July 8, 1924. 1,500,173

E. E. WINKLEY

TRUCK

Filed July 30, 1920

Fig. 2

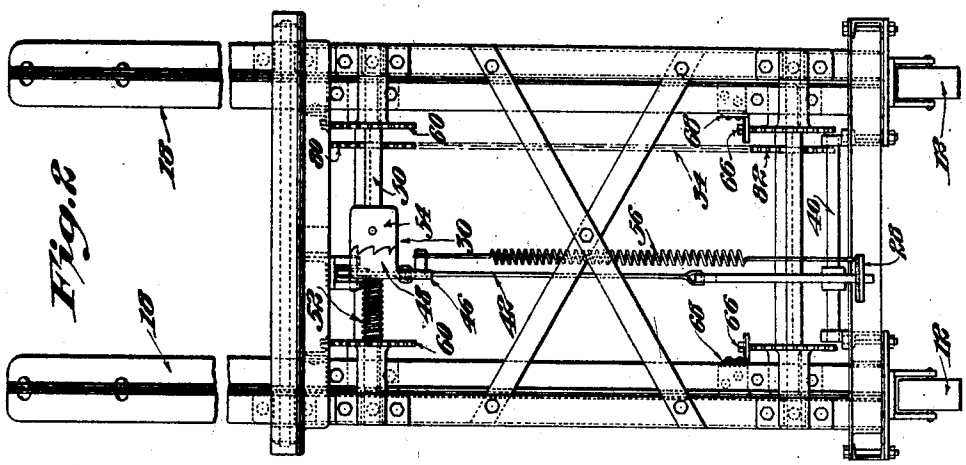
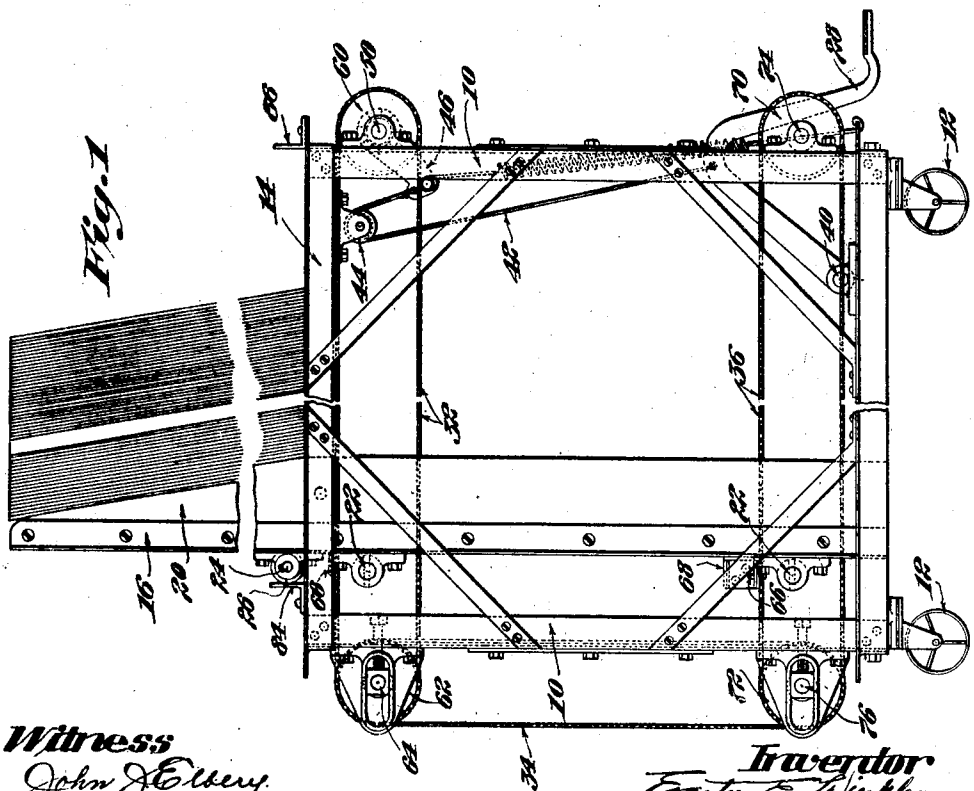


Fig. 1



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Patented July 8, 1924. 1,500,173

UNITED STATES PATENT OFFICE.

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TRUCK.

Application filed July 30, 1920. Serial No. 400,230.

To all whom it may concern:

Be it known that I, ERASTUS E. WINKLEY, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Trucks; 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 appertains to make and use the same.

This invention relates to wheeled trucks for transporting material from place to place, and it has special reference to such devices as are particularly adapted to support and carry pieces of sheet material arranged in a horizontally disposed stack with the pieces resting upon their edges.

Trucks of this general character are well adapted to handle sheets of leatherboard or analogous material which are utilized in the manufacture of boot and shoe heels and from which heel-lifts are cut or dinked in a lift-dinking machine, such, for instance, as set forth in Letters Patent of the United States, No. 1,472,108, issued to me October 30, 1923, and assigned to the United Shoe Machinery Corporation wherein the face of the cutting block is in a vertical plane.

In the machine of the patent above referred to, large sheets of leatherboard disposed in vertical position and resting on their edges upon a feed-table are fed intermittently past the cutting instrumentalities. By reason of the weight and bulk of these leatherboard sheets, considerable difficulty, effort and time is required on the part of the operator in lifting the sheets from the floor and properly positioning them upon the feed-table of the machine preparatory to the lift-dinking operation.

With this in mind, one object of the present invention is to provide a truck of the above indicated character which shall be particularly adapted to support a supply of pieces of sheet material in stacked relation with the pieces resting on their edges in a horizontal plane corresponding in height to that of the feed-table of the machine which is to operate upon the sheets, whereby the operator may wheel a supply of sheets adjacent the operating machine and successively deliver them with rapidity and facility from the truck to the feed-table thereof in vertical position to be operated upon.

Another object of the invention is to provide in a truck of this type, means whereby the operator may periodically advance the stack of sheets towards one end of the truck as the occasion requires, in order that as the sheets are successively removed from the truck, the endmost sheet of the remaining portion of the stack may be maintained within convenient reach of the operator and in such position that it may be slid on its edge directly upon the feed-table of the operating machine, hereinbefore referred to, and thus instantly be in position for the dinking operations thereon.

To the accomplishment of these ends, a feature of the invention resides in a wheeled truck having a horizontal support at the height of the feed-table of the operating machine and upon which a horizontal stack of pieces of sheet material may be disposed with the sheets resting on their edges and leaning against a back rest in a slightly inclined vertical position.

Another feature of the invention contemplates the provision in a truck of this class of a horizontally movable carriage against which the stack of sheets leans or rests, together with a treadle operated mechanism for intermittently advancing the carriage and feeding the stack of sheets across the support towards one end of the stack.

These and other objects of the invention and features by which they are attained will be readily understood from the following description of the preferred embodiment of the invention illustrated on the accompanying single sheet of drawings, in which:

Figure 1 is a view in side elevation of a truck constructed in accordance with the present invention; and Fig. 2 is a view in end or front elevation of the apparatus shown in Fig. 1.

Referring to the drawings, the truck shown comprises a rectangular frame structure 10 conveniently and preferably made of structural steel. The details of construction of the frame structure itself form no material part of the present invention and therefore will not be described. Suitably mounted at the bottom of the frame structure 10 is a plurality of self adjustable truck

wheels 12 for supporting the structure and by means of which the truck may be readily wheeled from place to place. The frame structure 10 also embodies at its upper end a plurality of horizontally disposed parallel members 14 having plane surfaces and offering no side edge obstructions, at their forward ends at least, which constitute supports for the material which is loaded upon the truck and which is to be transported by it. In the present instance the material comprises a plurality of large sheets of leatherboard or analogous material which are disposed upon the supporting members 14 in a horizontally extending stack, the individual sheets resting thereon upon their lowermost edges and being supported in a position slightly inclined to the vertical by means of a back rest or carriage 16 against which they lean or rest.

The carriage 16 comprises a pair of vertically disposed members 18 preferably of structural steel which are located just inside the supports 14 and which project upwardly above the supports to a height corresponding substantially to the height of the pieces of sheet material to be carried by the truck. The upper ends of the vertical members 18 are provided with inclined plates 20 against which the stack of sheets rests. The members 18 project downwardly to substantially the bottom of the truck and are rigidly connected together by suitable tie-rods 22 and a rod 24 which serves to carry a pair of rollers 26 that are adapted to rest upon and traverse the horizontal supports 14 for the purpose of carrying the weight of the carriage and permitting it to be advanced with ease across the support.

The movement or advance of the movable carriage 16 is effected at the will of the operator by means of a treadle 28, through the agency of a ratchet or clutch mechanism 30 and a double-pull mechanism comprising chains 32, 34 and 36. The treadle 28 is mounted upon a rod 40 that is carried in bearings suitably secured to the frame structure 10, said treadle being in the form of an inverted V to the apex of which a flexible cord or other member 42 is attached. The member 42 passes over a pulley 44 carried by the frame structure beneath the supporting members 14, and the other end thereof is attached to an arm 46 constituting a part of a toothed ratchet or clutch member 48 that is rotatably mounted upon a horizontally extending shaft 50 suitably journaled across the front of the frame structure 10. The clutch member 48 is normally urged by a coiled spring 52 surrounding the shaft 50 into cooperative engagement with a toothed clutch member 54 that is pinned to the shaft 50. In order to maintain the treadle 28 in its uppermost position, as indicated in Fig. 1, a spring 56 is provided, one end of which is attached to the pivoted arm 46 and the other end to a part of the frame structure 10.

Obviously the shaft 50 may be rotated intermittently by repeated depressions of the treadle 28 by the operator, each depression serving through the flexible member 42 to rotate the pivoted arm 46 in a clockwise direction, as view in Fig. 1, whereby the cooperating and engaging clutch members 48 and 54 are caused to impart rotative movements to the shaft 50. After each depression of the treadle, the spring 56 functions to return the arm 46 and treadle 28 to their initial positions in readiness for another actuation of the shaft 50.

These rotative movements of the shaft 50 are utilized to impart a horizontal feed movement to the carriage 16, whereby the stack of sheet material disposed upon the supports 14 is advanced or fed horizontally toward one end of the stack. For this purpose, the double-pull mechanism including the chains 32, 34 and 36 is employed, a mechanism of this general type being desirable in order that the movable carriage shall be maintained in vertical position throughout its feed movements, whereby excessive binding due to frictional resistance imposed by the weight of the stack is reduced to a minimum, thereby permitting of the advance of the stack with only a moderate expenditure of energy upon the part of the operator.

The double-pull mechanism above referred to is constructed and arranged as follows: The shaft 50 is provided adjacent its respective ends with a plurality of sprockets 60 with which a pair of chains 32 severally cooperate. These chains 32 extend substantially horizontally across the frame structure 10 and are carried at their opposite ends by a plurality of sprockets 62 which are mounted upon an adjustably positioned shaft 64, each chain being conveniently attached by a bolt 66 to a member 68 that is fixed to each of the upright carriage members 18. The lower chains 36 are similarly supported upon sprockets 70 and 72 that are respectively carried by shafts 74 and 76, said chains being similarly connected to the upright carriage members 20 in a manner similar to that described in connection with the upper set of chains 32. In order to effect the actuation of the lower chains 36, the shafts 64 and 78 are provided with sprockets 80 and 82 which carry the chain 34. From this construction it is evident that whenever the ratchet or clutch shaft 50 is rotated through the agency of the treadle mechanism, the actuating mechanism just described operates to cause the movable carriage 16 to be advanced in parallelism in steps to feed the material across the supports 14. The fact that the force to

move the carriage forward is applied at two vertically separated points on the side members 18 insures the continued maintenance of a vertical position for these members and hence an easy movement of the carriage in advancing the stack across the supports. The limits of travel of the movable carriage 16 are determined by a rear stop 84 and front stop 86 secured to the supporting members 14, the front stop 86 also performing the function of a guide to hold the endmost piece of the stack in position.

As already stated, the height of the supporting members 14, upon which the stack of material rests, is made to correspond to the height of the feed-table of whatever machine is to be utilized to operate upon the stock. Thus having loaded the truck with a stack of stock, in the manner shown in Fig. 1 of the drawings, the operator may readily transport the stock on the truck to a position adjacent the machine which is to operate upon the stock, whereupon he may with facility successively slide the endmost sheets of material off the support 14 and into position on the feed-table of the operating machine. As the supply of stock on the truck is gradually diminished, the operator has only to step on the treadle 28 to advance the stack of material forwardly into such position that the end sheet may be reached, handled and transferred conveniently by a sidewise sliding movement while on edge into proper position upon the feed-table of an operating machine such as disclosed in said application Serial No. 342,656.

While the invention has been set forth as embodying a more or less specific arrangement and location of parts and details of construction, it will be understood that many variations may be effected therein without departing from the spirit and scope of the invention, and therefore only such limitations should be imposed as are indicated in the appended claims.

Having described the nature of the preferred embodiment of the invention, that which is claimed as new is:

1. A wheeled truck comprising a horizontal support presenting a plane surface without edge obstructions at the forward end at least for material to be transported, a horizontally movable carriage for supporting sheet material on edge and feeding it across said support into position to be slid sidewise off the support at its forward end, and a stop at each end of said support for limiting the movement of the carriage thereon.

2. A wheeled truck comprising a horizontal support presenting a plane surface without edge obstructions at the forward end at least for material to be transported, a carriage for supporting a stack of sheet material on edge movable upon said support, a stop at the forward end of said support, and manually operated means for moving said carriage horizontally to feed the material across the support toward said stop and into position to be slid sidewise off the support when at its forward end.

3. A wheeled truck comprising a horizontal support presenting a plane surface without edge obstructions at the forward end at least for material to be transported, a carriage for supporting a stack of sheet material on edge movable upon said support, and treadle mechanism for moving the carriage horizontally in steps to feed the material across the support into position to be slid sidewise off the support at its forward end.

4. A wheeled truck comprising a horizontal support for material to be transported, a carriage for supporting a stack of sheet material on edge movable upon said support, a ratchet device for moving the carriage horizontally, a treadle mechanism for actuating said ratchet device intermittently to cause the carriage to feed the material in steps across said support, and a stop at the forward end of the support to limit the forward movement and position the material for removal from the truck.

5. A wheeled truck comprising a horizontal support for material to be transported, a vertically disposed horizontally movable carriage, and double-pull mechanism connected to said carriage at vertically separated points for maintaining said carriage vertical while actuating it to feed the material across said support.

6. A wheeled truck comprising a horizontal support for material to be transported, a vertically disposed horizontally movable carriage, a double-pull mechanism connected to said carriage at vertically separated points for maintaining said carriage vertical while actuating it to feed the material across said support, and means for actuating said mechanism intermittently to cause the carriage to feed the material in steps.

7. A wheeled truck comprising a horizontal support upon which pieces of sheet material in horizontal stacked formation rest upon their edges, a vertically disposed horizontally movable carriage extending above and below the support against which the pieces lean in slightly inclined vertical position, and means including a double-pull mechanism and a treadle-operated ratchet mechanism for moving the carriage horizontally to feed the stack of pieces across the support towards one end of the support.

8. A wheeled truck comprising a horizontal support upon which pieces of sheet material in horizontal stacked formation rest upon their edges, a vertically disposed horizontally movable carriage extending above

and below the support against which the pieces lean in slightly inclined vertical position, rolls for supporting the carriage upon said support, a double-pull mechanism connected to said carriage at vertically separated points below said support, and means for actuating said mechanism to cause said carriage to roll across said support and feed the stack of pieces towards one end of the support.

9. A wheeled truck for transporting and holding a supply of sheet material in position adjacent the feed-table of a machine adapted to operate upon the material while supported on edge in said machine, said truck comprising a horizontal support having a height corresponding to that of the feed-table of the operating machine, and means for sustaining on said support a supply of sheet material in substantially horizontal stack formation with the sheets resting on their edges including a back rest against which the stack of material leans in slightly inclined vertical position.

10. A wheeled truck for transporting and holding a supply of sheet material in position adjacent the feed-table of a machine adapted to operate upon the material while supported on edge in said machine, said truck comprising a horizontal support having a height corresponding to that of the feed-table of the operating machine, a rest for sustaining on said support a supply of sheet material in substantially horizontal stack formation with the sheets resting on their edges in slightly inclined vertical position, and means for advancing said rest step by step to feed the material across the support in a direction opposite to that in which the sheets are inclined.

11. Transportation means for supplying sheet leatherboard to the feed table of a heel lift dinker, or like machine, of the type in which the face of the cutting block is in a vertical plane, having a wheeled base, a table for supporting the leatherboard, and a rest for sustaining the leatherboard on edge in stack formation, said table being of such height that the sheets may be slid, on edge, directly upon the feed table of said machine.

12. Transportation means for supplying sheet leatherboard to the feed table of a heel lift dinker, or like machine, of the type in which the face of the cutting block is in a vertical plane, comprising a wheeled truck to be positioned beside said machine having a surface corresponding to the height of the feed table of said machine and provided with means for sustaining the leatherboard in stack formation on edge, for direct sidewise delivery to said machine without change from the vertical position thereof.

ERASTUS E. WINKLEY.