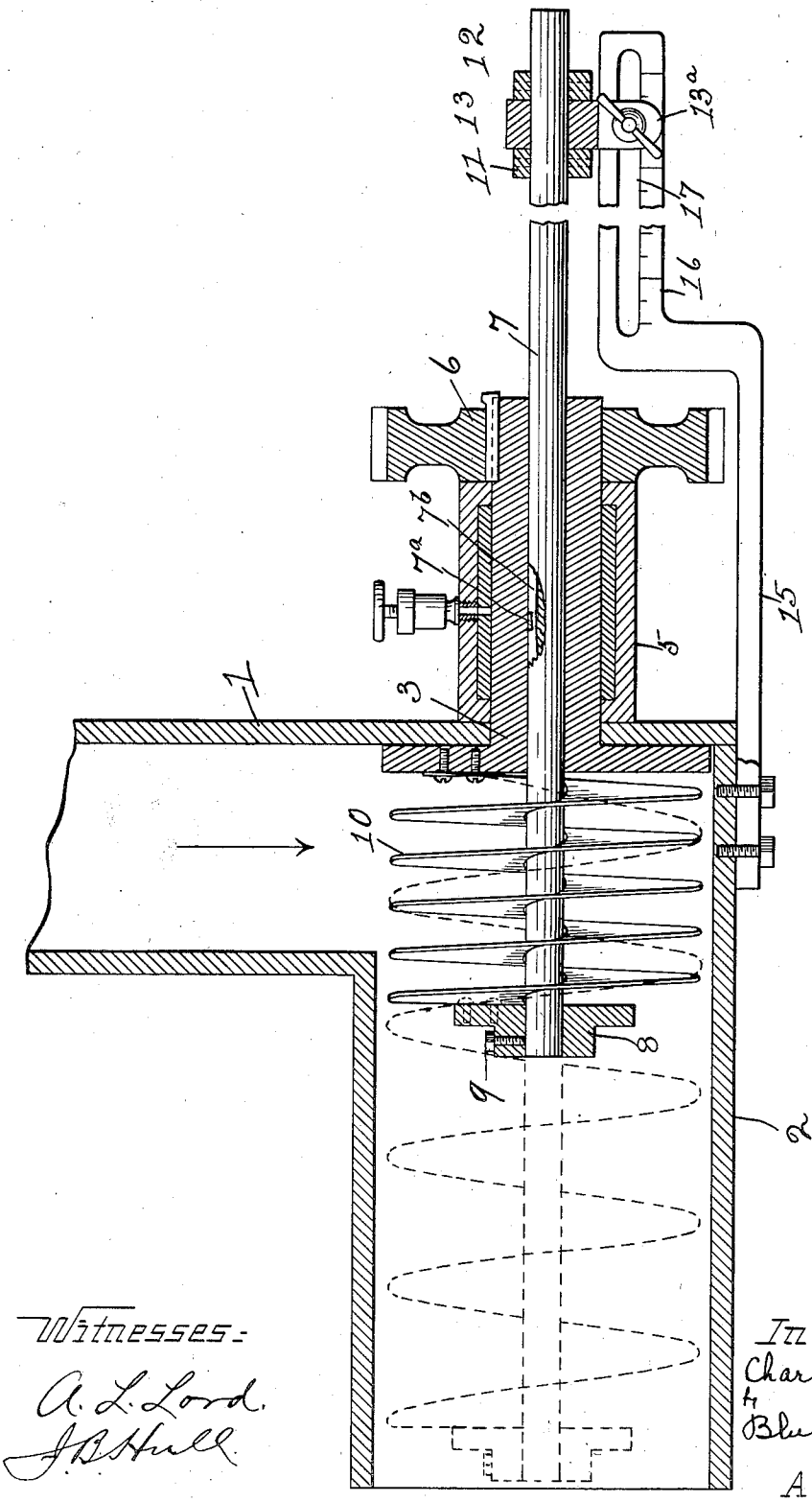
No. 887,762. PATENTED MAY 19, 1908.

C. BRENT.

ADJUSTABLE SCREW CONVEYER.

APPLICATION FILED JULY 31, 1905. RENEWED OCT. 16, 1907.



Witnesses:-

A. L. Lord.

J. B. Hull

Inventor.

Charles Brent,

by Bluford W. Brackett

Attorney.

UNITED STATES PATENT OFFICE.

CHARLES BRENT, OF KENORA, ONTARIO, CANADA.

ADJUSTABLE SCREW CONVEYER.

No. 887,762. Specification of Letters Patent. Patented May 19, 1908.

Application filed July 31, 1905, Serial No. 272,124. Renewed October 16, 1907. Serial No. 397,675.

To all whom it may concern:

Be it known that I, CHARLES BRENT, a citizen of Canada, residing at Kenora, in the district of Rainy River, Ontario, Canada, have invented a new and useful Improvement in Adjustable Screw-Conveyer Feeding Devices, of which the following is a specification.

This invention relates generally to devices for feeding granular material, and particularly to that class of such devices known as screw conveyers.

More specifically the invention relates to means for varying the pitch of such screw conveyers, and thereby regulating the amount of material fed by the same.

The invention may be further briefly summarized as consisting in the construction and combination of parts hereinafter described reference being had to the accompanying description, drawings and claims.

Any preferred form and construction of parts may be employed in the carrying out of my invention but I have shown one form in the drawings which very effectively meets the necessary requirements and in such embodiment 1, represents the hopper of any ordinary construction which is adapted to feed the material to the screw conveyer, and to the trough 2, which is preferably made half round for a purpose which will hereinafter appear. Rotatably mounted in the end wall of this trough 2, is a driving head 3, operating in a suitable bearing 5, and having secured to the outer end thereof a driving gear 6, which may be driven by any suitable power mechanism not shown. This driving head is preferably hollow for the purpose of receiving the shaft 7, which carries a hub 8, secured thereto by means of a set screw 9. Rigidly secured to this hub 8, and to the driving head 3, is a flexible flight 10, adapted to conform substantially to the bottom of the trough and feed forward the material therein.

The shaft 7, is loosely splined to the driving head by means of the spline 7^a, and the key-way 7^b, whereby the shaft 7, and the head 3, will both receive the same rotary motion. This shaft 7, is sufficiently long for the purpose of permitting it to extend out beyond the driving head 3, where it is provided with a pair of collars 11, and 12, keyed to the shaft in any suitable manner, and adapted to receive between them a clip 13, loose upon said shaft and having a downwardly extending ear portion 13^a. A suitable clamping bolt and wing nut 14, are arranged in this ear portion 13^a, for a purpose to be described.

Secured to the trough or any other stationary part of the frame work is a bracket 15, having a guiding member 16, provided with a slot 17, which receives the shank of the clamping bolt in a well known manner. This construction is such that the clip 13^a, may be fastened in any adjusted position.

It will be readily seen from the foregoing description that before or during the rotation of the driving head 3, through the mechanism for that purpose, the clip 13, may be shifted in one direction or the other with the result that the flight will be varied in its pitch and the material will be varied as to quantity.

Having described my invention I claim:—

1. In a conveyer, in combination, a flight, means for driving the same, and means for varying the feed of said conveyer by variation in the pitch of said flight.

2. In a conveyer, in combination, a flight having a constant pitch throughout the length of the same, means for driving said flight and means for varying the feeding thereof without affecting the speed.

3. In a conveyer, in combination, a flight having a constant pitch throughout the length of the same, means for driving said flight, and means for varying the pitch of said flight.

4. In a conveyer, in combination, a feeding flight having a constant pitch throughout its length, means for driving the same and means for varying the pitch of said flight during operation and without affecting the speed thereof.

5. In a conveyer, in combination, a flexible feeding flight, means for spreading and contracting said flight to vary the feed thereof, and means whereby said flight may be rotated.

6. In a conveyer, the combination with the hopper, of a driving member suitably mounted and held against endwise movement, another member coöperating with said member but slidable with respect to the same, a feeding flight mounted between said members, and means for holding said shiftable member in any adjusted position.

7. In a conveyer, the combination with the hopper, of a driving head rotatably mounted therein, a member slidably mounted

with respect to said driving head, means for retaining said slidable member in any adjusted position, and a feeding flight mounted between said driving head and said slidable member.

8. In a conveyer, the combination with the hopper, of a driving head rotatably mounted therein, a shaft slidably mounted with respect to said head, a hub carried by said shaft and adapted to slide therewith, a feeding flight mounted between said hub and said head, and means for holding said shaft in any adjusted position.

9. In a conveyer, the combination with the hopper, of a driving head rotatably mounted therein, a shaft slidably mounted with respect to said head, a hub secured to the end of said shaft and adapted to slide therewith, a feeding flight secured to said head and to said hub, and means for holding said flight in any adjusted position.

10. In a conveyer, the combination with the hopper, of a driving head rotatably mounted therein, a shaft slidably mounted therein, a hub secured to the end of said shaft and adapted to slide therewith, a feeding flight secured to said hub and to said head, a clip for shifting said shaft, and means for holding said clip in any adjusted position.

11. In a conveyer, the combination with the hopper, of a driving head rotatably mounted therein, a shaft slidably mounted therein, a hub secured to the end of said shaft and adapted to slide therewith, a feeding flight secured to said hub and to said head, a clip swiveled to said shaft for shifting the same, a slotted brace secured to a stationary part, and means engaging in said slotted brace for clamping said clip in any adjusted position.

12. In a conveyer, in combination with a hopper, of a flexible feeding flight having a constant pitch throughout its length, means whereby the same may be rotated and means for varying the pitch of said flight.

13. In a conveyer, in combination, a flexible feeding flight, means whereby the same may be expanded and contracted to vary the pitch thereof, and means for retaining said flight in any adjusted position.

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

CHARLES BRENT.

Witnesses:
ROBT. J. BRANDON,
R. A. CLEMENT.