

No. 760,844.

PATENTED MAY 24, 1904.

J. G. BODENSTEIN.  
ELEVATOR ICE PLANER.  
APPLICATION FILED SEPT. 24, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

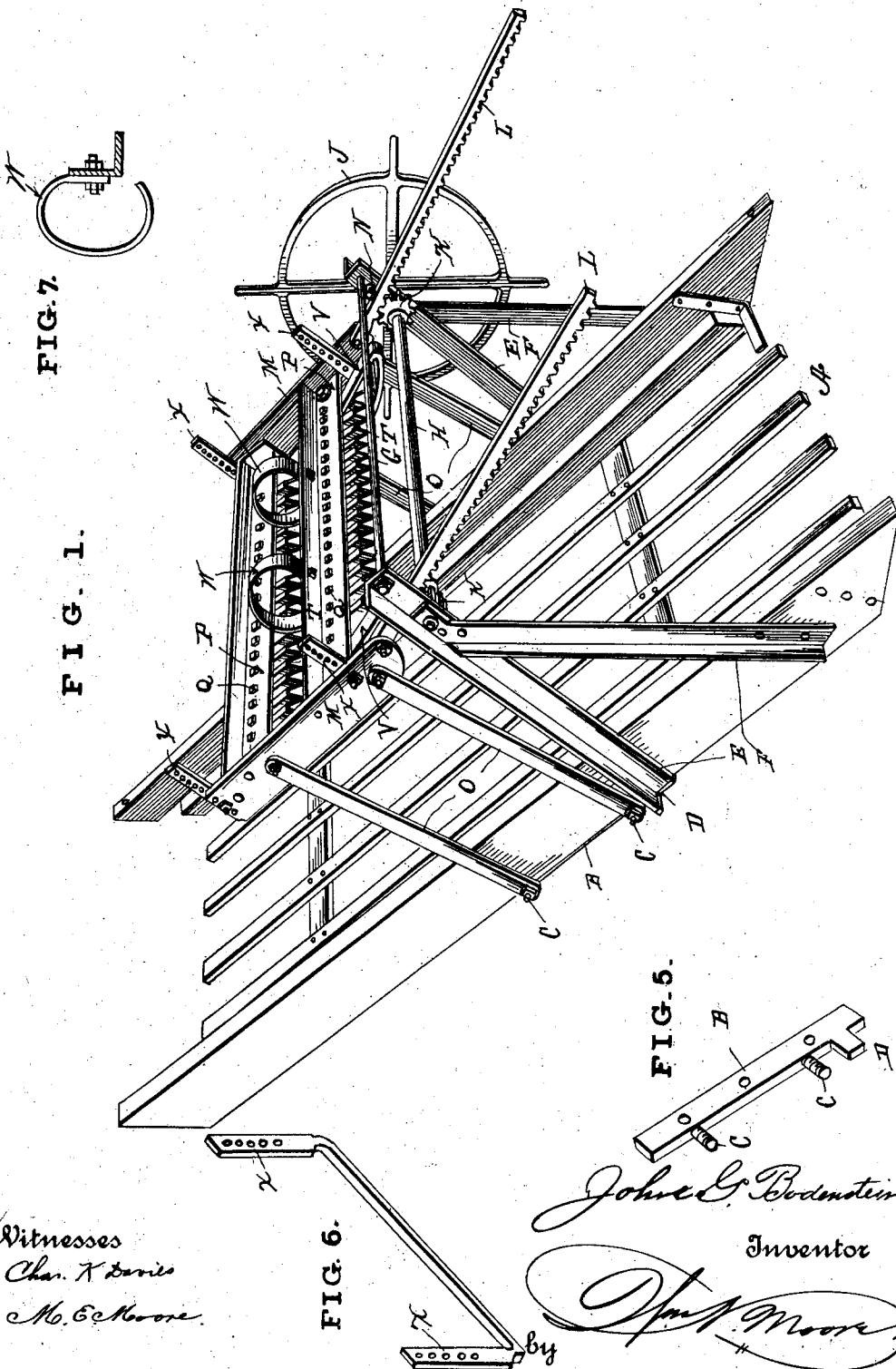


FIG. 7.

FIG. 1.

FIG. 6.

Witnesses  
Char. A. Davis  
Mo. E. Moore.

FIG. 6.

John G. Bodenstein  
Inventor  
Mo. E. Moore  
Attorney

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3 SHEETS—SHEET 2.

NO MODEL.

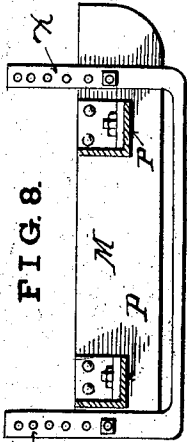


FIG. 8.

FIG. 2.

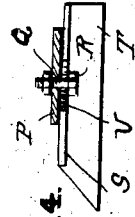
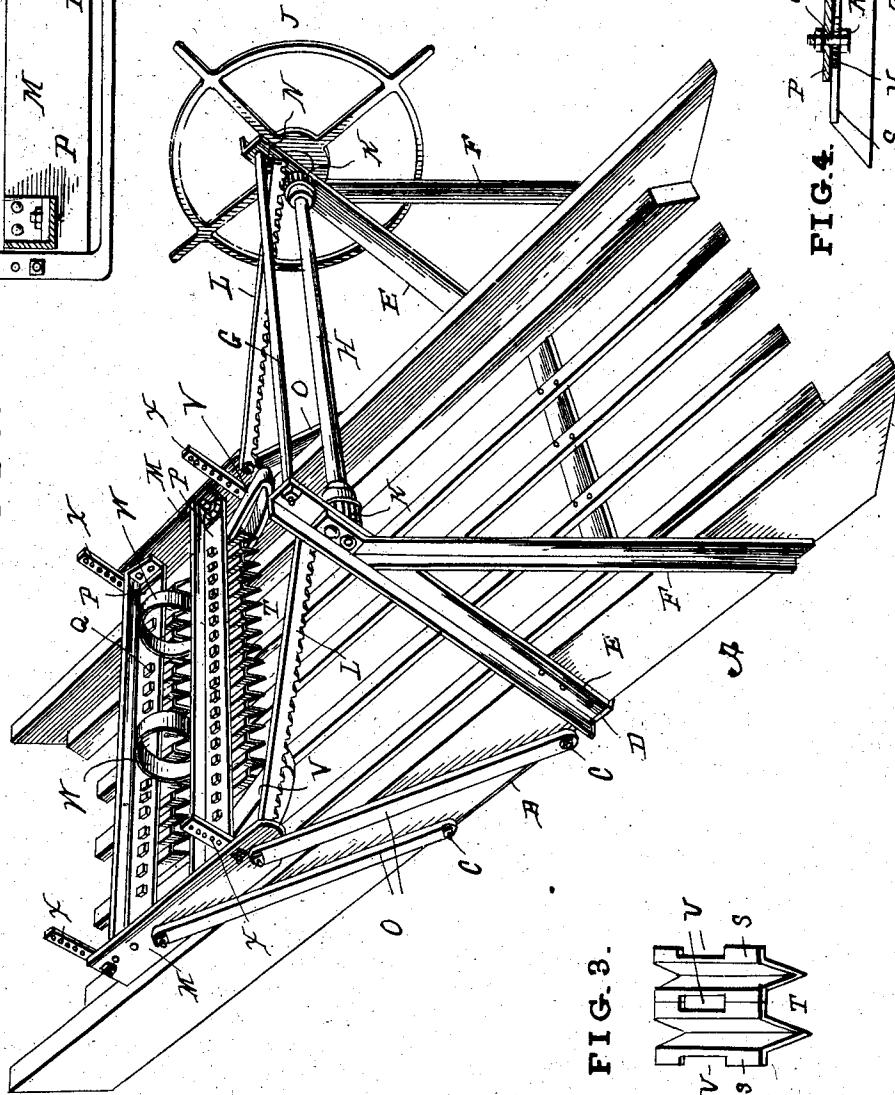
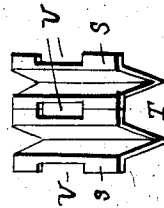


FIG. 4.

FIG. 3.



Witnesses

Chas. K. Davis.  
A. E. Moore

*John G. Bodenstein*

Inventor

by *A. E. Moore*  
Attorney

# UNITED STATES PATENT OFFICE.

JOHN G. BODENSTEIN, OF STAATSBURG, NEW YORK.

## ELEVATOR ICE-PLANER.

SPECIFICATION forming part of Letters Patent No. 760,844, dated May 24, 1904.

Application filed September 24, 1903. Serial No. 174,445. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN G. BODENSTEIN, a citizen of the United States, residing at Staatsburg, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Elevator Ice-Planers, of which the following is a specification.

My invention relates to improvements in elevator ice-planers; and one object of my invention is the provision of an elevator ice-planer which can be quickly adjusted for use and which when not in use can be collapsed to occupy a small amount of space.

Another object of my invention is the provision of an elevator ice-planer which will be light in weight, but possess great strength and durability, which can be quickly adjusted for use, and which can be regulated to suit the size of blocks of ice to be planed.

Another object of my invention is the provision of an elevator ice-planer which can be quickly raised out of the way of obstructions to prevent injury to the parts, which will be extremely simple and inexpensive of construction, and thoroughly efficient and practical in every particular.

With these objects in view my invention consists of an elevator ice-planer embodying novel features of construction and combinations of parts, substantially as disclosed herein.

Figure 1 represents a perspective view of my complete planer, the parts being in a position they assume when the machine is in use. Fig. 2 represents a similar view of my planer with the parts in the position they occupy when the machine is thrown out of use. Figs. 3 and 4 represent detail views of the knives or cutters and the manner of securing them to the knife-supporting bar. Fig. 5 represents a detail view of one of the supporting-plates. Fig. 6 is a detail perspective of one of the gage-bars. Fig. 7 is a sectional detail view showing one of the contact-springs, and Fig. 8 is a detail view showing the relation of the gage-bar to the side plates or bars of the device.

In the drawings the letter A designates the chute or elevator, which is arranged at an incline and consists of the side rail and the series of horizontal guide-bars upon which the

ice travels to the storehouse. To the under side of each side rail is bolted or otherwise secured the pair of supporting-plates B, formed each with a pair of threaded studs C and with an angle-plate D, and upon the angle-plate rests the lower end of the standards or supports E, to which are connected the braces or inclined bars F, this structure forming the frame of my planer and the frame being made rigid and secure by the connecting cross-bar G. Mounted in the frame is the shaft H, which carries at one end the hand-wheel J for turning said shaft, and upon said shaft is mounted the pinions K, said pinions meshing with the pair of rack-bars L, the inner end of which rack-bars is connected to the side pieces or plates M, and said racks are guided and retained always in mesh with the pinions by means of the rollers N. From this construction it will be observed that the frame supports the shaft carrying the hand-wheel and pinions and that said pinions mesh with the pair of rack-bars and that the turning of the hand-wheel moves the rack-bars back and forth, and consequently the side rails or plates, and said plates are supported on the threaded studs by means of the series of links O the side bars will be adjusted to any height with reference to the elevator, the purpose of which will presently appear.

Mounted to the side rails or plates are the knife-supporting bars P, in this instance two of the bars being shown, although I would have it understood that I may use any number desired, and said knife-supporting bars are provided with openings through which pass the fastenings Q, which have the heads R engaging the horizontal portions S of the V-shaped knives or cutters T.

The knives or cutters are of V-shaped form and are provided with the horizontal portions provided with kerfs or recesses, which when the knives are assembled form a series of openings U, through which the fastenings Q pass, and the heads of said fastenings engage the under side of the horizontal portions and secure the knives in place. To prevent injury to the cutting edges of the knives and to hold the blocks of ice down, I provide the pair of curved springs V, which extend be-

low the edge of the cutters and receive the impact of the ice and prevent it from hard contact with the knives, and I also provide the pair of curved springs W, which take the jar from the cutter-bars, and in addition I provide the series of perforated strips X, which form a gage for regulating or setting the depth of cut desired. As shown in Fig. 8, said depth-gages are bolted to the frame-plate M, holes being drilled through the gage-bars at any desirable intervals, thus providing for an adjustment to any depth within the limits of a particular case.

I claim—

1. In an elevator ice-planer, the combination of the chute the stationary vertical frame mounted on said chute, the shaft mounted in said frame and carrying the hand-wheel and the pinion, the swinging links having their lower ends pivoted to the chute, the side rails pivoted to the upper ends of said links, the knife-bars adjustably mounted in said side rails the knives carried by said bars, the rack-bars connected to the side rails and engaging the pinion and guides for holding the rack-bars in engagement with said pinion.

2. In an elevator ice-planer, the combination with the inclined chute, the frame rigidly mounted on said chute, the shaft mounted in said frame and carrying the pair of pinions, the rack-bars engaging said pinion, the side rails connected to the inner ends of said rack-bars, the links connecting the side rails with

the chute to permit a swinging movement upon the chute, the knife-bars mounted in the side rails and carrying the knives, the springs carried by said rails, and means for adjusting the knives in the bars.

3. In an elevator ice-planer, the combination with the inclined chute, the frame composed of the vertical standards, and inclined braces secured to the chute, the shaft mounted in the frame and having operating means, a pair of pinions carried by said shaft, a pair of rack-bars held in engagement with said pinions, side rails connected to the inner end of said rack-bars, the links connecting the side bars or rails with the chute to permit a swinging movement, the knife-bars, means for adjusting said bars, and the V-shaped knives carried by said bars.

4. In an elevator ice-planer, the combination with the inclined chute the side rails pivotally mounted on the chute to swing with reference thereto, means for swinging said bars to the proper adjustment with reference to the chute, knife-bars mounted in said side rails, a series of V-shaped knives secured to said bars and the springs carried by the side rails to prevent shock to the knives.

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

JOHN G. BODENSTEIN.

Witnesses:

FERD BODENSTEIN,  
WILLARD T. VAIL.