

(No-Model.)

E. S. EDMONDSON.

FLOUR AND GRAIN CONVEYER.

No. 307,275.

Patented Oct. 28, 1884.

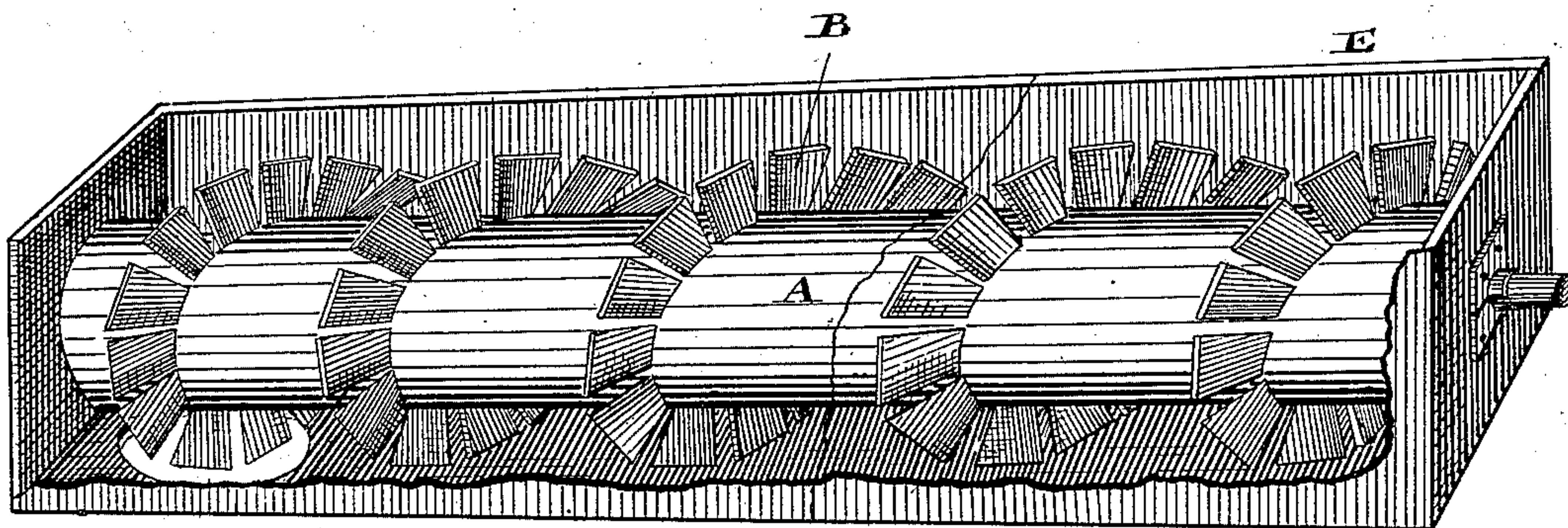


Fig. 1.

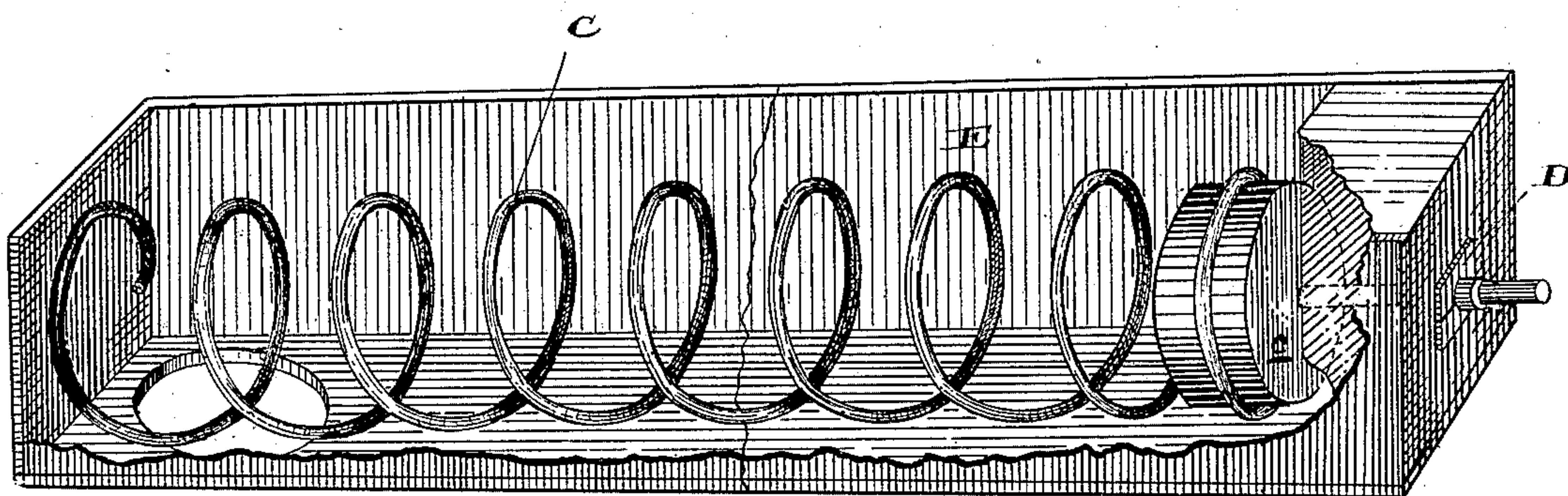


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

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FLOUR AND GRAIN CONVEYER.

SPECIFICATION forming part of Letters Patent No. 307,275, dated October 28, 1884.

Application filed May 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, ELI SMITH EDMONDSON, of the town of Oshawa, in the county of Ontario, in the Province of Ontario, Canada, miller, have invented a certain new and useful Conveyer for Grain and Flour Machines; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to certain new and useful improvements in grain-conveyers; and it consists in the peculiar construction, arrangement, and operation of parts, as hereinafter more fully described, and then pointed out in the claims.

Figure 1 is a perspective view of an ordinary conveyer as now usually made. Fig. 2 is a similar view of my improved conveyer.

The conveyer as now usually made, and illustrated in Fig. 1, consists of a cylindrical body or shaft, A, on which is placed a spirally-formed projection, B, commonly called by millers the "flight." The capacity of a conveyer made like this is measured by the circumference of the body A and the depth of the flight B. Consequently, to increase the capacity of the conveyer, it is necessary to increase the diameter of the body A as well as the depth of the flight B. Therefore machines requiring conveyers of large capacity must be increased in size to permit of the application of the required large conveyer. The cost of the machine is therefore increased in other parts besides the mere cost of the large conveyer, which increased cost is saved by my improved conveyer, which, moreover, is in other respects more efficient.

As shown by Fig. 2, my conveyer consists merely in a spirally-bent rod, C, one end of which is coiled around and securely attached to a block, e, connected to a suitable shaft, D, supported by a properly-formed bearing, and deriving motion from the same source as any other conveyer.

When in operation I find that a thin layer of flour or grain rests on the bottom of the box E, and to a certain extent supports the conveyer formed by the rod C, which layer of flour or grain forms almost a frictionless sup-

port for the conveyer formed by the rod C, which enables the conveyer to be driven with proportionately less power than if there were any strain on the bearing caused by the weight of the conveyer.

I have not described the exact construction of the box E, nor have I shown or described how the grain or flour enters or leaves the said box, as both the construction and operation of conveyers are well understood to those skilled in the art of milling.

I am aware that it has been proposed to use a coiled rod for the same purpose; but in such construction the end of the rod of which the conveyer was formed extended through the side of the box and formed the shaft for the drive-pulley. This was found objectionable for several reasons. The strain all coming on the end of the rod near the last bend, it was very apt to be broken off, in which case it was necessary to take off the pulley and withdraw the end which formed the shaft and the broken conveyer and substitute a new one or weld a new shaft thereto. Again, if the end that formed the shaft was not exactly in line with the center of the diameter of the spiral, either the pulley or the conveyer, or both, would "wobble," which would cause the conveyer to rub against the sides of the box, the results and disadvantages of which are apparent. All of these difficulties are avoided by my manner of connecting the conveyer to the shaft.

What I claim as my invention is—

1. As an improved conveyer for a grain or flour machine, the spirally-bent rod C, one end of which is free and the other coiled around and secured to a block on the shaft D, substantially as described.

2. The combination, with the box E and shaft D, of the block e, secured to said shaft within said box, and the spirally-bent rod C, one end of which is free and the other coiled around and securely fastened to said block, substantially as and for the purpose specified.

E. S. EDMONDSON.

In presence of—

LYMAN ENGLISH,
A. CARSWELL.