

F. MAGNUSON.
SCAFFOLD.

APPLICATION FILED JUNE 16, 1910.

1,000,738.

Patented Aug. 15, 1911.

2 SHEETS—SHEET 1.

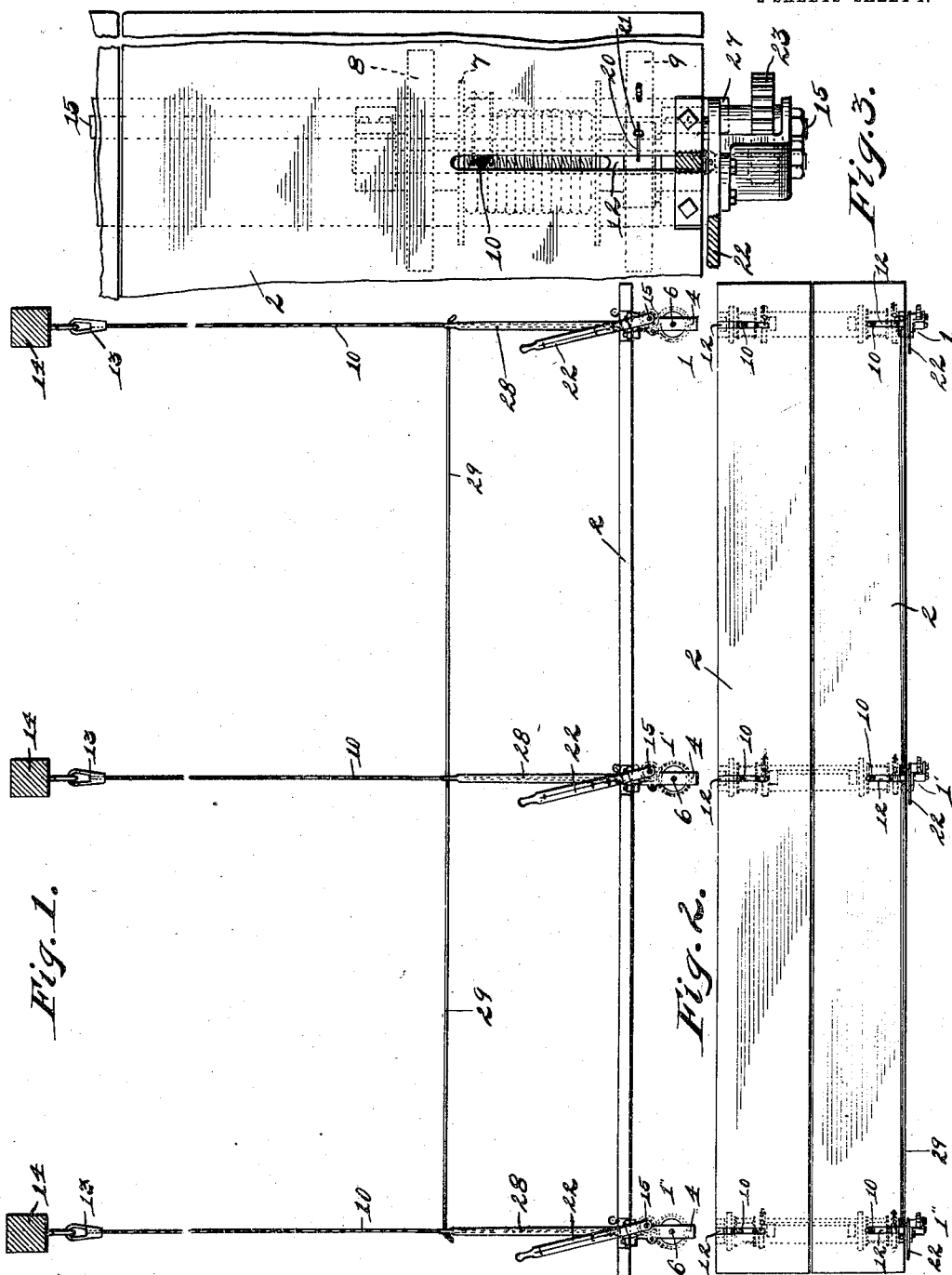


Fig. 1.

Fig. 2.

Fig. 3.

Witnesses:
E. E. Wessels.
A. A. Olson

Inventor:
Frank Magnuson,
By Joshua R. Stone
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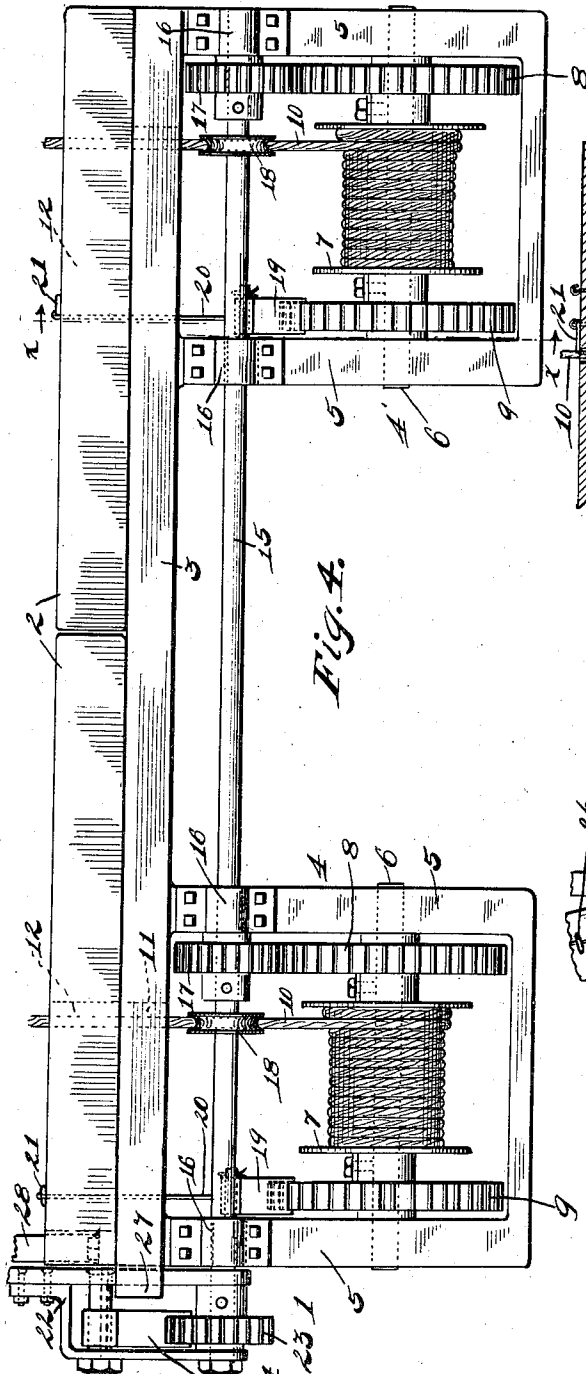


Fig. 4.

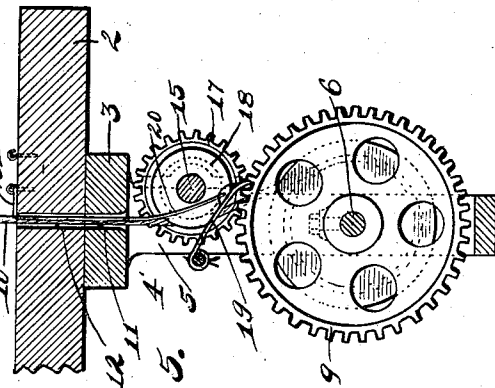


Fig. 5.

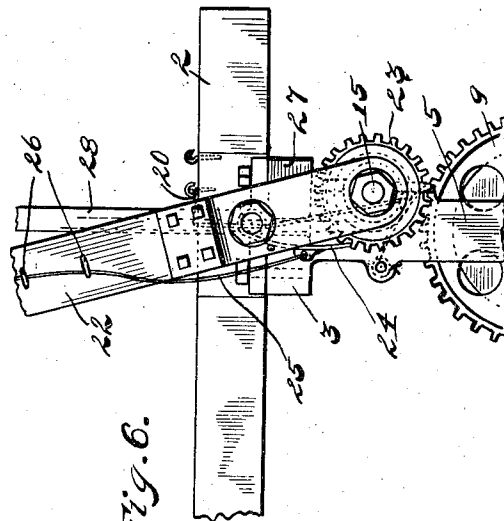


Fig. 6.

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UNITED STATES PATENT OFFICE.

FRANK MAGNUSON, OF SOUTH CHICAGO, ILLINOIS.

SCAFFOLD.

1,000,738.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed June 16, 1910. Serial No. 567,257.

To all whom it may concern:

Be it known that I, FRANK MAGNUSON, a citizen of the United States, residing at South Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Scaffolds, of which the following is a specification.

My invention relates to adjustable scaffolds and has for its object the production of a device of this character which will be of durable and economical construction and reliable and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in a scaffold characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and more particularly pointed out in the appended claim.

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

Figure 1 is a side elevation of a scaffold embodying the preferred form of my invention, Fig. 2 is a top plan view thereof, Fig. 3 is an enlarged sectional top plan view of a portion of the scaffold, Fig. 4 is an end elevation of the device, Fig. 5 is a transverse section taken on line $x-x$ of Fig. 4, and Fig. 6 is a detail elevation of a portion of the construction shown in Fig. 4.

Referring now to the drawings 1, 1' and 1'' indicate parallelly extending coplanar supporting devices which are suitably spaced so as to support elongated platform boards 2 upon the upper elongated body portions 3 thereof. The members 1, 1' and 1'' are of identical construction so that the description of one, which will be set forth in the following, will apply to each of the others. Upon the under side of the body 3, at the respective ends thereof, are provided rectangular bearing frames or hangers 4 and 4'. Journalled in each of said hangers between the vertically and parallelly extending bar portions 5 thereof is a shaft 6 upon which is fixed a substantially centrally positioned reel or drum 7, a gear 8, and a ratchet wheel 9, said gear and ratchet being arranged at either end of said reel adjacent the bars 5. Secured to and coiled upon the reels 7 are cables 10, the free ends thereof projecting upwardly through registering slots 11 and 12 provided respectively in the body 3 and platform boards 2, the upper extremities of

said cables being provided with attaching devices 13 whereby the same may be secured to supporting beams 14 or other suitable supporting structure in conjunction with 60 which the scaffold is employed.

15 indicates a shaft which is journaled in coaxial bearing straps 16 provided upon corresponding sides of the bars 5 adjacent the upper ends thereof. Fixed to said shaft 65 are pinions 17 which mesh with the gears 8, and rotatably and slidably mounted upon said shaft adjacent the pinions 17 are journaled pulleys 18, the latter being of diameters such that the same are disposed tangentially with the vertical plane of the slots 11 and 12, and whereby said pulleys are adapted to serve as guides for the cables 10 to properly direct the same for passage through the slots 11 and 12, such pulleys being so 75 mounted that, as the cables are coiled upon or uncoiled from the reels 7, the former will slide upon the shaft 15 to accommodate the changing positions of the free ends of said cables; 19 indicates spring pawls adapted to coact with the ratchet wheels 9 to normally prevent retrograde rotation thereof and hence uncoiling rotation of the reels 7. Flexible cords 20 are secured at their lower extremities to the free ends of the pawls 19, 85 the same extending upwardly therefrom through the slots 11 and 12 and being provided at their upper extremities with hand rings 21 whereby said pawls may, from a position upon the platform, be elevated to 90 disengage the ratchet wheels 9.

Rotatably mounted on the outer end of the shaft 15 is the lower end of an operating hand lever 22, the latter normally projecting upwardly to a substantially vertical position so that the same may be readily engaged from a position upon the platform and be manually oscillated. The lower end of said lever is of forked form, as clearly shown in Fig. 4 and fixed to the extremity 100 of the shaft 15 at a position thereon between the fork arms is a ratchet wheel 23. Carried by said lever is a spring pawl 24 adapted normally to coact with the ratchet wheel 23 in order to effect positive rotation 105 of the shaft 15 and hence coiling of the cables 10 upon the reel 7 when said lever is oscillated. A cord 25 is secured at its lower end to the free end of said pawl, the same extending through guide eyes 26 in 110 the outer side of the lever to a position in which the same may be engaged if desired

when operating said lever, in order to effect the disengagement of said pawl with the ratchet 23. An ear 27 projecting from the outer extremity of the body 3 serves as a stop for the lever 22 to limit upward or rearward oscillation thereof. The arrangement is such, as will be observed, that, in order to effect the elevation of the scaffold, it is only required to simultaneously oscillate levers 22 of the various supporting devices 1, such operation effecting, as before described, the winding of the lower ends of the cables 10 upon the reels 7, and hence the corresponding elevation of the devices 1 and the platform 2. Locking of the scaffold in any position to which it may be elevated is automatically effected through the medium of the pawls 19 and 24, the latter, through their own resiliency, normally remaining in constant engagement with the ratchet wheels 9 and 23. In order to descend it is only required to alternately disengage the pawls 19 and 24 through the medium of the cords 20 and 25, and to oscillate the levers 22 with the pawls 24 in disengagement upon the forward or downward movement of said levers and in engagement upon the return or upward oscillation thereof. By this construction, it will be seen, the scaffold may be slowly but safely lowered.

28 indicates upright posts which are rigidly secured at their bases to the members 3 adjacent the outer ends thereof. The upper ends of said posts are formed into eyes through which extend and to which is secured a rope 29, the latter being adapted to serve as a guard rail for those working upon the platform.

A device of the construction shown and described is perfectly reliable and safe in

operation, is of durable construction and the same may be operated in order to raise or lower the same with ease and readiness.

While I have shown what I deem to be the preferable form of my scaffold I do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of parts described without departing from the spirit of the invention comprehended within the scope of the appended claim.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

A scaffold comprising a platform; supporting means for each end of said platform, said means comprising an elongated body extending transversely of said platform; hangers at the underside of said body at each end thereof; coaxial reels mounted in said hangers; pawl and ratchet devices arranged to prevent unwinding of said reels; a shaft mounted in said hangers and extending longitudinally of said body above said reels, there being elongated slots in said support above said shaft and reels; a gear connection between said shaft and each of said reels; grooved pulleys loosely mounted on said shaft under said slots; supporting cables passed through said slots, over said pulleys and coiled on said reels; and means for operating said shaft, substantially as described.

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

FRANK MAGNUSON.

Witnesses:

ARTHUR A. OLSON,
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