May 20, 1947. R. A. NOBLE 2,420,903

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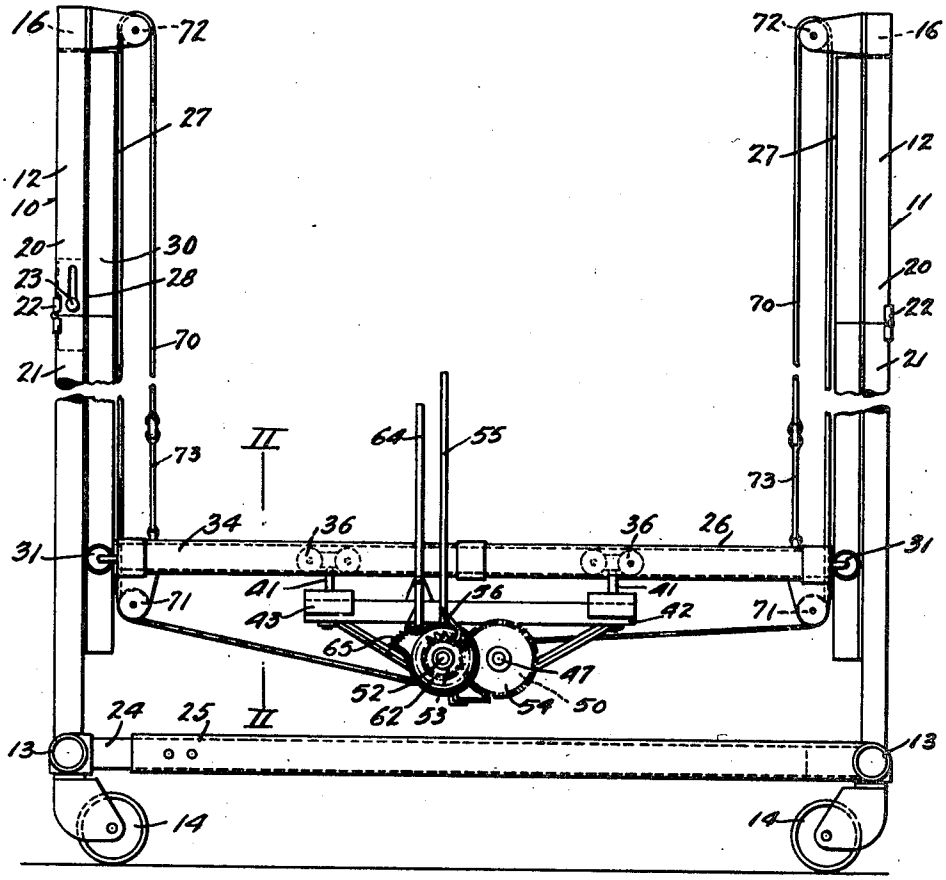

Fig. 1.

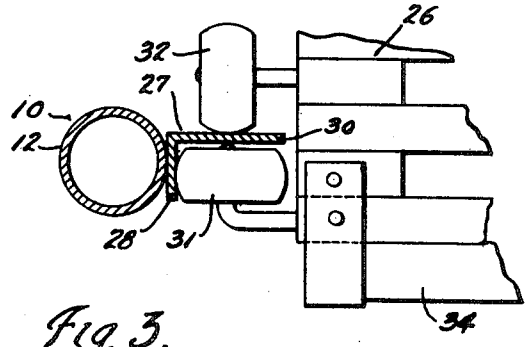

Fig. 3.

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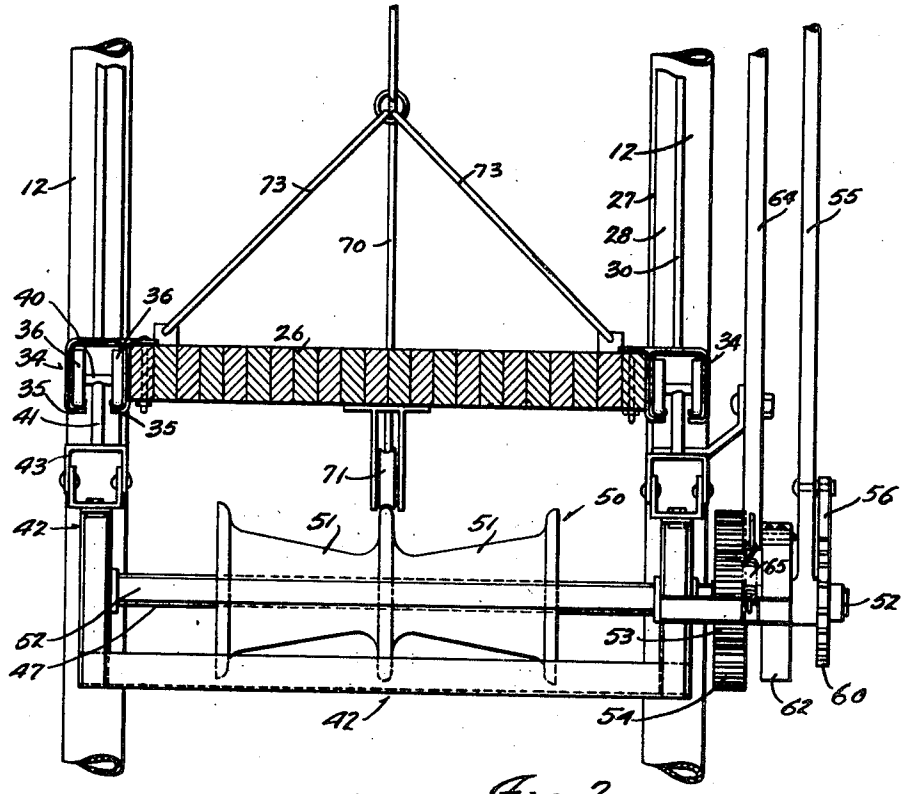

Fig. 2.

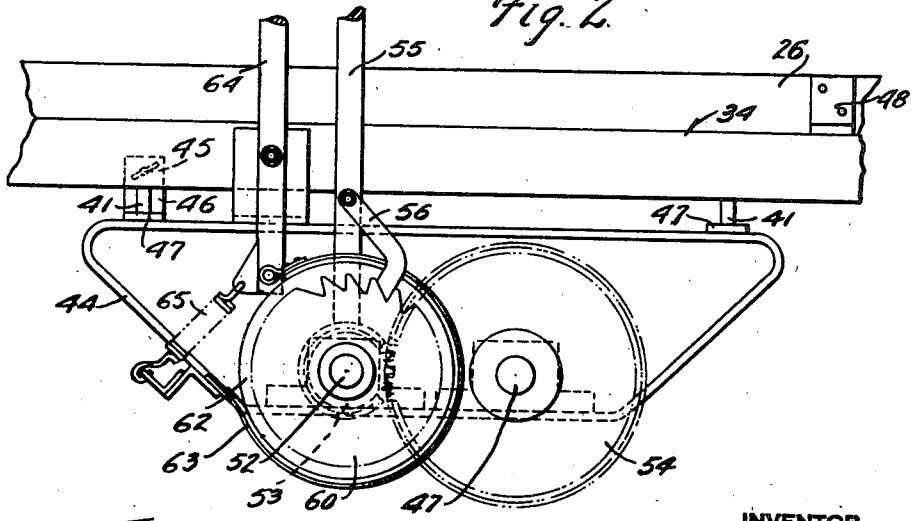

Fig. 4.

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5 Claims. (Cl. 304—29)

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My invention relates in general to scaffolds and in particular to a portable scaffold for use by painters or the like which may be elevated or lowered to suitable working height.

The principal object of my invention has been to provide a scaffold which may be easily raised to desired position and quickly lowered by the workman when upon the platform.

Another object has been to provide a simplified and improved platform operating means having normally engaged brake means.

The above objects and advantages have been accomplished by the device shown in the accompanying drawings, of which:

Fig. 1 is a side elevation of the complete invention;

Fig. 2 is a sectional end elevation thereof taken on line II—II of Fig. 1;

Fig. 3 is an enlarged fragmentary plan view of the guide rollers; and

Fig. 4 is an enlarged elevational view of a modified form of hoisting device.

My device comprises in general a frame having two longitudinally spaced vertical members 10 and 11, each provided with two spaced posts 12 carried by and extending upwardly from a horizontal frame member 13. Suitable casters 14 are provided on the frame members whereby the device may be wheeled about. The posts are connected together at their upper ends by means of a top cross member 16. Each post is preferably made in two sections 20 and 21 pivotally connected together by means of a hinge 22, whereby the vertical members may be folded when not in use. A bolt 23 is slidably disposed in the upper section 20 of one of the posts and is engageable with the other section of the post to maintain them in upright position.

One of the horizontal frame members 13 is provided with a beam 24, and the other frame member is provided with a beam 25. The beams 24 and 25 extend toward each other and are in telescopic arrangement, whereby the vertical members 10 and 11 may be separated and the device extended to the desired length up to the maximum.

A platform 26 is mounted between the vertical members 10 and 11 and this platform is made in two sections which are telescoped together in well-known manner, whereby the platform may be extended in length to correspond to the length of adjustment of the vertical members. A guide track 27 of angle iron shape is carried by each of the posts and secured to the faces thereof which are adjacent the ends of the platform.

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These tracks are made in sections substantially coextensive with the post sections 20 and 21 and each has an attaching leg 28 and an outwardly extending leg 30. Guide wheels 31 and 32 are carried at each corner of the platform for engagement with the legs 28 and 30, respectively, of the guide tracks for guiding the platform in the vertical movement.

Secured to each side of one of the sections of the platform 26 is a channel track 34 which is preferably box shape in cross section having track flanges 35 for the support of rollers 36 mounted thereon. The rollers are carried by a roller shaft 40 to which a hanger 41 is attached. The hangers extend downwardly and are secured to the corners of a hoist-supporting structure 42, whereby said structure is mounted in floating manner and will automatically centralize itself when in use. The hoist-supporting structure comprises two spaced side members 43 each of which supports suitable bearings for the drum shaft 47 and the countershaft 52. The drum shaft 47 has rigidly mounted thereon a twin spool drum 50 having a spool 51 arranged at each end thereof. The countershaft 52 is connected to the drum shaft 47 by means of a gear pinion 53 carried thereby and meshing with a gear 54, carried by the drum shaft.

Means are provided for causing the rotation of the countershaft, and such means may comprise a ratchet lever 55, rotatably supported by the countershaft and having a ratchet pawl 56 which is engageable with the teeth of a ratchet wheel 60, non-rotatably carried by the countershaft. A brake drum 62 is carried by the countershaft 52 and is engaged by a brake band 63. One end of the brake band is attached to a brake lever 64, pivotally carried by hoist-supporting bracket 42, and the other end is fixed to said bracket. The lower end of the brake lever 64 is urged in brake-applying direction by means of a tension spring 65 which is connected to said lever and to a fixed part of bracket 42. In the modified form of Fig. 4, the hoist-supporting bracket is represented at 44.

The platform is supported by means of cables 70 each of which is extended from one of the spools 51 of the drum and so reeved that upon rotation of the drum, simultaneous winding or unwinding of the cables will be brought about. Each of these cables extends around a pulley 71 carried by the platform, upwardly and over a pulley 72 carried by the top cross member 16, and then downwardly to the platform where it is connected in suitable manner by means of two short angu-

larly disposed cables 73, whereby the platform will be suspended in non-tilting manner.

As shown in Fig. 4, suitable means may be provided to lock the hoist-supporting structure 42 or 44 in its centralized position. Such means may comprise a set screw 45 carried by a flange member 46 secured to one of the cross members 47 of the structure and engageable with the track 34 to lock the track and structure together. In the modified form of the invention of Fig. 4, the platform 26 is elevated above the tracks 34 and supported by suitable angles 48.

From the foregoing it will be obvious that the platform is normally held in fixed position by means of the spring-applied brake and when it is desired to elevate the platform, it is only necessary for the workman to operate the ratchet lever 55, the brake being automatically released by the rotative movement of the brake drum. When it is desired to lower the platform from an elevated position, it is only necessary to disconnect the ratchet means whereupon the brake may be released to permit lowering at any desired speed.

While I have shown a preferred embodiment of the invention, it is obvious that detailed changes may be made without departing from the spirit of the invention or the scope of the appended claims.

Having thus described my invention, what I claim is:

1. A scaffold comprising a body frame having telescopically connected vertical members, each of said members being formed in two sections hinged together for collapsing, means for clamping said sections in erected position, an extensible platform supported for vertical movement between said members, hoisting means carried by said platform, and slidable means carried by said platform for connecting said hoisting means and said platform.

2. A scaffold comprising a body frame having telescopically connected vertical members, each of said members being formed in two sections hinged together for collapsing, means for clamping said sections in erected position, an extensible platform supported for vertical movement between said members, a channel track carried by each side of said platform, a hoist-supporting structure mounted below said platform and slidably supported by the tracks, a double-ended cable drum rotatably carried by said structure, cable means connecting said drum with said platform for vertical movement of the latter, and means for operating said drum.

3. A scaffold comprising a body frame having opposed vertical members, each of said members being formed in two sections hinged together for collapsing, means for clamping said sections in erected position, longitudinally arranged telescoping beams connecting said members, a two-part extensible platform mounted for vertical movement between said members, a hoist-supporting structure slidably carried by said platform, a hoist drum carried by said structure, cable means connecting said drum with the ends of the platform for vertical movement of the latter, gear and ratchet means carried by said support and operable from said platform to rotate said drum, and spring engaged brake means for normally maintaining said platform in fixed position.

4. A scaffold comprising a body frame having opposed vertical members, each of said members being formed in two sections hinged together for collapsing, means for clamping said pieces in erected position, longitudinally arranged telescoping beams connecting said members, a two-part extensible platform mounted for vertical movement between said members, a hoist-supporting structure slidably carried by said platform, a hoist drum carried by said structure, cable means connecting said drum with the ends of the platform for vertical movement of the latter, and gear and ratchet means carried by said support and operable from said platform to rotate said drum.

5. A scaffold comprising a body frame having telescopically connected vertical members, each of said members being formed in two sections hinged together for collapsing, means for clamping said sections in erected position, an extensible platform supported for vertical movement between said members, hoisting means for said platform, said hoisting means comprising a drum shaft carried by said platform, a drum mounted on said shaft, a countershaft rotatably mounted on said platform, gear means connecting said shafts, ratchet means carried by said countershaft and said platform for rotating the same, brake means carried by said countershaft and said platform for coacting with said countershaft, and means connecting said hoisting means and said platform.

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