

B. F. HOWLAND.
CONVEYER SHAFT COUPLING.
APPLICATION FILED DEC. 3, 1910.

1,016,748.

Patented Feb. 6, 1912.

Fig. 1.

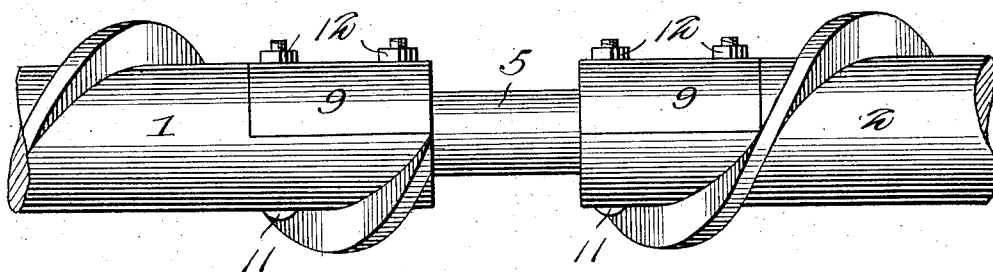


Fig. 2.

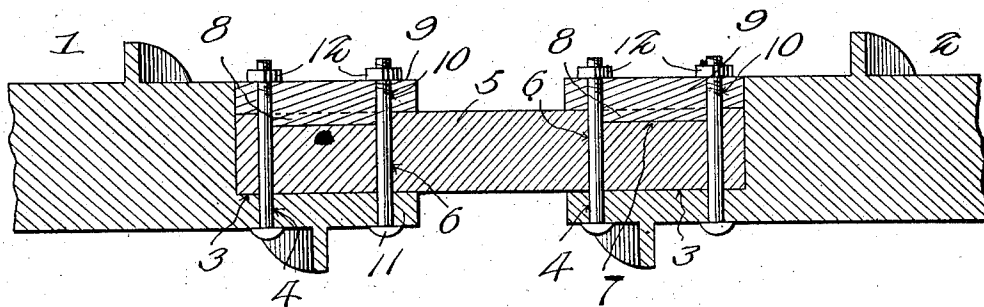
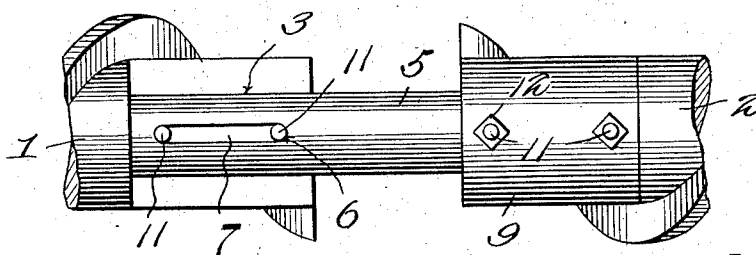


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

BENJAMIN F. HOWLAND, OF DES MOINES, IOWA.

CONVEYER-SHAFT COUPLING.

1,016,748.

Specification of Letters Patent.

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Application filed December 3, 1910. Serial No. 595,407.

To all whom it may concern:

Be it known that I, BENJAMIN F. HOWLAND, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented new and useful Improvements in Conveyer-Shaft Couplings, of which the following is a specification.

This invention relates to conveyers and more particularly to the shaft used in screw conveyers.

The object of the invention is the provision of novel means for coupling adjoining ends of the shaft whereby they may be conveniently and readily detached or attached for any purpose such as the replacing of the coupling shaft.

A further object of the invention is the provision of novel means for securing the coupling shaft in the ends of the conveyer shaft in such a manner that it may be readily removed and whereby the strain is removed from the attaching bolts.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawing which forms a part of this application, and in which:

Figure 1 is a side elevation. Fig. 2 is a longitudinal sectional view. Fig. 3 is a detail top plan view with one of the caps removed.

Referring more particularly to the drawing, 1 and 2 represent the separate ends of the conveyer shaft to be connected. Each end of the shaft is split longitudinally in half as shown and provided with a semi-circular socket 3 with transverse apertures 4 leading thereinto. The sockets on the ends of the shaft are adapted to receive the opposite ends of the coupling shaft 5 which is provided with transverse apertures 6 adapted to register with the apertures 4 leading into the socket. Two of these apertures are formed adjacent each end of the shaft and between the apertures the shaft 5 is grooved as at 7 to receive a longitudinal key 8 formed

on the inner side of the closing cap 9. Suitable apertures 10 are formed through the closing cap at either end of the key 8 which are adapted to register with the apertures 6 in the shaft 5 and with the apertures 4 in the ends of the shaft 1 and 2. Bolts 11 are passed through all of these apertures and suitable nuts 12 are threaded thereon to hold the caps in position. The bolts are preferably loose in the apertures so that the key 8 takes all the torsional strain between the ends of the shaft and the bolts are therefore not wedged in position and therefore hard to remove when it is desired to remove the coupling shaft 5. The caps 9 conform in shape to the shaft and the only projecting parts are the heads and nuts on the bolts. These will be countersunk in practice so that the ends 1 and 2 of the shaft will be perfectly round.

Having thus described the invention, what is claimed is—

The combination with the separate ends of the conveyer shaft to be connected, said ends being provided with semi-circular extensions having semi-circular longitudinal sockets, of a coupling shaft seated in the said extensions, semi-circular closing caps having semi-circular longitudinal sockets, bolts passing through the extensions of the conveyer shaft, through the coupling shaft and through the caps for holding the caps in position and preventing displacement of the coupling shaft, said coupling shaft having longitudinal grooves arranged between the bolts at each end, and keys integral with the caps and adapted to enter said grooves to hold the coupling shaft from turning in the sockets, said caps and extensions conforming to the sides of the conveyer shaft.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN F. HOWLAND.

Witnesses:

ROSE HOWLAND,
FRANK GLAZE.