Sept. 11, 1923. 1,467.652

J. H. REEDY

PAPER SORTING TABLE

Filed Sept. 5, 1922

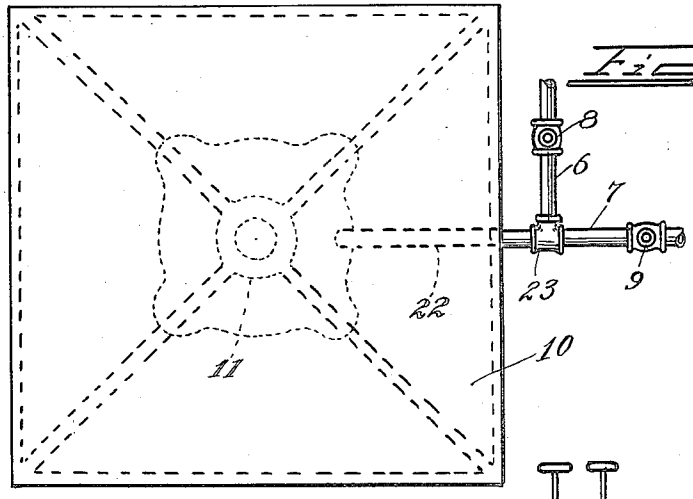


Fig. 2.

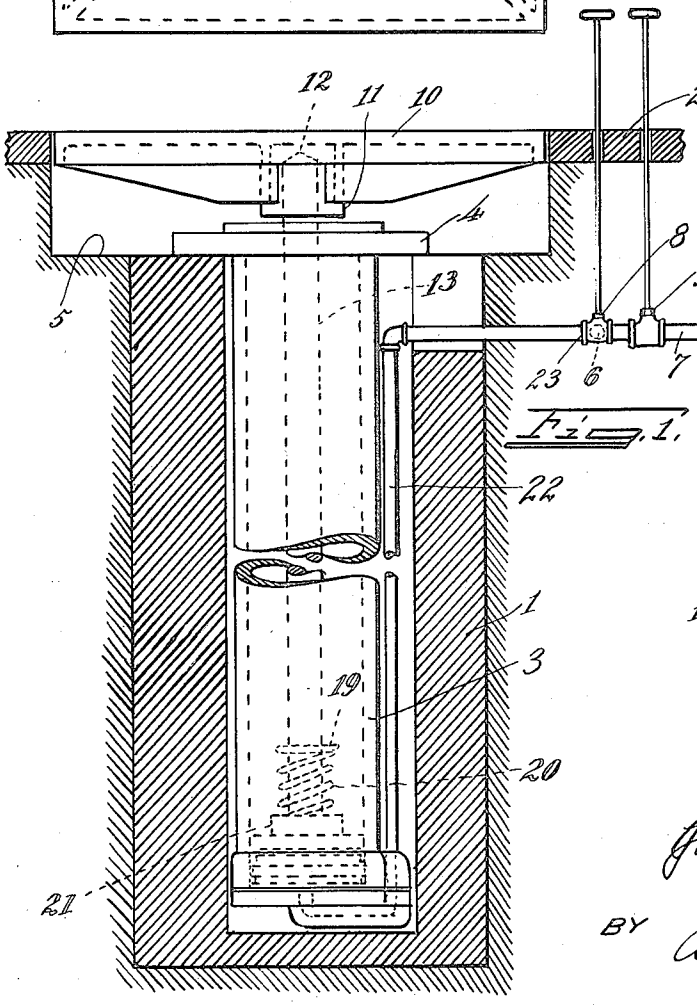


Fig. 1.

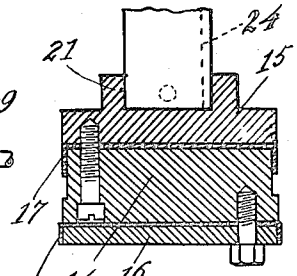


Fig. 3.

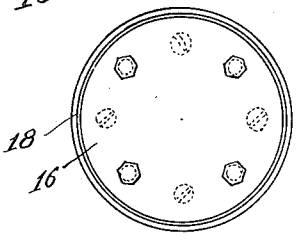


Fig. 4.

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UNITED STATES PATENT OFFICE.

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PAPER-SORTING TABLE.

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To all whom it may concern:

Be it known that I, JOHN H. REEDY, a citizen of the United States, and a resident of Hamilton, in the county of Butler and State of Ohio, have invented a certain new and useful Paper-Sorting Table, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to devices for sorting paper upon which paper is deposited by trucks or otherwise and from which the sheets are inspected and counted and distributed in the desired manner.

The great difficulty in the sorting of large bundles of paper in the past has been that the bundles are high, bulky and very heavy, and that either at the start the bundle is too high, or at the close it is too low for convenient reach by the operator. Also it has always been a difficult proposition to properly deposit a bundle of paper sheets to be sorted or counted on a table from the factory trucks on which the bundles are transported, since it requires jacking up prior to deposit and a lateral deposit from the truck, even after jacking up.

Also in machines where the paper is brought directly from a cutter onto a counting and sorting table, it is a great disadvantage to have a fixed surface or table onto which the sheets are shifted one by one, since if the support is high enough at the start of cutting a batch of sheets, the pile is too high for convenient manipulation toward the end of the operation.

It is thus the object of my invention to provide a sorting table for paper sheets and the like, which can be moved by power to any desired height, such as five feet, and as low as flush with the floor of the factory, and can be shifted gradually from any position to another within this range, so that the top of the bundle of sheets at any one time will be conveniently placed, and so that a truck can be rolled onto the support and unload its bundle downwardly into place.

I also have as an object the provision of a hydraulic operation for the support, so that it can be readily moved by power and will keep its adjusted position against the heavy loads which it is required to withstand.

I accomplish my objects above set forth by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings,

Figure 1 is a central vertical section of the device.

Figure 2 is a top plan view thereof.

Figure 3 is a detail section through the piston.

Figure 4 is a bottom plan view of the piston.

I have shown a well or casing 1 of suitable structure, such as concrete, and a floor 2 erected on the concrete base. The cylinder 3 of heavy construction has a flanged head 4 which rests on the base of the platform countersink 5 in the concrete. The head is preferably held down by suitable bolts (not shown).

There is a water pipe 6 running to the drain and a service water pipe 7 containing water under pressure. Each pipe has a valve 8 and 9, respectively.

The support or table 10 is formed of a heavily constructed metal plate with a central boss 11 beneath it, in which engages the large head 12 of the piston rod 13, the piston rod being guided in the head of the cylinder.

The piston is formed of a central member 14 of cylindrical shape having on its upper and lower faces, heavy metal plates 15, 16, suitably bolted in place and serving to mount the washers or cup leathers 17, 18.

A boss 21 in the upper plate 16 forms a socket for the lower end of the piston rod. Preferably the piston rod has a fixed collar 19 thereon, and a heavy coiled spring 20 set around the rod bears on this collar and on the periphery of the boss 21. This spring serves as a buffer to take up jars and holds the piston normally, somewhat above the base of the socket in the boss 21.

I have shown the boss beneath the table as partially off-center, the reason for this being that sheets of different sizes are often counted or sorted on tables of this character, and the off-center placing is so arranged that large sheets and small sheets in bundles may be placed on the table with the center of gravity maintained along the axis of the table boss at all times. Thus the size and position of the largest sized sheets likely to be used on any one installation will govern the position of the boss off-center, and the operator will be directed

to place his larger size sheets in a more or less definite position on the table.

In use the water supply valve is turned on to permit water to flow through the pipe 22 from the common connection or T 23 of the waste and supply pipes into the base of the cylinder. This water forces the piston upwardly until the valve is turned off or the piston is as high as it will go. When it is desired to lower the table, the supply valve is turned off and the waste valve opened, whereupon by gravity the table will force out the sustaining column of water and the table settle down under control of the waste valve until it has reached a point within the counter-sink and on a level with the floor.

Thus in taking off from a cutter the table will be fed up to the desired height and gradually lowered as the bundles pile up to maintain the desired level. In loading onto a truck, the easiest height can be arrived at. In loading the table from a truck, it is moved to the level of the floor, the truck run over it and dumped.

In working on a pile on the table, the height of the top of the bundle is maintained where most desirable and the column of water beneath the piston is a non-compressible medium capable of sustaining any load that the mechanical parts will sustain, so long as both valves are closed.

Tables of this character are often used in rows and any revolution of the table would not be desirable. With this in view it is preferred to have the piston rod keyed by means of a key-way 24 in the rod engaging a key or projection in the cylinder head. A like key is provided for the socket in the table boss and the upper end of the piston rod is fitted into the boss, so that its key-way registers with the key.

The advantage of working on a table of this character with heavy bundles of paper which must be examined or counted sheet by sheet and sorted into piles, is obvious without further remark, and the structure described as my preferred form is distinguished by simplicity of parts and ease of operation.

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

1. In combination with a building floor having a recess therein to house a table top, a table top, and means located beneath the floor to carry said table top, said means being controllable from a point outside of the table to move the table top to a variety of horizontal positions above the floor, for the purpose described.

2. In combination with a building floor having a recess therein to house a table top to be flush with the floor, a table top, and a hydraulic piston and piston rod, said rod being engaged with the table top to move it to desired positions above the recess, said hydraulic piston and rod being located beneath the said building floor.

3. In a sorting table for paper bundles, the combination with a horizontal support for paper bundles, of a controllable, movable carrier for said support, adapted to locate and hold the support at a variety of positions, said carrier comprising a hydraulic piston and piston rod, the piston rod being in engagement with the support and operative control of the piston located outside of the support.

JOHN H. REEDY.