L. A. BARNES.

ADJUSTABLE SUPPORTING DEVICE.

APPLICATION FILED JULY 22, 1916.

1,227,105. Patented May 22, 1917.

Fig. 1.

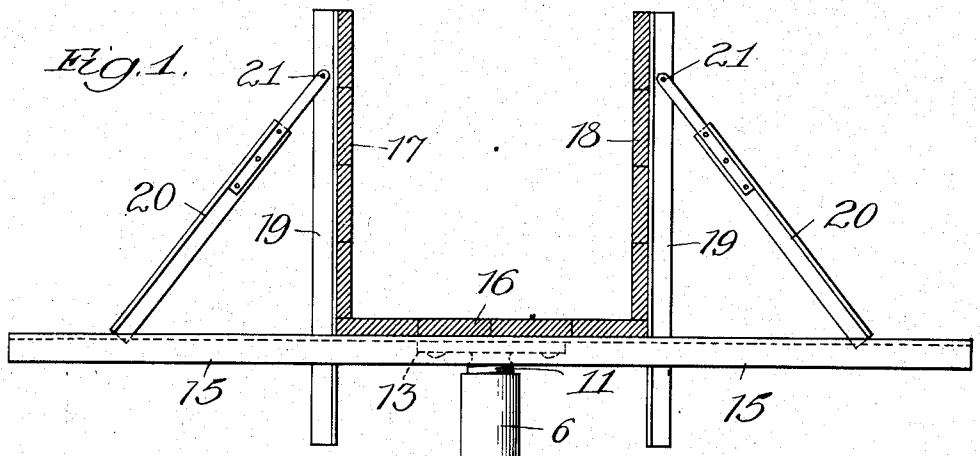


Fig. 2.

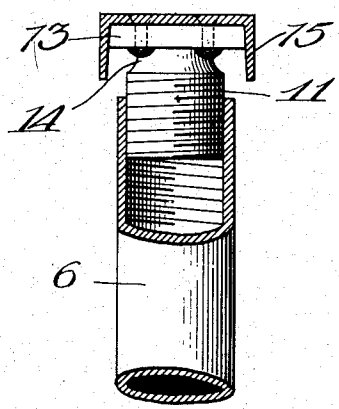
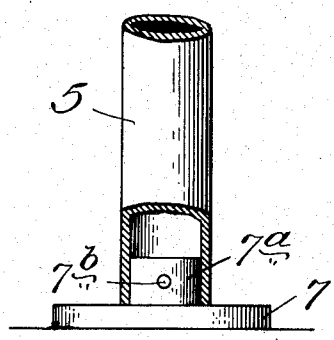


Fig. 3.



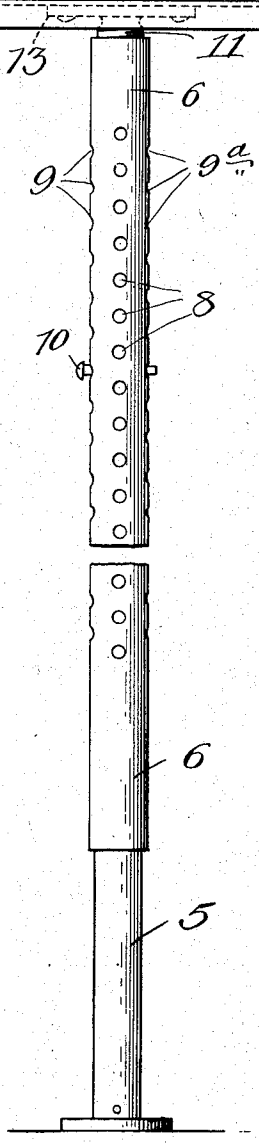
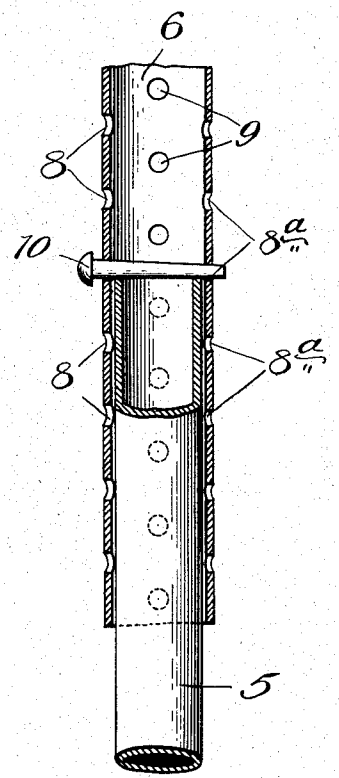


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE SUPPORTING DEVICE.

1,227,105. Specification of Letters Patent. Patented May 22, 1917.

Original application filed February 1, 1916, Serial No. 75,529. Divided and this application filed July 22, 1916. Serial No. 110,670.

To all whom it may concern:

Be it known that I, LEW A. BARNES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Adjustable Supporting Devices, of which the following is a specification.

My invention relates, more particularly, to a supporting device formed of relatively adjustable members such as are employed for temporarily supporting the molds for forming the beam-portions of reinforced concrete floors or roofs, during the course of erection of the structures; and my objects, generally stated, are to provide a novel, simple and improved construction of supporting device, more particularly for the purpose stated, which may be economically produced, be quickly and readily adjusted to meet the varying conditions presented, may be readily withdrawn from operative position after the work in connection with which it is used, is completed, and which will be strong and durable, this application being as to certain features thereof divided out of my pending application, Serial No. 75,529, filed February 1, 1916.

Referring to the accompanying drawing, Figure 1 is a view in elevation, of a supporting device constructed in accordance with my invention, the device being shown as supporting a section of a mold, shown in section, for forming a beam of a floor. Fig. 2 is a broken, enlarged, view in elevation of the upper end of the device, the upper extremity thereof being shown in section. Fig. 3 is a similar view of the lower end of the supporting device; and Fig. 4, a broken, enlarged, view in elevation of a portion of the supporting device, portions thereof being shown in section.

My improved device, as I prefer to construct it, is formed of telescoping members 5 and 6, the lower, or innermost tube 5 being provided at its lower end with a base 7 at which the supporting device rests upon the ground, the base 7 being preferably provided with an upwardly-extending boss 7^a over which the tube 5 fits and is held against rotation thereon by a pin 7^b passing through the tube and boss. The outer tube 6 contains at intervals along its length series of openings 8, 8^a, 9 and 9^a, these series of openings being disposed at an angle to each other, as represented, to avoid weakening of the structure, though if desired but two series only may be employed. The openings 8, 8^a, 9 and 9^a are provided for receiving a pin 10 which extends across the upper end of the tube 5 and serves to support the tube 6, with the parts carried thereby, on the tube 5, the pin 10 being insertible into any of the said openings and this adjustment of the tube serving as a comparatively coarse adjustment of the device is a vertical plane. The pin 10 is preferably tapered as shown and the openings 8^a and 9^a are slightly smaller than the openings 8 and 9 to insure substantially uniform seating of the tube 6 on the pin 10. The upper end of the tube 6 is internally threaded, and screwing therein is the threaded depending portion 11 of a plate member 13 which is adapted to engage the structure to be supported by the device. The depending portion 11 is provided preferably as an integral part of the member 13 and, by preference, is of reduced diameter, as represented at 14, at its upper end. This feature readily permits of the complete formation of all of the threads on the part 11. The threaded connection thus provided between the plate member 13 and the tube 6 affords means for accurately adjusting the plate 13 vertically to the desired height, and the provision of the complete threads on the part 11 insures the maintenance of the threads on the upper end of the tube 6, in proper condition.

In the drawings I have shown my improved device as the supporting medium for a beam-mold of a floor structure. In this arrangement the member 13 fits against and is secured to the underside of the channeled member 15 which carries the mold formed of the bottom 16 and sides 17 and 18, the sides 17 and 18 being held in position in any suitable way by uprights 19 passing through openings (not shown) in the member 15 and braced by braces 20 pivoted at their ends, as indicated at 21, to the bars 19 and engaging openings (not shown) in the top of the member 15.

In practice the member 13, and consequently the member 15, where the supporting device is used in the particular arrangement disclosed, is adjusted to the desired height by first adjusting the tube 6 on the tube 5, as by sliding it vertically thereon, the

pin 10 being then inserted into the openings in the tube 6 immediately above the top of the tube 5, and thereupon rotating the tube 6 on the tube 5, as through the medium of a bar (not shown) inserted into one of the openings 8, 8ª, 9 or 9ª in the tube 6, to effect the desired fine adjustment of the plate 15.

It will be noted that my improved supporting device affords a means whereby the desired relatively fine vertical adjustment of that portion of the device against which the structure to be supported by the device, bears, may be effected, and that it may be readily and quickly collapsed when it is desired that it be removed from operative position, the feature of providing the taper to the pin 10 permitting this pin to be readily driven out of engagement with the openings in the tube 6, if desired.

While I have illustrated and described a particular embodiment of my invention, I do not wish to be understood as intending to limit it thereto, as the same may be variously modified and altered without departing from the spirit of my invention.

What I claim as new and desire to secure by Letters Patent is:

1. Supporting means for the purpose set forth, comprising telescoping members having a base, one of said members containing openings for receiving a pin to engage the other of said members and hold these members in relatively adjusted position, a bearing member supported on the one of said telescoping members which is supported on said pin, said last-referred-to telescoping member being rotatably supported relative to the other of said members and a single threaded adjustable connection between said bearing member and the one of the telescoping members on which it is directly supported.

2. Supporting means for the purpose set forth, comprising telescoping members, one of said members containing openings of different diameters arranged in series, with the edges of diametrically opposed openings in a plane at a right-angle to the median line of the member containing them, said openings being provided for receiving a pin to engage the other of said members and hold these members in relatively adjusted position, a tapered pin extending into a large and a small one of said openings and holding said members in relatively adjusted position, and a bearing surface on the upper end of the uppermost one of said members, for the purpose set forth.

LEW A. BARNES.