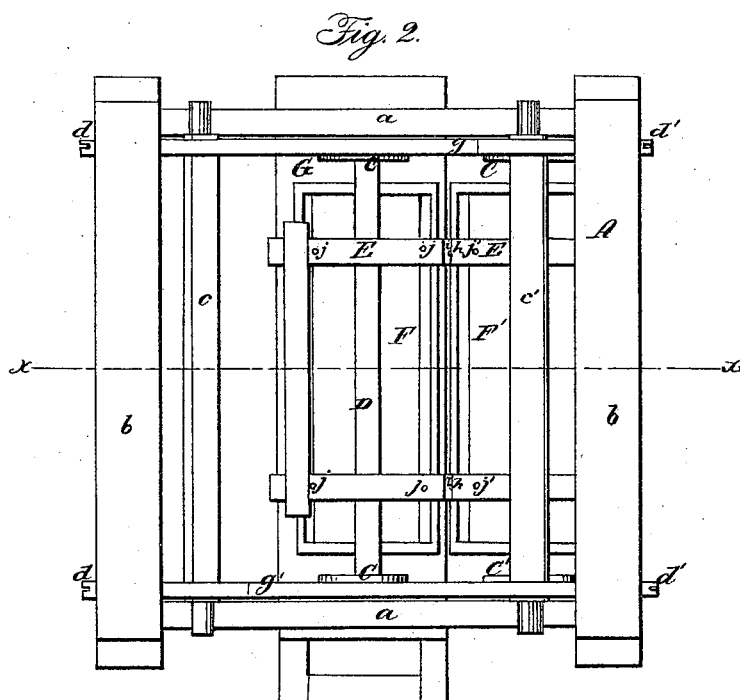
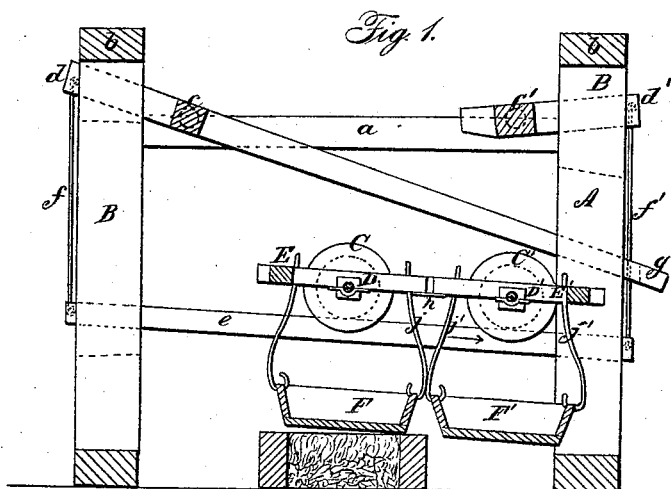


J. C. BELL.
Evaporating Pan.

No. 51,683.

Patented Dec. 26, 1865.



Witnesses:
Wm. Brewin
Thos. Fusch.

Inventor:
J. C. Bell
By *Munn & Co.*
Attys

UNITED STATES PATENT OFFICE.

J. C. BELL, OF PAWNEE CITY, NEBRASKA TERRITORY.

IMPROVED EVAPORATOR.

Specification forming part of Letters Patent No. 51,683, dated December 26, 1865.

To all whom it may concern:

Be it known that I, J. C. BELL, of Pawnee City, in the county of Pawnee and Territory of Nebraska, have invented a new and Improved Evaporator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention, the line *xx*, Fig. 1, indicating the plane of section. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention consists in suspending two or more pans in which the evaporation of saccharine or other liquids is to be conducted from bars or frames which rest upon the axles of flanged wheels, in combination with tracks which can be made to incline in either direction, and with an arch or fire-flue, in such a manner that by raising the tracks at one end one of the pans is caused to roll over the arch by its own gravity, and by raising the tracks at the opposite end the first pan is caused to move off from its place over the arch, and the second pan takes its place, the whole being so arranged that the operator or attendant can change the pans with little exertion and without difficulty. The change in the inclination of the tracks is effected by means of levers which extend from two rock-shafts in opposite directions. Said rock-shafts have their bearings in suitable bars secured in the frame above the tracks, and they are provided with suitable arms, from which said tracks are suspended. By depressing one of the hand-levers an oscillating motion is imparted to the rock-shaft thereof, and the ends of the track are raised accordingly.

A represents a frame, built of wood or any other suitable material, and composed of four uprights, B, which are united by cross-bars *a* and longitudinal bars *b*. The cross-bars *a* are provided with semicircular bearings to receive the ends of two rock-shafts, *c c'*, which extend parallel to the longitudinal bars *b* and in close proximity to the same. From these rock-shafts

extend arms *d d'* through mortises in the uprights B, and rails *e* are suspended, by means of wires or ropes *f f'*, from the ends of said arms. The rock-shafts *c c'* are operated by means of hand-levers *g g'*, which extend through suitable mortises in the uprights B, and by depressing the hand-lever *g* those ends of the rails *e* are raised which are suspended from the arms *d*, whereas by depressing the hand-lever *g'* the opposite ends of the rails are raised.

The rails *e* form the track for two pairs of wheels, C C', the wheels C being connected by an axle, D, and the wheels C' by an axle, D'. Each of these axles supports a frame, E or E', which can be connected by hooks *h*, secured to the ends of one frame and made to catch into loops *i* at the ends of the other frame, as clearly shown in Fig. 1 of the drawings, so that both frames are compelled to move back and forth on the rails or track *e e'* simultaneously. Suspended from said frames by metal rods *j j'*, or any other suitable means, are the pans F F', at such a height that they clear the arch G, which extends under the frame in a longitudinal direction and about in its center. This arch is constructed, in the usual manner, with an opening of sufficient size to receive one of the pans, and by moving the frames E E' transversely on the rails *e* either of the pans can be brought over the arch. The motion of the pans is facilitated by throwing the rails in an inclined position. By depressing the hand-lever *g* the pans are caused to roll down in the direction of the arrow marked near them in Fig. 1, and the pan F comes over the arch, and by depressing the hand-lever *g'* the pans roll down in the opposite direction and the pan F' adjusts itself over the arch.

If desired, the rods from which the pans are suspended can be provided with screw-threads or other suitable means whereby said pans can be slightly raised or lowered, so that each pan can be let down flat upon the arch when desired, or slightly raised therefrom before it is moved.

By this arrangement the operation of the pans is much facilitated, and an apparatus for evaporating cane-juice or other liquids is obtained which can be easily operated by one person, and which is of great practical value for small farmers or persons desiring to pro-

duce sugar on a small scale. It is obvious, however, that my apparatus can also be used with advantage for large establishments, and by its use much time and labor are saved in moving the pans.

I claim as new and desire to secure by Letters Patent—

1. The tilting rails *e*, arranged in combination with the frames *E E'*, supported by wheels *C C'*, and supporting the pans *F F'*, and with the arch *G*, substantially in the manner and for the purpose set forth.

2. The rock-shafts *c c'* and hand-levers *g g'*, in combination with the tilting rails *e*, carriages *E E'*, pans *F F'*, and arch *G*, all constructed and operating substantially as and for the purpose described.

J. C. BELL.

Witnesses:

E. R. WILLSON,
R. H. HAMMOND.