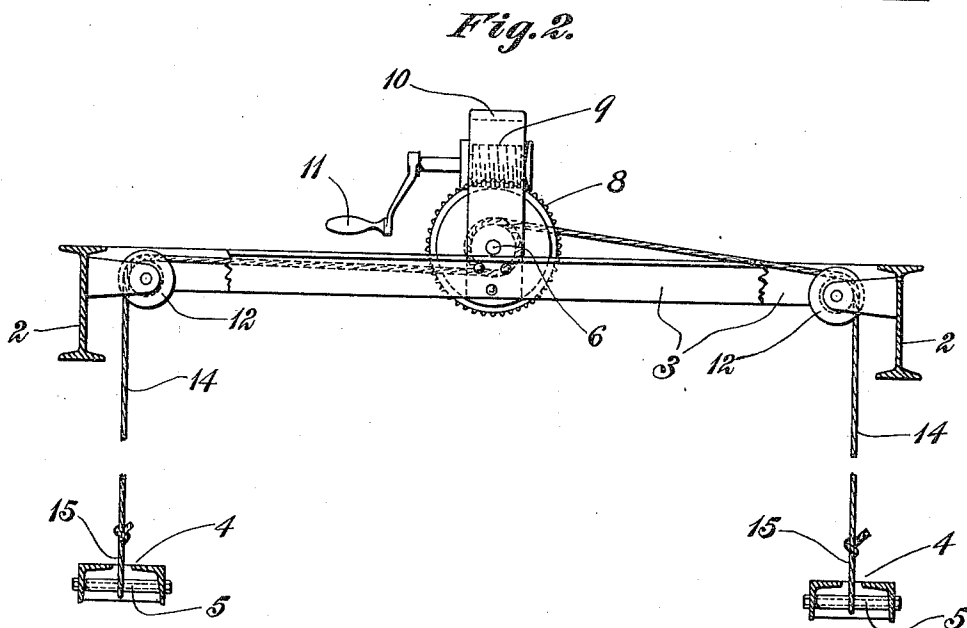
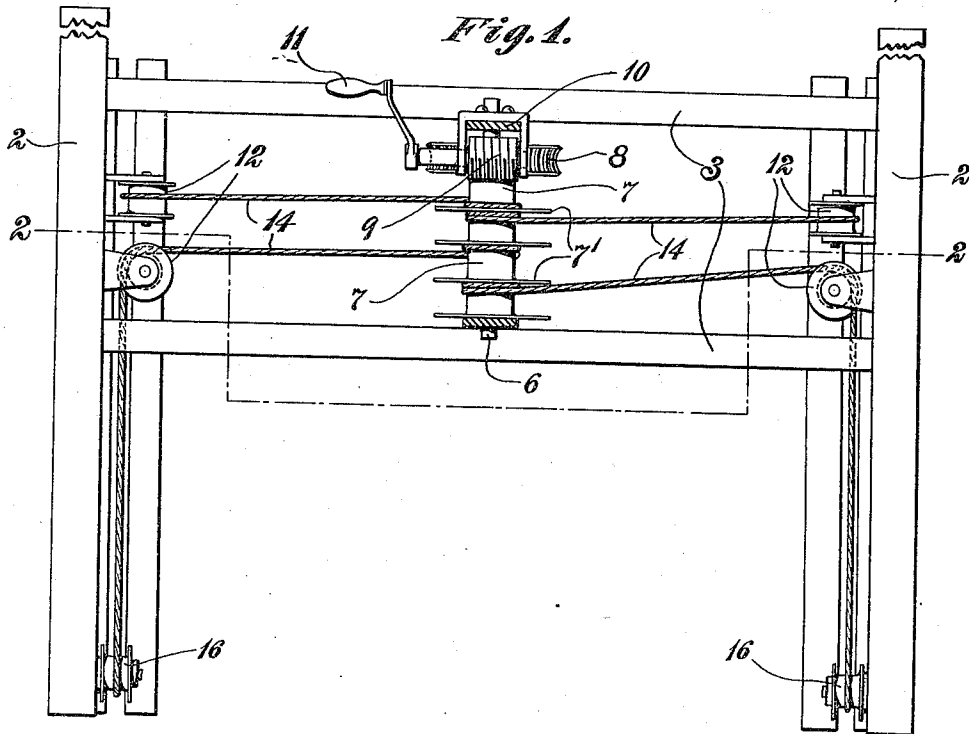


C. M. HAYNES.
HANGING SCAFFOLD.
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1,004,876.

Patented Oct. 3, 1911.



Witnesses:

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UNITED STATES PATENT OFFICE.

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HANGING SCAFFOLD.

1,004,876.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES M. HAYNES, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hanging Scaffolds, of which the following is a specification.

This invention relates to hanging scaffolds and while a device involving my invention is applicable for many uses it is of peculiar adaptability to buildings of masonry in course of erection it being intended in this particular use thereof to support the scaffold by the skeleton structure of the building.

The apparatus is strong and compact; the platform supporting means is free of all obstructions thereby assuring a space of considerable area for the workmen and their tools. In the present instance the scaffold includes a reel-supporting frame and a platform supporting frame the former being normally stationary and carrying the reel or equivalent device by which through the intervention of cables or analogous means, the platform supporting frame is elevated step by step as the work on the masonry or other part of the building progresses, the platform-supporting frame generally though not necessarily consisting of approximately parallel members which may be bridged by planks, boards or the like to present the platform.

In the drawings accompanying and forming part of the present specification I have shown in detail one simple form of embodiment of the invention which to enable those skilled in the art to practice the same will be fully set forth in the following description while the novelty of the invention will be included in the claims succeeding said description. From the statement made it will be obvious that I do not restrict myself to such disclosure; I may depart therefrom in several respects within the scope of my invention as expressed in said claims.

Referring to said drawings; Figure 1 is a top plan view of a hanging scaffold embodying my invention, and, Fig. 2 is a sectional view on line 2—2 of Fig. 1.

Like characters refer to like parts in both figures.

As previously intimated the apparatus includes a reel-supporting frame and while there may be several ways in which this may be made, the one illustrated is satisfactory

for my purposes in that it possesses the requisite strength and rigidity required without undue weight. Said reel-supporting frame is composed in the present case of two side members each denoted by 2 and a connecting or transverse member 3 all three of said parts being usually of skeleton or open form and the transverse or connecting member 3 being advantageously utilized to sustain the reel mechanism one form of which will be hereinafter described. The connecting or transverse member 3 is united with the parallel side members 2 between their ends so that as shown each of said side members will present long and short branches at opposite sides of the connecting member the short branches in the present case being provided to connect the scaffold with a building and such short branches may be clamped or otherwise joined with the girders or beams of the building being erected. The platform-supporting structure or frame is located below the longer branches of the side members 2. There may be cases where the lengths of the branches of the two side members may be changed from that described, the important feature being to preserve at the inner portion of the frame which supports the reel mechanism, means by which the structure as a whole can be supported so as not to affect the proper raising and lowering of the platform supporting members.

There are two platform supporting members each being designated by 4 and preferably though not essentially consisting of angle irons connected at or near their ends by bolts 5 which in the present case present a convenient means also for uniting the suspending and hoisting cables or their equivalents with the platform supporting members 4.

Between the sides of the connecting or transverse member 3 is rotatively mounted the shaft 6 to which are rotatively connected the two spools or drums 7, for example by keying the said spools or drums to said shaft. To the shaft is illustrated fastened the worm gear 8 in mesh with the worm 9 the shaft of which is carried by the yoke or standard 10 extending between and suitably fastened to the sides of the transverse member 3. The worm shaft is provided with a hand-crank 11 which presents a simple means for turning simultaneously through the intermediate parts the two spools or drums 7. Near the junction of the connecting member

3 with the side members 2 are two pairs of guide sheaves each for convenience being denoted by 12 and all of which are carried by suitable brackets between the sides of the transverse member 3, the axes of two of the sheaves being horizontal and of the other two vertical. The series of sheaves are approximately in the same horizontal plane with the winding spools or drums 7 so that I can accurately guide and control the cables hereinafter described without the necessity of an undue number of sheaves which would be necessary were the drums or spools any distance above or below the sheaves. As shown the drums or spools are located between the sides of the skeleton or open-work connecting member which assures a compact construction while assuring the advantage to which I have already alluded.

I have shown two pairs of cables extending oppositely from the reel mechanism although for the sake of convenience each is denoted by 14 the said cables passing around the several sheaves 12 and hanging down from the reel supporting frame their outer or lower terminal ends having loops 15 to receive the connecting or tie bolts 5. I prefer to space the sections of the platform-supporting members 4 a distance slightly exceeding the thickness of the cables and the latter extend into these spaces as will be clear. The cables as will be apparent extend outward from the spools or drums 7 around the sheaves 12 and then are suspended from the reel-supporting structure. When therefore the platform-supporting members 4 are bridged by planking or otherwise the whole of the platform or scaffold proper is free of all obstructions unless I except the cables at the corners substantially of the platform and these practically amount to nothing. Each spool or drum receives one each of the two pairs of cables and it follows that when the reels or spools are turned in the proper direction the cables will be wound thereon to elevate in unison the two platform-supporting members. Owing to the fact that worm-gearing is utilized to actuate the drums or spools an automatic locking means is provided so that no pawls or detents are necessary to prevent downward accidental movement of the parallel members.

If desired and as shown each spool or drum 7 may be subdivided into two portions or sections by a flange 7' to prevent the cables fouling thereon. The upper or normally stationary frame of the scaffold will in practice be provided at or near its outer ends with sheaves 16 rotatable about horizontal axes to receive the forward two suspending and hoisting cables which for a part of their length as shown extend lon-

gitudinally of the sides 2 of said upper frame.

What I claim is:

1. A scaffold comprising a substantially stationary frame having side members and a connecting member, a plurality of reel sections rotatively connected together and supported by said connecting member, cables windable on the respective reel sections and extending therefrom in opposite pairs, a series of sheaves located at opposite sides of the reel mechanism for guiding the respective cables, two of the said cables depending from the said side members at the forward portions thereof and the other two cables depending from said side members at the rear portions thereof, and platform supporting members connected at longitudinally separated points with the pendent portions of the respective cables, and situated approximately in vertical line with said side members.

2. A scaffold comprising a substantially stationary frame having side members and a connecting member, reel mechanism supported by the connecting member, two pairs of cables windable on and extending oppositely from the reel mechanism, two pairs of sheaves for guiding both pairs of cables and located approximately at the junctions of the ends of said connecting member with said side members, one cable of each pair extending longitudinally of each side member, sheaves carried by said side members for guiding the said longitudinally extending cables, the several cables hanging down from said side members, and platform-supporting members connected with said cables.

3. A scaffold comprising a substantially stationary frame having side members and a connecting member, a plurality of reel sections rotatively connected together and supported by said connecting member, cables windable on each reel section and extending from the reel mechanism in opposite pairs, two pairs of sheaves for guiding said cables located approximately at the junctions of the ends of said connecting member with said side members, two of said cables depending from the rearmost sheaves and the other two cables extending forward along said side members, a pair of sheaves located at the forward ends of said side members and around which the last mentioned two cables are passed, and a pair of platform supporting members connected with the pendent portions of said cables.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES M. HAYNES.

Witnesses:

EDWARD B. HAROLD,
SAMUEL P. WATSON.