G. A. NICHOLS.

SCAFFOLD.

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Fig. 1.

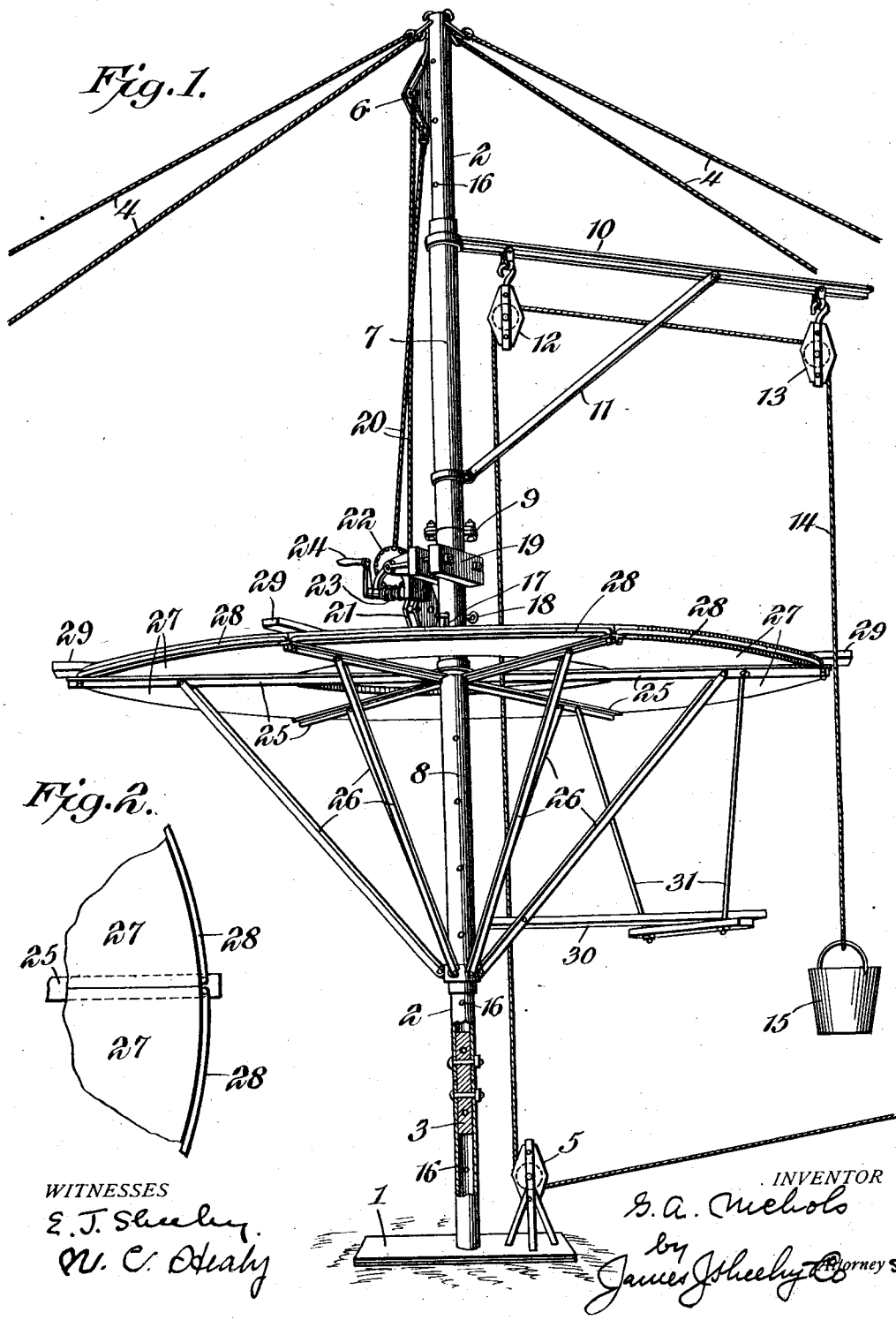


Fig. 2.

WITNESSES

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GEORG A. NICHOLS, OF STREATOR, ILLINOIS.

SCAFFOLD.

1,070,910. Specification of Letters Patent. Patented Aug. 19, 1913.

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To all whom it may concern:

Be it known that I, GEORG A. NICHOLS, citizen of the United States, residing at Streator, in the county of Lasalle and State of Illinois, have invented new and useful Improvements in Scaffolds, of which the following is a specification.

My present invention pertains to scaffolds, and contemplates the provision of a scaffold designed more particularly for use inside of a silo, stack or the like during the building thereof, and constructed with a view to facilitating the construction of a silo or stack and also constructed in such manner that it is strong and durable, and yet is adapted to be expeditiously and easily and inexpensively put together and as readily disassembled.

With the foregoing in mind the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a perspective of the scaffold constituting the best practical embodiment of my invention; the central standard being shown partly in section to impart an understanding of the manner in which I prefer to construct the same. Fig. 2 is a detail plan view of a portion of the platform.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

Among other elements, my novel scaffold comprises a shoe or base 1, and suitably fixed to and rising from the said shoe or base 1 is an upright central standard. This standard may be of any construction compatible with the purpose of my invention without involving departure from the scope of the same as claimed. I prefer, however, to construct the standard in the manner shown by section in Fig. 1—*i. e.*, to have the standard comprise superimposed tubular sections 2 of metal, and a plug 3, also of metal, fixed in and extending above each of the tubular sections below the uppermost tubular section, and also disposed in and fixed in a detachable manner to the next upper tubular section. By reason of this construction the standard may be readily increased in height, as occasion demands, and when desired the said standard can be quickly and inexpensively taken apart for storage or shipment.

Suitably connected to the upper end of the uppermost tubular section 2 of the standard are guy-cables 4, which are suitably connected at their outer ends to anchors or fixed objects calculated to serve the purpose of anchors.

Suitably mounted on the shoe or base 1 is a pulley block 5, and suitably connected to the upper tubular section 2 of the standard is a pulley block 6.

Mounted on the standard and adapted to be adjusted vertically is a sleeve which has for its function to carry the platform comprised in the scaffold. The said sleeve, for the sake of convenience, comprises an upper section 7 and a lower section 8; the two being detachably connected together at 9. On the upper section of the sleeve is an outwardly-reaching arm 10, preferably of T-form in cross-section; the said arm being supported by a stay 11 connected to the section 7, and the arm being equipped with inner and outer pulley blocks 12 and 13 through which passes a cable 14. The said cable also passes through the pulley block 5, and is designed to be connected at one end with suitable hoisting means, and at its opposite end with a suitable receptacle 15 designated for the elevation of material to the platform of the stacker.

The standard is provided at intervals of about twelve inches with transverse apertures 16, and the upper sleeve section 7 is provided with diametrically opposite slots 17, designed to be placed in registration with the apertures 16. When this is done, a pin 18 is passed through the slot 17 and the apertures 16 coincident therewith, so as to positively support the vertically-adjustable sleeve and the platform carried thereby.

For the purpose of enabling a person positioned on the platform to raise or lower the adjustable sleeve and the platform with the expenditure of but little effort, I provide on the lower section 8 of the sleeve a winch, suitably clamped on the section 8, as indicated by 19, and connected through a cable 20 with the pulley block 6 on the upper part of the standard, and also with a pulley block 21 suitably connected with the platform; the stretch of the cable intermediate the blocks 6 and 21 being behind the standard and sleeve. The winch comprises the usual drum, and a worm wheel 22 fixed with respect to the drum, and a worm-screw 23 intermeshed with the worm wheel and

equipped with a crank 24. By virtue of this provision the vertically adjustable sleeve and the platform can be conveniently raised, and the platform is safe and not liable to casually descend from any position in which it is placed.

The platform comprised in my improvements comprises bars 25, of T-form in cross-section, fixed at their inner ends in suitable manner to the lower sleeve section 8 and extending radially outward therefrom, stays 26, also of T-form in cross-section, fixedly connected at their lower ends to the lower portion of the lower sleeve section 8, and fixedly connected at their upper ends to the outer portions of the radial bars 25, wood sections 27, preferably of sector-shape and eight in number, superimposed upon the bars 25 and grouped in annular formation about the central upright and sleeve with an intervening space between their inner ends and the sleeve, of sufficient size to permit the passage of a man, and retaining rods 28 having depending end portions disposed in apertures at the outer ends of the bars 25; the major portions of the said rods 28 being disposed against the outer ends of the wood sections and designed to prevent outward movement of the said wood sections, and also designed to protect the wood sections against wear or injury. The wood sections are preferably connected in a detachable manner to the radial T-bars, and connected to some of the wood sections by bolts are stays 29. These stays are designed to be extended beyond the perimeter of the platform, and to bear against the inner side of a silo or stack with a view to contributing to the firmness or stability of the scaffold as a whole.

It will be gathered from the foregoing that the sleeve, the outwardly reaching arm 10, and the platform of my novel scaffold, are adapted to be raised as a unit; also that when a silo or stack is completed, the scaffold can be expeditiously and easily disassembled and removed from the silo or stack; it being understood in this connection that I prefer to detachably connect the wood sections to the bars 25, and also prefer to connect the bars 25 to the sleeve section 8 in a detachable manner, and to similarly connect the bars 26 to the bars 25 and the sleeve section 8.

It is frequently necessary for a workman to pass from the ground to the platform and vice versa, and in order that this may be conveniently done, I provide the sub-platform 30, disposed in a horizontal plane below the main platform of the scaffold. The said platform 30 is formed by a plank, and its inner end is suitably connected with certain of the stays 26, while its outer end is imposed on the cross-bar of a stirrup 31, connected to and depending from certain of the radial bars 25. A ladder can be rested against one side edge of the sub-platform 30, and a person can conveniently pass from the ladder to the sub-platform 30, and can then conveniently climb through the space within the circular group of wood sections and to the main platform. A person can also leave the main platform through said space and pass to the sub-platform 30, and from the latter to the ladder.

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

1. In a scaffold, the combination with a central standard, a platform surrounding the standard and having a space between it and the standard, and stays interposed between and connected with the standard and the platform, of a stirrup connected to and depending from the outer portion of the platform, and a sub-platform having its outer portion arranged in and supported by the said stirrup and its inner portion connected with certain of the stays.

2. A scaffold comprising a central standard, and a platform surrounding and supported on the standard; said platform having bars connected with and reaching radially from the standard, wood sections superimposed on the radial bars, and protecting and retaining rods arranged against the outer ends of the said wood sections and on the radial bars and having depending end portions disposed in apertures in the outer end portions of the said radial bars.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORG A. NICHOLS.

Witnesses:
J. S. HURST,
EVAN D. ROBERTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."