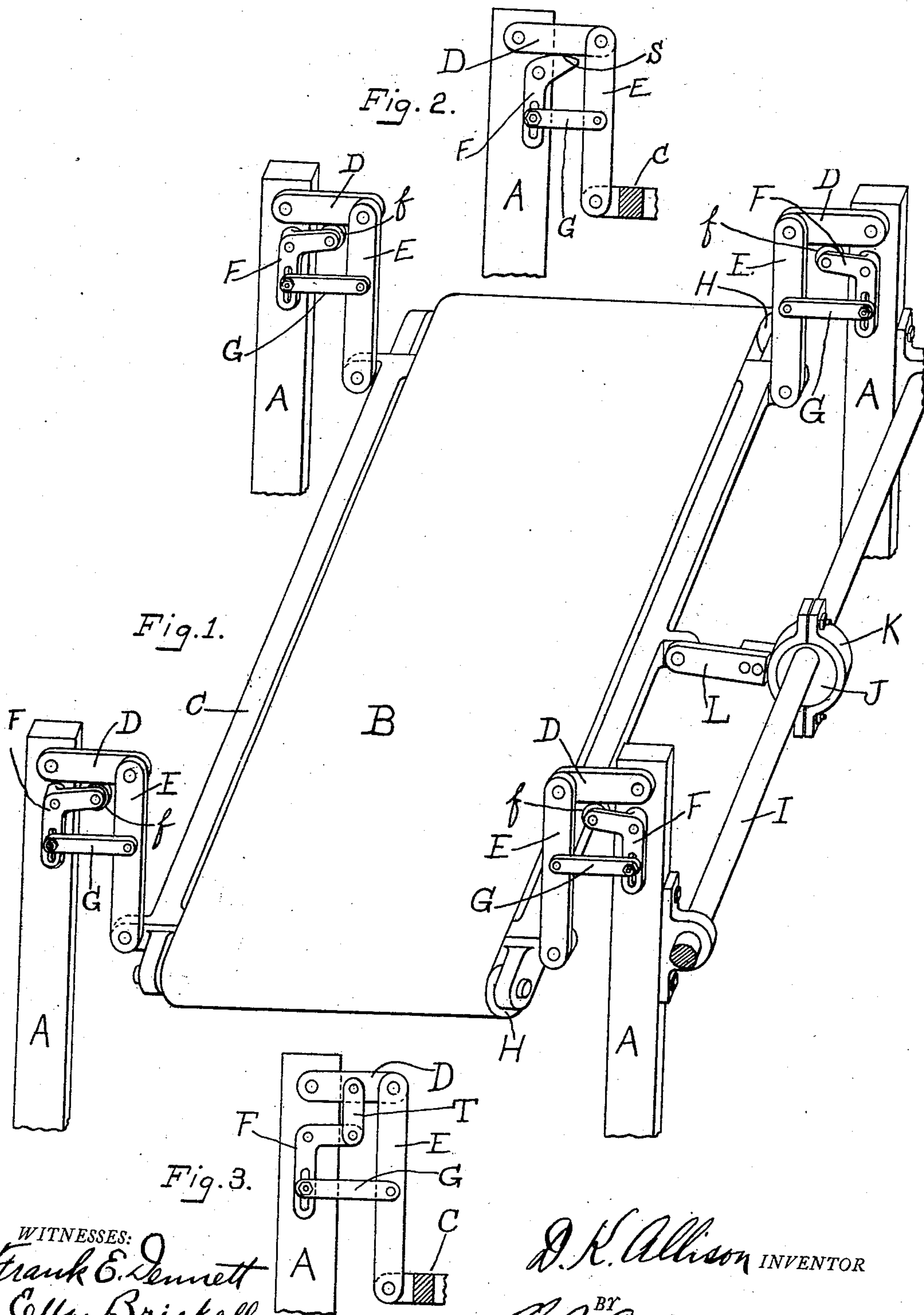


915,322.

D. K. ALLISON.
VANNER.
APPLICATION FILED JULY 12, 1906.

Patented Mar. 16, 1909.



WITNESSES:
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UNITED STATES PATENT OFFICE.

DANIEL K. ALLISON, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO ALLIS-CHALMERS COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF NEW JERSEY.

VANNER.

No. 915,322.

Specification of Letters Patent.

Patented March 16, 1909.

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To all whom it may concern:

Be it known that I, DANIEL K. ALLISON, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Vanner, of which the following is a specification.

This invention relates to vanners or ore concentrators and comprises novel means for supporting the movable table of such machines.

In the accompanying drawings which form a part of this specification and illustrate an embodiment of the invention and in which the same reference characters indicate the same elements on each of the several views,—Figure 1 is a fragmentary perspective of an ore concentrating table showing this invention applied thereto. Figs. 2 and 3 illustrate modifications of the specific supporting means shown by Fig. 1.

In the drawings, the reference letter A represents standards which are adapted to support the table as a whole.

C represents the frame of the table, and B the endless belt supported upon said frame by rollers H at each end thereof and adapted to be moved continuously about said frame upon said rollers.

As this invention relates specifically to the supporting means for the table, it has been deemed sufficient to illustrate only enough of the general structure of the apparatus to render the subject matter of this invention intelligible, as these ore concentrators are well known and in general use. It may be stated, however, that the embodiment which is illustrated belongs to that type in which a frame supporting an endless belt is adapted to be oscillated while at the same time the belt is moved continuously about the frame.

Pivotally supported upon each of the supports A, is a link D, and depending from the free end of said link and pivotally supported therefrom and to the frame of the table is a link E. Supported also upon said standards A are angled levers or links F which are pivoted to said standards, and connecting said angled levers with the link E are links G which are preferably adjustably secured to said angled levers. One arm of an angled lever F is adapted to support the link D and is provided with an antifriction roller *f*.

Reference character I represents the usual shaft located at the side of the machine and

supported upon the standards A, said shaft carrying the eccentric J and adapted to impart an oscillating motion to the frame C by means of the eccentric straps K and link L.

In the modification shown by Fig. 2, the antifriction wheel *f* shown in Fig. 1, is omitted and the part of the angled lever upon which the link D rests is formed with a cam surface S.

In the modification shown in Fig. 3, the angled link is connected with the link D by means of the small link T.

The operation of the apparatus is as follows: When the frame C is swung to the left, for example, the frame C swings upon the links E and at the same time imparts motion through the links G to the angled levers F, whereupon the links D at the left hand side of the machine will be depressed and the similar links D at the right hand side of the machine will be lifted, thereby giving a compound motion to the frame C and belt B. The purpose of uniting the links G and angled levers F adjustably is to enable the motion of the table to be adapted to different grades of ore which it may be necessary to treat.

The modification shown by Figs. 2 and 3, it will be noticed, will give a slightly different motion to the table from the specific arrangement of supporting apparatus shown in Fig. 1, while at the same time the general arrangement of parts is substantially the same.

What I claim is:

1. The combination with a support, of a concentrating table adapted to be oscillated, vertically arranged links pivoted to said table for supporting the same, horizontally arranged links pivoted to said vertically arranged links and to said support, angle levers fulcrumed to said support and adapted to support said horizontally arranged links, said angle levers being adapted to cause said vertically arranged links to rise and fall while said table oscillates.

2. The combination with supports, of a concentrating table carrying a belt which is adapted to move endwise thereof, means for oscillating the table, oscillatable links pivoted to the sides of said table, horizontally disposed links pivoted to the supports and supporting the oscillatable links, angle levers secured to said supports and supporting the horizontal links, and links connected to said angle levers and to said oscillatable links for

bodily raising and lowering said links as the table is oscillated.

3. The combination with a concentrating table adapted to be oscillated, of means for
5 oscillating the table, a link for supporting the table, and means flexibly connected to said supporting link and operated thereby for bodily raising and lowering said link in unison with the oscillations of the table.

10 4. The combination with a support, of a table, means for oscillating the table, a supporting link pivoted to the table, means pivoted on the support for bodily raising and

lowering the supporting link in unison with the oscillations of the table, a connection between the supporting link and the support, and a separate connection between the supporting link and the means pivoted on the support. 15

In testimony whereof, I affix my signature 20 in the presence of two witnesses.

DANIEL K. ALLISON.

Witnesses:

FRANK E. DENNETT,
ELLA BRICKELL.