Aug. 19, 1924. 1,505,928

E. L. BUCK ET AL

FEED ATTACHMENT FOR CONVEYERS

Filed Jan. 2, 1923 2 Sheets-Sheet 1

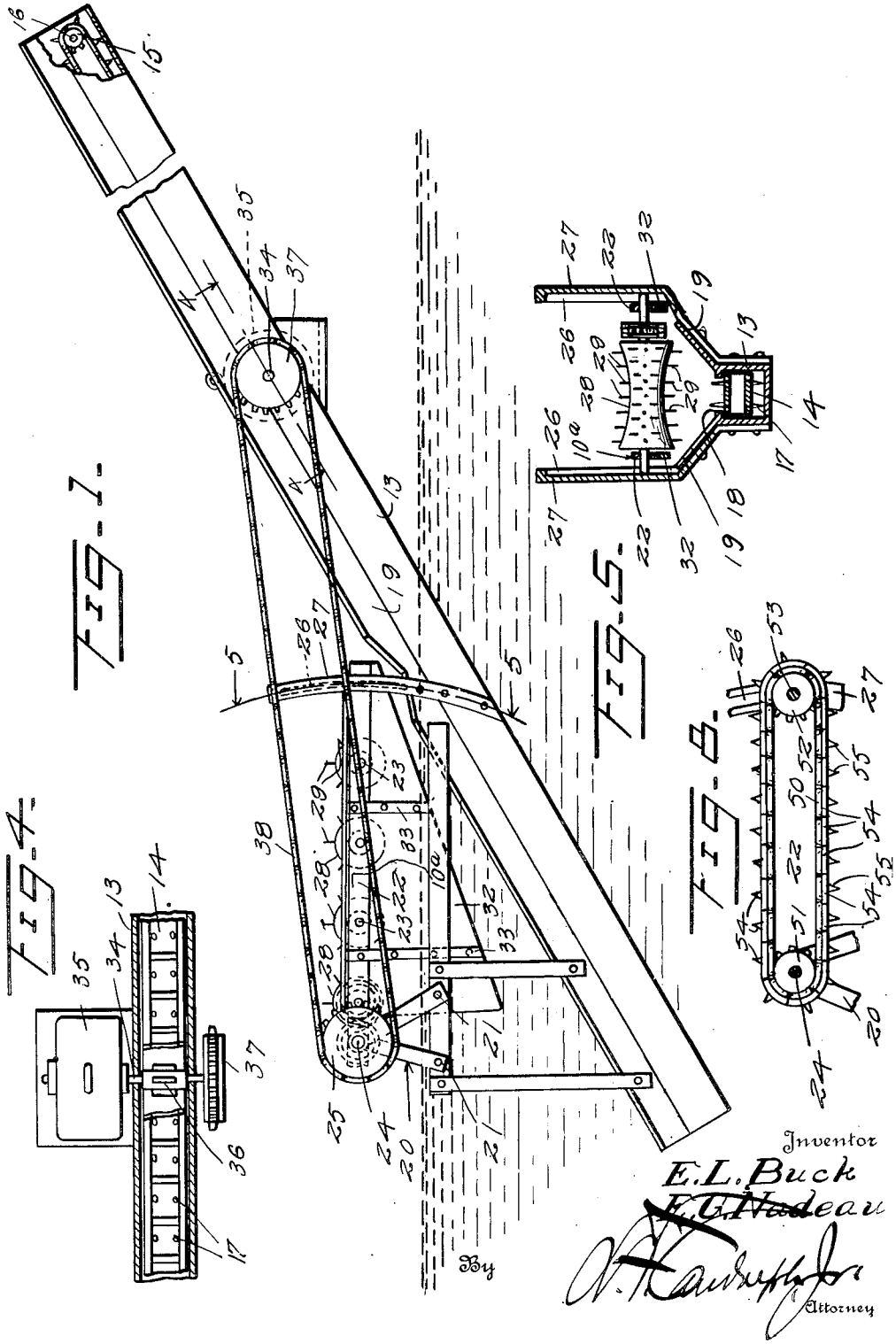

Fig. 1.

Fig. 4.

Fig. 5.

Fig. 8.

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Fig. 3.

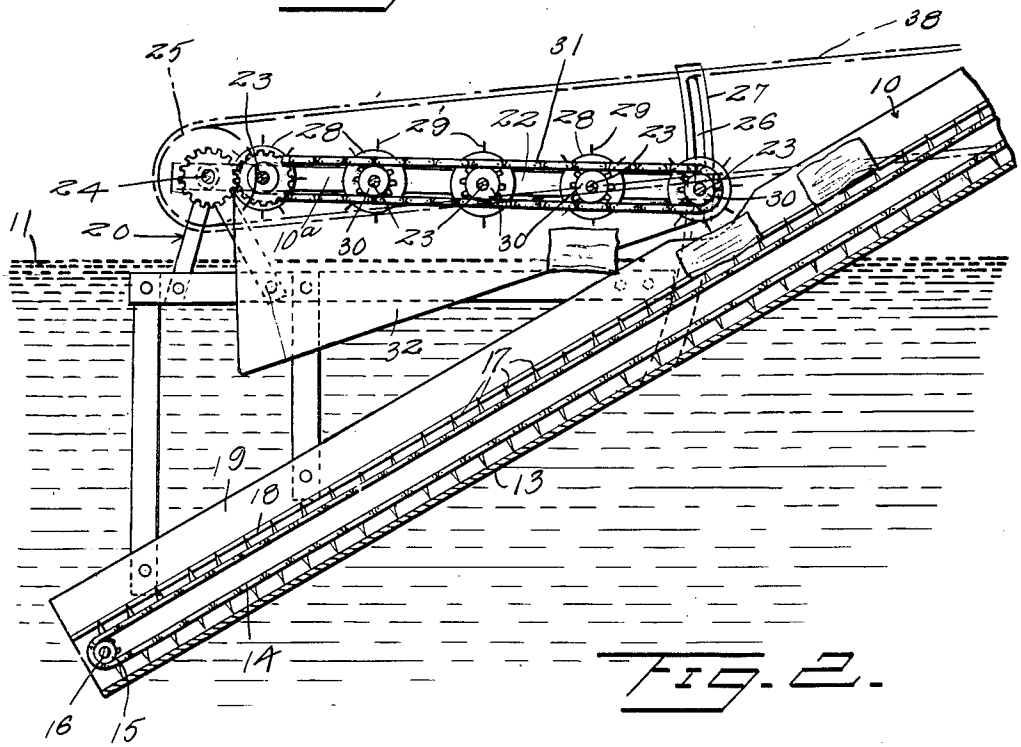

Fig. 2.

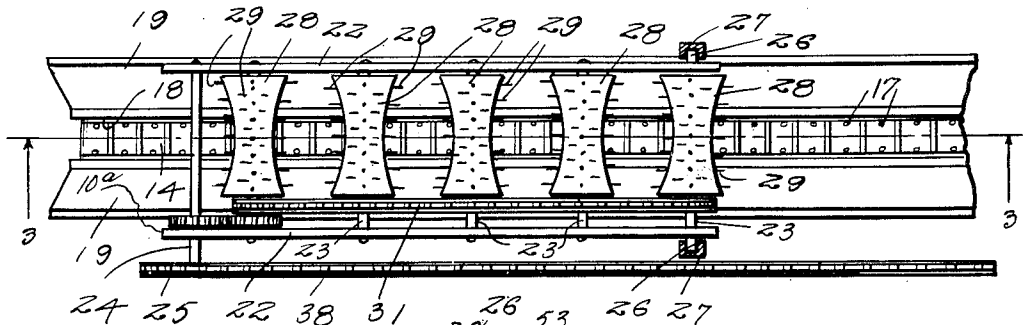

Fig. 6.

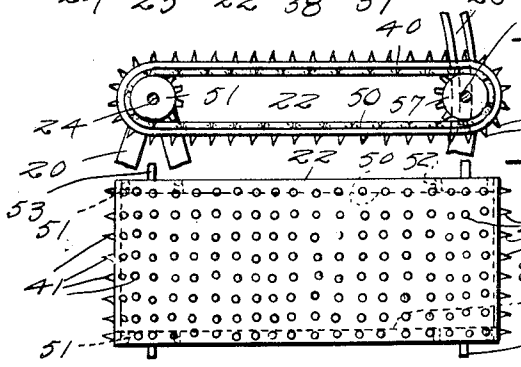

Fig. 7.

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UNITED STATES PATENT OFFICE.

EDWARD L. BUCK AND EDMUND G. NADEAU, OF WEST ENFIELD, MAINE.

FEED ATTACHMENT FOR CONVEYERS.

Application filed January 2, 1923. Serial No. 610,268.

To all whom it may concern:

Be it known that we, EDWARD L. BUCK and EDMUND G. NADEAU, citizens of the United States, residing at West Enfield, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Feed Attachments for Conveyers; and we 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 a feed attachment particularly for a conveyer of the type which removes logs or other objects from a body of water in which they are floated from the forest for use.

At the present time, usually at least two men are constantly employed to guide the logs to the conveyer and hold and depress them into engagement with the conveyer. This method is slow and expensive. Realizing these conditions, it is an object of the present invention to provide an attachment for the conveyer which will of itself feed the logs or other objects to the conveyer, thus overcoming the necessity of employing the labor mentioned, and which will more rapidly cause engagement of the logs with the conveyer and more rapid conveying thereof from the water.

Another object is to provide a construction employing a feeding frame to engage the logs from above and by the weight thereof to insure rapid and effective engagement of the conveyer with the logs.

It is further aimed to provide means to pivotally mount the said frame on the conveyer to drive it in unison with the conveyer, arrange the frame for yielding movement to accommodate passage of logs thereunder and to provide guards on the frame to depend to the water line to assist in guiding the logs or objects to the conveyer.

Various additional objects and advantages will be pointed out and become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:—

Figure 1 is a side elevation showing the invention in use;

Figure 2 is a plan view showing the invention in use;

Figure 3 is a longitudinal vertical sectional view on the line 3—3 of Figure 2;

Figure 4 is a horizontal section of the invention taken substantially on the line 4—4 of Figure 1;

Figure 5 is a cross sectional view on the line 5—5 of Figure 1;

Figures 6 and 7 are fragmentary side elevations and plan views of a modified form of conveying means, and

Figure 8 is another fragmentary side elevation of a further modified form of conveying means.

Like reference characters designate like or similar parts in the different views.

Referring specifically to the drawings, a conveyer or carrier is generally shown at 10, inclined with respect to a body of water 11 such as a stream or canal and extending below said body. Conveyer 10 is adapted to remove logs or other articles as suggested at 12, which are floated from the forest in the body of water to the conveyer 10 which delivers same to the bank of the stream for piling, use in mills or the like.

Said conveyer 10 is to be taken as conventional. The present embodiment consists of a casing 13, generally rectangular, in which an endless sprocket chain or belt 14 travels over rollers or wheels 15 at each end thereof and journaled on pins or shafts 16 spanning the side walls of said casing 13. Said chain or belt 14 has spurs or barbs 17 which travel in a longitudinal groove 18 in the upper walls of the casing 13 and extend above said walls so as to engage the logs or articles 12 and elevate them out of the water. Flaring outwardly and upwardly from the casing 13 are guide flanges 19 between which the logs pass. Said conveyer 10 is anchored and placed in any suitable manner as will be readily understood. One other form of conveyer may be a lag belt as will be obvious. Much difficulty is encountered in placing the logs 12 in engagement with the spurs 17, at the present time requiring the services of two attendants constantly. It is this labor which my attachment overcomes and which at the same time enables more expeditious elevation of the logs.

Referring now to the attachment, bearings 20 are employed one on each side of the conveyer 10, being for instance of V-shape and fastened adjacent the uncon-

nected ends of the legs by bolts or the like 21 to the casing 13. A frame 10ª is provided consisting of side bars 22 connected together by means of cross rods or shafts 23. At one end, a rod or shaft 24 is journaled in the side bars 22 and in the bearing 20 on which a pulley wheel 25 is keyed. The foremost rod 23 is longer than the remainder of said rods and the ends thereof are disposed and adapted to travel in grooves 26, arcuate as shown, of guide brackets 27 rigidly fastened to and extending upwardly from the casing 13. Rigid with the rods 23 and 24 are feed rollers 28, preferably dished intermediate their ends as shown and provided with spurs or barbs at 29. On said shafts 23 and 24, sprocket wheels 30 are keyed over which a sprocket chain 31 travels and whereby all of the rollers 28 will be driven from the shaft 24. Depending from the side bars 22 are guide plates 32 which extend at least to the water line. These side plates 32 may be fastened in position in any suitable manner as by means of cleats 33 secured thereto and to the side bars 22. Also said side plates 32 preferably converge toward their forward ends. As a result of the construction described, the frame consisting of the side bars 22 and the rollers and plates 32 is free to swing upwardly from the shaft 24 as a pivot when a log is engaged by a conveyer 14 and in its upward movement displaces such frame. Normally the weight of the frame is sufficient to prevent it being raised merely by contact of the log therewith, whereby such weight of the frame is used to insure engagement of the log with the spurs 17.

Any suitable means may be used to operate the attachment.

The shaft 34 is journaled transversely of the casing 13 being driven from any suitable source such as a motor 35. On the shaft 34, a sprocket wheel 36 is rigidly fastened which engages the chain 14 and serves to positively drive it. Also rigid on the shaft 34 but exteriorly of the casing 13 is a pulley 37 over which a belt 38 is trained which also passes over the pulley 25. The belt 14 is driven at the same rate of speed as the rollers 28 and from the same source of power as described.

In operation, logs or other objects 12 floating on the water 11 will enter the attachment intermediate the side plates 32 where the same is engaged by the barbs 29 of one or more of the rollers 28, depending on the size of the log. The weight of the frame prevents upward movement thereof due to engagement with the log which insures engagement of the log with the barbs 17. When the log is engaged by the barbs 17, it will be forcibly conveyed upwardly, thus overcoming the weight of the frame and causing the latter to swing upwardly to a corresponding extent on the shaft 24 as a pivot and with the foremost shaft 23 guided by travel in the grooves 26.

A modified form is illustrated in Figures 6 and 7. In lieu of the rollers 28, an endless belt 40 is employed from which spurs or barbs 41, to function similar to those at 29, extend. Said belt 40 is carried by sprocket chains 50 which are trained over sprocket wheels 51 and 52, the former being keyed on shaft 24 and the latter keyed on a shaft 53, journaled in side bars 22 having its end disposed for travel in the grooves 26 of the brackets 27.

A further modified form is shown in Figure 8. It differs from Figure 6 in that a single sheet belt like 40 is supplanted by individual lags or bars 54 secured to chains 50 from which the spurs or barbs 55 extend to function like those at 29 and 41.

It will be understood that various changes in the details, combinations and arrangements of the parts may be made provided they fall within the spirit and scope of the invention.

What is claimed is:—

A feed mechanism for a conveyor comprising bearings secured to the conveyer, a shaft journaled in said bearings, a frame having side bars pivotally mounted by said shaft, said shaft journaled in said side bars, the conveyer having a second shaft, the latter shaft extending beyond the side bars, brackets on the conveyer having grooves into which the ends of the last shaft extend, sprocket wheels on all of said shafts, a sprocket chain passing over said sprocket wheels, means to drive one of said shafts, said shafts being adapted to pass over the object to be conveyed, feed rollers on said shafts to engage the object, and depending side plates on said side bars.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD L. BUCK.
EDMUND G. NADEAU.

Witnesses:
ERVIN C. LUTHERS,
EARL R. ROUND.