnesota, a firm composed of Dennis L. Healy and De Witt C. Ruff," as assignees by mesne assignments, of the entire interest in said invention, as shown by the records of assignments in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 6th day of November, A. D. 1928.

(Seal)

M. J. Moore,  
Acting Commissioner of Patents.