J. W. WINNINGHAM.

SORTING APPARATUS.

APPLICATION FILED MAR. 29, 1912. RENEWED DEC. 21, 1914.

1,148,066. Patented July 27, 1915.

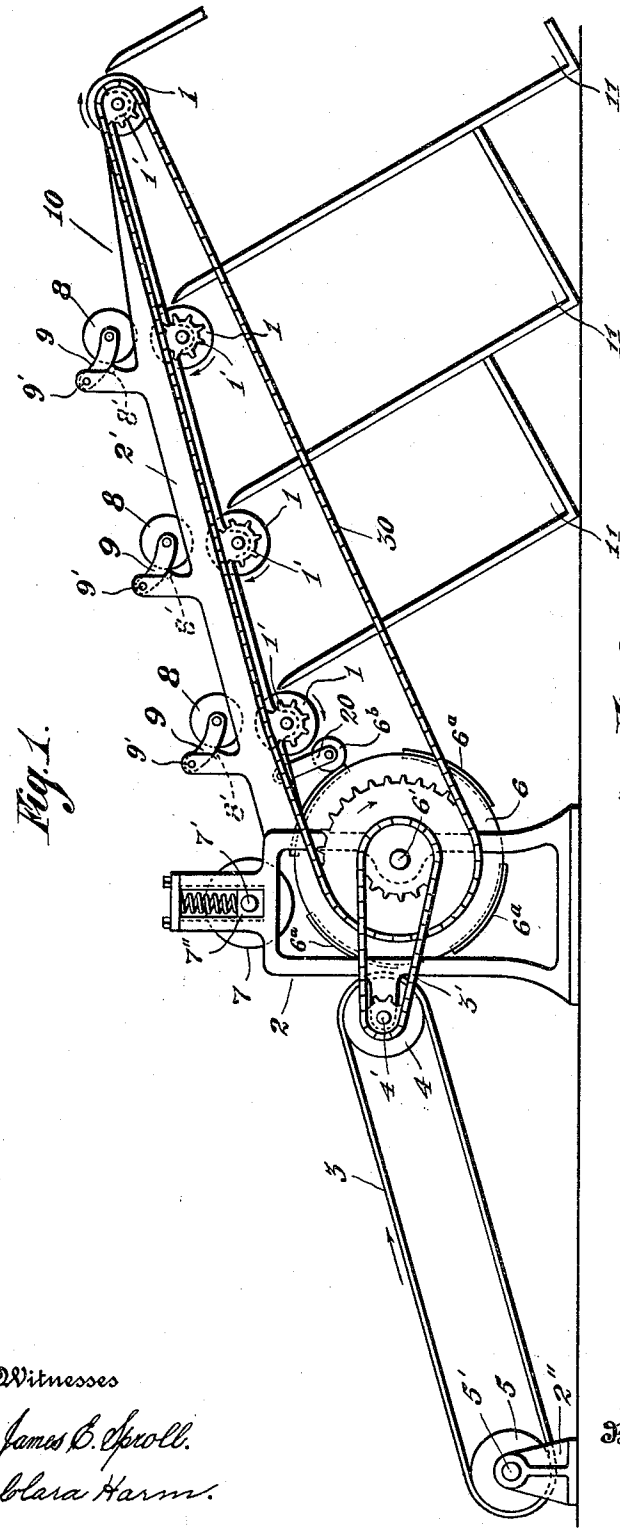


Fig. 1.

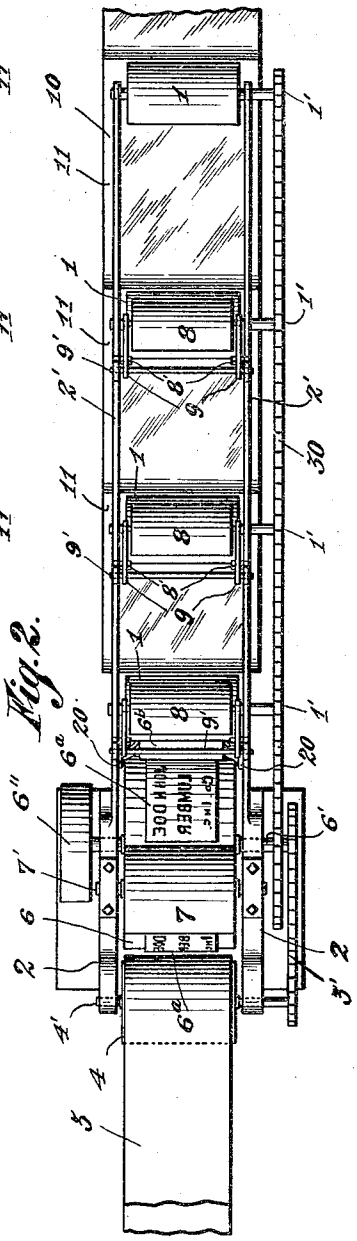


Fig. 2.

Witnesses

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SORTING APPARATUS.

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To all whom it may concern:

Be it known that I, JOHN W. WINNINGHAM, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Sorting Apparatus, of which the following is a specification.

The present invention pertains to novel apparatus of the above type primarily devised for sorting lumber according to length and it consists in certain novel features and combinations of parts as set forth in the following description and succinctly defined in the appended claims.

With reference to the accompanying drawing wherein similar reference characters designate corresponding parts throughout the several views: Figure 1 is a side elevation of an apparatus embodying the features of my invention in such form as now preferred by me, and Fig. 2 is a plan of the same.

My invention embraces a feed way, as 10, adapted to receive pieces of stock for endwise movement and comprising supports, as 1, spaced apart varying distances to leave clearance spaces through which the stock, tilting by gravity on said supports, falls.

Supports 1, as shown, are rotatable members in the form of rollers, journaled on rearwardly extending side parts 2′ of a frame 2 with their upper surfaces in a common plane with an inclined feed conveyer 3 comprising an endless belt taking about wheels 4, 5, which latter are secured to shafts 4′, 5′, journaled, respectively, on forwardly projecting brackets of frame 2 and on standards 2″.

Frame 2 is equipped with stock forwarding means in the form of lower and upper wheels or rollers 6, 7, secured to shafts 6′, 7′, which are journaled, respectively, in fixed bearings of frame 2 and in vertically movable spring pressed slide boxes 7″ guided in the frame. Wheel 6, as shown, is provided with peripheral printing plates 6^a to which ink is conveniently applied, during rotation of the wheel, through the medium of an inking roller 6^b journaled on swing arms 20, pivoted to frame 2.

Shaft 6′, which is provided with a drive pulley 6″, is connected with conveyer 3 and supports 1, to drive the same in the direction indicated by the arrows in Fig. 1, through the medium of link belt gearing comprising a belt 3′ taking about suitable sprockets secured to shafts 6′, 4′, and a belt 30 taking about a sprocket secured to shaft 6′ and engaged with sprocket wheels 1′ secured to the axles of respective supports 1. Directly over the supports 1 are press rolls 8, journaled on respective inclined frames 9 which latter are pivoted, as at 9′, to the frame parts 2′ and normally engage underlying fixed stops 8′ with the rolls 8 in the path of the stock and rearwardly of the axes of their respective frames.

Reference numeral 11 indicates suitable bins or compartments positioned, in any desired manner, beneath feed way 10 to receive pieces of stock delivered from respective supports 1.

In operation, pieces of stock placed on conveyer 3 are conveyed between rollers 6 and 7, the former of said rollers through the provision of the plates 6^a marking the same during their advance movement. Further advance movement of the stock is effected by the rotatable supports 1, against which the stock is pressed by the adjacent press rolls 8. The shorter lengths of stock tilt on the first support 1 and fall into the forward bin 11 while the longer pieces of stock are conveyed onward and received in the proper succeeding bins.

Bins 11 which through the inclination of feed way 10 can be arranged so as to be accessible for ready removal of the stock conveniently hold such stock in an upright position. These bins can however, be dispensed with, or other contrivances provided for retaining or delivering the sorted stock.

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

1. A lumber sorter comprising a feed way for taking lumber endwise including transversely disposed supports, said supports being spaced apart varying distances along the feed way in the direction of its length, the spacing of the supports increasing toward the rear end of the feed way.

2. A lumber sorter comprising an inclined feed way for taking lumber endwise including transversely disposed supports spaced apart along the feed way in the direction of its length, the spaces between succeeding supports being gradually increased in width toward the rear end of the feed way.

3. In a lumber sorter, a feed way includ-

ing transversely disposed supports spaced apart varying distances in the direction of its length, the spacing of the supports increasing toward the rear end of the feed way, and means arranged above said supports to press the lumber thereagainst, for the purpose specified.

4. In a lumber sorter, a feed way including transversely disposed supports spaced apart varying distances in the direction of its length, the spacing of the supports increasing toward the rear end of the feed way, and means yieldingly supported above said supports for pressing the lumber thereagainst, for the purpose specified.

5. A lumber sorter comprising a feed way including transversely disposed rotatable supports spaced apart varying distances in the direction of its length, means for rotating said supports to advance the lumber endwise along said feedway, and presser rolls arranged above said supports for pressing on the lumber being advanced.

6. A lumber sorter comprising a feed way for taking lumber endwise including transversely disposed rotatable supports spaced apart varying distances along the feed way, means for positively rotating said supports to advance the lumber, and press rollers arranged over said supports and each associated with a respective one thereof for engagement with the lumber.

7. A lumber sorter comprising a feed way for taking lumber endwise including transversely disposed rotatable supports spaced apart varying distances along the feed way in the direction of its length, means for rotating said supports, and press rollers spaced apart in the path of the lumber each associated with a respective one of said supports.

8. A lumber sorter comprising an inclined feed way for taking lumber endwise including transversely disposed rotatable supports spaced apart varying distances along the feed way, means for rotating said supports, and press rollers spaced apart in the path of the lumber.

9. A lumber sorter comprising a feed way including transversely arranged rotatable supports for advancing lumber endwise and for supporting pieces differing in length at respective points for overbalance and endwise tilting thereon by gravity, said supports being spaced apart varying distances along the feed way with the spacing thereof increasing toward the delivery end of the feed way, and means for rotating said supports.

10. A lumber sorter comprising a feed way including transversely disposed rotatable supports spaced apart uniformly varying distances along the feed way, the distances of spacing increasing toward the rear end of the feed way, means for rotating said supports, and means for forwarding lumber to said feed way.

11. A lumber sorter comprising a feed way including transversely disposed rotatable supports spaced apart varying distances along the feed way, press rollers mounted in the feed way over said supports, means for forwarding lumber to said feed way, and means for feeding lumber to said forwarding means.

12. A lumber sorter comprising a feed way including transversely disposed supports spaced apart in the direction of the length of the feed way, the spacing of said supports increasing toward the rear end of the feed way, and means for feeding lumber endwise through the forward end of said feed way.

13. A lumber sorter comprising a feed way including transversely disposed supports spaced apart varying distances along the feed way, and upper and lower rotatable members for forwarding lumber endwise to said feed way.

14. A lumber sorter comprising a feed way including rotatable supports spaced apart varying distances along the feed way, press rolls mounted over said supports for relative vertical movement, upper and lower rotatable members for forwarding lumber to said feed way, and means for operating one of said members and said supports.

Signed at Seattle, Washington this 7th day of March 1912.

JOHN W. WINNINGHAM.

Witnesses:

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