

1,294,320.

Patented Feb. 11, 1919.

2 SHEETS—SHEET 1.

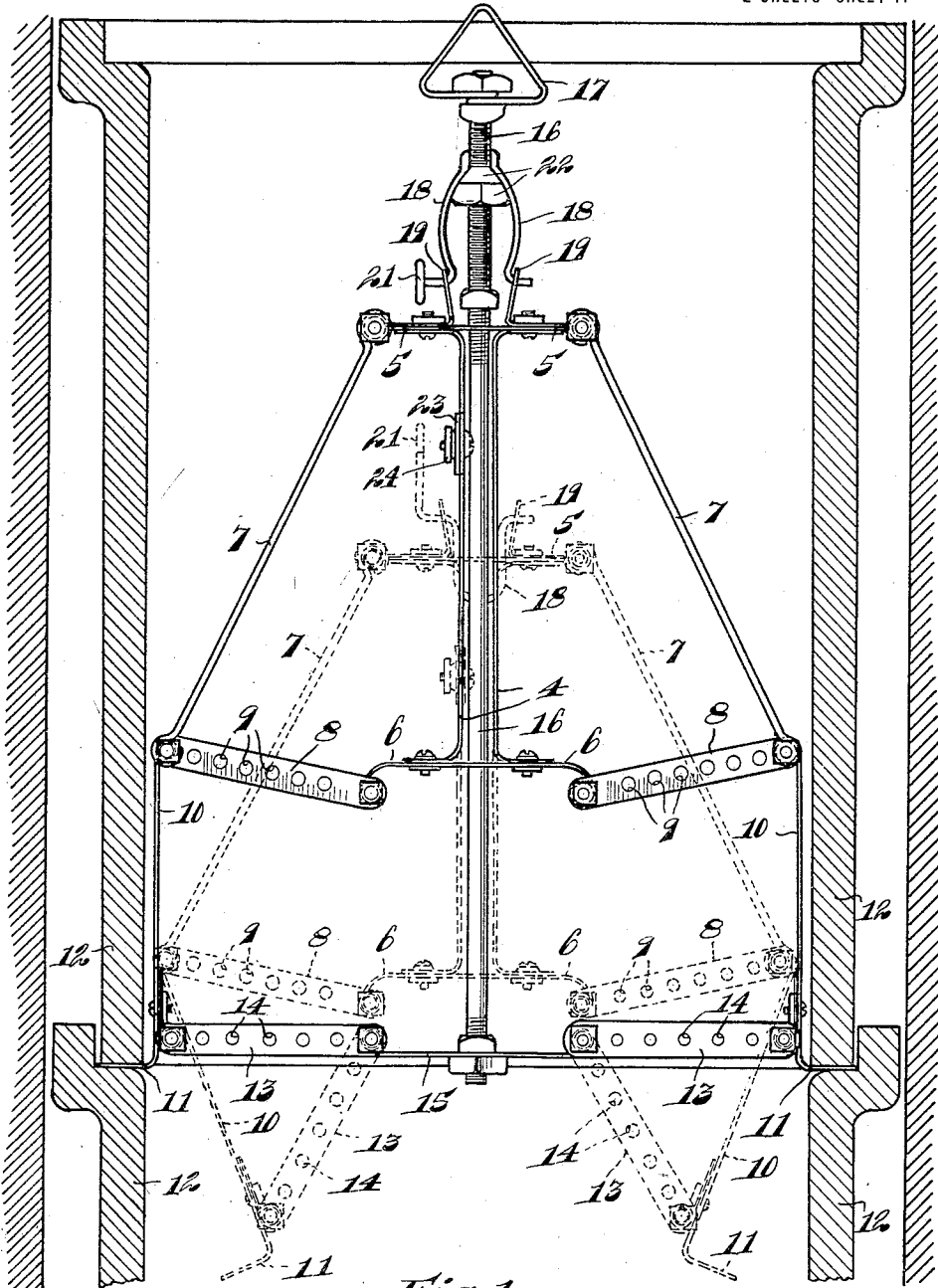


Fig. 1.

Witnesses:

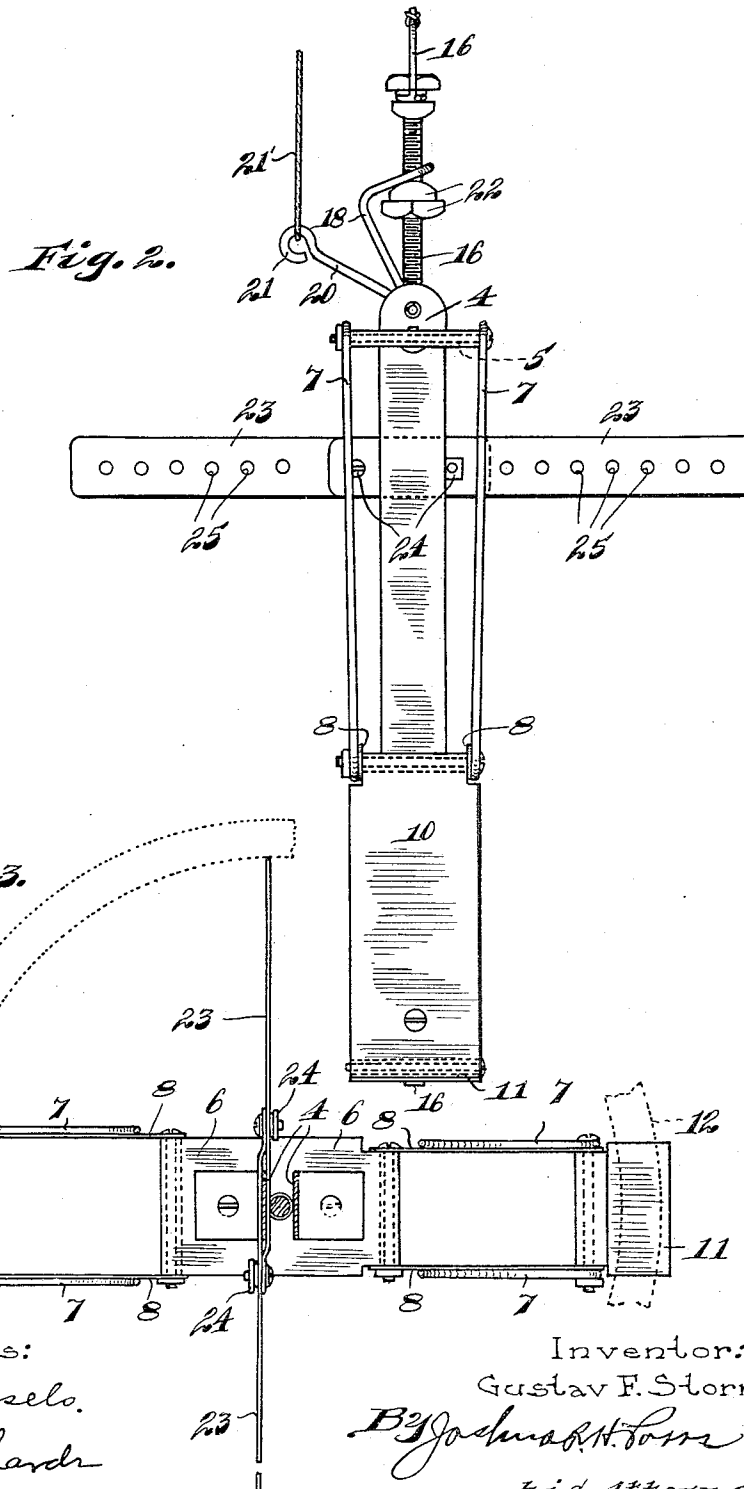
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Inventor:

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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

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## TILE-POSITIONING DEVICE.

1,294,320.

Specification of Letters Patent.

Patented Feb. 11, 1919.

Application filed January 11, 1918. Serial No. 211,328.

*To all whom it may concern:*

Be it known that I, GUSTAV F. STORM, a citizen of the United States, and a resident of the city of Sanborn, county of O'Brien, and State of Iowa, have invented a certain new and useful Tile-Positioning Device, of which the following is a specification.

My invention relates to a certain new and useful tile positioning device and has for its object the provision of a device of this character adapted to permit of the ready lowering and positioning of tiles or the like in a well or the like.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a vertical section showing a device embodying the invention in position of use,

Fig. 2, an end view of the device removed, and

Fig. 3, a top plan view of the device.

The preferred form of construction as illustrated in the drawings comprises a central frame preferably made up of two vertical struts or strips 4 permanently secured at their upper and lower ends to cross arms 5 and 6 respectively. Supporting braces 7 are pivotally connected at their upper ends to the outer ends of arm 5 and are also pivotally connected at their lower ends by means of pivotal links 8 with cross arm 6, as shown. The links 8 are provided with a plurality of spaced bolt holes 9 to permit of the adjustment of the brace arms 7 inwardly or outwardly to fit within different sizes of tiles or the like. Supporting arms 10 are pivotally connected at their upper ends to the lower ends of brace arms 7 and are provided at their lower ends with outwardly extending supporting fingers or flanges 11, adapted to fit under and support diametrically opposite portions of the lower edges of tiles 12, as indicated. At their lower ends arms 10 are connected by pivotal links 13, having adjusting bolt holes 14 with a cross arm 15 secured to the lower end of a suspending rod 16 operating freely between the struts 4 as shown. At its upper end rod 16 carries an eye or loop 17 for the attachment of a lowering or sus-

pending cable or the like. A locking device 18, made of wire and bent as shown to embrace the upper end of the rod 16, is pivoted in ears 19 on cross arm 5 and is provided with a rocker arm 20 having an eye 21 for connection with a trip string 21' as shown. Lock nuts 22 are threaded on the upper end of rod 16 to furnish a stop to engage the locking device 18 to prevent upward movement of the rod, relatively to the frame, but to permit of free downward movement thereof. Cross arms 23 are adjustably clamped to one of the struts 4 by means of bolts 24 taking through bolt holes 25, said arms being arranged to contact with the inner walls of tile 12 to prevent tilting of the tile on the supporting fingers 11, and are adjustable to different sizes of tiles.

In use the device is arranged in the full line position indicated in Fig. 1, with the lock 18 engaging nuts 22 as shown, and a tile 12 positioned on the fingers 11. This tile is then lowered by means of a cable or the like attached to the eye 17 until the tile reaches its position of rest, as indicated in Fig. 1. The tile is then supported independently of the lowering device which takes the weight and strain off of the parts thereof and leaves the same free to collapse. Then string or cord 21' is pulled until lock 18 disengages nuts 22 leaving the rod 16 free for vertical movement, relatively to the frame of the device, and the frame of the device free to collapse into the dotted line position indicated in Fig. 1, which it will do provided the fingers 11 are not too tightly held by the weight of the tile 12. If the fingers 11 are too tightly held for this action a slight upward pull on the rod 16 will forcibly withdraw said fingers, thus compelling the collapsing of the device. Thereupon the device may be readily removed and a new tile section placed in position as before.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I

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

1. A device of the class described comprising a frame; collapsible supporting means on said frame; a vertically arranged suspending rod extending loosely through said frame; an operative connection between said suspending rod and said supporting means whereby vertical movement of said rod in said frame collapses said supporting means; means for locking said rod against upward but permitting free downward movement thereof in said frame; and means for releasing said locking means, substantially as described.

2. A device of the class described comprising a frame; collapsible supporting means on said frame; a vertically arranged suspending rod extending loosely through said frame; an operative connection between said suspending rod and said supporting means, whereby vertical movement of said rod in said frame collapses said supporting means; a stop on said rod; a swinging locking member adapted to embrace said rod and engage the upper side of said stop; a rocker arm on said locking member arranged to effect unlocking movement thereof; and an operative connection with said rocker arm, substantially as described.

3. A device of the class described comprising a frame; two diametrically arranged supporting arms pivoted at their upper ends in said frame and having outwardly extending supporting fingers at their lower ends; a vertically arranged suspending rod extending loosely through said frame; retracting links connecting the lower end of said rod with said arms; means for suspending said rod; means for locking said rod against upward but permitting free downward movement in said frame; and means for releasing said locking means, substantially as described.

4. A device of the class described comprising a frame; braces pivotally connected at their upper ends to said frame; adjustable links pivotally connecting the lower ends of said braces with the lower portion of said

frame; supporting arms pivotally suspended from the lower ends of said braces; outwardly extending supporting fingers at the lower ends of said arms; a suspending rod vertically slidable in said frame; adjustable links pivotally connecting the lower ends of said supporting arms with the lower end of said suspending rod; a swinging lock arranged to engage and prevent upward but permit of downward movement of said rod in said frame; means for operating said lock from a distance to release said rod; and laterally adjustable positioning arms on said frame arranged to engage the inner walls of a tube on said fingers to prevent tilting of the same, substantially as described.

5. A device of the class described comprising a frame; braces pivotally connected at their upper ends to said frame; adjustable links pivotally connecting the lower ends of said braces with the lower portion of said frame; supporting arms pivotally suspended from the lower ends of said braces; outwardly extending supporting fingers at the lower ends of said arms; a suspending rod vertically slidable in said frame; adjustable links pivotally connecting the lower ends of said supporting arms with the lower ends of said suspending rod; a stop nut threaded on the upper portion of said rod; a swinging lock mounted on said frame and adapted to embrace said rod above said nut to prevent upward but permitting of downward movement of said rod in said frame; a rocker arm connected with said swinging lock for effecting retraction thereof; means for operating said rocker arm; and laterally adjustable positioning arms on said frame arranged to engage the inner walls of a tubular member on said fingers to prevent tilting of the same, substantially as described.

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

GUSTAV F. STORM.

Witnesses:

G. M. SOLON,  
E. A. HOWEN.