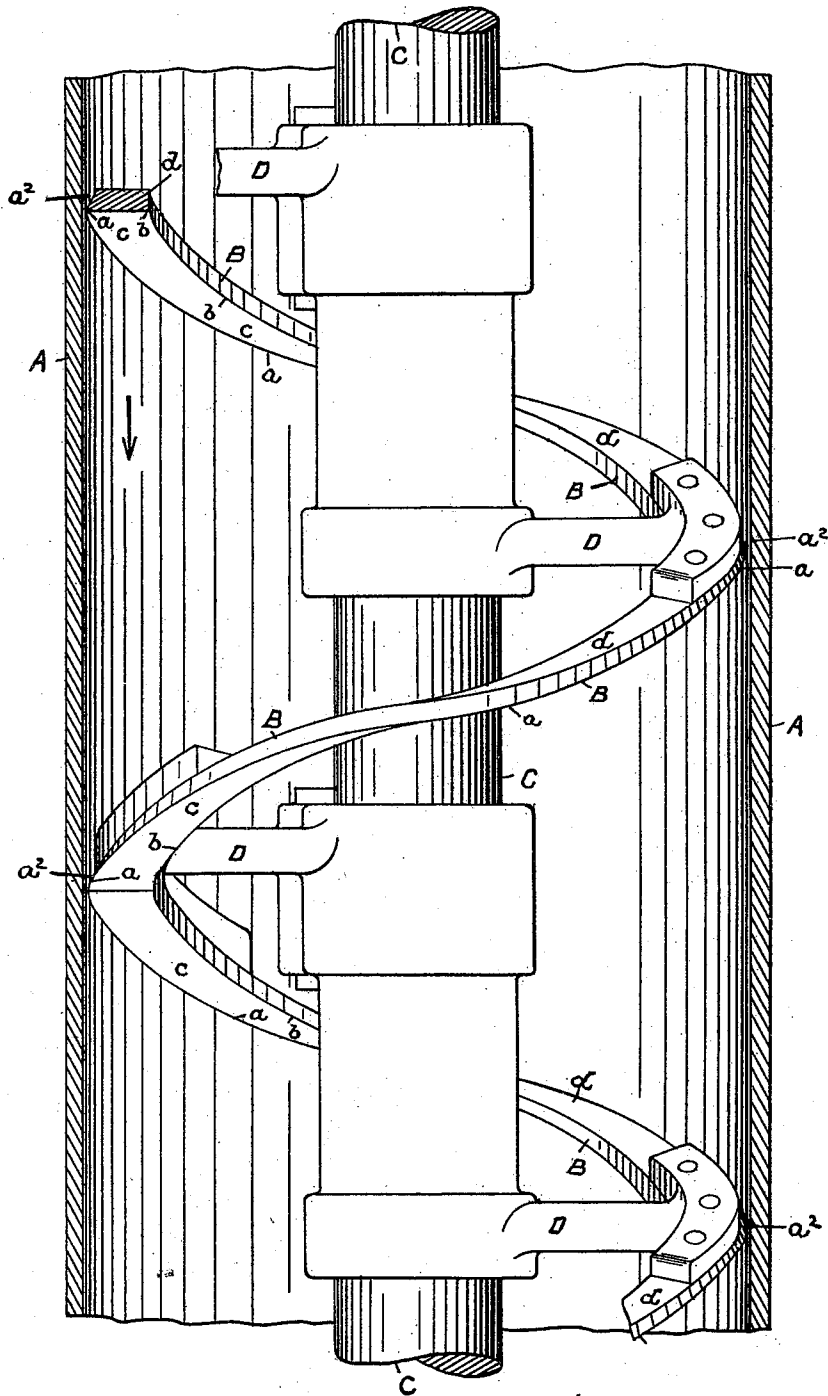


(No Model.)

B. F. RADFORD.
SPIRAL CONVEYER.

No. 499,175.

Patented June 6, 1893.



WITNESSES

M. C. Brown
M. W. Storer

INVENTOR

Benjamin F. Radford
by his Attorneys Brown Bros.

UNITED STATES PATENT OFFICE.

BENJAMIN F. RADFORD, OF HYDE PARK, MASSACHUSETTS.

SPIRAL CONVEYER.

SPECIFICATION forming part of Letters Patent No. 499,175, dated June 6, 1893.

Application filed September 15, 1892. Serial No. 446,016. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. RADFORD, a citizen of the United States of America, and a resident of the town of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented a certain new and useful Improved Spiral Conveyer, of which the following is a full, clear, and exact description.

This invention relates to a spiral-conveyer and more particularly such as used in sugar-manufacture to convey, by its operation, sugar along a trough, a cylinder, or such like, and to that class of such conveyers as have consisted of a conveyer-blade spirally surrounding and held on but away from a rotating shaft suitably supported and it and its said blade suitably arranged for the blade in motion to move and to travel out of contact with but near to the inner wall of the trough, cylinder, or such like.

In the use of these conveyers a practical increase in the forward forcing capacity of their blades would be desirable, provided it could be obtained without otherwise sacrificing its well known advantage, to wit, of always allowing and securing the freeing of the sugar from between the outer edge of the blade and the inner wall of the trough, cylinder, or such like, as the sugar is moved forward by them.

The object of this invention is to secure the result above stated, and to that end, it, in substance, consists of a conveyer, of the class stated, having a spiral propelling blade, made of a band or strip of suitable material, and with face, for forcing the sugar forward, that practically is wide and from edge to edge is flat, or substantially so, and with an outer edge, to wit, the edge toward the wall of the trough, cylinder, or such like, in which the conveyer runs, that is inclined backward from, or in other words, at an acute angle to the working or forcing face of the blade.

In the drawing, forming part of this specification, the figure is a plan view of a portion of the length of the spiral-conveyer of this invention and a horizontal longitudinal section of a portion of a cylinder, in which it moves.

In the drawing, A is the cylinder, B is the spiral-conveyer and C is the shaft for the conveyer B, and to this shaft the conveyer is attached by radial arms D, all and otherwise as usual, except as to this invention.

The spiral-conveyer B is made of a band or strip of rigid metal or other suitable material and it has its outer edge *a* toward the inner wall of the cylinder, its opposite and inner edge *b* toward the shaft, and its opposite side faces *c*, *d*, presented, the one *c* toward one end and the other, *d* toward the other end of the cylinder A or trough, &c., in which the conveyer works. In the rotation of the conveyer, its side-face *c* is its working or forcing face and its outer edge *a* is its edge running near but out of contact with the cylinder A or trough, &c. The forcing face *c* of the conveyer, from edge *a* to edge *b*, is practically wide and flat, or substantially so, and the outer edge *a* inclines backward and at an acute angle to said forcing face thereby leaving an angular open space *a*² between said edge of the conveyer and the wall of the cylinder or trough, &c., directly opposite and contiguous thereto. The wide and flat or substantially flat forcing face of the conveyer secures a moving forward by the conveyer of the sugar along the cylinder or trough, &c., to the highest degree and the backward inclining outer edge *a*² of the conveyer affords and secures an absolute and certain avoidance and relief of all possible packing of sugar between said edge and the contiguous wall of the cylinder or trough, &c., the advantages of all of which are obvious without further explanation.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with a cylinder, trough, &c., a conveyer for sugar, &c., composed of a strip or band having a wide and flat or substantially flat face *c* for forcing, by the rotation of the conveyer, the sugar along the cylinder and an outer edge *a* that inclines backward from and is at an acute angle to its said forcing face, substantially as described, for the purposes specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BENJ. F. RADFORD.

Witnesses:

E. E. CHANDLER,
G. H. COX.