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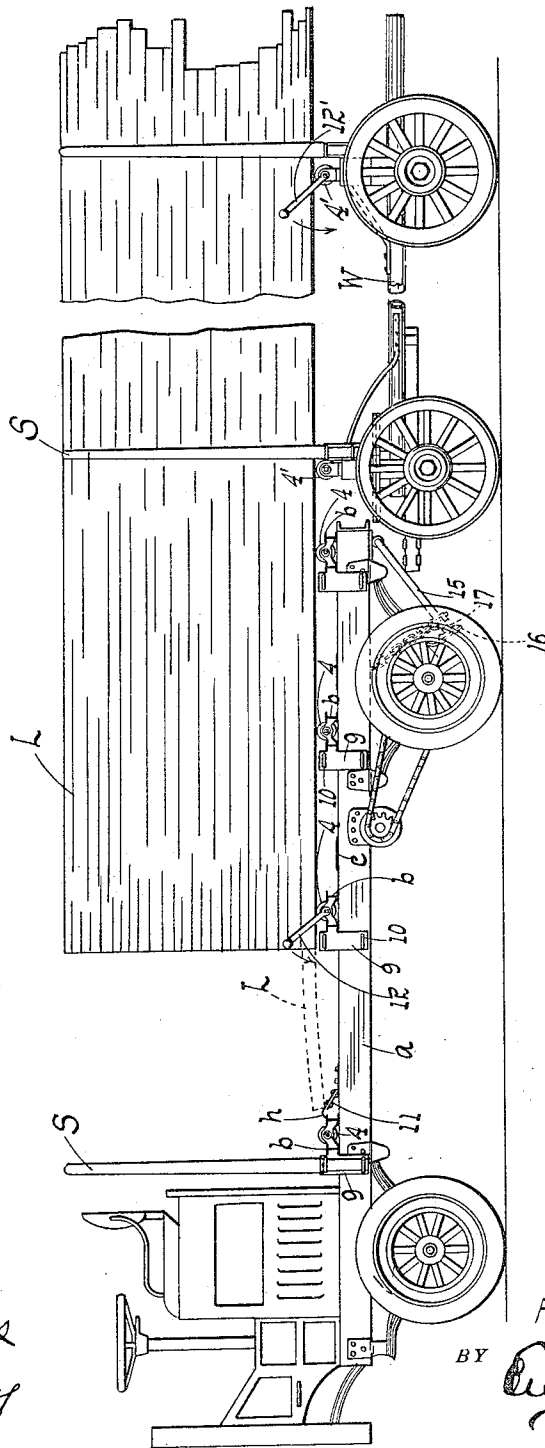
F. W. KARCHES.  
LUMBER TRUCK LOADER.  
APPLICATION FILED FEB. 4, 1911.

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Patented Aug. 1, 1911.

4 SHEETS—SHEET 1.

FIG. 1.



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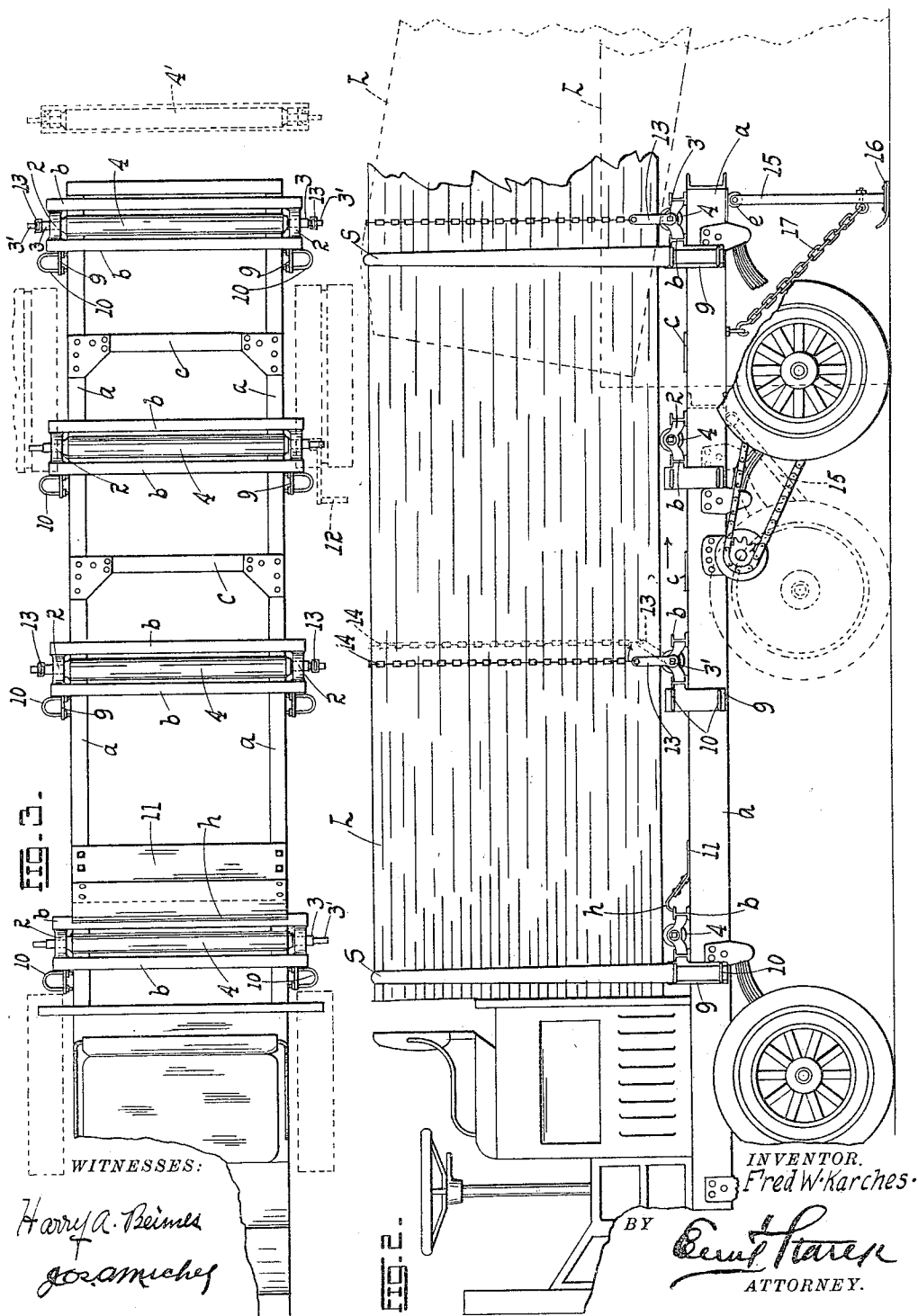
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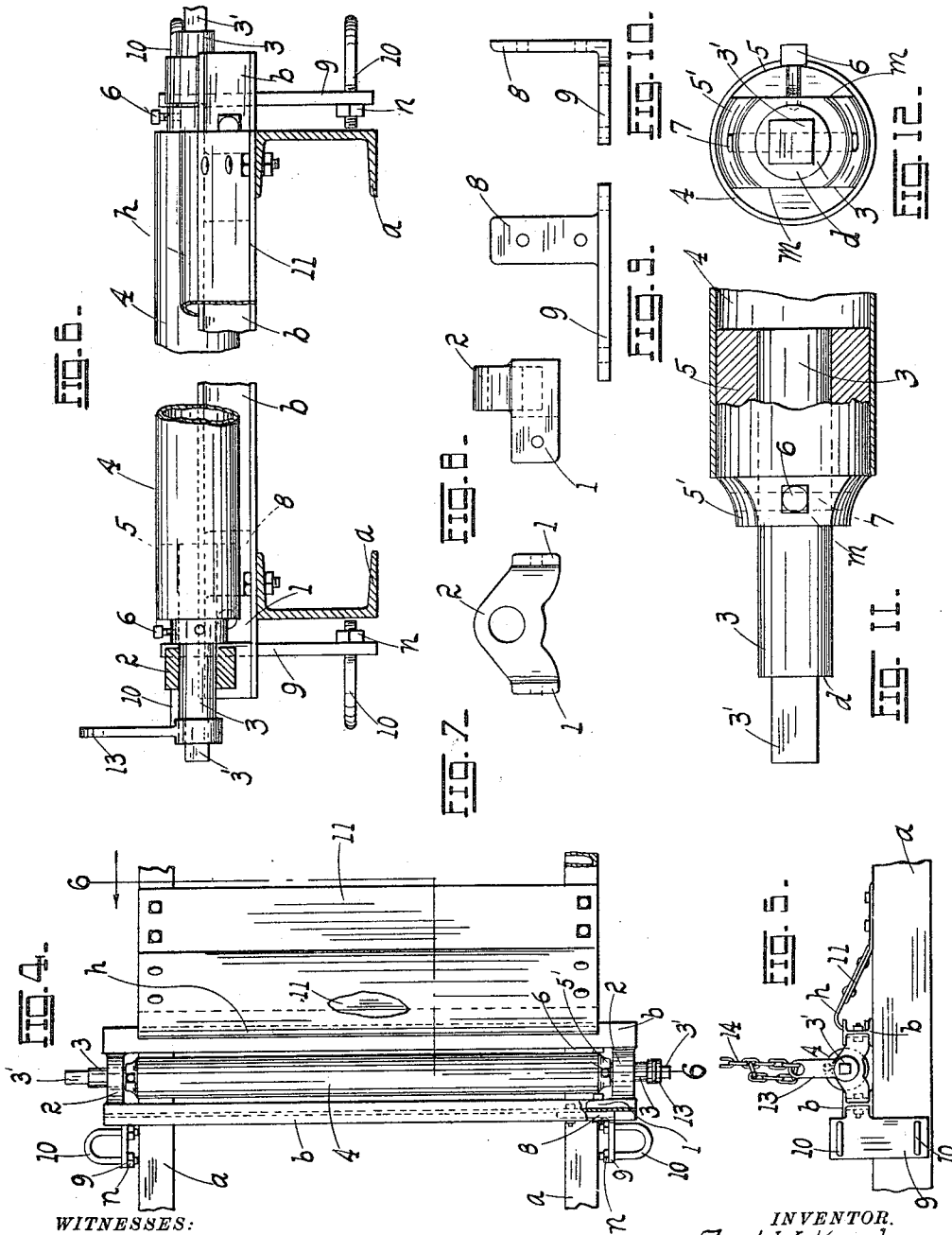
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4 SHEETS-SHEET 3.



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4 SHEETS-SHEET 4.

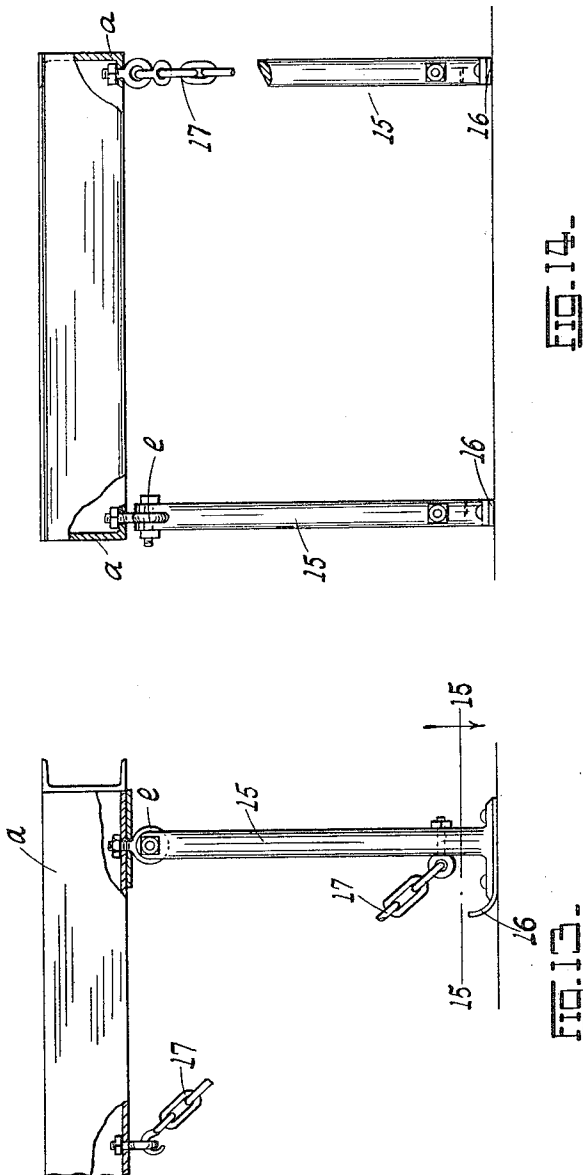


FIG. 14.

FIG. 13.

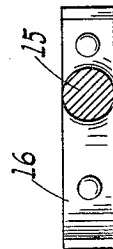


FIG. 15.

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# UNITED STATES PATENT OFFICE.

FRED W. KARCHES, OF ST. LOUIS, MISSOURI, ASSIGNOR TO FIDEL GANAHL LUMBER COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

## LUMBER-TRUCK LOADER.

999,310.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed February 4, 1911. Serial No. 606,570.

*To all whom it may concern:*

Be it known that I, FRED W. KARCHES, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Lumber-Truck Loaders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in lumber-truck loaders; and it consists in the novel construction of truck and loading attachment more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a motor-truck showing the lumber being loaded from the "dead" wagon; Fig. 2 is a side elevation of the motor-truck with lumber loaded; Fig. 3 is a top plan of the motor-truck, with lumber removed; Fig. 4 is a top plan of one end of the motor-truck frame showing the roller over which the lumber travels and on which it finally rests, and showing also the guide-shield or buffer which directs the advancing lumber onto the roller; Fig. 5 is a side view of Fig. 4; Fig. 6 is a combined elevation and vertical cross-section on the broken line 6-6 of Fig. 4; Fig. 7 is an inside elevation of the bearing for the spindle of the roller; Fig. 8 is a side view of Fig. 7; Fig. 9 is a longitudinal edge view of the casting or bracket to which the stake-stirrups are secured; Fig. 10 is a top edge view of Fig. 9; Fig. 11 is a combined section and elevation of one end of the roller and spindle therefor; Fig. 12 is an end view of Fig. 11; Fig. 13 is a side view of the rear end of the motor-truck showing the shoe-braces dropped to lowest position during the unloading operation; Fig. 14 is a rear elevation of Fig. 13; and Fig. 15 is a horizontal section on the line 15-15 of Fig. 13.

The object of my invention is to provide a lumber-truck of the self-propelled or motor variety with means for facilitating the loading of lumber onto the truck with a view of minimizing the time of the loading operation; one which will facilitate the operation of loading and minimize the handling of the lumber; one which will afford the full load of lumber the necessary support while the load is being transferred

from the "dead" wagon onto the motor-truck; one facilitating the unloading of the lumber; one insuring a tight grip on the lumber when once loaded; and one possessing further and other advantages better apparent from a detailed description of the invention which is as follows:

Referring to the drawings, *a* represents the longitudinal side channel members (or equivalent structural members) of the motor-truck frame, the same being connected at the ends, and at intermediate points by cross I-beams *b*, and braces *c*, the whole constituting the truck frame of the motor-truck, though in practice any equivalent frame may answer the purpose in view. The I-beams *b* are arranged in pairs, the terminal web portions of the said I-beams having secured thereto the side wings 1 of the roller-bearings 2, said bearings supporting the terminal spindles 3 of the pipe rollers 4 operating between the I-beams. The ends of the pipes 4 are provided with hollow bushings 5 (Fig. 11) having conical reduced terminals 5' projecting beyond the piping, said terminals having opposite flat faces *m* one of which receives a set-screw 6 to initially hold the spindle 3 inserted into the bushing, the spindle being finally locked in place by a pin 7 inserted through registering openings in the terminal 5' and spindle, between the faces *m, m*. The bushing 5 may be driven into the pipe 4 or secured thereto in any mechanical manner. The outer ends of the spindles 3 terminate in square or polygonal portions 3' leaving shoulders *d* for a purpose presently to appear. Secured to the outer face of the web of preferably the forward member of each pair of I-beams, is the lateral horizontal wing 8 of a vertical bracket 9 through which are passed the arms of the superposed stake-holders or stirrups 10, the stirrups being held in place by nuts *n* (Fig. 6) or equivalent mechanical manner, the stakes *S* being inserted between the stirrups and I-beams as shown.

Located rearward of each pair of I-beams *b* (or their equivalents) is a shield or buffer 11 made preferably of two sections of sheet metal riveted together, the lower section being bolted to the frame members *a*, the edge of the upper section resting on the adjacent member *b*, the crown *h* of the

shield being raised somewhat above the member *b*. The shield extends substantially the full length of the roller 4, across the truck frame.

- 5 Over the projection 3' of the roller spindle may be temporarily passed the socket of a crank or handle 12 during the loading operation, after which the projection receives the socket of a chain-anchor 13, a chain or  
10 band 14 being passed around the lumber *L*, the ends of the chain being secured to the opposite anchors 13.

- Hinged to a pair of eye-bolts *e* at the rear of the motor-truck frame are props or supports 15 the lower free ends of which terminate in shoes or runners 16 having front up-turned ends (Figs. 13, 15) and when  
15 dropped to touch the ground are anchored by chains 17 to the truck-frame by any suitable fastening means. When not in  
20 service, the props 15 are swung up (Fig. 1) and held in a raised position by the same chains.

- The lumber in the yard is first deposited  
25 on a "dead" wagon *W* (Fig. 1) which is drawn from one pile to another until the entire load is deposited thereon, this method permitting the motor-truck to deliver the load previously deposited thereon to the customer, builder or consumer. The "dead"  
30 wagon is likewise provided with rollers 4' equipped with crank-handles 12' (Figs. 1, 3).

- The operation of the loader may be described as follows:—Assuming that the  
35 "dead" wagon *W* has first been loaded in the yard, the empty motor-truck is run into the yard and the "dead" wagon moved up to the rear of such truck (Fig. 1). Thereupon the operator turns the crank 12' to  
40 impart rotation to the roller 4' in proper direction to advance the load onto the motor-truck. The advancing lumber runs over the rollers 4 on the motor-truck frame, being  
45 assisted in such advance by the rotation of the rollers 4 through the crank-handles 12 in the hands of an assistant. A handle may be temporarily attached to a roller-spindle wherever necessary or desirable, as quite obvious from the drawings. Should the  
50 boards (in a small load of thin material) tend to sag in front (see dotted position in Fig. 1) and fail to pass freely over the rollers 4, they will strike the buffer or shield  
55 11, the inclination of which is such as to direct the sagging board over the ridge or crown *h* of said shield, and onto the roller 4 as obvious from the drawing. Without the shield 11, the sagging edge of the board  
60 might strike the roller below the middle and thus fail to pass freely over the roller. During the loading operation, the props 15 are out of commission. After the lumber is loaded, the cranks 12 are removed, and in  
65 their place the anchor-arms 13 are substi-

tuted, a chain 14 being secured to each pair of anchors. The mounting of the anchor arms or levers 13 on the roller-spindles is important. Should the body of lumber when once loaded tend to shift (for example 70 to the right, Fig. 2), it will impart a rotation to the rollers 4 in the same direction, and hence depress the anchor arms 13. Such a depression or oscillation of the arms serves to tighten the chain all the more, and hence  
75 increase the grip of the chain on the load. In this way, the shifting of the load rearward (it can not shift forward on account of the driver's seat) to any considerable extent is prevented, since some of the arms 13  
80 of the series will be depressed in such shift, and some of the chains will thus be tightened. When the lumber is to be discharged or unloaded from the motor-truck, the chains 14 are removed, and the props 15 are  
85 swung down (Fig. 2) so as to take the strain off the rear of the truck due to the passage of the load of lumber thereover. In the unloading, the anchors 13 are removed, the cranks 12 are restored, and the rollers 4 are  
90 turned in the opposite direction. The lumber thus is rolled back until the rear free end of the load drops on the ground, the load assuming an inclined position such as shown in the upper dotted view in Fig. 2. When  
95 that happens, the truck is withdrawn from under the raised end of the lumber pile, thus allowing the front end of such pile to drop onto the ground (see bottom dotted pile Fig. 2). In thus running the truck from under  
100 the lumber, the shoes 16 are brought into requisition for then they act as sleigh runners, and prevent the props 15 from penetrating the ground.

It will be seen from the foregoing that the  
105 motor-truck need never be out of commission for purposes of delivery, any great length of time. The only time it is standing still is during the few moments the pile is wheeled thereonto from the "dead" wagon,  
110 which latter is a permanent adjunct of the yard where the lumber is piled. The "dead" wagon may be a motor wagon or drawn by animals according to the desire of the dealer. Any design of "dead" wagon  
115 may of course, be employed.

While specifically referred to as a lumber-truck loader, it is obvious that other material may be handled, such as rails, sheet iron, and the like.

To permit the rollers 4 to support the lumber after the same is once loaded, the tops of the rollers must necessarily be above the tops of the I-beams *b*, and the ridges or crowns *h* of the shields 11 must be depressed below  
125 the rollers.

The props 15 are independent of one another to allow for any unevenness of the ground to which they are dropped during the unloading operation.

Having described my invention, what I claim is:—

1. In combination with a delivery-truck provided with a frame, a series of transverse rollers mounted across the frame, over which the material being loaded may be passed, and means on the ends of and rotatable with the rollers for the anchoring of binding chains passed over the load resting on the rollers.

2. In combination with a delivery-truck, a series of transverse rollers disposed thereon over which the material being loaded may be passed and on which it rests after being loaded, an arm coupled to the terminal of the roller and oscillatable with the rotation of the roller, said arm serving as a chain anchor.

3. In combination with a delivery-truck provided with a frame, a series of transverse rollers mounted across the frame and terminating in spindles having polygonal ends, arms adapted to be temporarily passed over said polygonal ends, and chains leading from an arm on the one side to an arm on the opposite side and passed over the load resting on the rollers.

4. In combination with a delivery-truck provided with a frame, rollers on the frame for the support of the material deposited thereon, a band wrapped about the load, and means coupled to the rollers and band respectively and rotatable with the rollers for tightening the grip of the band on the material with any shifting of the material after the same has been loaded.

5. In combination with a delivery-truck provided with a frame, rollers on the frame for the support of the material deposited thereon, a band wrapped about the load, and devices rotatable with the rollers disposed on the ends of the latter and coupled to the ends of the band for tightening the band about the load with any shifting of the latter while on the rollers.

6. In a delivery-truck, a roller, and a chain-anchor at one end of the roller rotatable with the rotation of the roller.

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

FRED W. KARCHES.

Witnesses:

EMIL STAREK,  
JOS. A. MICHEL.

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