H. T. STOCK.

Supporting-Frame for Excavating Machines.

No. 210,724. Patented Dec. 10, 1878.

Fig. 1

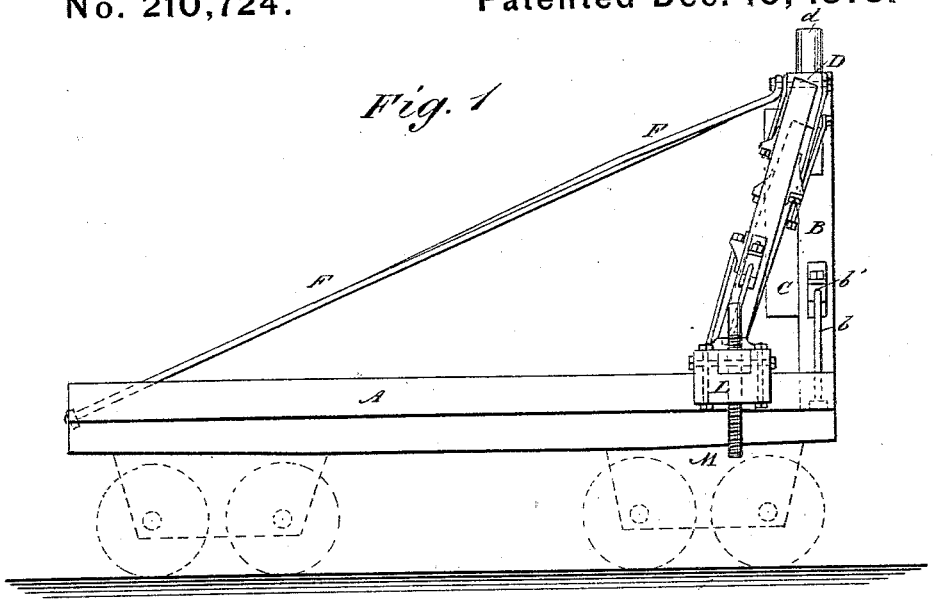


Fig. 2

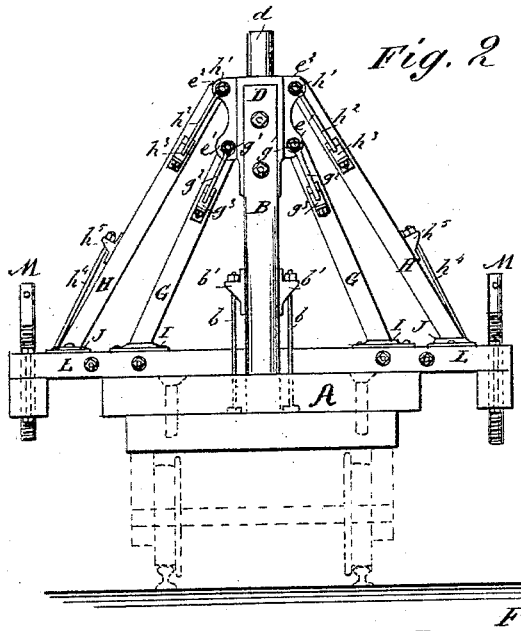


Fig. 3

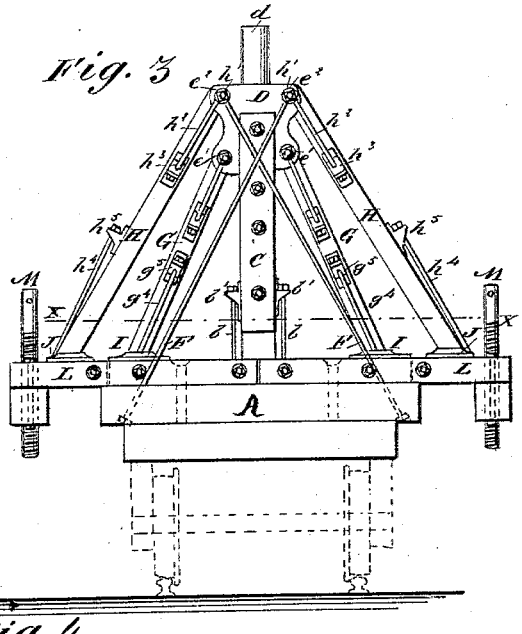
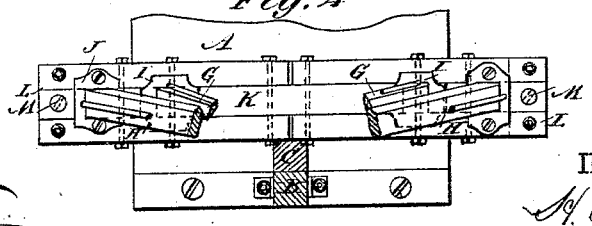


Fig. 4



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HOSEA T. STOCK, OF TOLEDO, OHIO.

IMPROVEMENT IN SUPPORTING-FRAMES FOR EXCAVATING-MACHINES.

Specification forming part of Letters Patent No. **210,724**, dated December 10, 1878; application filed July 22, 1878.

To all whom it may concern:

Be it known that I, HOSEA T. STOCK, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Supporting-Frames for Excavating-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to make and use the same.

As heretofore constructed, excavating-machines for railroad-work have been provided with special cars for supporting them when at work, or for transporting them from place to place, which cars were not available for other purposes; and the working parts of the machines have been of such heavy and complicated character that it has been necessary to take the entire apparatus apart and put it together again when moving from place to place and working in different localities, thus necessitating the employment of much time, labor, and expense.

To obviate these and other disadvantages which have come within my knowledge is the object of my invention; and to this end my invention consists in a novel construction, arrangement, and combination of parts, whereby an apparatus is produced which can be loaded, supported, and moved from place to place on a railroad-track, upon an ordinary flat or platform car, and whereby only certain portions need be removed in order to enable the apparatus to be transported in the same manner as, and to occupy no more space than, an ordinary railroad-car, which said removable portions can be readily and quickly placed in position for service.

In carrying out my invention, the base or bed of the apparatus is made of such dimensions as to enable it to be carried on an ordinary flat car without extending beyond the width of said car when not at work. The mast or crane-post is braced and strengthened by the two longitudinal bracing-rods and two sets or pairs of lateral braces, and the apparatus is provided with jack-screws and arms for preventing it from tipping when at work. When the machine is not at work, or when it is to be moved from place to place on a railroad-track, the jack-screws and arms and one set or pair of the lateral braces are detached and taken on board the car, and the apparatus then occupies no greater width than an ordinary railroad-car.

The essential features of my invention are represented in the accompanying drawing, in which—

Figure 1 is a side elevation of a machine embodying my improvements. Fig. 2 is a view of the front or working end of the machine. Fig. 3 is a rear view. Fig. 4 is a horizontal section taken in the line *x x* of Fig. 3.

Similar letters of reference indicate corresponding parts.

The various figures represent the apparatus in the position which it would occupy upon an ordinary platform-car, the car-wheels being shown in dotted lines. The various parts are attached to and supported by a bed, A, which may be of any suitable construction.

At the front or working end of the bed is the mast or post for carrying the arms, which mast or post consists of the two parts B C. The main or front post, B, rests upon the bed A, and is secured by screw-bolts *b b*, passing through said bed and through lugs *b' b'* on the post; and the secondary or auxiliary post, C, is bolted to said main post by screw-bolts passing through both.

On the upper end of post B is fitted a metal cap, D, provided with a pivot, *d*, for the crane to swing upon. The cap D extends downward on three sides of the post B, and is provided with perforated lugs e^1 e^2, for connection with lateral braces, as hereinafter described.

The upper portion of the auxiliary post C fits partly over the rear side of the cap D, and one or more of its bolts pass through the same. By this construction I obtain a very strong and substantial crane-post.

For bracing the crane-post in a fore-and-aft direction, I employ two rods, F F, extending from near the upper end of the post or mast to the rear corners of the bed A, said rods crossing each other near the front of the machine, as shown.

For bracing the mast in a lateral direction, I employ two sets of lateral braces, one set of which is adjustable and removable, for the purpose hereinafter described.

The inner set or pair of braces, G G, is in

tended to remain permanently when placed in position, and the outer set or pair, H H, is arranged so as to be readily removed and taken on board the car when the machine is not at work.

Each of the braces G is secured to the mast or crane-post by means of bolts g^1, passing through the lugs e^1 of the cap D and through the upper portion of the brace, and is further strengthened by means of eyebolts g^2, extending downward from the bolts g^1, and passing through the lugs g^3, attached to the brace G. The braces extend outward toward the sides of the bed A, and also slightly rearward, so as to co-operate with the fore-and-aft bracing-rods F F in bracing the mast longitudinally of the bed.

The lower end of each brace G fits in a socket or foot-plate, I, secured to a sill, K, lying transversely on the bed A, just in rear of the crane-post, and is further strengthened by a bolt, g^4, extending upward from the foot-plate, and passing through a lug, g^5, attached to the brace.

The outer braces, H H, are arranged in a similar direction to that just described, and are secured to the mast in a similar manner by means of bolts h^1, passing through the lugs e^2 of the cap D, and eyebolts h^2 and lugs h^3. Their lower ends are provided with bolts h^4, lugs h^5, and foot-plates J, similar to those on the inner braces; but the foot-plates J are secured to the removable jack-arms L L instead of the sill K. These jack-arms may be of any suitable form and construction which will serve the desired purpose. They are here shown as divided or forked, so as to fit snugly on both sides of the sill K and allow the forked ends of the two arms to meet in rear of the crane-post. When the parts are in position for working, the jack-arms L L are securely bolted to the sill K, and the three parts, thus fastened together, form a firm and substantial base and support for the braces.

The jack-arms may extend to any required distance beyond the sides of the bed A. Near the end of the arms are jack-screws M M, of any suitable description.

When the machine is at work the jack-screws are adjusted so as to bear upon the ground on either side, and thus prevent the machine from tipping. When it is not at work, or when it is to be transported from place to place on a railroad-track, the jack-arms L L and the outer braces, H H, are detached, which is readily accomplished by unbolting the arms from the sill K and removing the bolts h^1 and h^2. The braces and arms may then be placed on board the car, and as the bed A is no wider than an ordinary car, and the sill K is no longer than the width of the bed, the entire apparatus may be moved from place to place upon any railroad-track where an ordinary car can travel.

This apparatus is adapted to be converted into a wrecking-car by simply dispensing with the jack-arms and the excavating scoop or dipper.

An excavating-machine constructed as herein described may have the working parts operated by an engine carried on the bed A. Moreover, said engine may be so connected with the wheels and axles of the car as to enable it to be used for moving the entire apparatus from place to place upon the track.

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

1. The combination of the jack-arms L L and outer lateral braces, H H, made removable, and arranged substantially as and for the purpose herein described.

2. The combination of the removable jack-arms L L and permanent sill K, as herein shown and described.

3. The general combination and arrangement, with relation to the base or bed A, of the double mast or crane-post B C, metal cap D, bracing-rods F F, lateral braces G G H H, removable jack-arms L L, and permanent sill K, as herein shown and described.

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Witnesses:
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