No. 710,387. Patented Sept. 30, 1902.

C. G. WILLIAMS.

SPIRAL CONVEYER.

(Application filed Mar. 26, 1902.)

(No Model.)

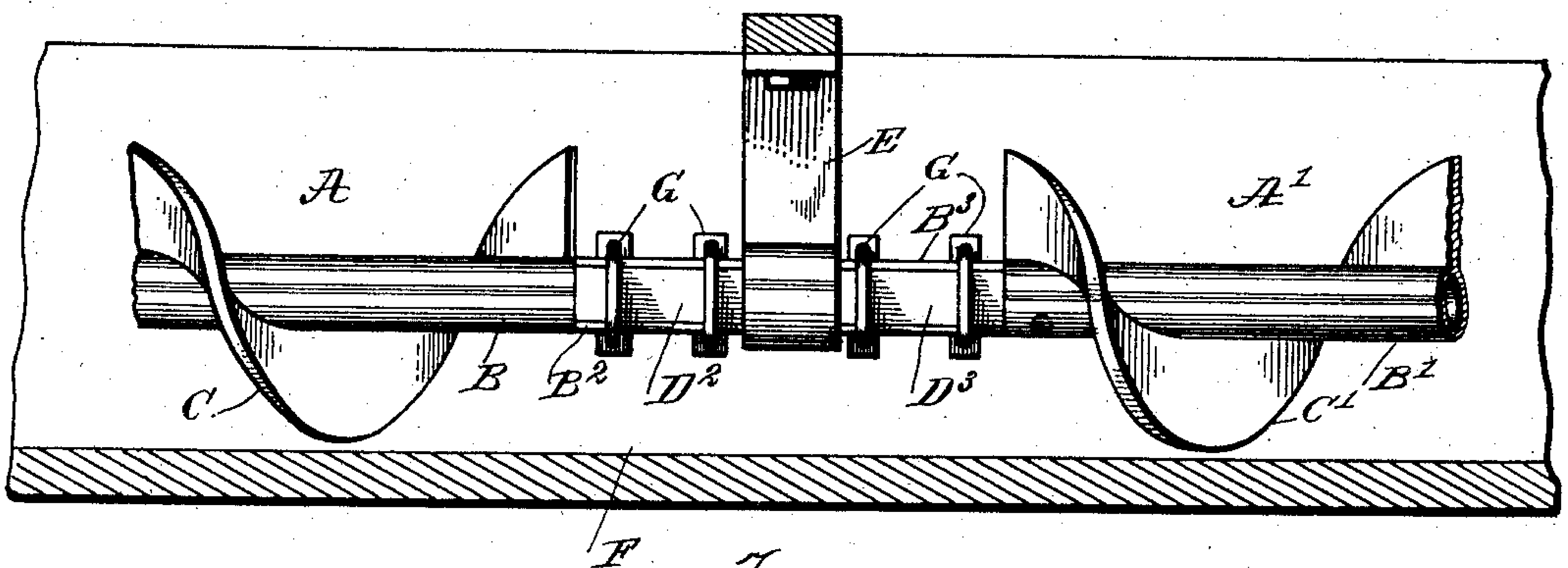

Fig. 1.

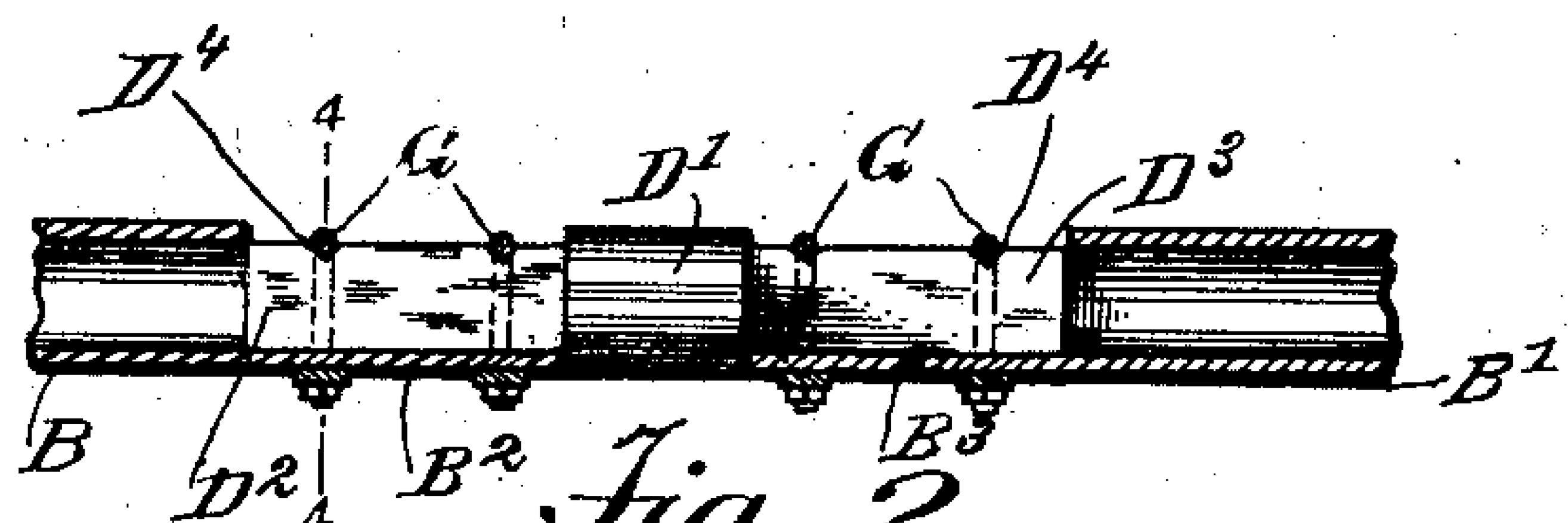

Fig. 2.

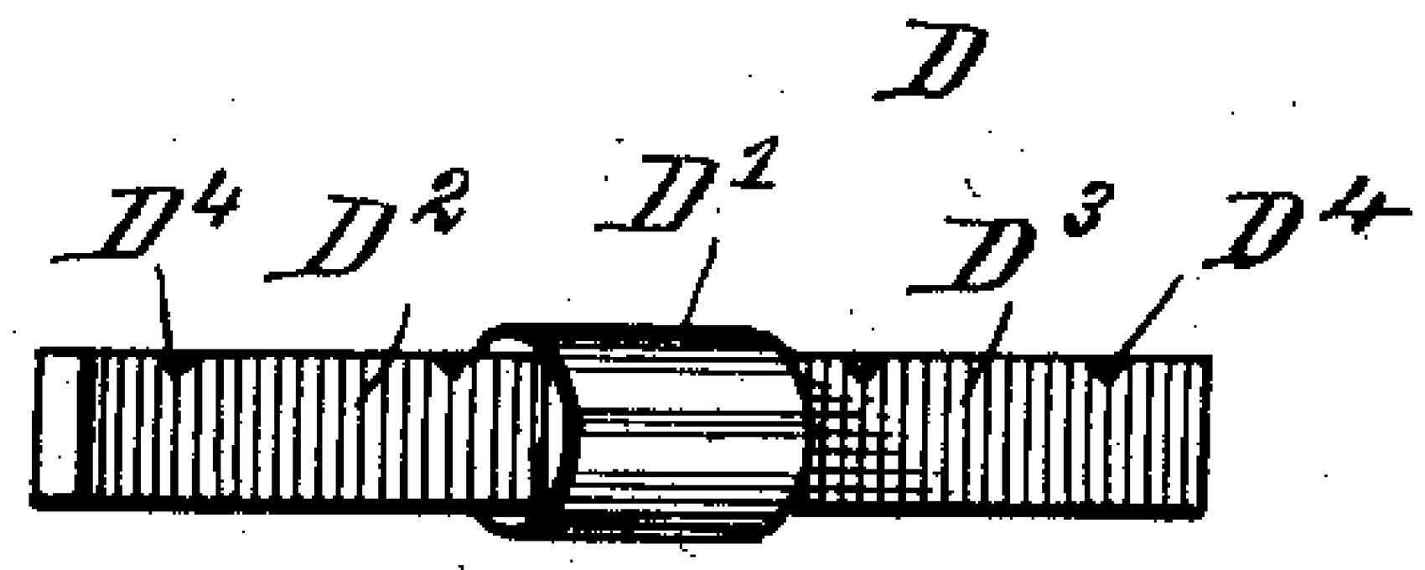

Fig. 3.

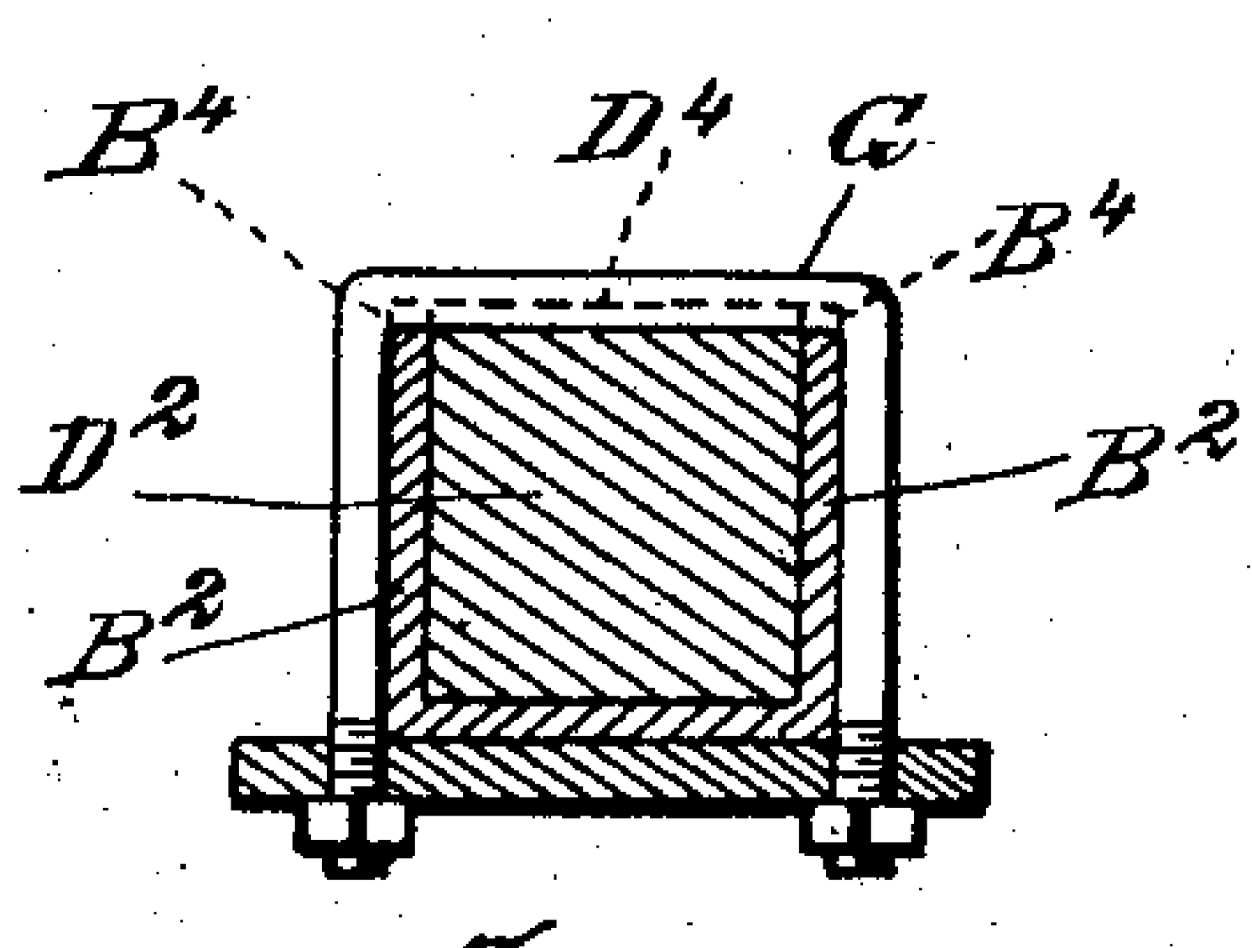

Fig. 4.

WITNESSES:

INVENTOR

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UNITED STATES PATENT OFFICE.

CAREY G. WILLIAMS, OF DALTON, IOWA.

SPIRAL CONVEYER.

SPECIFICATION forming part of Letters Patent No. 710,387, dated September 30, 1902.

Application filed March 26, 1902. Serial No. 100,048. (No model.)

To all whom it may concern:

Be it known that I, CAREY G. WILLIAMS, a citizen of the United States, and a resident of Dalton, in the county of Plymouth and State of Iowa, have invented new and useful Improvements in Spiral Conveyers, of which the following is a full, clear, and exact description.

The invention relates to spiral conveyers for moving grain and other materials; and its object is to provide certain new and useful improvements in spiral conveyers, whereby the several sections of the spiral shaft can be readily and securely fastened together and any one section requiring repairs can be readily removed at any time without disturbing the other sections.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal sectional elevation of the improvement. Fig. 2 is a longitudinal sectional elevation of the joint or coupling for adjacent shaft-sections. Fig. 3 is a perspective view of the coupling-plug, and Fig. 4 is an enlarged cross-section of the improvement on the line 4 4 of Fig. 2.

The sections A and A′ of the conveyer-spiral are provided with shafts B and B′, carrying the spiral blades C and C′, respectively, and each shaft-section is preferably made tubular, ordinary gas-pipe being preferably employed for the purpose. The shaft-sections B and B′ are connected with each other by a coupling-plug D, formed at its middle with a round or journal portion D′, mounted to turn in a bearing E, secured to the conveyer-case F, as plainly shown in Fig. 1.

The ends D^2 and D^3 of the coupling-plug D are preferably made square and fit into tongues B^2 and B^3, formed on the ends of the shaft-sections B and B′, the said tongues B^2 and B^3 being preferably U-shaped in cross-section, so as to engage three sides of the square ends D^2 and D^3. Clips G engage the ends D^2 and D^3 and the corresponding tongues B^2 and B^3 to securely fasten the latter to the coupling-plug, each clip extending through registering recesses D^4 B^4 in the plug ends and the tongues, so as to hold the same against longitudinal movement one on the other.

In practice I cut the end of the tube or gas-pipe in a lengthwise direction corresponding to the length of the ends D^2 and D^3 and then make an incision in a transverse direction at the end of the longitudinal cut, so as to allow of forming this end of the tube or pipe into the U-shaped tongue for engaging and fitting the end D^2 of the coupling-plug. In this manner a very simple, strong, and durable coupling is had between the sections of the spiral conveyer, and in case repairs are needed on one of the sections such section can be readily detached by removing the clips and then disengaging the tongues of the section from the coupling-plug without taking the latter out of the bearings E.

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

1. A spiral conveyer, having a blade-shaft made in sections, the ends of adjacent sections having projecting tongues made U shape in cross-section, a coupling-plug having a middle journal portion and projecting ends made square in cross-section for engaging the said tongues, and clips for clipping the said tongues and the ends of the plug together, as set forth.

2. A spiral conveyer, having a blade-shaft made in sections, the ends of adjacent sections having projecting tongues made U shape in cross-section, a coupling-plug having a middle journal portion and projecting ends made square in cross-section for engaging the said tongues, and clips for clipping the said tongues and the ends of the plug together, the clips engaging registering recesses in the said tongues and ends of the coupling member, to hold the said plug and tougues from longitudinal movement one on the other, as set forth.

3. A spiral conveyer having a blade-shaft made in tubular sections, the ends of adjacent sections having projecting portions U-shaped in cross-section, a coupling-plug having a journaled portion, and projecting ends

engaging said U-shaped portions of the shaft-sections, the ends of the coupling-plug being provided with transverse recesses registering with recesses in the side members of the U-shaped portions of the shaft-sections, and clips engaging said registering recesses, as set forth.

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

CAREY G. WILLIAMS.

Witnesses:
W. G. BOLSER,
A. R. LANDI.