J. DITSON.

ADAPTER FOR SADDLE CLAMPS.

APPLICATION FILED MAR. 31, 1921.

1,384,520. Patented July 12, 1921.

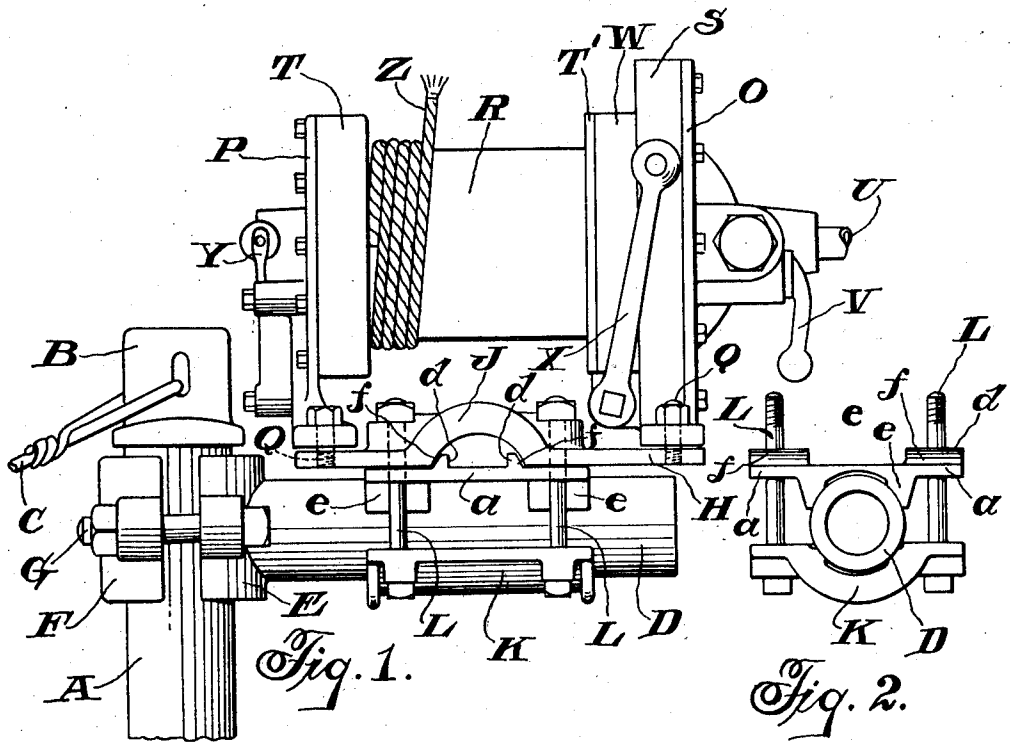


Fig. 1.

Fig. 2.

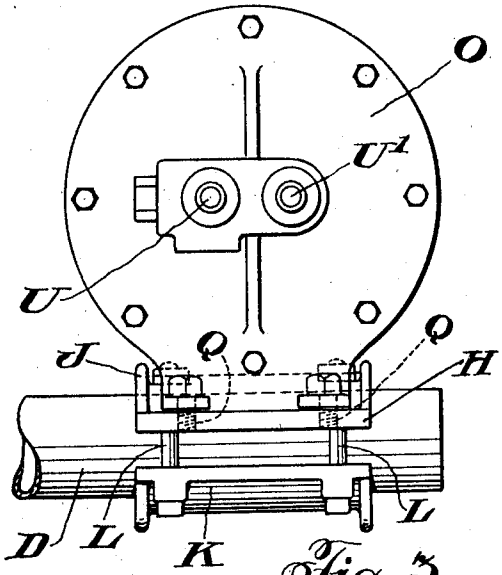


Fig. 3.

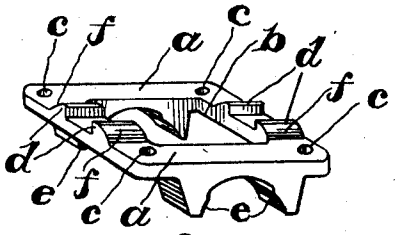


Fig. 4.

INVENTOR
Jesse Ditson
BY
Herbert L. Ogden
his ATTORNEY

UNITED STATES PATENT OFFICE.

JESSE DITSON, OF LITTLETON, COLORADO, ASSIGNOR TO INGERSOLL-RAND COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ADAPTER FOR SADDLE-CLAMPS.

1,384,520. Specification of Letters Patent. Patented July 12, 1921.

Application filed March 31, 1921. Serial No. 457,553.

To all whom it may concern:

Be it known that I, JESSE DITSON, a citizen of the United States, and a resident of Littleton, county of Arapahoe, State of Colorado, have invented a certain Adapter for Saddle-Clamps, of which the following is a specification accompanied by drawings.

This invention relates to clamping devices, but more particularly to an adapter for bar and column saddle clamps, in the form of a cross bar saddle, by means of which a machine or other element may be secured to a bar, column or other similar support either longitudinally or transversely of the support by means of the same set of clamps.

Small air driven hoists, for instance, of which the "Little Tugger" is a well known example, are used for many lifting, hauling and handling jobs. Miners use them clamped to a drill column or stretcher bar, shaft bar or timber for lowering and raising, hauling, dragging and numerous other uses. They are also used among other places, on board ship, in structural steel work, in manufacturing and power plants and on rail-roads.

In using such hoists, or in fact in using almost any machine adapted to be mounted on a bar or column by means of saddle clamps, occasions arise in which it becomes necessary or desirable to change the axis of the machine relatively to the longitudinal axis of the supporting bar or column. The conditions of the work may require that the hoist or other machine be mounted cross-wise or transversely of the bar or column instead of longitudinally or vice versa, and if the saddle clamps are designed with clamping jaws or recesses for longitudinal mounting, no provision is usually afforded for transverse mounting with the same clamps, so that the only alternative is to change the position of the bar or column which cannot always be done owing to the nature of the ground or to obstructions at the place of work.

The objects of the present invention are to enable a hoist or other machine to be changed and adjusted at will, either transversely or longitudinally upon a column or bar support by means of an auxiliary cross bar saddle which is in effect an adapter capable of adapting one and the same set of saddle clamps to both transverse and longitudinal positions upon a bar or column. By this means a hoist, for instance, may be used either vertically or horizontally on a column or either cross-wise or in the direction of the length of a cross bar, depending upon the conditions to be met.

To these and other ends which will hereinafter appear the invention is shown in one of its preferred forms in the accompanying drawings in which

Figure 1 is a side elevation, partly broken away, showing a "Little Tugger" hoist for illustrative purposes mounted longitudinally on a cross bar by means of my adapter.

Fig. 2 is a detail end view of the cross bar, lower saddle clamp and adapter.

Fig. 3 is a side elevation partly broken away of a cross bar showing the hoist mounted transversely or cross-wise on the bar by means of the usual saddle clamps without the use of the adapter and

Fig. 4 is a detail perspective view of the adapter.

Referring to the drawings, a column A partly broken away, is shown with a cap piece B to which a guy rope C may be fastened in this instance. A horizontally extending cross bar or arm D is adjustably secured to the column by the usual clamps E and F having the tightening bolts G.

A hoist of the "Little Tugger" type is mounted on a base plate H having a clamping member or portion J in the form of a saddle clamp adapted to grip a column or cross bar and clamp the hoist to the support in coöperation with the lower clamping member or cross bar saddle clamp K, in the usual manner as shown in Fig. 3. The base plate H and the coöperating saddle clamp J are preferably each provided with a plurality of bolt holes, in this instance four holes being provided in each of said members in rectangular formation for receiving the clamping bolts L.

In Fig. 3 the hoist is shown mounted cross-wise on the cross bar and the details of the hoist need not be further referred to except to say that the frames or casings O and P, bolted to the base plate H by the bolts Q, support the winding drum R, air motor casing S, gear case T. brake drum T″ and other operative parts of the hoist. Live air pressure is supplied to the air motor which may be of any suitable type, at the inlet U controlled by the throttle V

which also reverses the operation of the motor. The air exhausts at the exhaust outlet U'. The brake band W is controlled by the handle X and a clutch handle Y is provided for throwing out the gear drive when desired. A portion of the rope Z is indicated on the drum.

Obviously such a hoist, which may be taken as typical of machinery adapted to be used in many different ways, may be required to be mounted longitudinally of the cross bar D in some instances, as indicated in Fig. 1. For this purpose the adapter shown in detail in Fig. 4 is provided, constructed to fit against and be centered upon the saddle clamp J of the base plate H and adapt said clamp without other change for mounting the hoist in the opposite direction upon the cross bar. If the hoist is mounted directly upon the column A by means of the saddle clamps J and K the hoist will lie horizontally on the column, and in that case the adapter adapts the clamps for mounting the hoist vertically on the column.

The adapter is in the form of a cross bar saddle and comprises a flat rectangular body portion *a* preferably open at the central portion *b* and provided with bolt holes *c* at the four corners. Pairs of alined centering lugs *d* project from one face of the body portion *a* at the opposite sides of the central aperture, and clamping jaws *e* project from the other face of the body portion at opposite sides of the central aperture and in alinement substantially at right angles to the direction of alinement of the pairs of centering lugs *d*, so that the longitudinal axes of the lugs *d* and jaws *e* are substantially at right angles.

The lugs *d* are preferably slightly beveled at *f* on their outer faces so that the lugs may loosely fit within the recessed portion of the saddle clamp for centering the adapter as indicated in Fig. 1. In such case the jaws *e* coöperate with the column or cross bar and the clamping member J to which the adapter is applied and centered may be clamped cross-wise to the bar or column instead of longitudinally thereof. The same clamping bolts L hold the clamping members J and K, and the cross bar saddle or adapter securely upon the bar or column.

My device is simple and cheap to manufacture, has been found to fill a long felt want, operates satisfactorily and well in practice, and saves time and expense in the field.

I claim:—

1. As a new article of manufacture, an adapter for bar and column saddle clamps in the form of a cross bar saddle comprising a body portion having spaced centering lugs projecting from one face and clamping jaws projecting from the opposite face, the longitudinal axes of said lugs and jaws being substantially at right angles to each other, whereby a machine or other element may be secured to a bar or column either longitudinally or transversely of the said bar or column by means of the same set of clamps.

2. As a new article of manufacture, an adapter for bar and column saddle clamps in the form of a cross bar saddle comprising a body portion having spaced centering lugs projecting from one face adapted to center the saddle against the jaw portion of a clamping member, said saddle also being provided with clamping jaws projecting from its opposite face, and forming a clamping recess extending substantially at right angles to the longitudinal axis of the centering lugs, whereby a clamping member to which the adapter is applied may be clamped crosswise to a bar or column instead of longitudinally thereof.

3. As a new article of manufacture, an adapter for bar and column saddle clamps in the form of a cross bar saddle comprising a body portion having spaced centering lugs projecting from one face, adapted to enter the jaw portion of a clamping member and center the cross saddle thereon, said saddle also being provided with clamping jaws projecting from its opposite face and forming a clamping recess extending across said opposite face substantially at right angles to the longitudinal axis of the centering lugs, whereby a clamping member upon which the adapter is centered may be clamped at right angles to a bar or column instead of longitudinally thereof.

4. As a new article of manufacture, an adapter for bar and column saddle clamps in the form of a cross bar saddle comprising a flat rectangular body portion open at the center and provided with bolt holes at the corners, pairs of alined centering lugs projecting from one face of the body portion at opposite sides of the central aperture, and clamping jaws projecting from the other face of the body portion at opposite sides of the central aperture and alined substantially at right angles to the direction of alinement of the pairs of centering lugs, whereby the cross saddle adapts one pair of clamping members for mounting a machine or other element either longitudinally or transversely upon a bar, column or other similar support.

In testimony whereof I have signed this specification.

JESSE DITSON.