J. R. HARRISON.

CONVEYER.

APPLICATION FILED NOV. 17, 1913.

1,109,986.

Patented Sept. 8, 1914.

Fig. 1.

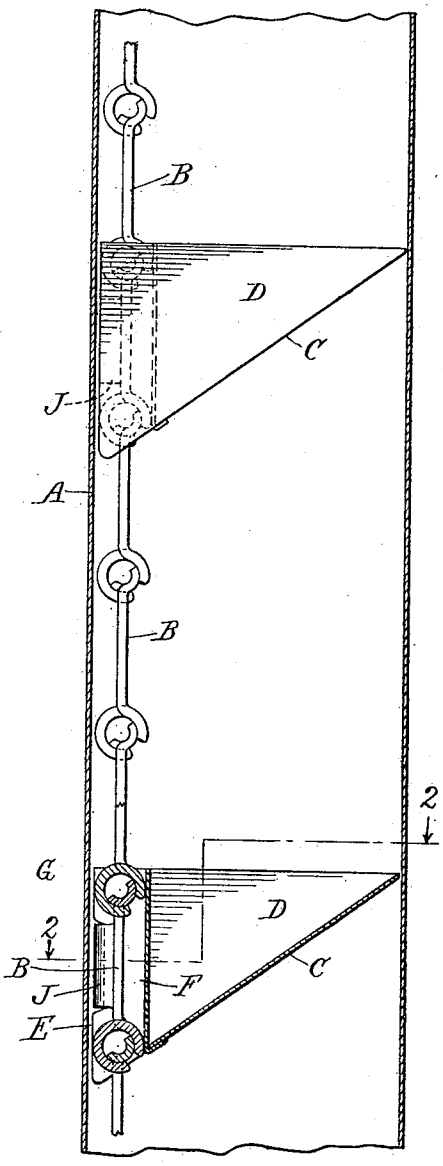
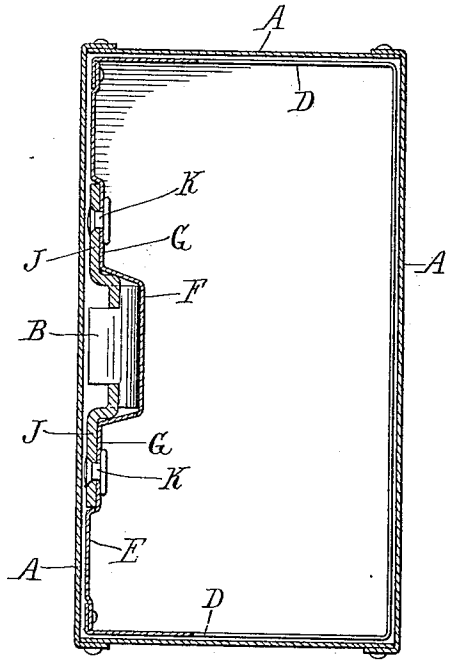


Fig. 2.



Witnesses.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES R. HARRISON, OF LAPORTE, INDIANA, ASSIGNOR TO M. RUMELY COMPANY, OF LAPORTE, INDIANA, A CORPORATION OF INDIANA.

CONVEYER.

1,109,986. Specification of Letters Patent. Patented Sept. 8, 1914.

Application filed November 17, 1913. Serial No. 802,176.

To all whom it may concern:

Be it known that I, JAMES R. HARRISON, a citizen of the United States, residing at Laporte, in the county of Laporte and State of Indiana, have invented a certain new and useful Improvement in Conveyers, of which the following is a specification.

My invention relates to a bucket elevator, particularly such as is designed for handling grain or other like substances in a closed pipe.

It is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a conveyer with buckets of my invention in use; Fig. 2 is a cross section on the line 2—2 of Fig. 1.

Like parts are indicated by the same letters in all the figures.

A is a tube or pipe preferably rectangular in cross section and B, B links of the conveyer chain.

C is the inclined bottom, D, D triangular ends and E the side of the bucket. The side of the bucket is deeply indented at F and on each side of such indentation is a shallower indentation G. One link of the chain is provided with lateral projections J, J, which are adapted to be received into the indentations G, G and to be at that point riveted to the side of the bucket by the rivets K, K. The body of that portion of the link which contains these lateral projections is received into the indentation F and the depth thereof is such that the outwardly extending part of the enlarged pivoting portions of the link are flush with the main outer surface of the side of the bucket.

By such an arrangement the chain and buckets travel in a path which is substantially a rectangle and may be of substantially the same maximum area as the cross section of the pipe. In this way substantially all of the grain or other material to be lifted or conveyed through the pipe by the buckets and chain is carried positively by or in front of the buckets and there is little or no room for any such material to fall or pass from one bucket to the next. This enables me to use a pipe of minimum size with maximum capacity and it prevents the slippage of material from bucket to bucket and the loss of energy or waste effort incident thereto.

I claim:

1. A grain conveyer comprising a pipe, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe, a maximum cross section substantially equal to that of the pipe and a chain in the pipe and outside the buckets, said chain provided with bucket attachments and said bucket side indented to receive such attachments.

2. A grain conveyer comprising a pipe rectangular in cross section, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe and a maximum rectangular cross section substantially equal to that of the pipe and a chain in the pipe outside the buckets, said chain provided with bucket attachments and said bucket side indented to receive such attachments.

3. A grain conveyer comprising a pipe, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe and a maximum cross section substantially equal to that of the pipe and a chain in the pipe outside the bucket, one end of said chain provided with lateral bucket attachments and said bucket-side indented deeply midway to receive the enlargements on the chain links and less deeply toward its ends to receive the lateral bucket attachments on the links.

4. A grain conveyer comprising a pipe rectangular in cross section, a series of buckets therein each having a side approximately parallel with the adjacent side of the pipe and a maximum rectangular cross section substantially equal to that of the pipe and a chain in the pipe outside the bucket, one end of said chain provided with lateral bucket attachments and said bucket-side indented deeply midway to receive the enlargements on the chain links and less deeply toward its ends to receive the lateral bucket attachments on the links.

In testimony whereof, I affix my signature in the presence of two witnesses this 6th day of November 1913.

JAMES R. HARRISON.

Witnesses:
LAMEL M. DOREMUS,
MINNIE M. LINDENAU.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."