

Oct. 22, 1935.

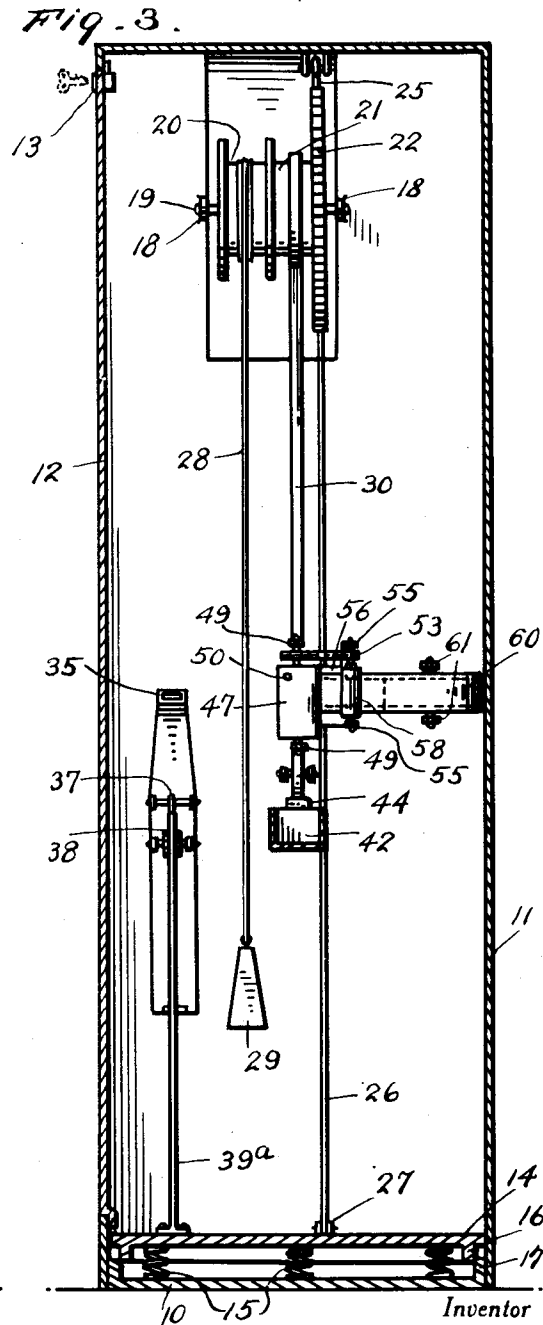
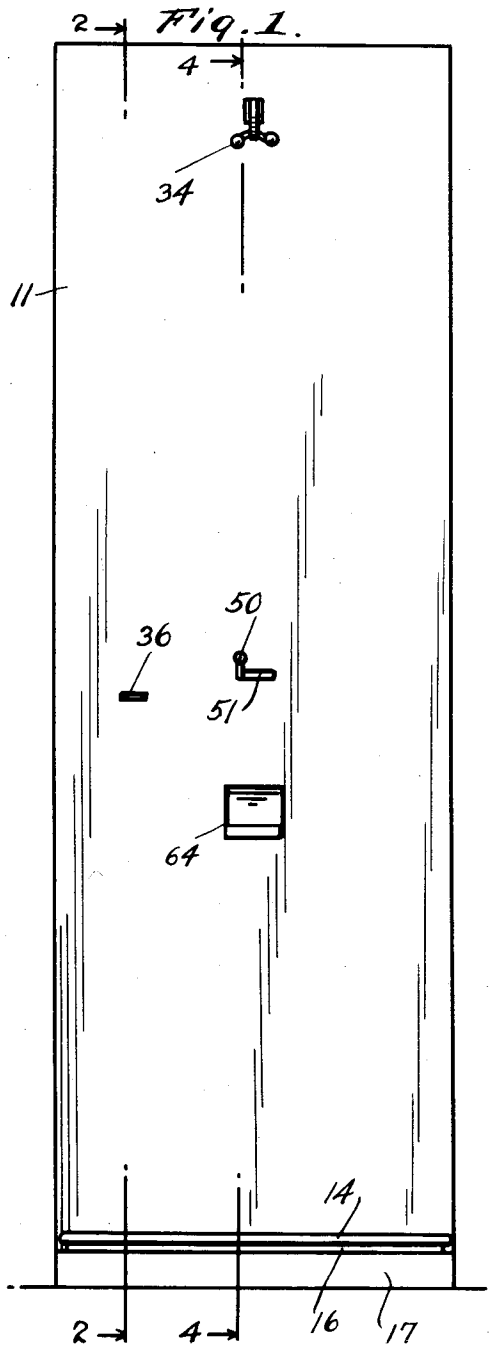
M. QUINTE

2,018,416

HEIGHT MEASURING APPARATUS

Filed Nov. 23, 1932

4 Sheets-Sheet 1



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Oct. 22, 1935.

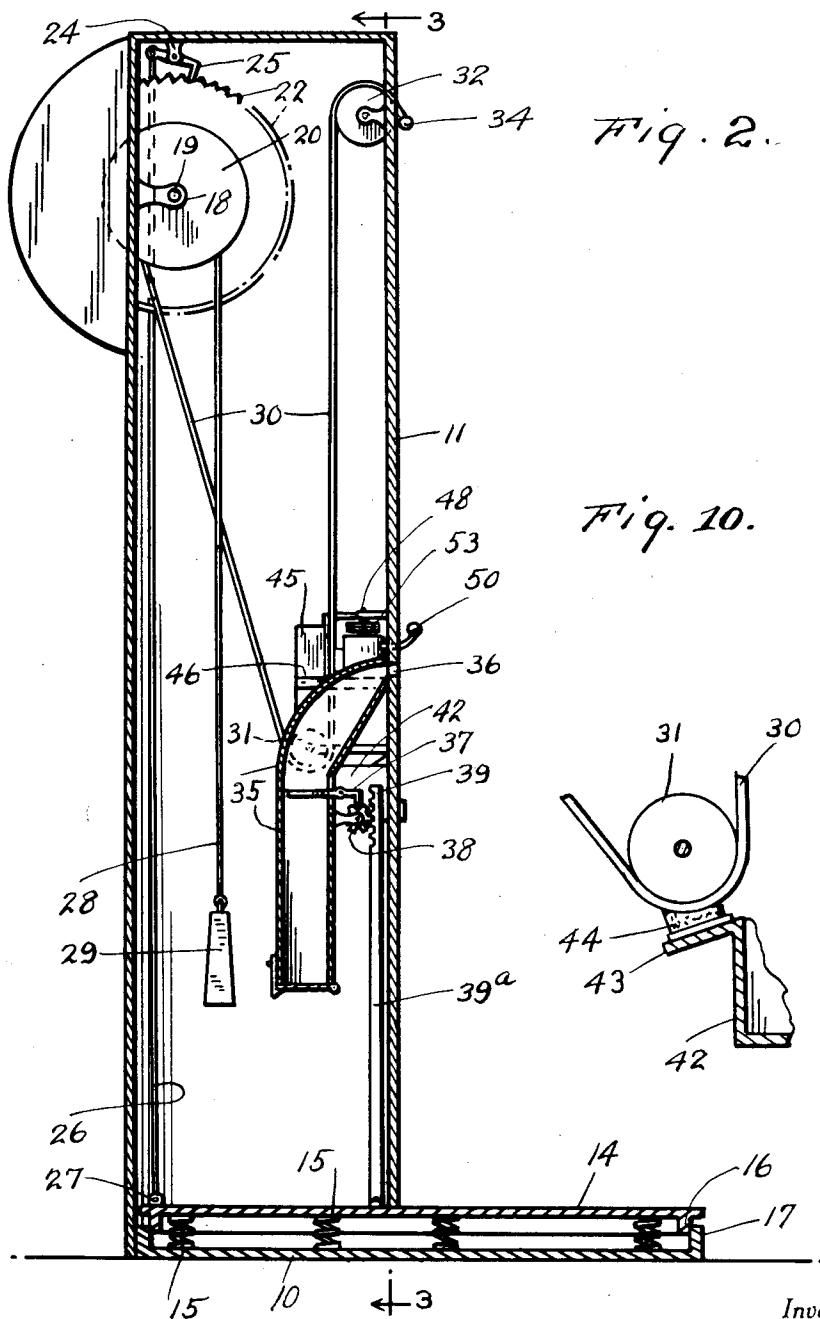
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4 Sheets-Sheet 2



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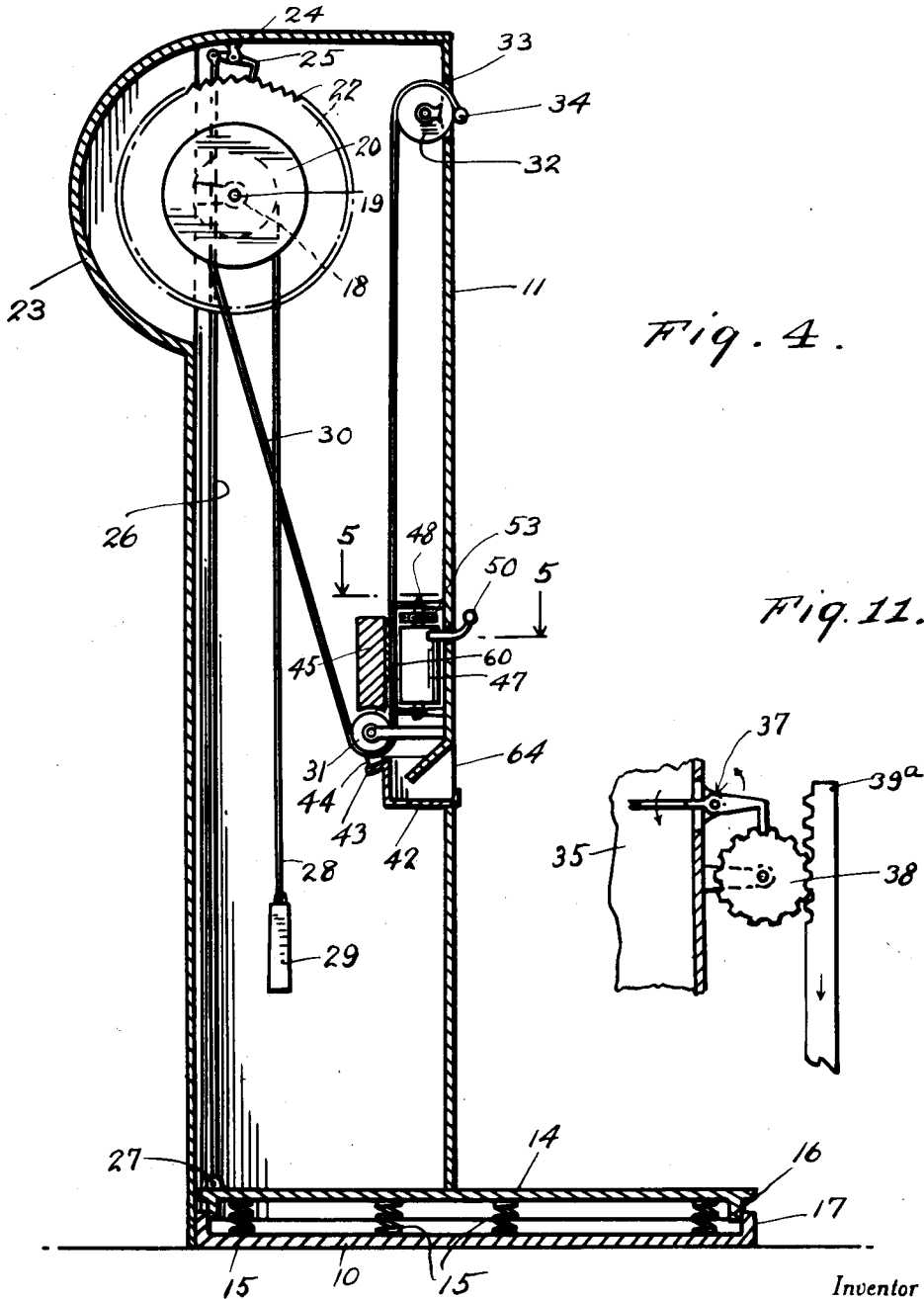
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4 Sheets-Sheet 3



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Fig. 5.

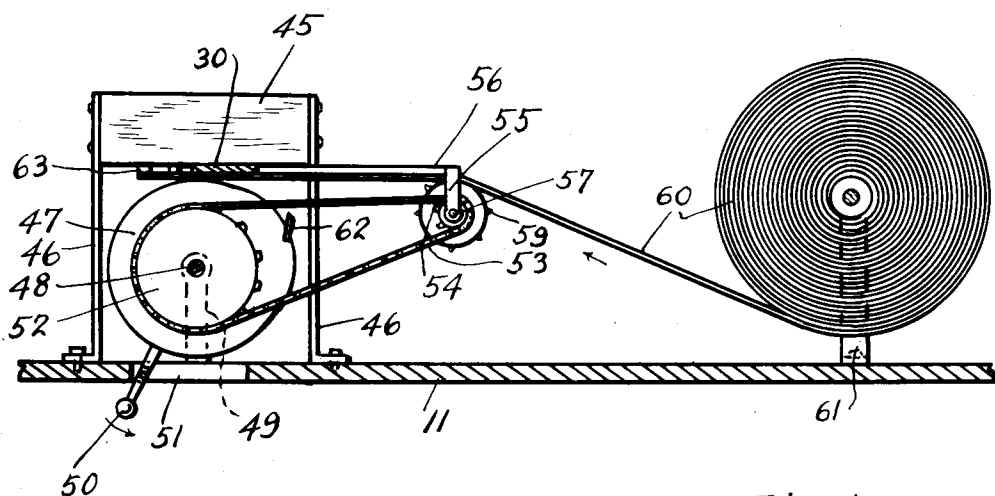


Fig. 6.

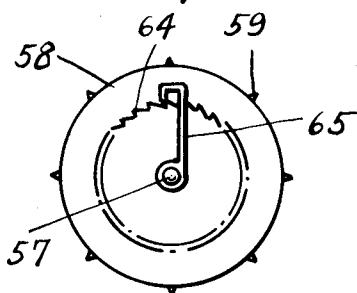


Fig. 7.

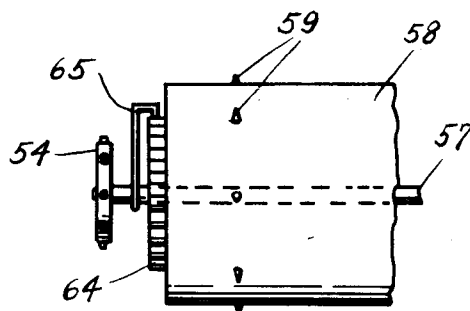


Fig. 8.

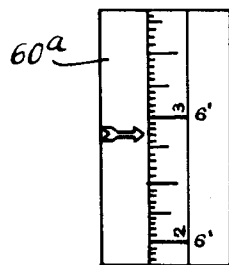
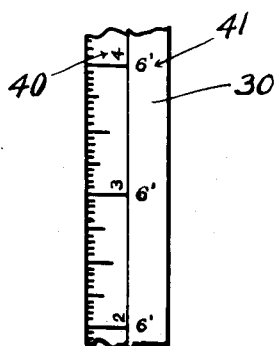


Fig. 9.

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UNITED STATES PATENT OFFICE

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HEIGHT MEASURING APPARATUS

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Application November 23, 1932, Serial No. 644,056

1 Claim. (Cl. 33—169)

This invention relates to an improved device or apparatus for measuring the heights of persons, and in accordance with the present invention a device or apparatus of the above mentioned character is provided with coin control mechanism together with additional mechanism for supplying the person whose height is measured by the device with a card or ticket having suitably indicated thereon the exact height of the person.

The invention together with its numerous objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a front elevational view of the device or apparatus.

Figures 2 and 4 are longitudinal sectional views taken substantially on the lines 2—2 and 4—4 respectively of Figure 1.

Figure 3 is a longitudinal sectional view taken on the line 3—3 of Figure 2.

Figure 5 is a sectional elevational view taken substantially on the line 5—5 of Figure 4.

Figure 6 is an end elevation of the structure shown in Figure 7.

Figure 7 is a side elevational view of a feed roll for the ticket tape.

Figure 8 is a plan view of a portion of the measuring tape.

Figure 9 is a plan view of the ticket with which the customer is supplied and having indicated thereon the height of the customer.

Figure 10 is a fragmentary sectional elevational view showing the manner of applying ink to the measuring tape, and

Figure 11 is a fragmentary vertical sectional elevational view showing the coin control means for normally retaining the platform in a locked raised position.

With reference more in detail to the drawings it will be seen that the machine comprises a base 10 from adjacent one end of which rises a case 11 provided with a suitable door 12 and key control lock means 13 for the door. Obviously the door serves as means of access to the interior of the case 11.

A platform 14 is mounted for vertical movement and is supported above the base 10 through the medium of springs 15, and is guided in its vertical movement through the medium of a depending flange 16 operating within the confines of a marginal flange 17 rising from the base 10. As shown to advantage in Figure 4 a portion of the platform 14 extends into the case 11.

Adjacent the upper end of the case 11 are brackets 18 between which is journaled a shaft 19 having fixed thereon for rotation therewith a double-pulley 20, 21. Formed on the free end of the pulley 21 is a relatively large ratchet wheel 22, and from a study of Figures 3 and 4 it will be seen that the rear wall of the case 11 adjacent its upper end is provided with a substantially semi-cylindrical casing 23 for accommodating the aforementioned double pulley and gear or ratchet wheel 22.

Pivotally mounted on a bracket 24 depending from the top wall of the case 11 is a dog 25 that has one end arranged to engage the teeth of the ratchet wheel 22 and the other end pivotally connected to a release rod 26 which at its lower end is pivotally connected to the inner end of the platform 14 as at 27.

The double pulley is normally urged to rotate in a clockwise direction through the medium of 20 a cable 28 wound on pulley 20 and provided at one end with a weight 29. A measuring tape 30 is wound on the pulley 21 and is also journaled over pulleys 31, 32, passing from the pulley 32 outwardly of the case 11 through an opening 33 provided in the front wall of the case adjacent the upper end thereof. The outer free end of the measuring tape 30 is provided with a handle or finger grip 34. The grip 34 is of such a shape and structure as to engage the front wall of the case 11 to prevent said end of the tape 30 being drawn entirely within the case 11.

Referring to Figure 2 it will be seen that a coin chute 35 extends inwardly and downwardly from a slot 36 provided at the front wall of the case 11. A trip lever 37 is pivotally mounted on the wall of the chute 35 and one end of this lever extends into the chute in the path of the coin while the other end of the lever is formed to engage the teeth of a ratchet wheel 38 rotatably supported by a bracket extending laterally from the wall of the chute 35 as shown in Figures 2 and 11. Ratchet wheel 38 is in mesh with rack teeth 39 formed on the upper end of a standard 39a rising from the platform 14 and arranged within the case 11. It will thus be seen that when a coin is passed into the chute 35, that the same will engage the lever 37 causing the latter to rotate in an anticlockwise direction releasing the ratchet wheel 38, thus permitting the platform 14 under weight of the person standing thereon to move downwardly against the action of the springs 15. This downward movement of the platform 14 causes a downward pull on the rod 26 for rotating the dog 25 in an anti-clockwise di-

recession and thereby releasing the ratchet wheel 22. When ratchet wheel 22 is released, the measuring tape may be fed from the pulley 21 by pulling downwardly on the handle 34 causing the double pulley 20, 21 to rotate in an anti-clockwise direction for feeding the tape 30, and for winding the cable 20 upon the pulley 20. Upon release of the handle 34 weight 29 will cause the cable 20 to unwind relative to the pulley 20 causing the double pulley 20, 21 to rotate in a clockwise direction resulting in a winding of the tape 30 upon the pulley 21.

A salient feature of the present invention is in providing the tape 30 with calibrations 40, 41, the calibrations 40 being in inches and the calibrations 41 being in feet, in the present instance and as shown in Figure 8 the calibrations 41 are identical and are spaced apart the distance of one inch, so that the reading will be in feet and inches as will be hereinafter more manifest. The calibrations 40, 41 are in the nature of raised characters so as to be readily impressed on a ticket in a manner to be set forth below.

As shown in Figures 4 and 10 there is suitably mounted interiorly of the case 11, and on the front wall of the case a ticket tray or receptacle 42. The tray 42 is disposed adjacent the roller 31 and the wall of the tray 42 is provided with a flange or support 43 on which is arranged an ink pad 44 between which and the periphery of the roller 31 the tape 30 passes. Obviously as the tape moves over the pad 44 the calibrations thereof are inked.

From the roller 31 the tape 30 passes upwardly between a block 45 suitably supported between the ends of the bracket arms 46 extending inwardly from the front wall of the case 11 and a cam like member 47 mounted on a vertical shaft 48 supported by suitable brackets 49. A finger piece or lever 50 is provided on the member 47 and operates in a slot 51 provided therefor in the front wall of the case 11.

Also mounted on the shaft 48 for rotation therewith is a sprocket 52 over which is trained a sprocket chain 53 that is also trained over a sprocket wheel 54 mounted on a shaft suitably journaled in bracket 55 provided at one end of a guide 56 extending laterally from the block 45. On the shaft 57 carried by the bracket 55 is a toothed guide drum or roller 58, the teeth 59 of which engage a ticket tape 60 in a manner suggested in Figure 5.

Suitable means designated generally by the reference character 61 is provided on the front wall of the casing 11 for supporting a reel of such ticket tape 60. The ticket tape 60 is weakened by transverse lines of perforations at relatively spaced points thereon to provide a plurality of sections or tickets 60a.

The hump of the cam member 47 has suitably mounted thereon a cutting knife 62. The purpose of the knife as will be apparent as the description proceeds is to sever a section 60a of the tape 60 when the latter as shown in Figure 5 is pressed against a portion of the tape 30 for receiving on the said section 60a an impression of the calibrations of the tape 30. It will be noted that the guide 56 serves to direct the tape 60 toward and between the tape 30 and cam 47. There is also provided on that face of the block 45 over which the tape 30 passes, an arrow or similar indicating element 63 and against which a portion of the tape section 60a will be pressed for receiving in proper position an impression of the ar-

row, so that after the ticket 60a has been so treated, the data appearing thereon will be as suggested in Figure 9.

It will thus be seen that after the platform 14 has been released in the manner before mentioned, and moved downwardly under the weight of the person, the person pulls on the tape 30 so that the handle or knob member 34 of the tape touches the head of such person. With the handle 34 touching the head of the person, such person with the other hand grasps the knob 50 and moves it in the direction of the arrow suggested in Figure 5 for rotating the cam 47. Rotative movement of the cam 47 causes the drum 58 to be rotated for feeding the ticket tape 60 so that a section 60a thereof passes between the tape 30 and the cam 47. Obviously as the cam 47 rotates the said portion 60a of the ticket tape is pressed against the tape 30 and the arrow 63 and an impression of the calibrations of the tape 30 and of the arrow 63 is made on the said section 60a of the ticket tape. Further as the cam 47 continues to rotate the knife 62 is brought into engagement with the tape 60 for severing from said tape 60 the section 60a thereof.

Upon reverse movement of the lever 50 the impressed or completed ticket 60a is then free and falls down into the ticket receiving tray 42 to be removed therefrom by the person being measured. Access to the tray 42 may be had through a suitable opening 64 provided in the front wall of the case 11.

It is also to be noted that the drum 58 is loose on the shaft 57, and to cause the drum 58 to rotate with the shaft 57 in one direction only there is provided on one end of the drum 58 a ratchet wheel 64 with which is engaged a dog 65 fixedly secured to the shaft 57. It will thus be seen that when the cam 47 is rotated in an anti-clockwise direction for feeding the tape 60 dog 65 engaging the ratchet wheel 64 will cause the drum 58 to rotate with the shaft 57. Upon reverse movement of the cam 47, and as is thought apparent, reverse movement of the shaft 57 will be accomplished without causing a corresponding movement of the drum 57.

Even though I have herein shown and described the preferred embodiment of the invention, it is to be understood that the same is susceptible of further changes, modifications and improvements coming within the scope of the appended claim.

Having thus described my invention, what I claim as new is:

A height measuring apparatus comprising a base, a vertically arranged casing having its lower end connected with the rear part of the base and said lower end having an opening in its front part, a vertically movable platform horizontally arranged on the base and having a part passing through the opening into the lower part of the casing, spring means for normally holding the platform in raised position with an intermediate part thereof bearing against the top wall of the opening in the front of the casing, a double drum rotatably supported in the upper part of the casing, a cable connected to one part of the drum and having a weight attached to its lower end and acting to cause the drum to rotate in one direction, a graduated tape connected to the other part of the drum and wound thereon in an opposite direction to the cable for rotating the drum in an opposite direction when the free end of the tape is pulled upon, the top part of the front of the casing having an opening therein through which the free end of the cable passes, a pulley sup-

ported in the top part of the casing adjacent the opening last mentioned and over which the tape passes, a second pulley in an intermediate part of the casing and under which the tape passes, a dog
5 pivoted in the top of the casing, a ratchet wheel attached to the drum and engaged by the dog, said dog and wheel acting to prevent rotary movement

of the drum by a pull upon the tape and a link connecting the dog with the rear part of the platform for releasing the dog from the wheel when the platform is lowered by a person standing on the front part of the platform.

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