

**No. 714,357.**

**Patented Nov. 25, 1902.**

**H. W. BLAISDELL.**  
**CONVEYER SYSTEM.**

(Application filed Apr. 10, 1902.)

(No Model.)

3 Sheets—Sheet 1.

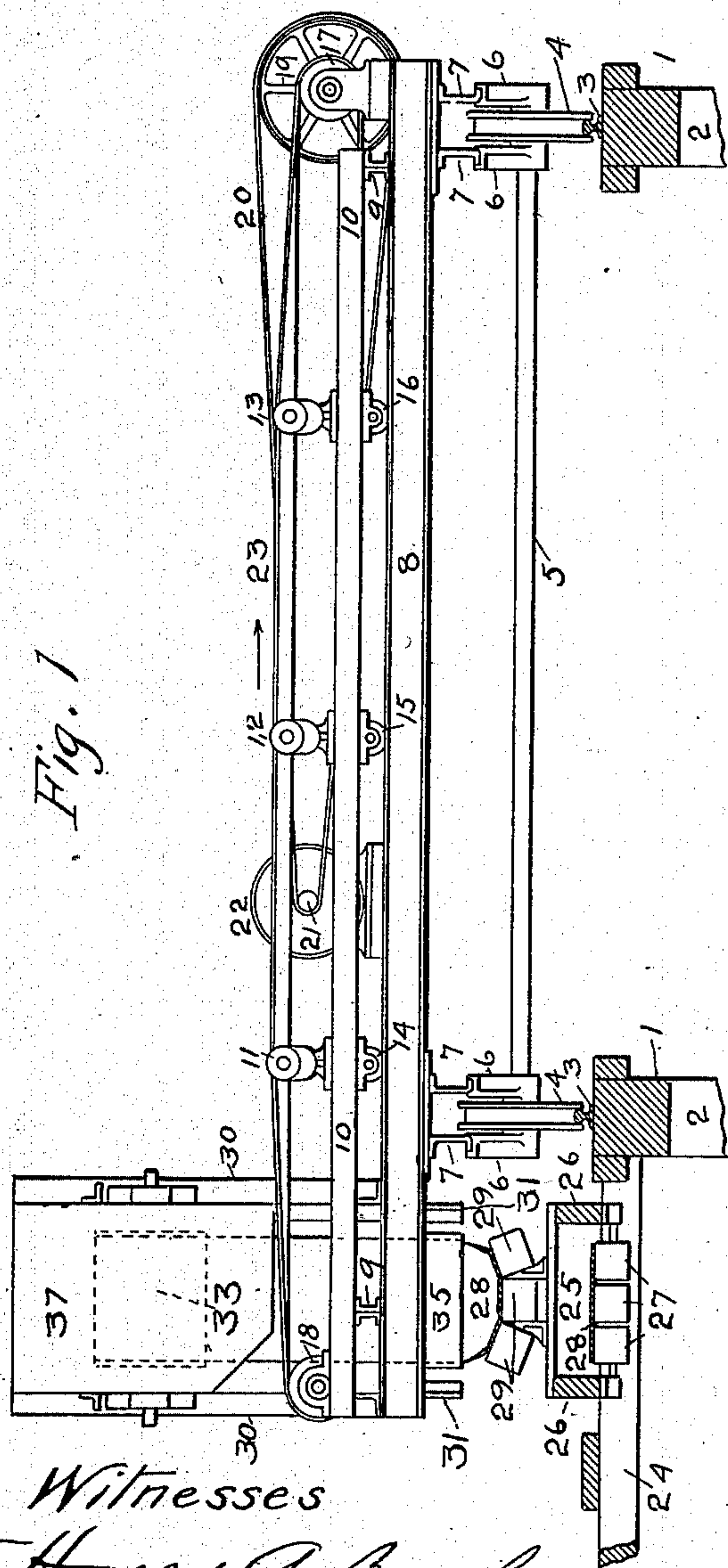


Fig. 1

Witnesses

Harry A. Brooks

B. W. Pierce.

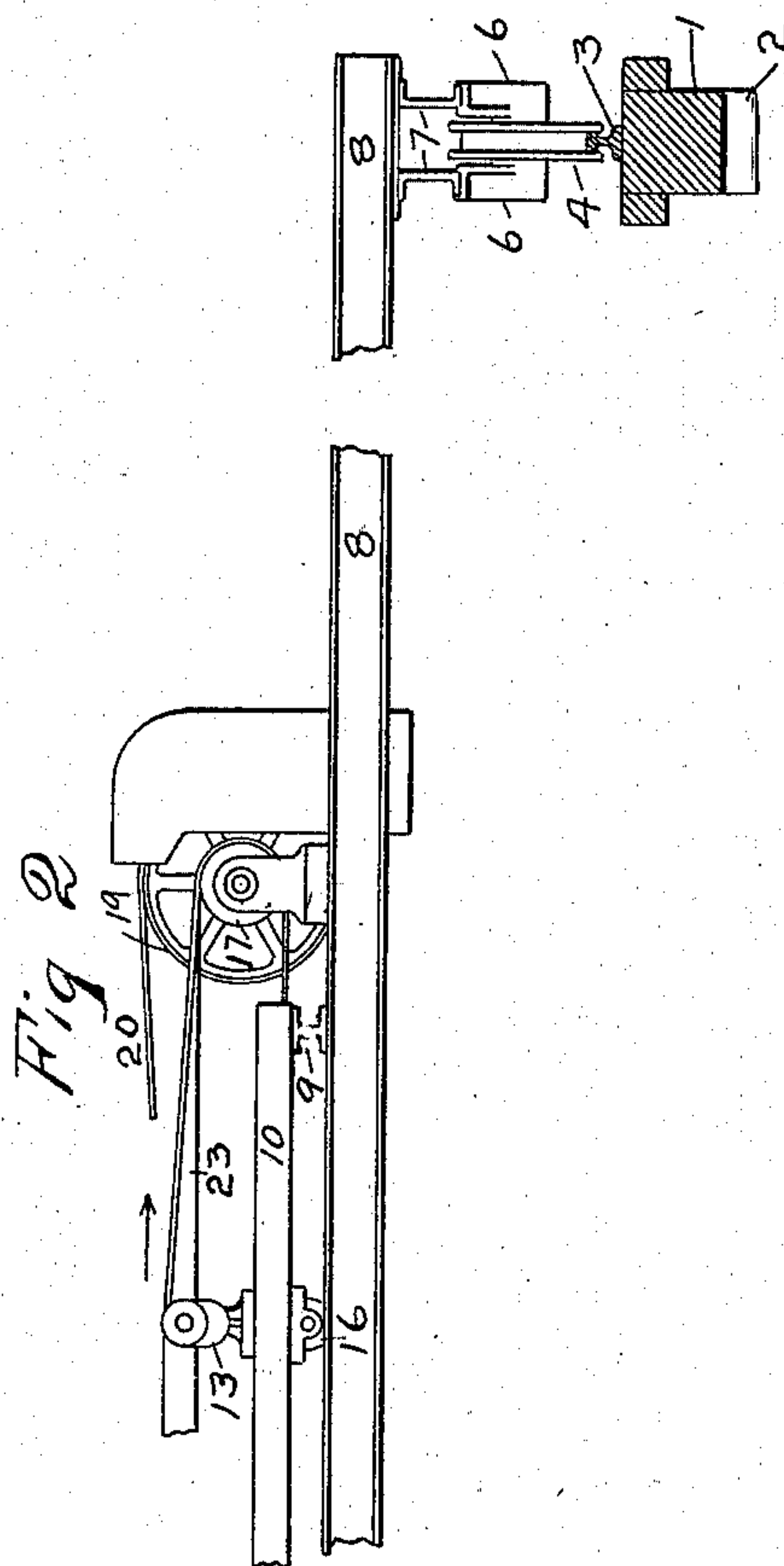


Fig. 2.

*Inventor*

Hiram W. Blandell.

By

Charles S. Rogers  
Attorney



No. 714,357.

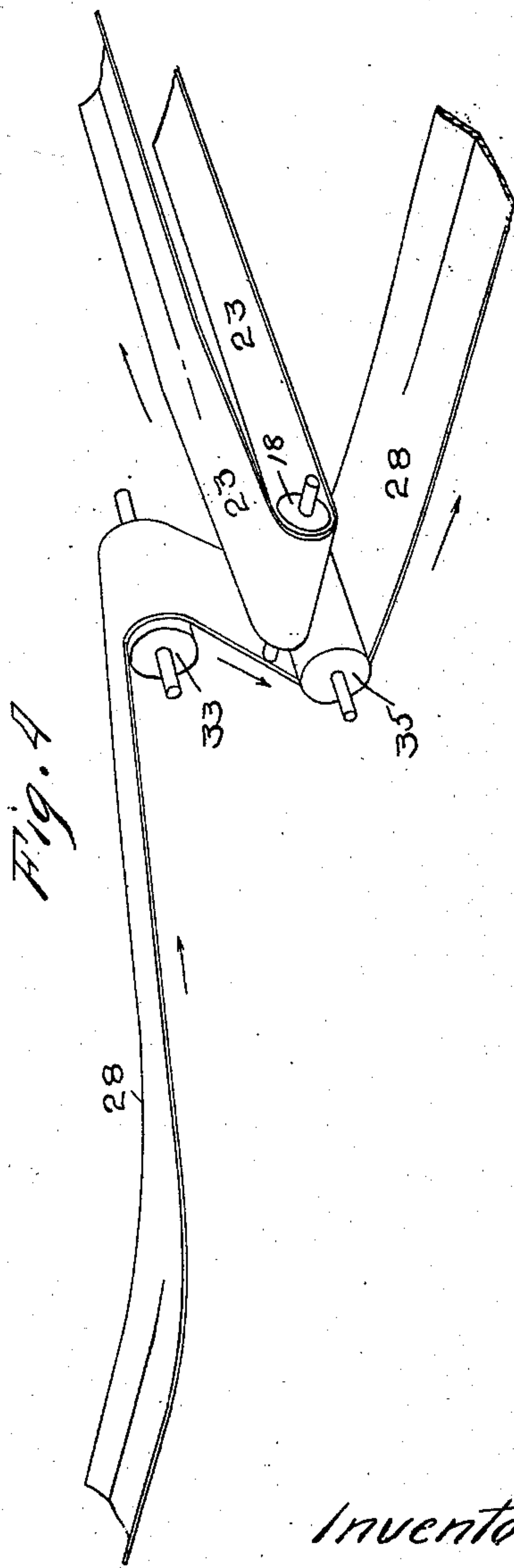
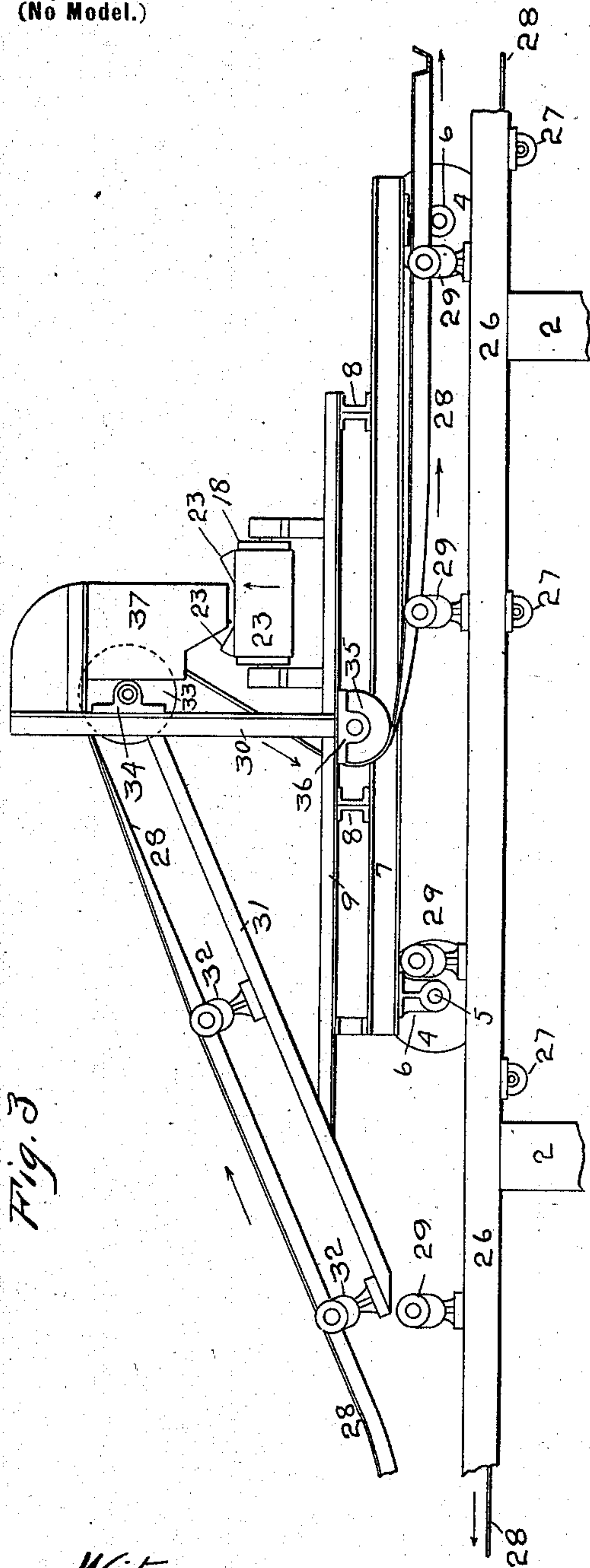
Patented Nov. 25, 1902.

H. W. BLAISDELL.  
CONVEYER SYSTEM.

(Application filed Apr. 10, 1902.)

(No Model.)

3 Sheets—Sheet 2.



Witnesses  
Harry A. Brooks  
B. H. Price

Inventor  
Hiram W. Blaisdell.  
By  
Charles S. Rogers  
Attorney



No. 714,357.

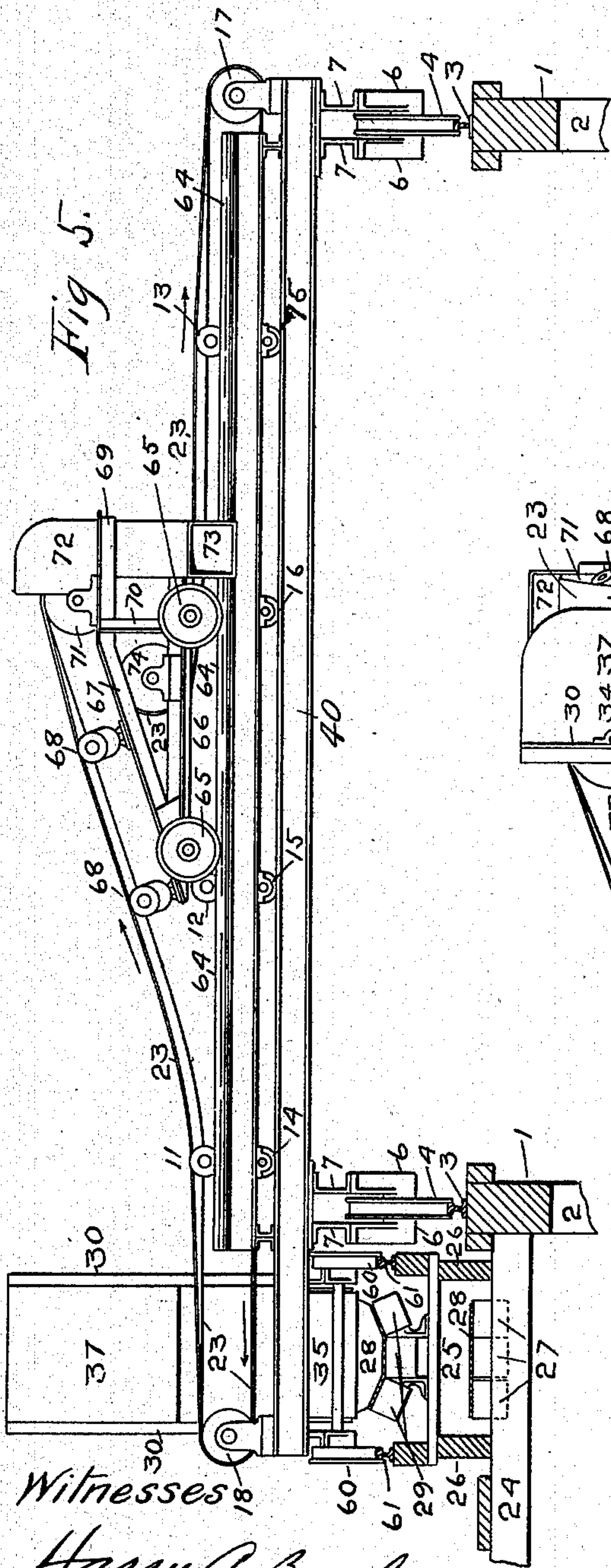
Patented Nov. 25, 1902.

H. W. BLAISDELL.  
CONVEYER SYSTEM.

(Application filed Apr. 10, 1902.)

(No Model.)

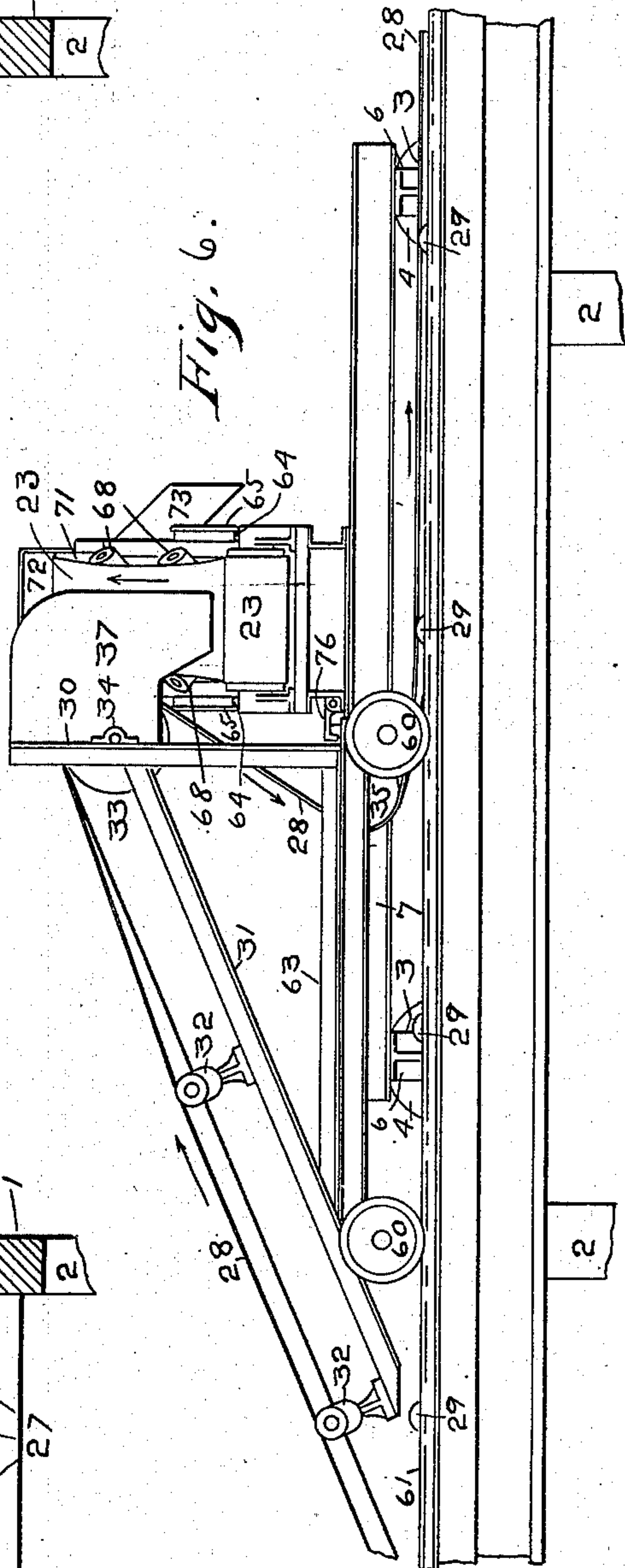
3 Sheets—Sheet 3.



Witnesses

Harry A. Brook

B. W. Pines



Inventor

Hiram W. Blaisdell

By

Charles S. Rogers  
Attorney



# UNITED STATES PATENT OFFICE.

HIRAM W. BLAISDELL, OF YUMA, ARIZONA TERRITORY.

## CONVEYER SYSTEM.

SPECIFICATION forming part of Letters Patent No. 714,357, dated November 25, 1902.

Application filed April 10, 1902. Serial No. 102,294. (No model.)

*To all whom it may concern:*

Be it known that I, HIRAM W. BLAISDELL, a citizen of the United States, residing at Yuma, in the county of Yuma, Territory of Arizona, have invented a new and useful Conveyer System, of which the following is a specification.

This invention relates to a conveyer system, and particularly to such a system wherein a main and an auxiliary conveyer are employed; and some of the objects of the invention are to provide a conveyer system that is simple in construction and positive and effective in operation.

Another object of the invention is to provide such a system wherein the main conveyer occupies a plane below that of the auxiliary conveyer, upon which it discharges.

A further object of the invention is to provide a conveyer capable of occupying different planes, so as to discharge upon elevations.

It is also an object of this invention to provide an endless main conveyer arranged to discharge upon a superimposed cross auxiliary conveyer constructed to be transported above the line of travel of said main conveyer and provided with means traveling therewith to effect said discharge.

With these and other objects in view the invention consists, essentially, in the construction, combination, and arrangement of parts substantially as more fully described in the following specification and illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 is an elevational view, partly in section, showing an end discharge. Fig. 2 is a fragmental view illustrating an intermediate discharge. Fig. 3 is an elevational view at right angles to that of Fig. 1, showing the manner of elevating a portion of the main conveyer. Fig. 4 is a diagrammatic perspective view illustrating the operative relation of the main and auxiliary conveyers, and Figs. 5 and 6 illustrate a detachable tripper.

Similar characters of reference designate corresponding parts throughout the several views.

Referring to the drawings, and particularly to the construction illustrated in Figs. 1 to 4 thereof, the reference character 1 designates parallel timbers supported upon posts or framing 2, and upon the timbers 1 are secured track-rails 3 to receive and support

wheels 4, carried by axles 5, Figs. 1 and 3, provided with bifurcated bearings 6, supporting channel-irons 7, whereon rest I-beams 8, substantially as shown in said figures.

Upon the I-beams 8 are preferably secured cross-beams 9, supporting timbers or a platform 10, whereon are preferably secured upper rollers or pulleys 11, 12, and 13 and lower rollers or pulleys 14, 15, and 16, the former desirably embracing a group of rollers arranged in different planes in order to provide a longitudinal curvature to the endless auxiliary conveyer 23, passing thereover and over the driving and guiding pulleys or rollers 17 and 18, respectively, at the ends of the traveling structure or bridge just described, the former being actuated, preferably, through the mediation of a band-wheel 19, connected by a belt 20 with a pulley 21 on the drive-shaft of a motor or engine 22 in the usual manner.

Upon a suitable frame or structure 24 is secured a trough or hollow frame 25, preferably extending parallel with the rails 3, and mounted in the sides 26 of the trough 25 are a plurality of pulleys or rollers 27, Figs. 1 and 3, any number of sets whereof may be employed to receive and support the lower or empty lead of the main conveyer 28, and mounted in a curved position upon the top portion of the trough 25 are sets of pulleys or rollers 29, Figs. 1 and 3, to receive and support the upper or loaded lead of the main conveyer 28 (except where the same is elevated) in such a manner as to impart a longitudinal curvature thereto to prevent the lateral discharge of the material transported thereby.

Formed on or connected with the platform 10 or in any other suitable manner are uprights 30, to which and to said platform are preferably secured inclined members or a frame 31, Fig. 3, constructed to support sets of curved pulleys or rollers 32, constructed to receive and support a portion of the main conveyer 28, which passes thereover and over a large discharging pulley or roller 33, preferably mounted upon the uprights 30, substantially as shown at 34, Fig. 3, and thence down under a similar pulley or roller 35, journaled in a bearing 36 upon the under side of the platform 10, from whence the main conveyer 28 passes out over the sets of curved pulleys or rollers 29 (except where the same is elevated) to and around a driving pulley



or roller (not shown) and back over the sets of straight rollers 27, Figs. 1 and 3 of the drawings.

By means of the construction just described a minor portion of the main conveyer, preferably that adjacent to the traveling bridge or structure, is temporarily elevated from the sets of pulleys or rollers 29, as shown at the left of Fig. 3, and passes up over the sets of pulleys or rollers 32 on the frame 31 and over the discharge pulley or roller 33 and down under the pulley or roller 35 back to the sets of pulleys or rollers 29, which is its normal plane of operation.

It will be understood from the foregoing description, when taken in connection with Figs. 1, 3, and 4 of the drawings and particularly the latter figure, which is a perspective diagrammatic view illustrating the relation of the main and auxiliary conveyers and the method of discharge from the lower main conveyer upon the superimposed auxiliary conveyer, that the mechanism for elevating a portion of the main conveyer moves with the traveling structure or bridge, which is movably supported upon the wheels 4 running on the track 3, and that as said structure is progressed the elevated portion of the main conveyer is likewise advanced, so that the same always discharges its load upon the auxiliary conveyer.

Formed on or connected with the standards or uprights 30 is a hood or casing 37, constructed to receive the impact of the load discharged by the main conveyer while passing around the pulley or roller 33 and to direct the same upon the auxiliary conveyer 23, preferably carried by pulleys or rollers 17 and 18, as before explained, and the auxiliary conveyer 23 transports the material discharged thereon to the point or points for depositing the same, which points may be varied by progressing the bridge or structure supporting the auxiliary conveyer 23, as will be readily understood.

In Fig. 1 of the drawings the auxiliary conveyer 23 is constructed to discharge at the end of the bridge or structure; but in Fig. 2 the driving-pulley 17 is moved nearer the guiding-pulley 18, and the discharge of the material is effected intermediate of the length of the bridge or traveling structure, which is especially used when the material employed is to be discharged directly into tanks or vats.

The operation of the construction hereinbefore described and shown will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following explanation thereof. The material to be transported is deposited upon the main conveyer 28 and is carried thereby over the pulleys or rollers 29 until the main conveyer with its load reaches the pulleys or rollers 32 upon the inclined frame 31 and passes thereover up and over the discharging pulley or roller 33 upon the uprights or posts 30 and within the hood

or casing 37, which latter acts to receive and direct the material discharged therein by the passage of the main conveyer 28 over said discharging-pulley upon the auxiliary conveyer 23, which conveys the material discharged thereon by the main conveyer to a point or place of final discharge, as will be readily understood. From the discharging-pulley 33 the main conveyer descends to and around the pulley or roller 35 and thence to and over the sets of curved pulleys 29 upon the upper surface of the frame or trough 25 and returns over the straight pulleys 27, mounted in said trough, as before explained. If it is desired to finally discharge the material at the end of the traveling structure or bridge, then the construction shown in Figs. 1 and 3 may be employed; but if an intermediate discharge of the material is necessary the construction illustrated in Fig. 2 can be used.

Referring now to the construction illustrated in Figs. 5 and 6 of the drawings, there is illustrated a modified form of the construction hereinbefore described and shown, wherein Figs. 5 and 6 illustrate an elevating device or tripper, which is mounted independently of the bridge and is preferably supported upon wheels 60, traveling upon rails 61, desirably mounted upon the frame 25, and a platform 63 may be mounted above the wheels 60 and uprights 30 may be secured to said platform, and the uprights may support a discharging pulley or roller 33, substantially as before described and shown.

Preferably connected with the platform 63 and with the uprights 30 are inclined members of a frame 31, Fig. 6, constructed to support sets of curved rollers 32, adapted to receive and support a portion of the main conveyer 28, which passes up thereover and over the discharge pulley or roller 33, and thence down under a pulley or roller 35, desirably journaled or mounted beneath the platform 63, and from the roller 35 the main conveyer 28 passes out over the sets of curved rollers or pulleys 29 to and around a tail pulley or roller (not shown) and back over the sets of straight rollers 27, as before described.

Formed on or connected with the standards or uprights 30 is a hood or casing 37, constructed to direct the discharged material upon the auxiliary conveyer 23, substantially as before explained, and in the construction shown in Figs. 5 and 6 of the drawings the elevating device or tripper may be removably connected with the bridge, as indicated at 75, so as to travel therewith when desired and to be disconnected therefrom and transported singly along the line of travel of the main conveyer to whatever point it is desired to discharge the material from the main conveyer.

In Figs. 5 and 6 the bridge or traveling structure is preferably provided with tracks or rails 64, whereon travel wheels 65, supporting a truck 66, carrying inclined mem-



bers of a frame 67, supporting sets of curved rollers 68, and said inclined frame preferably terminates in a horizontal extension 69, supported by uprights 70. (See Figs. 5 and 6.)

5 Mounted upon the extension 69 is a large discharge pulley or roller 71, partially inclosed in a hood or casing 72, preferably terminating in a discharge-spout 73 to receive and direct the material discharged from the auxiliary conveyer 23, which passes over the end  
10 pulley 18, the upper pulley 11, the sets of curved pulleys or rollers 68, over the discharge-pulley 71, thence down over the guide pulley or roller 74 upon the truck 66, then  
15 over the upper pulleys or rollers 13, the end pulley 17, and returning over the bottom rollers or pulleys 14, 15, 16, and 75 to the end pulley 18. By means of this construction the elevating device or tripper for the main conveyer can be detached from the bridge or  
20 traveling structure and used independently thereof, and the truck 66 can be moved to any point upon the bridge or traveling structure, so that the auxiliary conveyer may be  
25 caused to discharge the material at any point throughout the length of the bridge, as will be readily understood.

It is not desired to confine this invention to the specific construction, combination, and  
30 arrangement of parts herein shown and described, and the right is reserved to make all such changes in and modifications of the same as come within the spirit and scope of the invention.

35 I claim—

1. A conveying system provided with a main conveyer and a cross auxiliary conveyer in a plane above said main conveyer and movable means for effecting the discharge of the  
40 material from said main conveyer upon said superimposed auxiliary conveyer.

2. A conveying system provided with a main conveyer, an auxiliary conveyer in a plane above the main conveyer and means  
45 traveling with said auxiliary conveyer for elevating a portion of the main conveyer so that the material can be discharged therefrom upon the said auxiliary conveyer.

3. A conveying system provided with a  
50 main conveyer, a bridge carrying elevating devices over which said conveyer travels and an auxiliary conveyer upon the bridge constructed to receive the material elevated by said main conveyer while passing over said  
55 devices.

4. A conveying system provided with a main conveyer, a traveling bridge, a frame thereon provided with pulleys or rollers over which said main conveyer travels, whereby  
60 the portion thereof over the bridge is elevated and an auxiliary conveyer adjacent to the bridge to receive the material so elevated.

5. A conveying system provided with a main conveyer, an auxiliary conveyer overlapping the main conveyer and an elevating mechanism, a part of the structure supporting said auxiliary conveyer.

6. A conveying system provided with a main conveyer, a traveling bridge, an auxiliary conveyer thereon in a plane above and  
70 overlapping said main conveyer and means carried by said bridge to elevate that portion of said main conveyer adjacent to said auxiliary conveyer.

7. A conveying system provided with a  
75 main conveyer, an auxiliary conveyer in a plane above the main conveyer and traveling means to elevate a portion of the main conveyer, whereby the material carried thereby can be discharged upon said auxiliary conveyer.

8. A conveying system provided with a main conveyer, an auxiliary conveyer in a plane above the major portion of the main conveyer and traveling means having an inclined portion over which a part of said main  
85 conveyer passes, whereby the material transported by the latter is discharged upon the superimposed auxiliary conveyer.

9. A conveying system provided with a  
90 main conveyer, an auxiliary conveyer, the major portion whereof is in a plane above the major portion of said main conveyer and a traveling device upon the structure supporting said auxiliary conveyer constructed to  
95 elevate a portion thereof to effect a final discharge of the material at any point throughout said structure.

10. A conveying system provided with a main conveyer, an auxiliary conveyer the major portion whereof occupies a plane above the like portion of said main conveyer, a structure supporting said auxiliary conveyer, a device movable thereon and constructed to  
100 elevate a portion of said auxiliary conveyer and a discharge-hopper connected with said device, whereby the material may be discharged throughout the length of said structure.

11. A conveying system provided with a  
110 main conveyer, an elevating device movable throughout the length thereof and a superimposed auxiliary conveyer receiving the material from that portion of said main conveyer then elevated by said device.

12. A conveying system provided with a main conveyer having the minor portion thereof elevated, an auxiliary conveyer having the major portion thereof in a plane above the major portion of said main conveyer and receiving material from said elevated portion  
120 of said main conveyer and an elevating device movable throughout the length of said auxiliary conveyer to effect the final discharge of the material in a plane above the major portion of said auxiliary conveyer.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HIRAM W. BLAISDELL.

Witnesses:

J. W. KEMP,

L. B. ALDERETE.