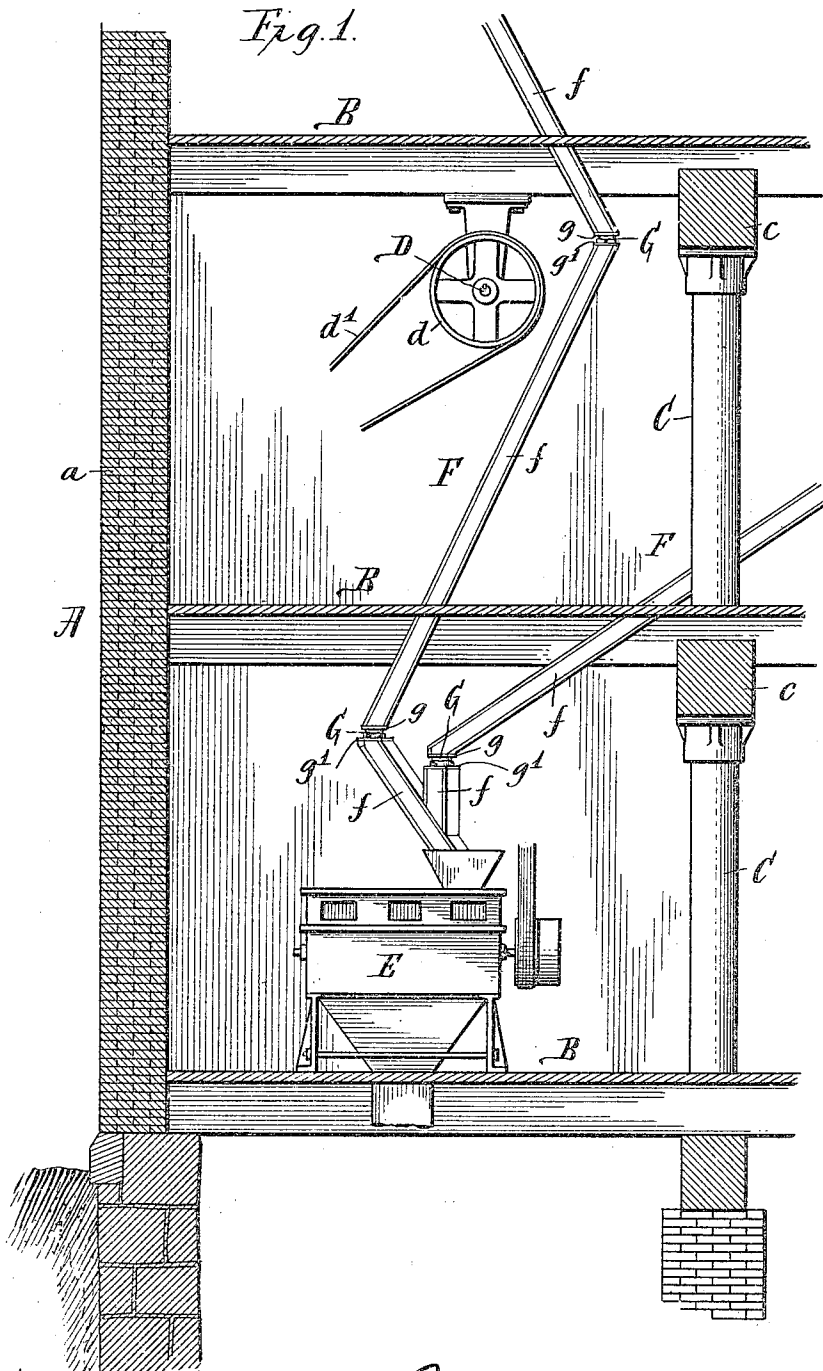


J. REDMOND.
CONNECTOR FOR GRAIN SPOUT SECTIONS.
APPLICATION FILED JULY 14, 1909.

949,499.

Patented Feb. 15, 1910.

2 SHEETS—SHEET 1.



Witnesses
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Jacob L. Oberst Jr.

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2 SHEETS—SHEET 2.

Fig. 2.

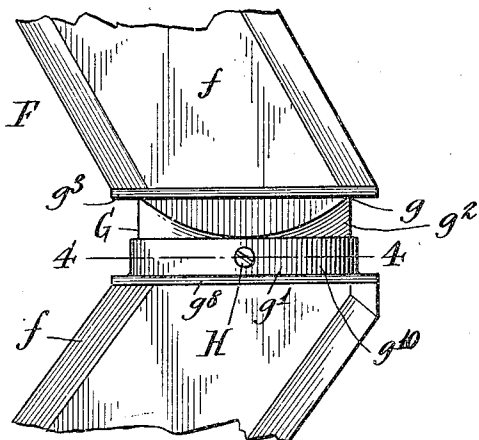


Fig. 3.

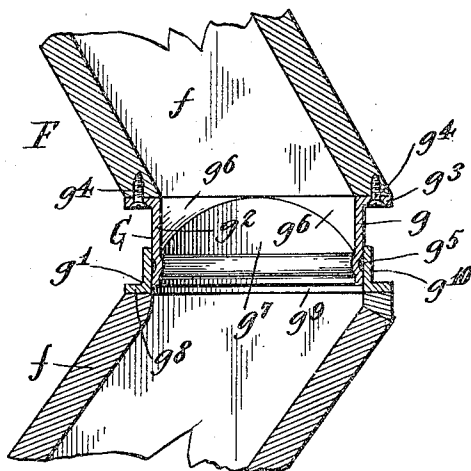


Fig. 4.

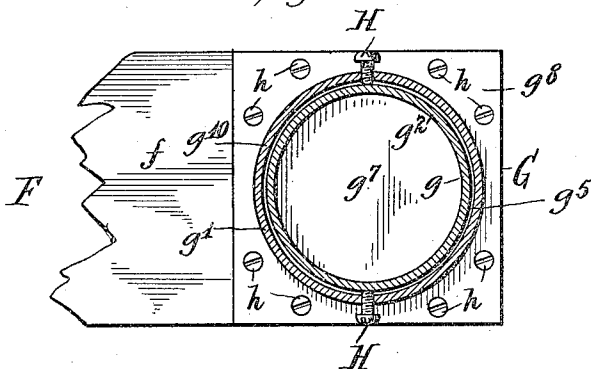


Fig. 5.

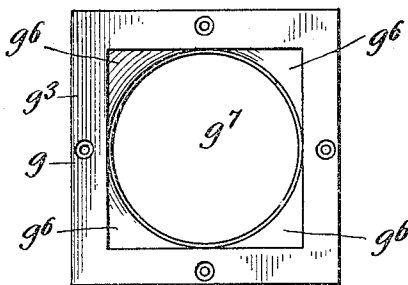
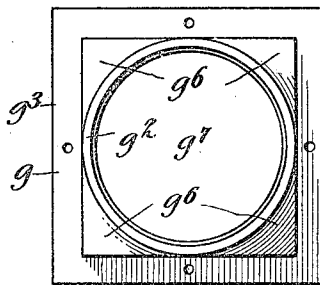


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN REDMOND, OF LE ROY, NEW YORK.

CONNECTOR FOR GRAIN-SPOUT SECTIONS.

949,499.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed July 14, 1909. Serial No. 507,601.

To all whom it may concern:

Be it known that I, JOHN REDMOND, a citizen of the United States, residing at Le Roy, in the county of Genesee and State of New York, have invented certain new and useful Improvements in Connectors for Grain-Spout Sections, of which the following is a specification.

This invention relates to improvements in connectors for grain spout sections, and it has for its primary object the provision of means for connecting spout-sections arranged at an angle to each other so as to avoid all corners where the sections are connected and thus prevent lodgment of grain or the accumulation of dirt at such points, which in time would become musty and foul.

Another object of my invention is the provision of a metallic connector between the several sections of a grain spout where the course of the spout is changed; said connectors being always arranged in a horizontal plane and being so constructed that very little time and labor are required to apply the co-acting parts thereof to the ends of the spout sections, and which connectors permit of installing a spout in much less time than is required by joining the sections thereof in the manner now in vogue; which not only requires skilled labor but when directing one section of a spout laterally with respect to another, creates corners or ledges in or on which grain or other material passed through the spout accumulates.

In constructing spouts of this kind in a mill, elevator, or other building, it is often necessary to change the course of the spout so as to clear machinery, uprights, supporting floors, and other obstructions, and my invention is particularly adapted for use at the points of the spout where the course of the same is changed; the connector being so constructed that one section of the spout may be swung with respect to another so as to properly position the first mentioned section without in any manner changing the position of the last-mentioned section.

With these and other objects in view, my invention consists in the construction, arrangement, and combination of parts to be hereinafter described and particularly pointed out in the subjoined claim.

In the drawings,—Figure 1 is a section through a portion of a building showing the same equipped with spouts having the sections thereof connected by my improved

connectors. Fig. 2 is a side elevation of my improved connector showing the same secured to the adjacent ends of adjoining spout sections. Fig. 3 is a vertical section of my improved connector, similarly applied. Fig. 4 is a horizontal section taken on line 4—4, Fig. 2. Fig. 5 is a plan view of the upper member of my improved connector. Fig. 6 is an inverted view of said upper member.

Referring now to the drawings in detail, like letters of reference refer to like parts in the several figures.

A represents a portion of a building showing the outer wall *a*, the floors *B* separating the various stories of the building, and uprights or columns *C* supporting girders *c* upon which the several floors of the building are carried.

D represents a shaft hung from the ceiling of one of the stories of the building and having a pulley *d* and belt *d*¹ adapted to drive machinery located in said story; and *E* is a suitable milling-machine in which grain is to be charged through a grain spout *F* comprising a number of spout sections *f*. These spout sections are arranged at different angles so as to avoid the shaft *D* and other machinery within the building; also to avoid coming in contact with the uprights or columns *C*. The sections are connected by means of my improved connectors *G* arranged wherever the spout changes its direct course. The ends of the spout-sections are cut at the required angle so that the edges thereof lie in horizontal planes; and as the connectors comprise two members *g* and *g*¹ they also lie in horizontal planes when said members are connected together and are attached to the spout-sections.

The member *g* of the connector comprises a cylindrical portion or thimble *g*² having at its upper end an outstanding flange *g*³ whose perimeter is rectangular, as shown in Fig. 4; said flange serving as a means of connection to the spout-section and for this purpose the flange is provided with openings through which screws *g*⁴ are passed that take into the end of the spout-section, as best shown in Fig. 3. The sleeve portion or thimble *g*² of said member has an annular external groove *g*⁵ for a purpose to appear hereinafter and from the corners of the flange *g*³, the walls of said members are beveled, as at *g*⁶, to the cylindrical opening *g*⁷ provided by said thimble, thus providing

flaring portions at the upper end of said sleeve at four points which obviates all corners and prevents lodging of material in the spout where the sections are connected.

5 The member g^1 of each connector comprises a flat plate g^s having a central opening g^o and an upstanding annular flange g^{10} bounding said central opening. The depending cylindrical portion or thimble g^2 of member g is entered in member g^1 , as best shown in Fig. 3, and binding-screws H are passed through the upstanding flange g^{10} of member g^1 and enter the annular groove g^5 of member g , the inner ends of said screws impinging against said thimble and by reason of said screws entering the annular groove g^5 , displacement of the thimble g^2 within the member g^1 cannot take place.

10 The plate g^s of member g^1 has openings through which screws h are passed that take into the end of the adjacent spout-section, thus securing said member to said section.

15 In constructing a grain spout and applying my improved connector at the points where the corners of the spout change, the ends of the spout-sections are cut at an angle so that the edges thereof will lie in horizontal plane when the spout is properly positioned. The connector members are then fastened to the ends of said sections, and are connected together by inserting the member g in the member g^1 , and after swinging the section carrying the member g^1 into the desired position, the binding screws H are tightened so that adjoining sections will be held in proper adjusted positions. It is possible with this connector to swing the lowermost section of a spout so that its lower

end can be placed to deliver grain or other material to different machines or to different points in a building, without in any manner changing the position of the remaining sections. 40

By constructing a connector as described, I obtain a cornerless connection between the spout sections and consequently a perfectly clean and sanitary grain spout results therefrom. 45

Having thus described my invention, what I claim is,— 50

A grain spout comprising a plurality of sections arranged at different angles and having their end edges in horizontal planes, and metallic connectors between said sections comprising an upper member and a lower member, each upper member having a rectangular flange and a depending cylindrical sleeve flared at four points to the inner corners of said flange and provided with an annular external groove near its lower end and each of said lower members comprising a rectangular plate and a cylindrical upstanding flange receiving the lower end of the cooperating upper member, and a binding screw passed through said cylindrical flange and entering said annular groove to impinge against the wall of said upper member at a point within said groove. 55 60 65

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses. 70

JOHN REDMOND.

Witnesses:

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J. W. ABBEY.