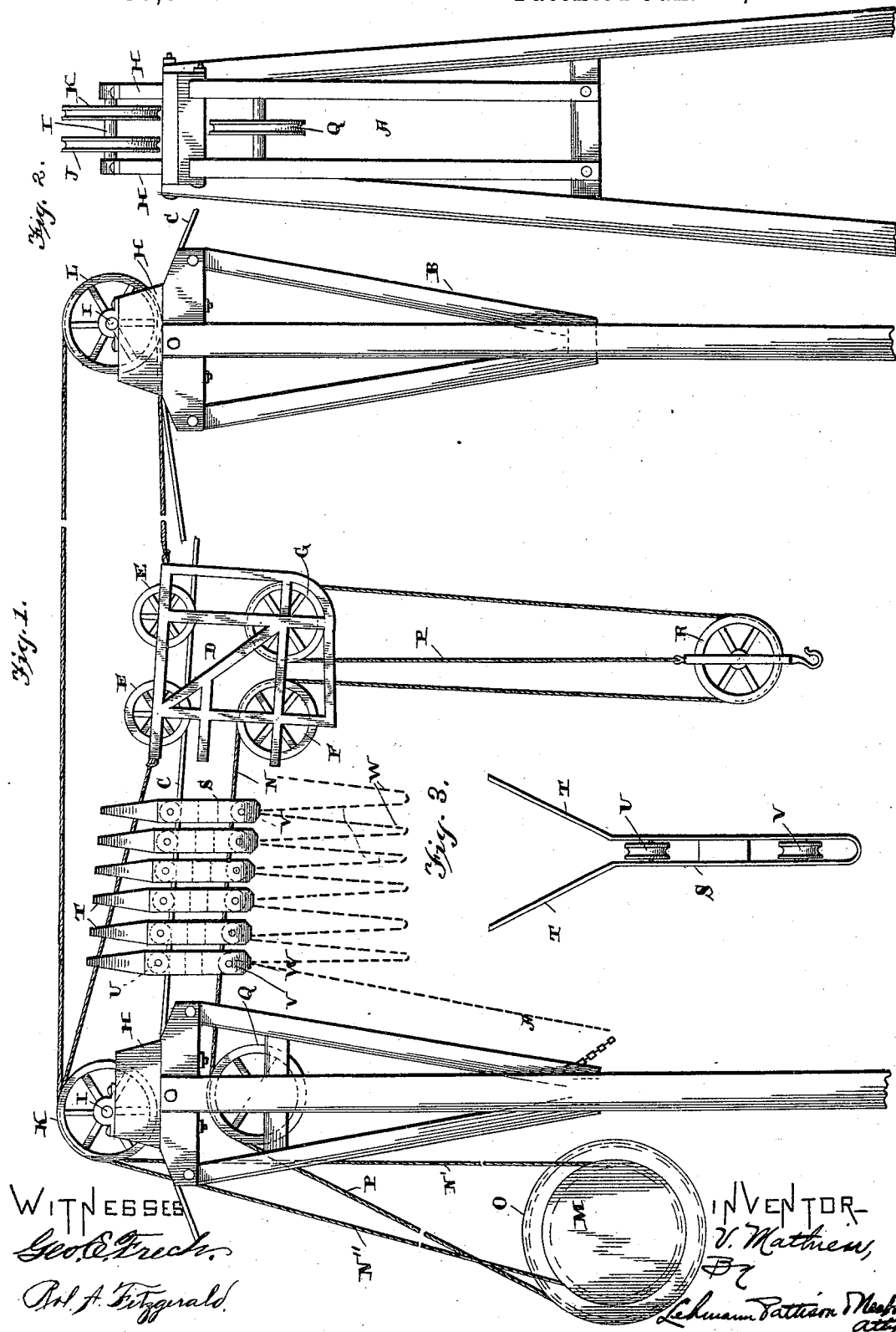


(No Model.)

V. MATHIEU.  
HOISTING APPARATUS.

No. 490,574.

Patented Jan. 24, 1893.



WITNESSES  
*Geo. E. French.*  
*Robt. A. Fitzgerald.*

INVENTOR  
V. Mathieu,  
BY  
*Lehmann & Mathieu*  
*attys*

# UNITED STATES PATENT OFFICE.

VICTOR MATHIEU, OF INVERNESS, FLORIDA.

## HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 490,574, dated January 24, 1893.

Application filed October 22, 1892. Serial No. 449,663. (No model.)

*To all whom it may concern:*

Be it known that I, VICTOR MATHIEU, of Inverness, in the county of Citrus and State of Florida, have invented certain new and useful Improvements in Hoisting Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in hoisting apparatus; and it consists in the novel construction and arrangement of parts, all of which will be fully described hereinafter and more particularly designated in the claims at the end of this specification.

The object of my invention is to provide an improved hoisting apparatus having a movable carriage which is adjustable on a track or way between the vertical supports, and which is so arranged as to prevent any possible entanglement of the several cables.

Referring to the accompanying drawings,—  
Figure 1, is a side elevation of my improved hoisting apparatus. Fig. 2, is an end view of the same. Fig. 3, is a detached view of one of the combined rope supports and guides.

A and B designate the respective supports or towers which are arranged at opposite sides of the point over which the hoist is to be operated. Securely fastened to these towers is the cable C constituting a track over which moves the carriage D. The latter consists of a suitable number of cross bars to insure strength. Journaled in the upper portion of the carriage structure are the peripherally grooved wheels E which support and transport the carriage on the way C. In the lower portion of the carriage are the wheels F and G over which the hoisting cable travels presently to be described.

Projecting from the upper end of tower A are the bearings H and journaled across them is the shaft I to which are secured the sheaves J and K. Similarly mounted on the tower B is the sheave L.

Arranged at a convenient point adjacent the base of the tower A is the spirally grooved drum M around which the rope N is wound three or more times. The shorter portion N' of this rope is passed up over the sheave K

and outward therefrom where it is secured to the end of the carriage adjacent the tower A, as shown. The other or greater portion N'' of the rope N is extended over the sheave J, and from thence to the sheave L on the tower B around which it passes back to the carriage to which it is secured at a point opposite the end of the portion N'. By this construction it will be seen that by revolving the drum M either one way or the other the carriage may be adjusted on the way C in a most convenient manner. No source of power is here shown for operating the drum, but the same may be conveniently driven by an engine, as will be readily understood.

Secured to and wound upon a suitably operated drum O is the rope P which passes upward over a sheave Q, suitably journaled in the tower A. Continuing outward from this point the said rope extends outward over the wheel F, then downward around the hoisting hook pulley R, and upward therefrom around the wheel G from which latter it depends, its end being secured to the frame of the pulley R, as shown. This rope P constitutes the hoisting cable which may be operated from the drum O, so as to raise or lower the hoisting pulley R whenever it is desired to do so. The longitudinal adjustment of the carriage on the way C, enables the operator to place the hoist at any desired point between the towers.

Supported and adapted to move on the way C are the combined rope supports and guides S having outwardly flaring arms T at their upper ends for guiding or confining the portion N' of the carriage shifting rope N. The said rope portion is prevented from sagging or becoming entangled with the hoisting rope P or way C, when slack occurs therein. These devices S are supported on the way C by the rollers U journaled between their sides so that they move freely on the said way. In the lower ends of the devices are the rollers V, and over them passes the rope P on its way to the carriage. Thus the said rope is supported in line with the way C and prevented from sagging. The adjacent lower ends of the combined guides and supports are connected by the chains W so that in moving outward over the way C they will be prevented from moving too far apart. As shown in Fig. 3, the vertical sides of the above described

supporting and guiding devices may be formed of a single piece of metal by doubling the same at its lower end.

The towers A, B, may be arranged any desired distance apart, so that the hoist may be operated over considerable space.

The ends of the way C are shown extending over and beyond the towers to suitable anchorages, which though not shown will be readily understood.

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

1. In an apparatus of the class described, the combination of two towers, a track or way supported thereby, a carriage on said way, a rope for moving backward and forward the said carriage, guides supported on the track or way having upwardly extending flaring arms for guiding the said rope, and a hoisting rope supported by the carriage, substantially as shown and described.

2. In an apparatus of the class described, the combination of a suitably supported track or way, a carriage thereon, a suitably operated rope for adjusting the carriage on the way, combined guiding and supporting de-

vices movable on the said way, upwardly extending flaring arms at the upper ends of the devices for guiding the said rope, a hoisting rope extending to the carriage, and rollers in the lower ends of the said guiding and supporting devices over which the said last named rope passes, for the purpose shown and described.

3. In an apparatus of the class described, the combination of a suitably supported track or way, a carriage, a rope for adjusting the same, a suitably operated hoisting rope passing to the carriage, movable devices on said way having forked upper ends for guiding the first named rope, the sides of each of the said devices being formed of continuous pieces of metal, rollers in the lower ends of the devices over which passes the said hoisting rope, and connecting chains between the said devices, substantially as shown and described.

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

VICTOR MATHIEU.

Witnesses:

GEO. W. DE MURD,  
C. M. DU PREE,  
THOS. P. LLOYD.