(No Model.)

A. P. MASSEY.

CONVEYER.

No. 301,506. Patented July 8, 1884.

Fig. 1.

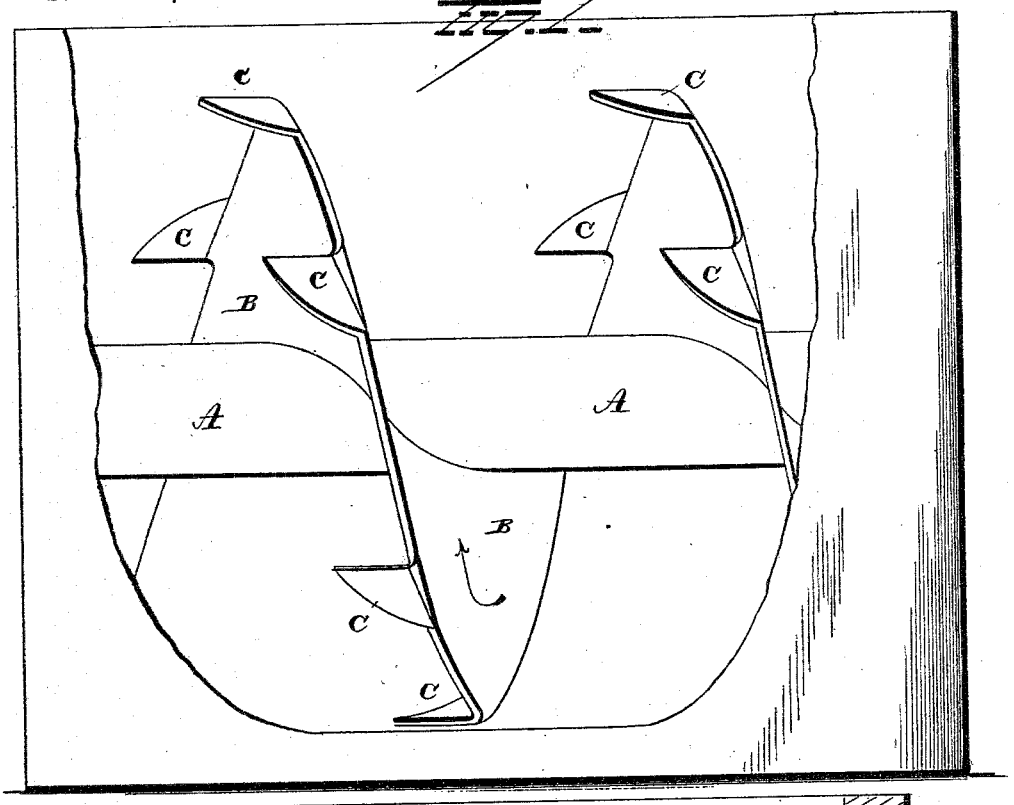
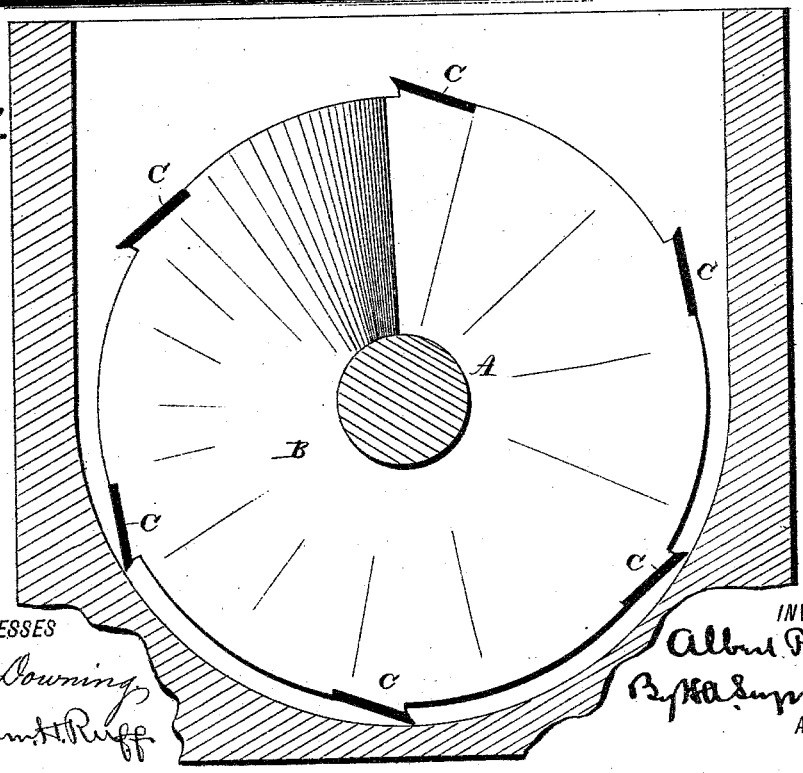


Fig. 2.



WITNESSES

Geo. F. Downing

William H. Ruffe

INVENTOR

Albert P. Massey.

By H. A. Seymour

ATTORNEY

UNITED STATES PATENT OFFICE.

ALBERT P. MASSEY, OF CLEVELAND, OHIO, ASSIGNOR TO THE AMERICAN SEED OIL COMPANY, OF SAME PLACE.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 301,506, dated July 8, 1884.

Application filed June 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBERT P. MASSEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Conveyers; and I 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.

My invention relates to an invention in conveyers.

In the process of drying various materials—as in drying blood to make a fertilizer, or in removing gasoline from meal which has been treated for oil—a stage is reached where the mass becomes very adhesive.

Hitherto it has been customary to use an ordinary screw-conveyer for transferring substances such as those above referred to; but while this has worked very well with dry or semi-liquid substances, it has been found objectionable when the substances reached the pasty or adhesive state, on account of the clogging of the conveyer-case.

The object of my present invention is to overcome the objectionable features of the conveyers heretofore used, and provide a screw-conveyer which shall automatically free itself without offering any resistance to the passage of material on its bearing-face; a further object being to provide a screw-conveyer with freeing devices which shall at the same time act as stirrers.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the conveyer in side elevation, a portion of the case being removed; and Fig. 2 is an end view.

The direction in which the conveyer rotates and the motion of the material conveyed are denoted by arrows.

A represents a shaft, about which the spiral flange B is secured. To the edge of the flange B the cutters C are secured, extending backward from the bearing side of the flange B. The cutters C are arranged at such intervals along the edge that their paths on the inner surface of the casing overlap each other, whereby a single revolution of the screw will cause the cutters to pass over the entire inner surface of the casing. The cutting-edges of the cutters C furthermore project somewhat beyond the edge of the flange B, whereby they cut a cylinder somewhat larger than the screw, in which the screw is free to revolve.

The cutters may be formed integral with the flange B, and bent backward into proper shape, as shown in the drawings; or they may be formed separately and secured to the flange by rivets or other suitable means.

It will be observed that by extending the cutters on the non-carrying side of the spiral flange the carrying side of the same is left entirely free from any hinderance to the moving material, while the material which adheres to the casing is constantly being cut therefrom, to be received on the bearing-face of the flange.

Where the conveyer is used for carrying material through a case that is heated by a steam-jacket or otherwise, for the purpose of heating or drying the material, the cutters perform a double function. They both prevent clogging and serve to effectually stir the material, allowing fresh portions to come in contact with the surface of the hot case.

It is evident that slight changes may be made in the form and arrangement of the cutters without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the construction herein set forth; but,

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

1. In a screw-conveyer, the combination, with a spiral flange, of cutters secured to the non-carrying side of the flange, substantially as set forth.

2. In a screw-conveyer, the combination, with a spiral flange, of cutters secured to the edge of the flange, said cutters extending outward and backward from the carrying-surface of the flange, substantially as set forth.

3. In a screw-conveyer, the combination, with a spiral flange, of cutters secured to the edge of the flange at such intervals that their

paths overlap, said cutters extending backward from the carrying-surface of the flange, substantially as set forth.

4. In a screw-conveyer, the combination, with a spiral flange, of cutters formed integral with the flange and extending backward from the carrying-surface of the flange, substantially as set forth.

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

ALBERT P. MASSEY.

Witnesses:
P. W. PAYNE,
LOUIS CARRUTH.