

(No Model.)

R. BING.
CONVEYER.

No. 307,904.

Patented Nov. 11, 1884.

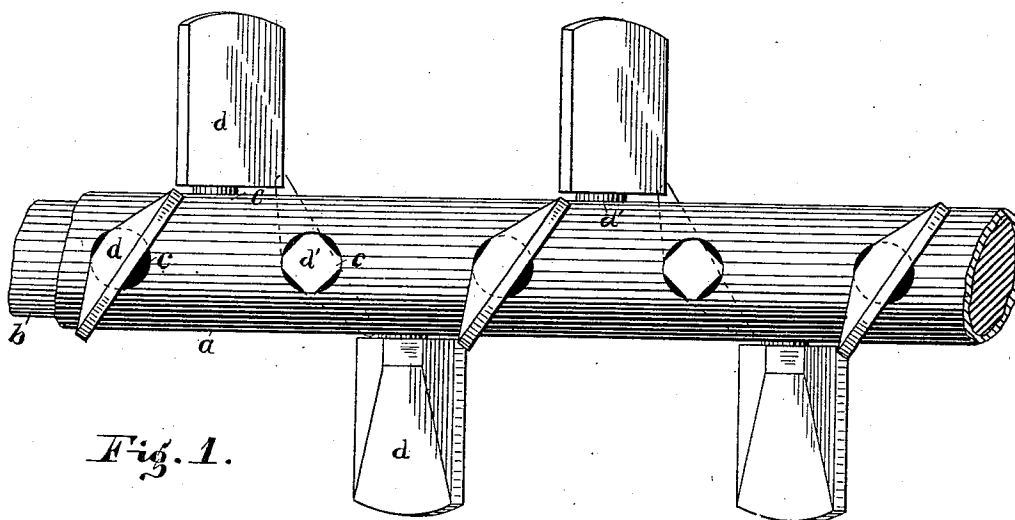
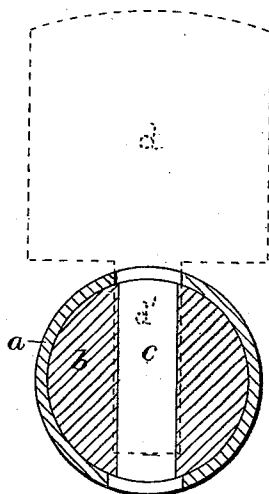


Fig. 2.



WITNESSES.

J. E. Shand.
James Bing

INVENTOR

Robert Bing

UNITED STATES PATENT OFFICE.

ROBERT BING, OF MAY'S LANDING, NEW JERSEY.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 307,904, dated November 11, 1884.

Application filed September 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BING, a citizen of the United States, residing at May's Landing, Atlantic county, New Jersey, have
5 invented a new and useful Improvement in Conveyers, of which the following is a specification.

My invention relates to conveyers for flour and other mill products.

10 It consists of a shaft constructed as below specified, with adjustable flights attached thereto spirally.

In the annexed drawings, Figure 1 is an elevation of a portion of the shaft with flights
15 attached; Fig. 2, a cross-section of the shaft through any one of the flight-sockets, one of the flights being indicated in front elevation by dotted lines to show the embedding of the shank in the wall or sides of its socket.

20 The shaft consists of a tube, *a*, of iron or steel, such as inch and a quarter gas-pipe of the required length, filled with a core of soft wood, *b*, forced in. Sockets *c*, about two inches apart, are drilled transversely through the
25 shaft on two lines parallel with the axis of tube *a*, the sockets in one line breaking spaces with those in the other line. To the extent of the thickness of metal of tube *a* the sockets *c* are cut a little larger than those portions
30 of the same extending through the core of the tube, being in the metal, say, nine-sixteenths of an inch in diameter, and through the wood, say, scant half-inch, as shown in Fig. 2. The flights *d* are of the usual character.
35 It is provided that their shanks *d'* shall be a little larger in diameter than the sockets *c* in

the wooden core, so that when driven into these sockets they shall embed themselves in the wood, as indicated in Fig. 2, and be thus held with sufficient rigidity without other
40 fastening. The shanks *d'* may be coated with glue before being driven in; but this is not essential. Each flight is set at an angle of about forty-five degrees with respect to the shaft, and the series constitute a spiral.

45 Instead of filling the tube *a* with wood in the stick, it may be filled with wood pulp, paper-pulp, or other substances capable of being readily bored for the sockets and having sufficient elasticity to hold the flight-shanks
50 with firmness. The shanks *d'* need not extend entirely through the sockets *c*.

It is an advantage in the construction above described that the flights can be readily driven
55 out in case it becomes necessary to remove or adjust them. The ends of the tube *a* form the journals of the conveyer, which is arranged, as usual, in a box into which the flour or other mill products are fed. The journals are surrounded by ordinary collars placed either on
60 the inside or outside of the inclosing-box.

I claim—

In conveyers for flour and other mill products, a shaft consisting of a metallic tube filled with wood or other like elastic material
65 and provided with sockets, in combination with the adjustable flights, substantially as set forth.

ROBERT BING.

Witnesses:

J. E. SHAW,
JAMES BING.