W. H. STOLTZE.

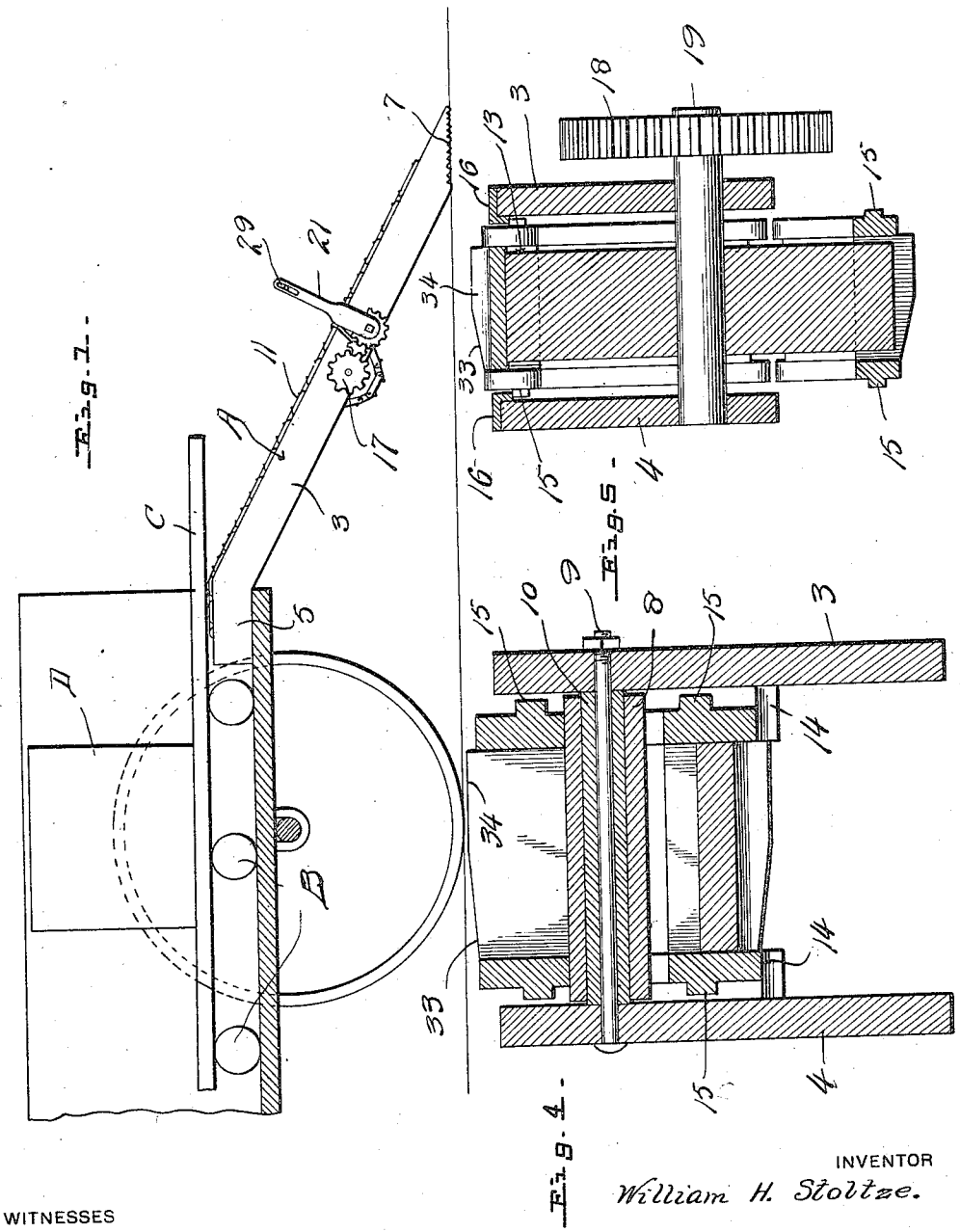
WAGON SKID.

APPLICATION FILED FEB. 19, 1916.

1,261,967.

Patented Apr. 9, 1918.

2 SHEETS—SHEET 1.



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William H. Stoltze.

WITNESSES

Chas. E. Kemper

Wm. H. Mulligan

BY

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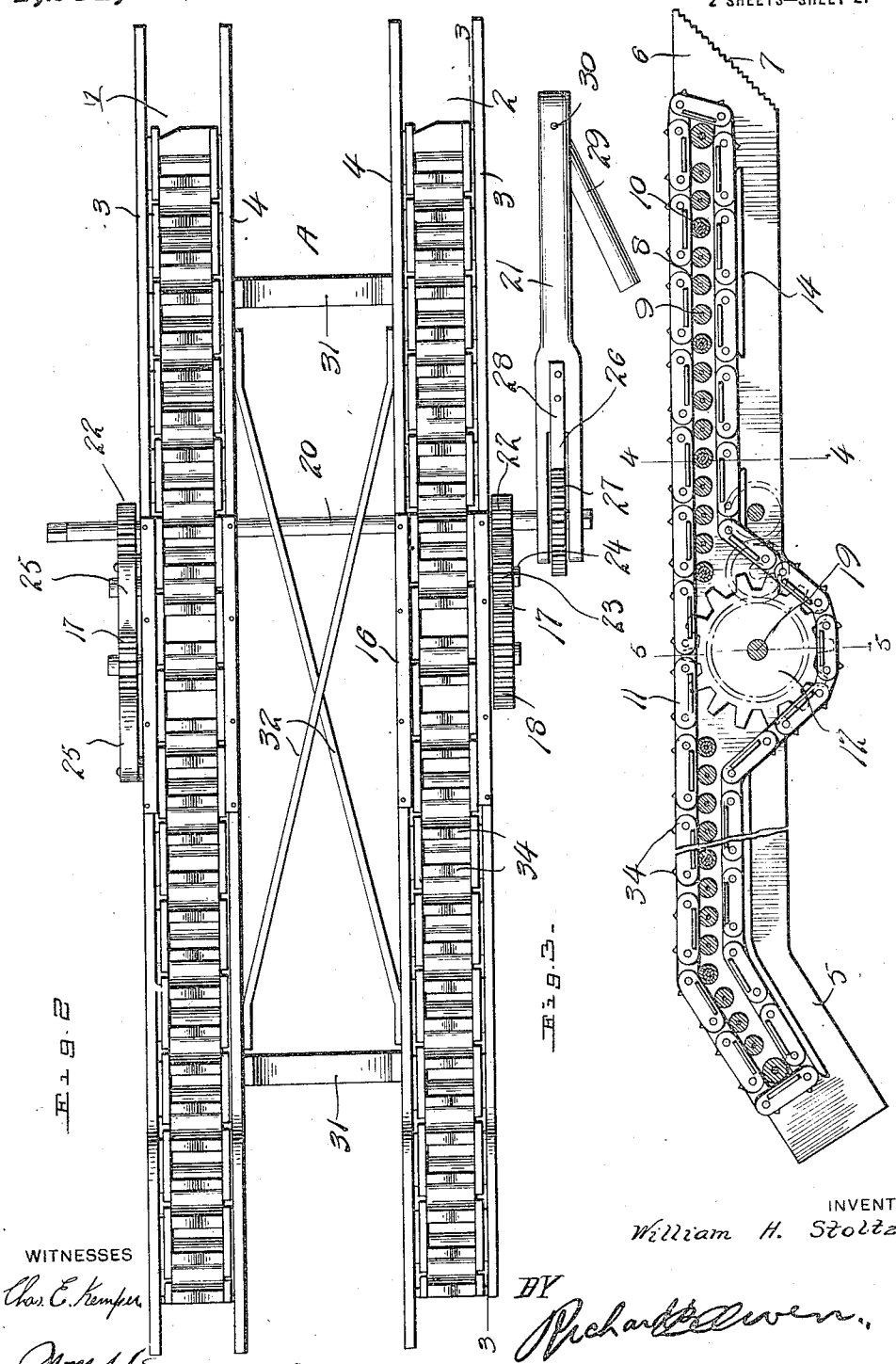


Fig. 2.

Fig. 3.

WITNESSES

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WILLIAM H. STOLTZE, OF ST. CHARLES, MISSOURI.

WAGON-SKID.

1,261,967. Specification of Letters Patent. Patented Apr. 9, 1918.

Application filed February 19, 1916. Serial No. 79,408.

To all whom it may concern:

Be it known that I, WILLIAM H. STOLTZE, a citizen of the United States, residing at St. Charles, in the county of St. Charles and State of Missouri, have invented certain new and useful Improvements in Wagon-Skids, of which the following is a specification.

This invention relates to wagon skids and the primary object is to provide a device of this character which will facilitate the loading of cartons, barrels or similar articles upon a wagon in a manner that will require but a minimum of labor and exertion on the part of the person loading the wagon.

The invention further contemplates the provision of a wagon skid that may be adapted to move the articles which are loaded upon the wagon up to the forward end of the wagon body.

As a further object of the invention, the conveyer chain of the device is provided with means for retaining the articles to be loaded in a central position on the wagon skid, whereby the danger of the articles falling to the ground or off one side of the wagon skid will be obviated.

A further object of this invention is the provision of a wagon skid which consists of comparatively few parts and is simple in construction, but durable and well adapted to withstand the rough usage to which devices of this character are ordinarily subjected.

For a full description of the invention and the advantages and merits thereof, reference is to be had to the following description and the accompanying drawings, wherein is illustrated the preferred form of my invention, in which;

Figure 1 is a section through the rear end of a wagon body showing the wagon skid employed to move an article forwardly to the front end of the wagon body.

Fig. 2 is a top plan view of the device.

Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2.

Fig. 4 is a vertical section on the line 4—4 of Fig. 4, through one of the channels which constitutes a part of the frame.

Fig. 5 is a vertical section on the line 5—5 through one of the sprockets.

A frame A is provided which consists of longitudinally extending channels 1 and 2, each channel being provided with side walls 3 and 4. One of the ends 5 of each of the side walls of the channels is disposed at an obtuse angle and the opposite ends 6 are provided with a diagonally cut edge which is provided with serrations 7 whereby the skid will be prevented from slipping when articles are being loaded upon the wagon.

A plurality of transversely extending rollers 8 are mounted in each of the channels 1 and 2, the rollers being adapted to turn or rotate on bolts 9 which extend through the center of the rollers and are secured in the side walls 3 and 4 of each of the channels 1 and 2. The rollers are arranged in a line extending longitudinally of each of the channels and are mounted adjacent the top edge of the side walls 3 and 4. Every fourth roller is provided with an internal sleeve 10 which is of a length exactly the same as the width of the inside of the channels, their ends therefore, contact with the inner face of each of the walls 3 and 4, thereby serving as spacing members for holding the side walls 3 and 4 in spaced relation at all times. The bolts 9 in the rollers provided with the internal sleeve, are extended through the sleeve and secured to the side walls as shown by Fig. 4 of the drawings.

Mounted for longitudinal travel in each of the channels 1 and 2 is a conveyer chain 11 which is arranged to travel on the rollers 8. A sprocket 12 is mounted in each of the channels, the teeth of which are adapted to mesh with the chain for imparting motion thereto. Each block of the chain is provided with a recess 13 which extends inwardly from its bottom face and is adapted to receive a tooth of the sprocket 12. The sprocket 12 therefore, may be provided with twice as many teeth as it ordinarily would if a sprocket was designed to contact only the links of the chain. A greater driving force is thereby obtained and the chain is not necessarily weakened because of the recesses formed in each of the blocks of the chain. To prevent the under part of the chain from sagging below the side walls 3 and 4 of the channels, the chain is mounted upon shelves 14 which are affixed to the inner faces of the side walls of the channels. Each link of the chain is provided with a ledge 15 which passes under a flange 16 formed on the upper edge of the side walls 3 and 4 of the channels and immediately over the sprocket 12. This construction prevents the chain from bulging upwardly while the sprocket is engaging with the chain while the article is passing upwardly

on the conveyer, and an even and regular line of travel of the conveyer is thereby provided.

Manually operated means for imparting power to the sprocket 12 whereby the conveyer chain may be made to travel, is employed which consists of a train of gears 17 arranged on each side of the wall 3 of each of the channels 1 and 2, the largest gear 18 of the train 17 being mounted upon the stub shaft 19 which carries the sprocket 12. A transversely extending driving shaft 20 is mounted in the walls of the channels and extends outwardly at each end, being provided with a squared end portion for the reception of a crank handle 21 which is employed for turning the shaft 20. A gear 22 is mounted on each end of the shafts 20 outside of the walls 3 of each of the channels and is adapted to mesh with an intermediate gear 23 which is mounted upon the stub shaft 24, this intermediate gear being in mesh with the large gear 18 which imparts power to the sprocket 12. Pawls 25 are mounted upon the wall 3 of the channel 1 and are arranged to engage with the teeth of the sprocket so that the motion of the chain may be stopped at any desired point without danger of the slipping of the article which is carried thereon.

The operating crank 21 is provided with a bifurcation 26 in which is mounted a ratchet wheel 27, and the pawl 28 is arranged to engage the ratchet wheel 27. The crank handle 21 may be oscillated and the chain may be made to travel by virtue of the intermittent engagement of the pawl 28 with the ratchet wheel 27. The handle 29 of the crank 21 is pivoted as at 30 in the end of the crank arm 21 for providing a handle by which the shaft may be rotated when it is desired to use the crank in this manner. The channels 1 and 2 are spaced apart by means of the braces 31 and the diagonally extending brace rods 32 which are secured to the walls 4 of each of the channels 1 and 2.

The wagon skid may be employed in any capacity where articles of great weight are to be moved up an incline or from a low plane to a higher plane and it will probably be greatly employed to load articles from the ground upon a wagon. As shown by Fig. 1 of the drawings a function of the wagon skid is illustrated in connection with its use on a wagon. The usual rollers B are employed which may consist of pieces of pipe or other suitable roller elements and a plank C which should be placed upon the rollers and having its under face engaged with the links of the chain. The carton D or other similar articles are placed upon the plank C and, by reason of their weight, will cause the plank to tightly engage the conveyer chain and when the same is operated the plank will be thrust forward and the carton D moved up to the forward end of the wagon body. The use of cant-hooks, crowbars and other similar tools is thereby obviated.

In order that the article which is being conveyed on the skid may be made to keep to the center line thereof, I provide each of the upper faces of the blocks of the chain with beveled faces 33, the bevels extending inwardly and downwardly and conforming to the general curve of a barrel or other similar round article which is being transported on the conveyer chain. Each block is provided with prongs 34 which will bite into the article that is being conveyed and prevent the same from slipping.

From the foregoing it will be observed that a very simple and durable wagon skid has been provided, the details of which embody the preferred form. I desire it to be understood however, that slight changes or modifications in the minor details of construction may be made without departing from the spirit of the invention or the scope of the claim hereunto appended.

I claim:

A device of the character described comprising a frame having side channels, chains longitudinally movable through the channels, a sprocket mounted in each of the channels and of a diameter greater than the depth of the channels and receiving the chains in both its forward and rearward travel and whereby the chain at its point of contact will bulge outwardly from the channel for providing a relatively narrow space between the upper and lower portions of the chain during its travel, and a plurality of shelves carried by the frame and supporting the chain to maintain the latter in a relatively narrow space.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. STOLTZE.

Witnesses:
EDW. SCHNEDLER,
J. F. RAUCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."