

#### A. Operating Principle

Wire Rope Pulling Hoister is operated in accordance with lever principle by the means of pulling the forward handle or the backward handle manually to make it move straight so as to finish such three performances as lifting, pulling and tensioning with less manual force to obtain the load of more tonnage.

It will make the four-link clamping mechanic tension of the front jaw-blocks and the back ones inside the hoister move clamp---relax to pull the forward handle or the backward handle to and forth. Then the pulling wire rope through the upper grip jaw and the lower grip jaw of the tow pliers will always remain in the clamping state between the pliers and wire rope because of the pretension of the spring. Thanks to the function of the abrasive force of the interfaces and the pulling of the load, the four link clamping mechanism always inclines backward in the direction of the load so as to clamp the rope tightly. With the help of other connecting levers, the front jaw and the back jaw will clamp the loading wire rope alternately and slide through the upper jaw and the lower jaw of another pair so as to lift and lower the load.

The series of the hoisters have such unusual advantages as the alternate working sensitivity of pretension springs, less loss of the travel, high mechanic efficiency, less abrasion to the wire rope and so on. The pliers are reliable in working capacity, good in durable moving function and have excellent processing finely.

The forward handle hasn't any safety protecting bolt. It will break when it is pulled too violently or overloaded. Safety bolt usually breaks automatically when it is overloads more than 1.25 times its rated load but we guarantee that the hoister can still be operated safely.

#### B. Usage

Reeve: (Fig. I) With the rope head downward and pressing the hoister, push the relaxed handle. When hearing the sound click, pliers mouth has been opened. Then you can reeve the wire rope from the back hole to the hoister. After the rope is out, the rope can be pulled to the length that you need and then push the relaxed handle back to clamp the rope tightly. When the forward handle or the backward handle pulled, the wire rope will automatically go into or come out of the hoister. Thus, the machine is in the normal state and it is ready to be used.

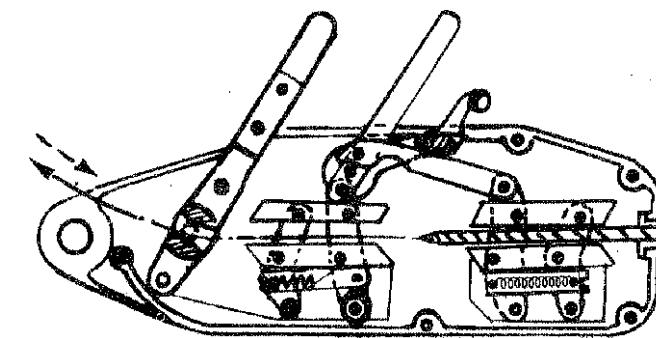


Fig I. Rope reeving and Rope receiving:

2.Anchor: Fixed axis is to be used to anchor the rope round the hoister. Connect the wire rope or the hanger with the fixed rope and tie the other end to the load, masts, etc. There is a relaxation-proofing tunnel on the fixed axis. When the fixed axis is inserted the hoister case, is must be turned twice to the second tunnel till it is clamped tightly (Fig.2)

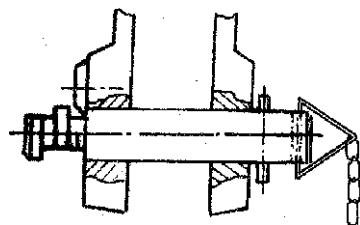


Fig2.Turn and push the fixed axis twice and let it enter the second tunnel

.Then the operation can be done. Notice please. The end of the wire rope must be on the upper of the fixed axis so as to make the rope not block and move freely.

3.Operate: Hook the load on the hanger.

Do as follows.

Lift (forward), tension: pull the forward handle.

(Fig. 3: A, B)

Lower (backward): Pull the backward handle.

(Fig. 3: C,D)

Stopped working: Whenever lifting or lowering the load, is will stop working to make the load stay in any position when the manual handle stops working.

Draw the rope out (Fig. I): Having finished the work, the pliers mouth will be opened as soon as the relaxing handle is pushed and then the wire rope can be drawn out of the end of the j-hoister. Clean the dirt on the rope, wind it onto the reel cross in good order to be ready to use next time.

Finally, push back the relaxing handle in order not to let pliers mouth open for long to keep the pretension spring working well later.

#### Caution

Before operating the hoister, you must check all. the tightened screw to see if any of them is loosened. If there is any, tighten it. And when pulling one of the

handles, make sure whether the hoister works in good order and whether the

other handles will move as it does. After the wire rope has been reeved, it can come out or go in inside the hoister. The wire ropes must be clean and is not twisted, cracked and part- broken, otherwise the hoist will not work properly.

#### 2. Strictly forbid in operation.

Never pull all the handles at the same time.

Don't pull the relaxing handle after the load is being lifted.

Never pull the handle violently, otherwise the safety bolt will be damaged. Don't use any self-made safety bolt instead of that provided by our factory if this happens.

Never use any pulling lever whose length has been changed by any means. If any, the consequence should be answered by yourself.

d Never stand on the load nor work on it (except working in a hanger frame). When any worker works in a hanger frame its total supporting weight should be reduced to one third rated power of the hoist and the worker on the should take measures to protect himself in case some unhappy accident happens.

Never let the load move round when it is being lifted. If, it must be stopped.

Never use the wire rope chosen by yourself instead of the old one. If it is done or any accident happens, the consequence should be answered by the users. When the diameter of the working part of the wire rope has been damaged by 10%, a new one provided by our factory should be replaced. Never reeve the rope from the head of the hoister(Fig.4) or the direction of the hook must not be used reversely. If it does so, Work can't be done or accident is easy to happen. While working, the anchored object should be strong enough so as to support the load to prevent any accident happening.

Keep the machine clean and don't let earth, mud or any other dirt pollute the machine. If polluted severely, it must be unassembled to be cleaned. When it is reassembled, never fix the parts by mistake and coat them with lime grease to keep it working properly.

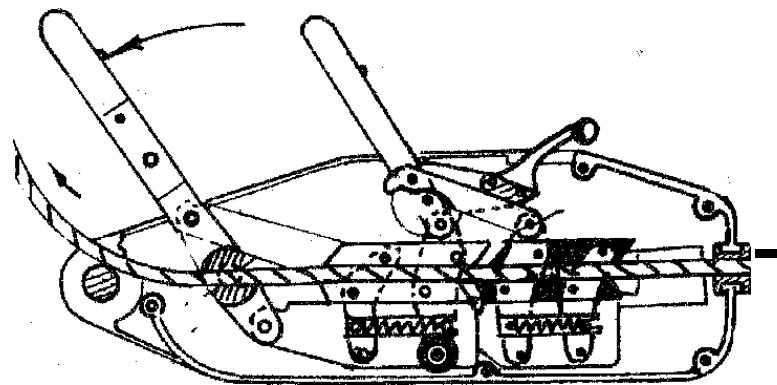


Fig3. A To lift a load (or pull a load forward):  
Pull the handle forward, the black clamping, the white relaxed

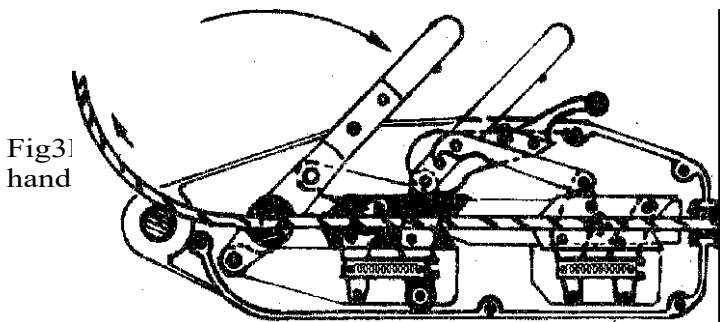


Fig3]  
hand

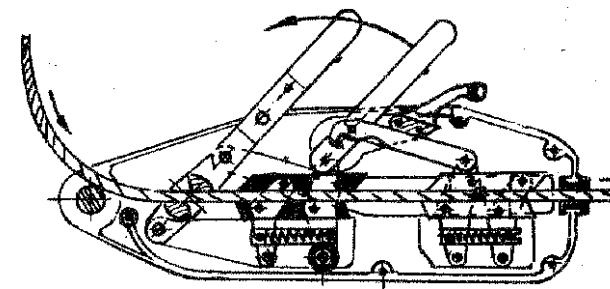


Fig3C.To lower a load (or pull a load backward)  
Pull the handle forward, the black clamping, the white relaxed

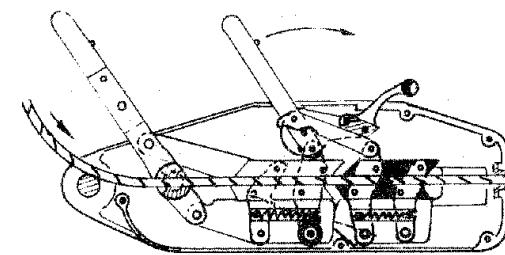


Fig3D.To lower a load (or pull a load backward):  
Pull the handle backward, the black clamping, the white relaxed

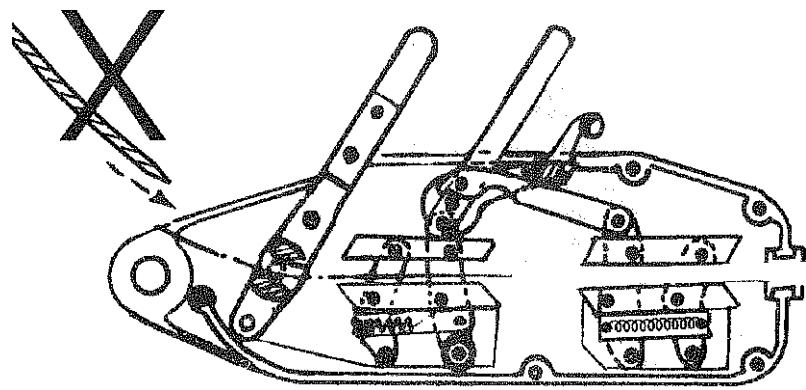


Fig4. Never use the wire rope chosen by yourself instead of the old one. If it is done or any accident happens, the consequence should be answered by the users. When the diameter of the working part of the Wire rope has been damaged by 10%, a new one provided by our factory should be replaced. Never reeve the rope from the head of the hoister or the direction of the hook must not be used reversely. If it does so, Work can't be done or accident is easy to happen. While working, the anchored object should be strong enough so as to support the load to prevent any accident happening!' .

## Type of application

