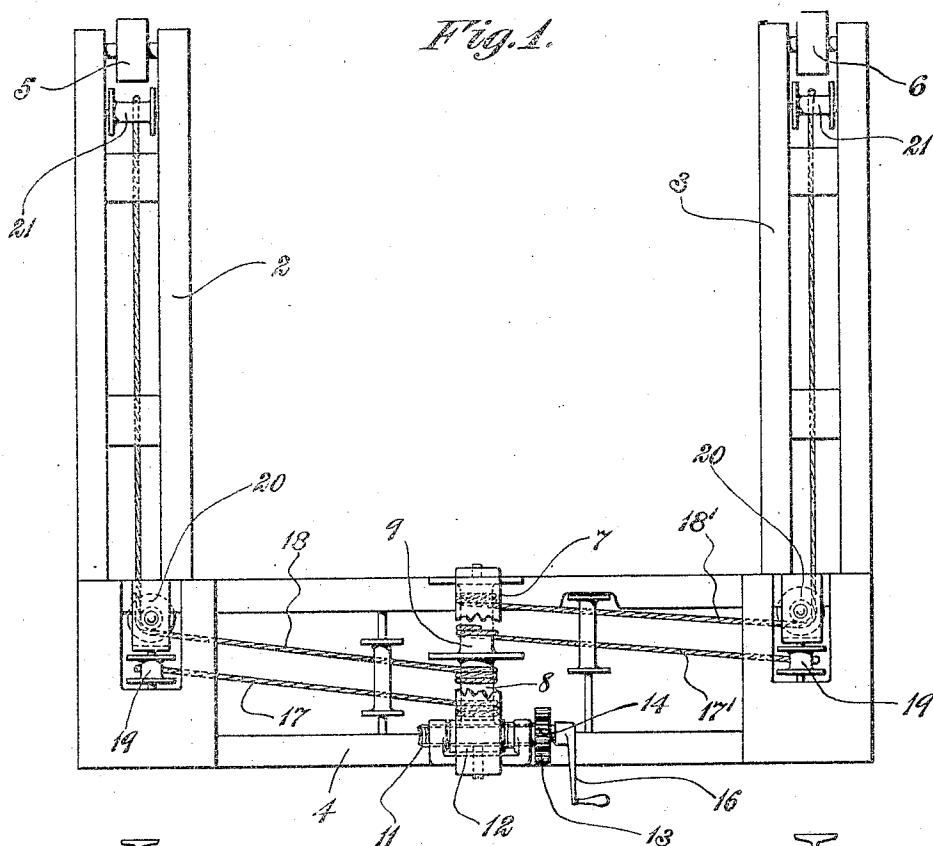
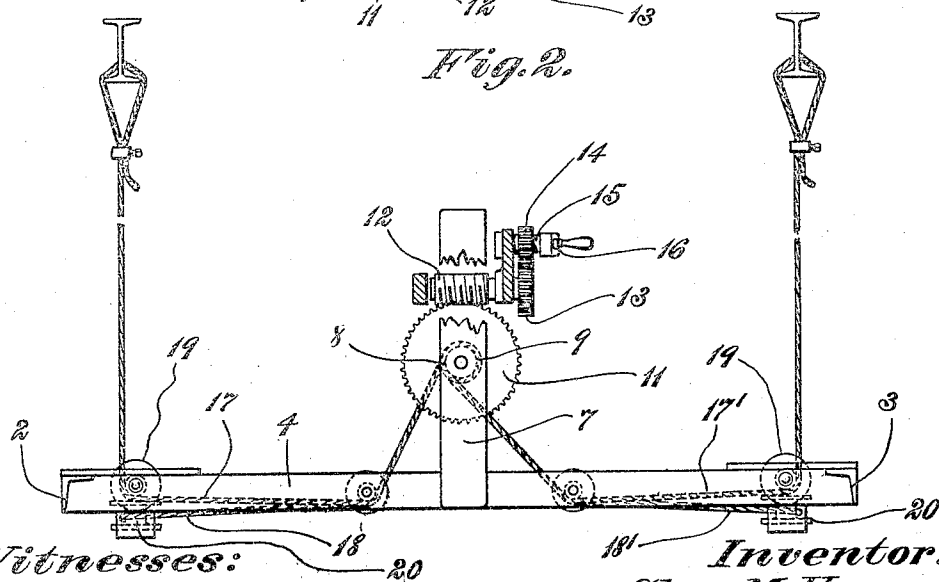


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Fig. 1.



*Fig. 2.*



*Witnesses:*

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# UNITED STATES PATENT OFFICE.

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## HANGING SCAFFOLD.

981,261

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed June 27, 1910. Serial No. 569,027.

*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, the object of the invention being to provide an effective device of this character having simple means for raising the same, said means being so located as to be out of the way of the workmen occupying the scaffold, although readily accessible. The device possesses other features of improvement and utility which with the foregoing will be set forth at length in the following description wherein I will outline that form of embodiment of the invention which I have selected, for illustration, in the drawings accompanying and forming part of the present specification, this disclosure being primarily to enable those skilled in the art to practice the invention. The novelty of the invention will be included in the claims succeeding said description and at this point I might observe that I do not restrict myself to the showing made by said drawings and description as 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 plan view of a scaffold involving my invention, and, Fig. 2 is a front elevation of the same.

Like characters refer to like parts in both figures of the drawings.

A scaffold comprising my invention can be employed with advantage in many different ways, for instance, in the formation of masonry around a steel structure, and in this particular use the scaffold is generally hung from beams or girders which extend out from the building, or which, if necessary, may be within the same, this point not being consequential.

The scaffold preferably embodies in its construction two laterally separated main or platform supporting members 2 and 3 which, as shown, are customarily disposed in parallelism, and a connecting or transverse member 4, each of the three members being usually of skeleton or open construction and being preferably in horizontal align-

ment. The platform-supporting members 2 and 3 ordinarily extends out from a building and the connecting or transverse member 4 is preferably located at the outer portion of the scaffold so that it is away from the building. The connecting member will, of course, be rigidly united with the companion members, the structure made up of these three parts being practically of U or yoked form. The platform or main members 2 and 3 are shown as provided at their inner ends with rollers 5 and 6 which travel against the outer faces of the building and thereby decrease the power necessary to elevate the structure.

As a convenient means for raising the scaffold I provide reel mechanism which so acts through cables or ropes as to equally elevate all parts of the device and preferably this reel mechanism is mounted on the connecting member 4 so as to be out of the way of the workmen occupying the scaffold and who generally travel from one of the members (2 and 3) to the other by planking or boards bridging said members 2 and 3.

The structure thus far described is a unit in itself, and there may be any number of these units along a building, and where several are employed the interval separating the same is approximately the same as that between the members 2 and 3 and where a plurality of these scaffolds or units are utilized bridge work may be utilized to connect the same if desired.

The different parts of the reel mechanism are sustained in some suitable manner for example, by a frame 7 shown as consisting of approximately inverted U members, the legs or branches of which are substantially fastened to the connecting member 4 practically centrally between the ends thereof. Between the sides or branches of the frame 7 are mounted spools 8 and 9 which are preferably rotatively connected so as to turn as one, although it is conceivable that they might be operated independently. I have shown rigidly connected with one of these spools or drums, for example, the spool 8, a worm gear 11 in mesh with a worm 12, the shaft of which is provided with a pinion 13 in mesh with a spur gear 14 carried on the shaft 15, said two shafts being supported by suitable bearings on one of the sides of the frame 7 and the upper shaft carrying a crank 16 by which the same can be turned,

thereby, through the intermediate parts turning simultaneously the two spools or drums 8 and 9. In view of the character of the gearing accidental backward movement of the spools will be positively prevented, although the spools can be freely turned to elevate the scaffold, and as a matter of fact they can be as easily turned to effect lowering of the same.

10 Connected with the spool 8 and extending outwardly therefrom, are cables or ropes 17 and 18, while from the spool 9 complementary cables or ropes 17' and 18' extend. The cables 17 and 17' in the present instance 15 pass under guide sheaves 19 shown as situated at the rear ends of the main or platform supporting members 2 and 3, the extreme outer ends of said cables 17 and 17' after they have passed the sheaves 19 being 20 connected with girders or other equivalents located above the said main members 2 and 3. The cables 18 and 18' pass around guide sheaves 20 rotatively supported by the main members 2 and 3 respectively and situated in 25 adjacency to the sheaves 19 respectively, although the two sets of sheaves turn about transverse axes, the axes of motion of the sheaves 19 being horizontal. After the cables 18 and 18' leave the guide sheaves 20, they pass under guide sheaves 21 situated near 30 the forward or inner ends of the members 2 and 3 respectively and are continued upward to the overhead beams to which I have referred. It, therefore, follows that when 35 the crank 16 is turned in such direction as to wind the cables 17 and 18 and 17' and 18' on to the spools or drums 8 and 9 the platform is lifted and that owing to the relation of the parts, the outer and inner ends of the main 40 members 2 and 3 are lifted an equal extent.

There are, of course, within the spirit of my invention other ways of turning the spools or drums 8 and 9, and there are other ways for guiding or positioning the hoisting 45 or lifting cables, and it will be observed that the cables which are employed for suspending the structure are also utilized in raising the structure.

What I claim is:

50 1. A hanging scaffold comprising laterally separated members, a connecting member for the laterally separated members, a hoisting device supported by the connecting member, two pairs of cables extending oppositely

from and operable by the hoisting device, 55 and guide sheaves for the two pairs of cables, supported by the laterally separated members at longitudinally separated points thereon.

2. A hanging scaffold comprising a pair 60 of laterally-separated members, a connecting member for the laterally separated members, two pairs of cables for supporting the scaffold structure, a plurality of guide sheaves 65 supported by the laterally-separated members, for receiving the said cables, and means on said connecting member, for reeling said cables to elevate the scaffold structure.

3. A hanging scaffold comprising laterally separated members, a connecting member for 70 the laterally separated members, suspending cables for the scaffold, the laterally separated members having guide sheaves for the cables; at longitudinally separated points, and means on the connecting member for 75 simultaneously reeling the cables.

4. A hanging scaffold including a scaffold structure comprising a pair of laterally-separated, platform supporting members 80 and a connecting member for said laterally-separated members combined with cable means for supporting the scaffold structure at different points from front to rear thereof, and means on said connecting member 85 for reeling said cable means to elevate said scaffold structure.

5. A hanging scaffold comprising a scaffold structure including a pair of laterally-separated, platform-supporting members 90 and a connecting member for said platform-supporting members, cables rising from said platform-supporting members at longitudinally-separated points, and means on the connecting member for reeling said cables.

6. A hanging scaffold comprising a scaffold structure including a pair of laterally-separated, platform-supporting members 95 and a connecting member for said platform-supporting members, combined with cable means for supporting the scaffold structure 100 and rising therefrom at different points from front to rear thereof.

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

CHARLES M. HAYNES.

Witnesses:

SAMUEL P. WATSON,  
EUGENE KINNISON.