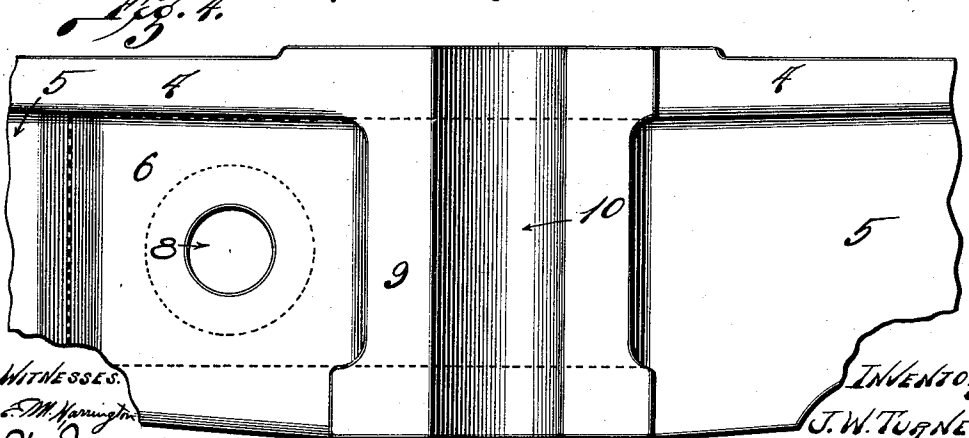
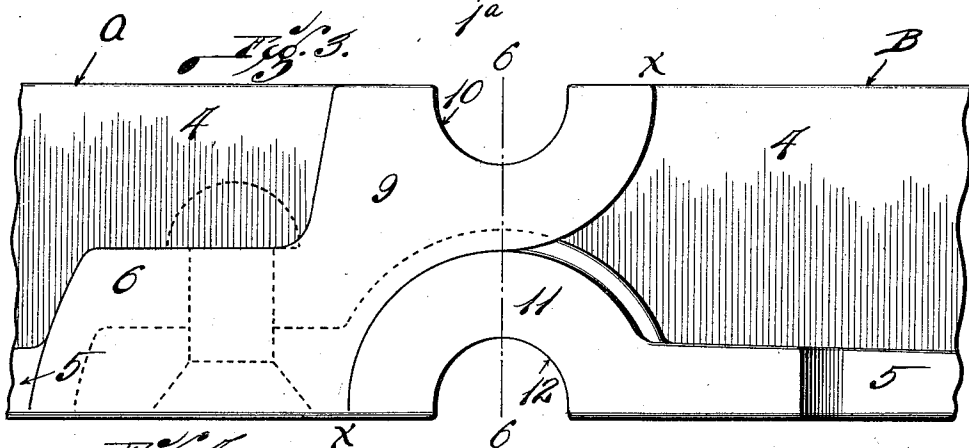
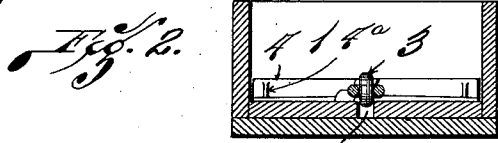
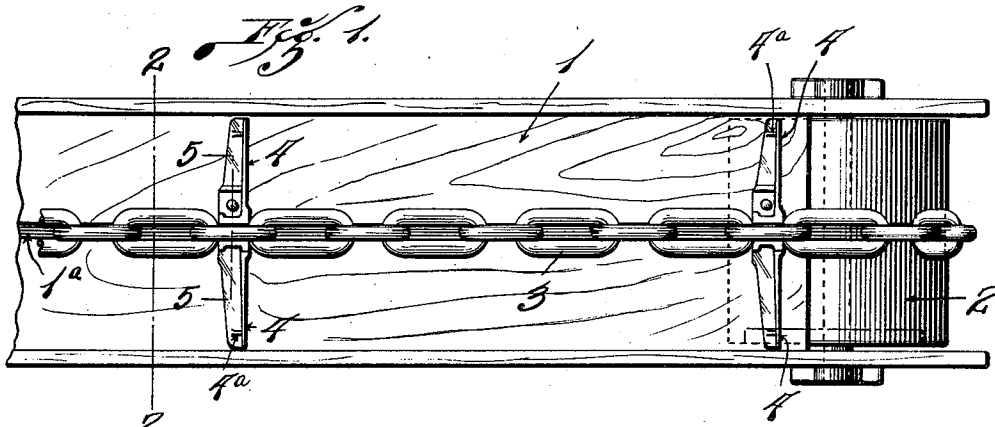


J. W. TURNER.
 CHAIN CONVEYER FLIGHT.
 APPLICATION FILED MAR. 15, 1911.

1,001,097.

Patented Aug. 22, 1911.

2 SHEETS—SHEET 1.



WITNESSES.
 E. M. Harrington
 J. M. Jannus.

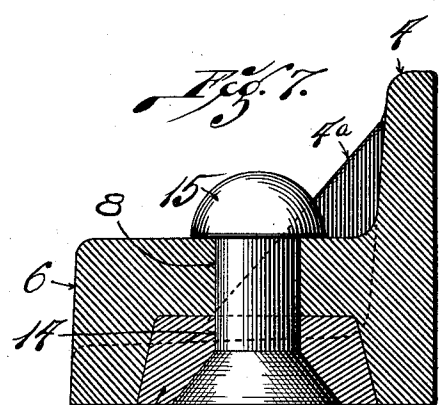
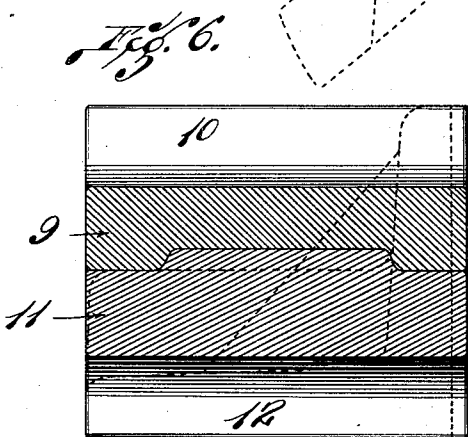
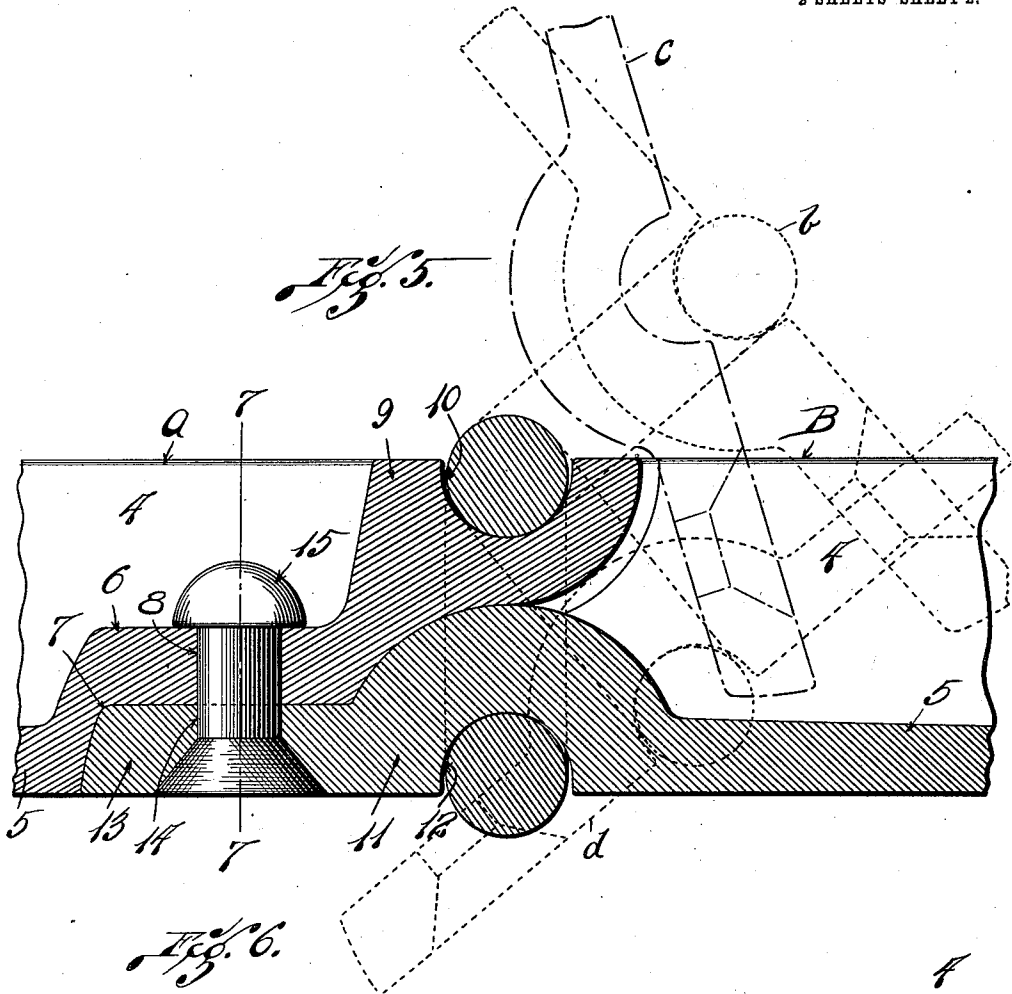
INVENTOR.
 J. W. TURNER.
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2 SHEETS—SHEET 2.



WITNESSES.
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UNITED STATES PATENT OFFICE.

JAMES W. TURNER, OF NEW ORLEANS, LOUISIANA, ASSIGNOR TO C. T. PATTERSON COMPANY LIMITED, OF NEW ORLEANS, LOUISIANA, A CORPORATION OF LOUISIANA.

CHAIN-CONVEYER FLIGHT.

1,001,097.

Specification of Letters Patent. Patented Aug. 22, 1911.

Application filed March 15, 1911. Serial No. 614,717.

To all whom it may concern:

Be it known that I, JAMES W. TURNER, a citizen of the United States, residing at New Orleans, parish of Orleans, State of Louisiana, have invented a certain new and useful Improvement in Chain-Conveyer Flights, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a trough with the conveyer chain shown therein and which chain is equipped with flights of my improved construction. Fig. 2 is a cross section taken on the line 2—2 of Fig. 1. Fig. 3 is a rear elevation of the central portion of a flight of my improved construction. Fig. 4 is a plan view of the central portion of the flight. Fig. 5 is an enlarged cross section taken on the line 5—5 of Fig. 1. Fig. 6 is a section taken on the line 6—6 of Fig. 3. Fig. 7 is a cross section taken on the line 7—7 of Fig. 5.

My invention relates generally to chain conveyers of the type particularly designed for use in carrying off refuse lumber from saw mills, and the like, and more particularly to the flights or cleats which are applied to the chain, and which ride upon the bottom of the trough and convey the refuse lumber, saw dust, etc., therefrom.

The principal object of my invention is to provide a flight which is an improvement upon the forms of flights shown in Patents Nos. 627,482, 943,734 and 977,273, and further to provide a two-part flight which can be readily attached to the chain, and which extends laterally in both directions from the link to which it is attached.

A further object of my invention is to provide a two-part flight which can be easily and quickly positioned upon a link of the conveyer chain by slightly twisting said chain and partially rotating one of the parts of the flight with respect to the opposite part, and to form the joint between the two parts so that when said parts are properly assembled there will be absolutely no lost motion or play between them, and they will combine to form in effect a single strong rigid structure, securely attached to one of the chain links and extending there-

from toward the side walls of the trough in which the conveyer operates.

To the above purposes my invention consists in certain novel features of construction hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawings, 1 designates a trough through which the refuse lumber and saw dust is conveyed and arranged in suitable bearings at the outer end of said trough is a drum or sheave 2, around which the chain 3 passes.

Formed in the bottom of the trough 1 is a longitudinally disposed groove 1^a through which the lower portions of the vertical links of the chain travel during operation. The main body portions A and B of my improved flight are alike in structure, that is each part is composed of a vertically disposed web 4, and a horizontally disposed web 5. The two webs of each part are cast integral, and if desired strengthening ribs 4^a may be formed integral with the rear sides of said webs.

The under sides of the webs 5 are flat, and are designed to ride directly upon the surface of the bottom of the trough 1, and the front faces of the webs 4 engage the refuse lumber, and saw dust and force the same forward through the trough to the discharge end thereof. The inner end of the web 5, of the part A is enlarged or thickened as designated by 6, and formed in the under side of this enlarged inner end portion is a recess 7. Formed through the central portion of the enlarged inner end of this web 5 is an aperture 8 adapted to receive the rivet or like fastening device used for fastening the two parts of the flight together as hereinafter more fully described. Formed integral with the inner end of the enlarged portion 6 and with the inner end of the vertical web 4 of the part A is a head 9, which is transversely disposed with respect to the length of said part A, and formed in the top of this head 9 is a groove 10, adapted to receive the upper portion of the link to which the flight is attached. Formed integral with the inner ends of the webs 4 and 5 of the part B is a transversely disposed head 11 designed to fit snugly immediately beneath the head 10, and formed in the under side of this head 11 is a groove 12 adapted to

receive the lower portion of the link to which the flight is attached. Formed integral with the head 11 on the side opposite the side to which the web 5 is attached is a tongue 13 which is adapted to fit snugly within the recess 7 and formed through the center of said tongue 13 is an aperture 14 which when the parts are properly assembled coincides with the aperture 8.

15 15 designates the rivet or like device used in fastening the two parts of the flight together and upon the chain, and the lower end of this lever is preferably counter-sunk in a corresponding portion of the aperture 14. The under side of the head 9 is formed on a compound curve as clearly shown in Fig. 3 and indicated X X, and the corresponding inner end of the part B is formed on a compound curve, and thus when the two parts are properly assembled their meeting inner ends fit snugly together.

In assembling the two parts of the flight on the conveyer chain, the part A is manipulated so that the upper portion of the link to which the flight is to be attached is seated in the groove 10 after which the chain is twisted slightly so as to swing the lower portion of the engaged link upward into approximately the position shown by dotted lines *b*, Fig. 5. The tongue 13 of the part B is now inserted through the link as shown by dotted lines *c*, Fig. 5, and said link is now permitted to swing back to a vertical position, and in so doing the part B is manipulated so as to engage the lower part of the engaged link in the groove 12, and with the parts so positioned, or as shown by dotted lines *d*, Fig. 5 the head 11 will travel around beneath the head 9 until the two parts A and B are in alinement and the tongue 13 occupies the recess 7. The rivet 15 is now inserted through the coinciding apertures 8 and 14, and when said rivet is properly secured the two parts of the flight are rigidly connected to one another and to the engaged link of the conveyer chain.

The meeting ends of the two parts of the flight are so formed as to overcome all lost motion or play when said two parts are fitted together upon a chain link, and when said two parts are joined by the rivet or like fastening device a very strong, rigid flight is formed which readily performs the work required.

In chain conveyers of the type herein shown and described it very frequently happens that one of the flights becomes broken and where flights of my improved construction are made use of, a broken flight can be removed and replaced by a new flight without removing the chain from the trough. It will be readily understood that the last mentioned advantage is especially desirable, inasmuch as where the two parts of a flight

are moved longitudinally relative one another in being positioned on the chain, such action can not be brought about without removing the chain from the trough or lifting a portion thereof above the top of said trough, and this procedure involves considerable time and labor.

It will be readily understood that minor changes in the form and size of the various parts of my improved flight can be readily made and substituted for those herein shown and described without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim:

1. A flight for conveyer chains, comprising two parts adapted to engage a link of the conveyer chain, and the joint between the two parts being formed on a compound curve to permit the parts to be assembled on the chain link by partially rotating one part relative to the opposite part.

2. A flight for conveyer chains, comprising two parts adapted to engage a link of the conveyer chain and the joint between the two parts being formed on a compound curve to permit the parts to be assembled on the chain link by partially rotating one part relative to the opposite part, and means for rigidly securing the two parts together in position upon the engaged chain link.

3. A flight for conveyer chains, comprising two parts adapted to engage a link of the conveyer chain and the joint between the two parts being formed on a compound curve to permit the parts to be assembled on the chain link by partially rotating one part relative to the opposite part, a lug projecting from the inner end of one of the parts and there being a corresponding recess in the opposite part for receiving said lug.

4. A flight for conveyer chains, comprising two parts adapted to engage a link of the conveyer chain and the joint between the two parts being formed on a compound curve to permit the parts to be assembled on the chain link by partially rotating one part relative to the opposite part, a lug projecting from the inner end of one of the parts, there being a corresponding recess in the opposite part for receiving said lug, and means for securing the two parts together in position upon a chain link.

5. A flight for conveyer chains, comprising two parts adapted to engage a link of the conveyer chain and the joint between the two parts being formed on a compound curve to permit the parts to be assembled on the chain link by partially rotating one part relative to the opposite part, a lug projecting from the inner end of one of the parts, there being a corresponding recess in the opposite part for receiving said lug, and

means passing through the projecting lug and through the part provided with the recess for securing the parts together in position upon a chain link.

5 6. A flight for conveyer chains comprising two parts, each of which is L-shaped in cross section, heads formed integral with the inner ends of said parts, there being link receiving grooves formed in said heads, and
10 the joint between said heads being formed on a compound curve.

7. A flight for conveyer chains comprising two parts, each of which is L-shaped in cross section, heads formed integral with the inner ends of said parts, there being link receiving grooves formed in said heads, the joint between said heads being formed on a compound curve, and means for securing said parts together in position upon a chain
20 link.

8. A flight for conveyer chains comprising two parts, each of which is L-shaped in cross section, heads formed integral with the inner ends of said parts, there being link receiving grooves formed in said heads, the joint between said heads being formed on a compound curve, a lug projecting from the head on one of the parts, and there being a corresponding recess formed in the opposite part adapted to receive said lug.
25

9. A flight for conveyer chains comprising two parts, each of which is L-shaped in cross section, heads formed integral with the inner ends of said parts, there being link receiving grooves formed in said heads, the joint between said heads being formed on a compound curve, a lug projecting from the head on one of the parts, there being a corresponding recess formed in the opposite part adapted to receive said lug, and fastening means passing through the lug and through the part provided with a recess for securing the two parts together in position upon a chain link.
30

45 10. The combination with a conveyer chain, of a flight composed of two parts, the inner ends of which are positioned through one of the links of the chain, the joint between said parts being formed on a

compound curve and which parts extend laterally in both directions from the chain. 50

11. The combination with a conveyer chain, of a flight composed of two parts, the inner ends of which are positioned through one of the links of the chain, the joint between said parts being formed on a compound curve, which parts extend laterally in both directions from the chain, and means for rigidly connecting the two parts of the flight. 55

12. A flight for conveyer chains comprising two parts the inner ends of which are provided with link receiving grooves and a joint between said inner ends being formed on a reversed curve the oppositely disposed portions of which are concentric with the respective centers of the link receiving grooves. 60

13. The combination of a conveyer chain, of a two part flight, the inner ends of which are provided with integral heads in which are formed link receiving grooves, and the joint between said heads being formed on a compound curve. 65

14. The combination of a conveyer chain, of a two part flight, the inner ends of which are provided with integral heads in which are formed link receiving grooves, the joint between said heads being formed on a compound curve, a lug projecting laterally from one of the heads, and there being a recess formed in the opposite part adapted to receive said lug. 70

15. A flight for conveyer chains comprising two parts the inner ends of which are adapted to be positioned in one of the links of a conveyer chain the joint between said parts being formed on a reversed curve the opposite portions of which are concentric with the axes of the legs of the chain link to which the flight is attached. 75

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this sixth day of March, 1911.

JAMES W. TURNER.

Witnesses:

W. H. SIMPSON,
S. E. KELLEHER.