



E. D. HALEY.  
Ice-Planer.

No. 214.999.

Patented May 6, 1879.

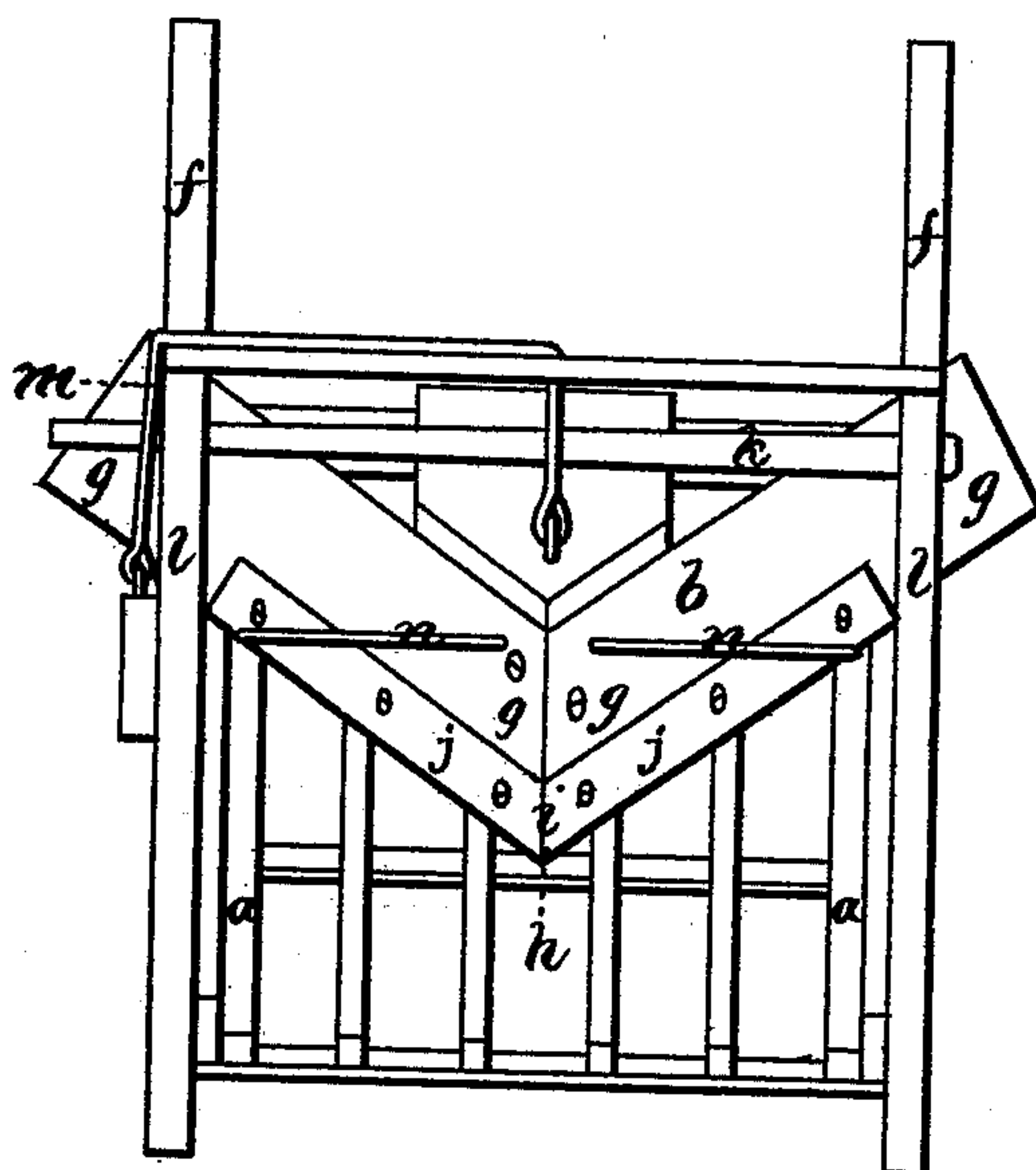


FIG. 3.

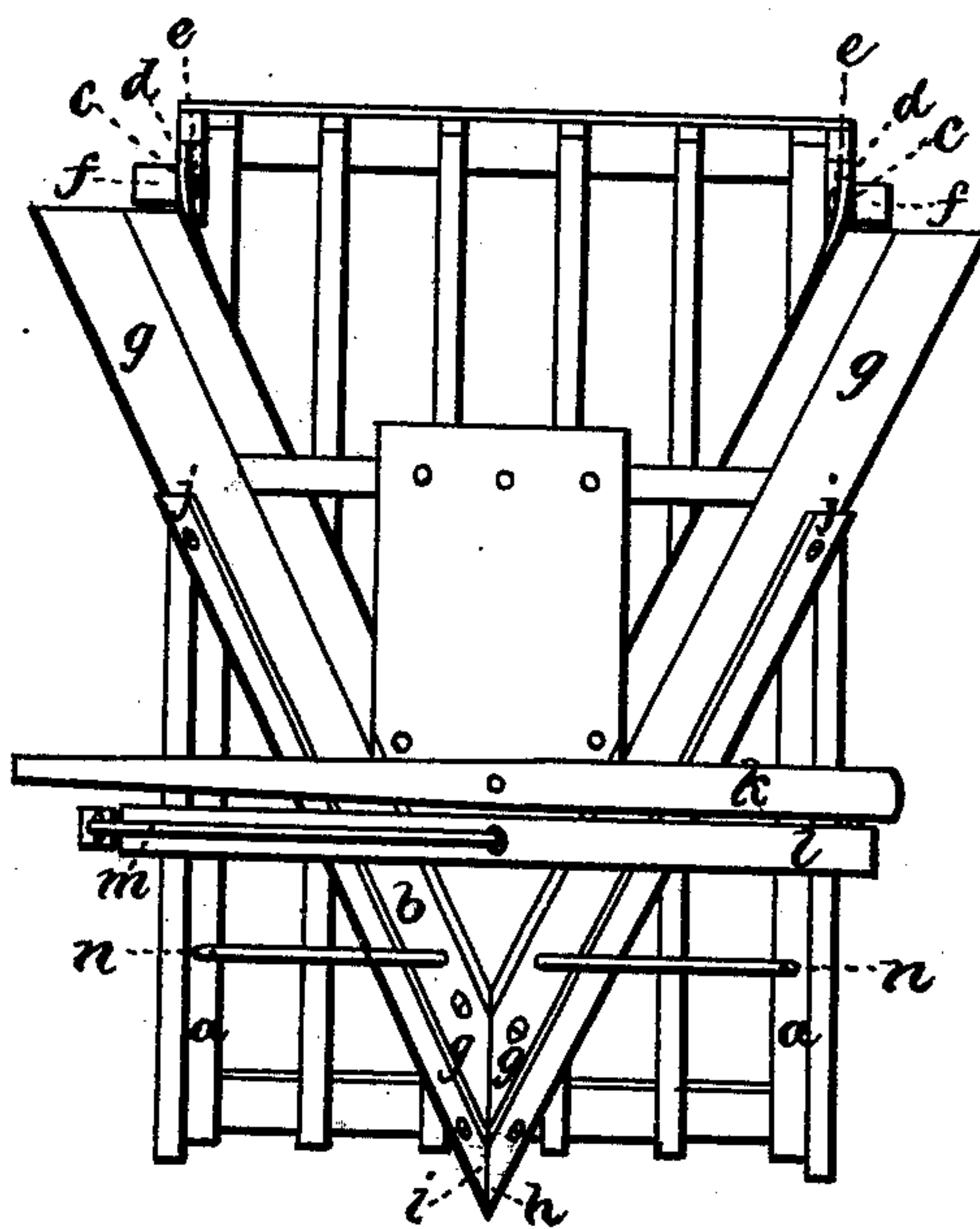


FIG. 4.

WITNESSES:

Chas. H. Kimball.  
Francis M. Lemmette.

INVENTOR:

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William Henry Clifford

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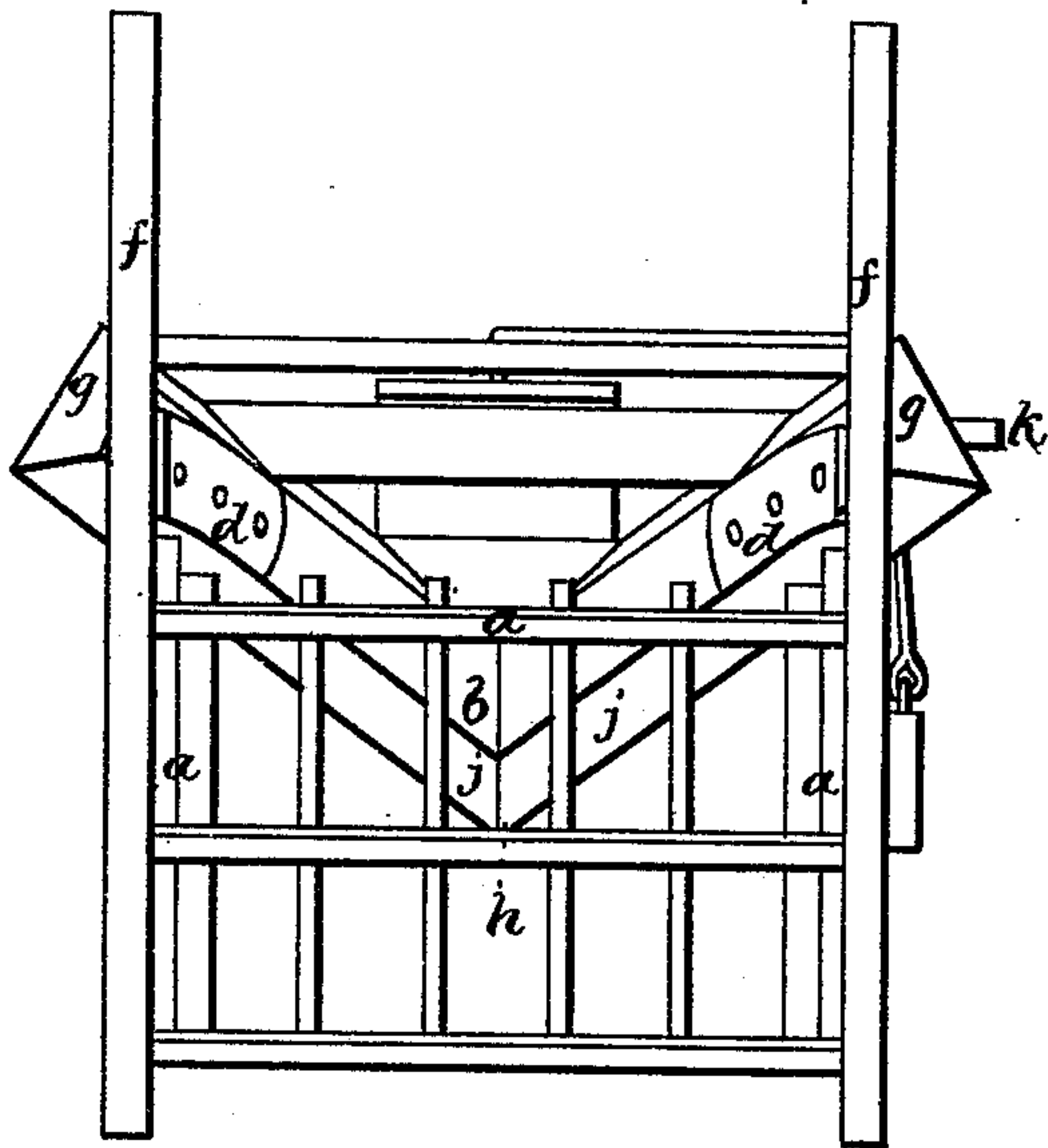
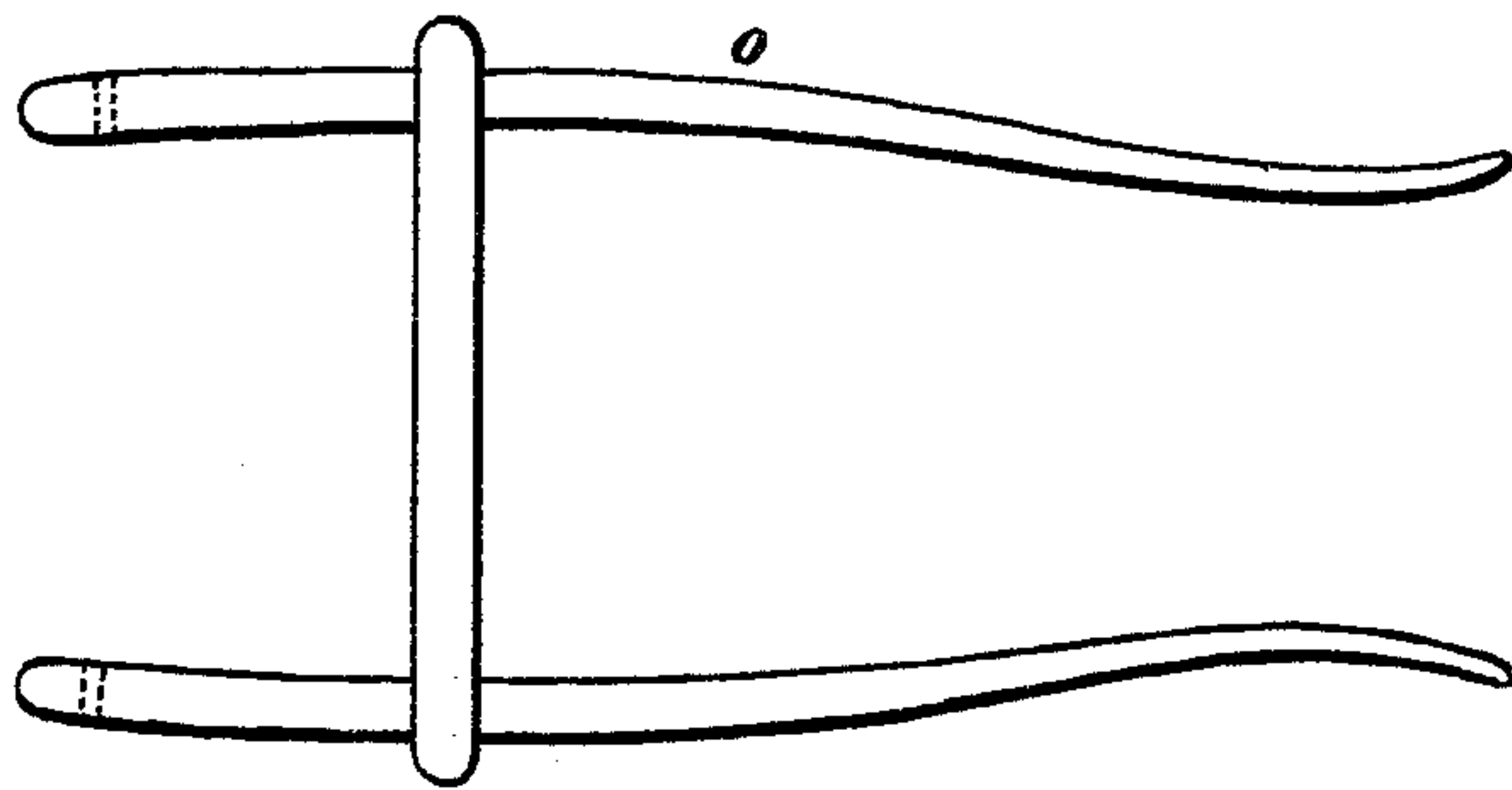


FIG. 5.



WITNESSES:

*Chas. H. Kimball.*  
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# UNITED STATES PATENT OFFICE.

EBEN D. HALEY, OF GARDINER, MAINE.

## IMPROVEMENT IN ICE-PLANERS.

Specification forming part of Letters Patent No. **214,999**, dated May 6, 1879; application filed January 10, 1879.

*To all whom it may concern:*

Be it known that I, EBEN D. HALEY, of Gardiner, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Ice-Planers, combining elevator and field-planer; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side view. Fig. 2 is an opposite side view. Fig. 3 is a front view. Fig. 4 is a top plan. Fig. 5 is a back view.

The object of my invention is to produce a device for planing and cleaning ice while being elevated into the packing-house.

My invention consists in the combination of an ice planer or cleaner with the slip leading up into an ice-house, in the manner hereinafter described, together with certain devices for attaching and suspending the cleaner upon the slip, and for operating said cleaner thereon, as hereinafter described.

In the accompanying drawings, *a* shows the inclined slip or elevator on which the ice is moved, when cut into blocks of the desired form and size, into the ice-packing houses. The ice is usually carried up by an endless apron, belt, or chain, which passes up over the slip, and has cleats or lags, against which the different cakes rest. They are by these moved up to the necessary height in the house to be stored away, as desired. Over the slip *a*, at any convenient points thereon, I place the device shown at *b*. This is held in its position by being suspended at *c*. At this point I supply two metal or other plates, bolted to the device *b*, as illustrated in Fig. 5. Through the back end of these plates I pass the bolts or pivots *e*. Two standards, *f*, rise on either side of the slip *a*, and the bolts *e* pass into holes provided for them in the standards *f*, and thus hold the device *b* at the desired height above the slip *a*. Instead of the holes, the plates *d* may be provided with slots themselves, or slots may be made in the standards *f*.

The device *b* is V-shaped in form, and comes

to a point at the lower end of the same. It is provided with flaring or beveled sides *g*, and presents at the lower end the point *h* and inclined edge *i*. On the bottom and outside edges it is furnished with two metal plates or scrapers, *j*, which have the same flare or inclination as the beveled sides *g*. These two plates are brought to an acute point and edge, as illustrated in Fig. 3. Near the front end of the device *d* it is provided with a lever, *k*. This lever is pivoted to a standard or frame, *l*. By means of this lever the scraper or planer *b* is pressed upon the ice-block passing under it with the desired force, in order to remove any accumulations from the face of the block.

A cord, *m*, supplied with a weight, and passing up over a support or frame, enables the operator easily to handle the scraper or planer by means of lever *k*.

The operation of the device *b*, when placed on the slip or elevator, may be described and illustrated as follows: While the ice is being prepared and cut into pieces or blocks in the field, accumulations of small broken fragments of ice and chips and ice-dust made by the plows collect on the top surfaces of the blocks. These are injurious to the ice, and occasion a great deal of labor in their removal. As the blocks pass up the slip, the lower point of the planer or scraper is by the lever *k* brought down to the upper edge of the block, and as the block passes under the planer all the soft and broken deposits are removed, and the said top surface is left even, smooth, and hard, leaving the ice dry, which prevents the blocks from cementing together when packed in houses. The use of this device very much increases also the keeping qualities. The contact of the point of the planer with the top of the ice-block, combined with the inclination of the scraper, works a slight groove or concavity in the top surface of the block. This produces a slight space or aperture between the cakes when piled upon each other, which very much facilitates the use of the striking-under bar used by the workmen to loosen up the cakes before removal for transportation, &c.

Detaching the planer *b* from the slip or elevator, it can be used in the ice-field to plane and smooth the ice before cutting. The effect is to cut off all uneven and irregular parts from

the ice, such as are occasioned by broken pieces becoming frozen on the top.

The rod *n* and the shafts *o* show a convenient manner of fitting the planer to be drawn over the field by a horse. The rods *n* pass through holes in the back end of the shafts, and thus permit of the shafts being attached to the planer to draw it, in the manner described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The planer or cleaner *b*, in combination with the plate *d*, bolts *e*, standards *f*, lever *k*,

and frame *l*, as and for the purposes herein set forth.

2. The planer *b*, in combination with the lever *k*, and cord *m* and its weight, as herein described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EBEN D. HALEY.

Witnesses:

LIZZIE W. COLE,

CELIA H. GOOWIN.