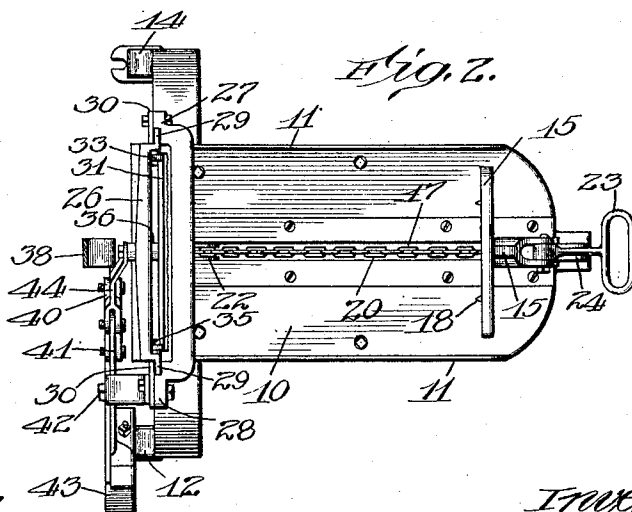
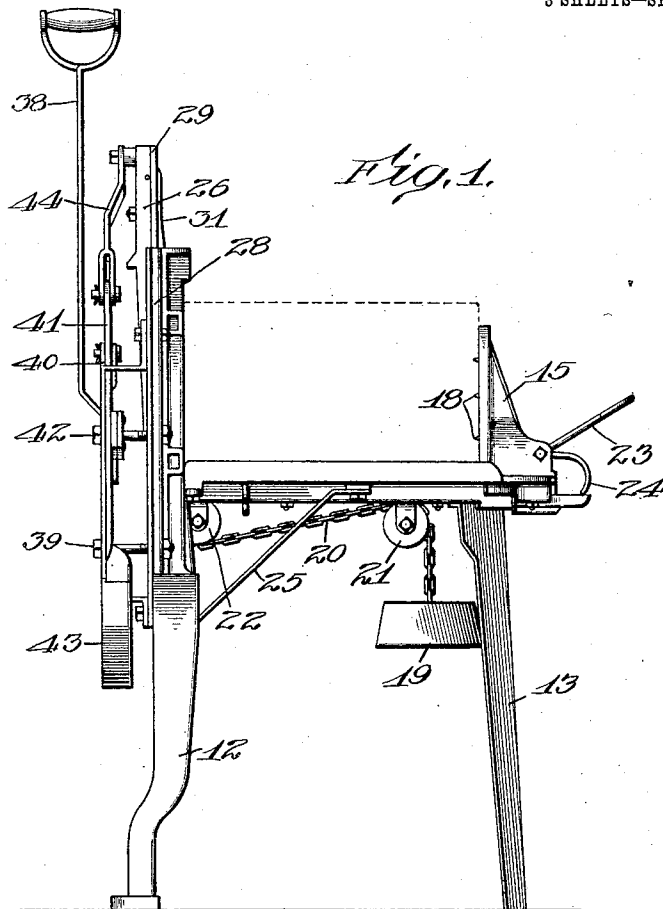


G. S. BLAKESLEE.
ICE SHAVING MACHINE.
APPLICATION FILED JAN. 4, 1906.

933,154.

Patented Sept. 7, 1909.

3 SHEETS—SHEET 1.



Witnesses:
Robert A. Weir
J. B. Weir

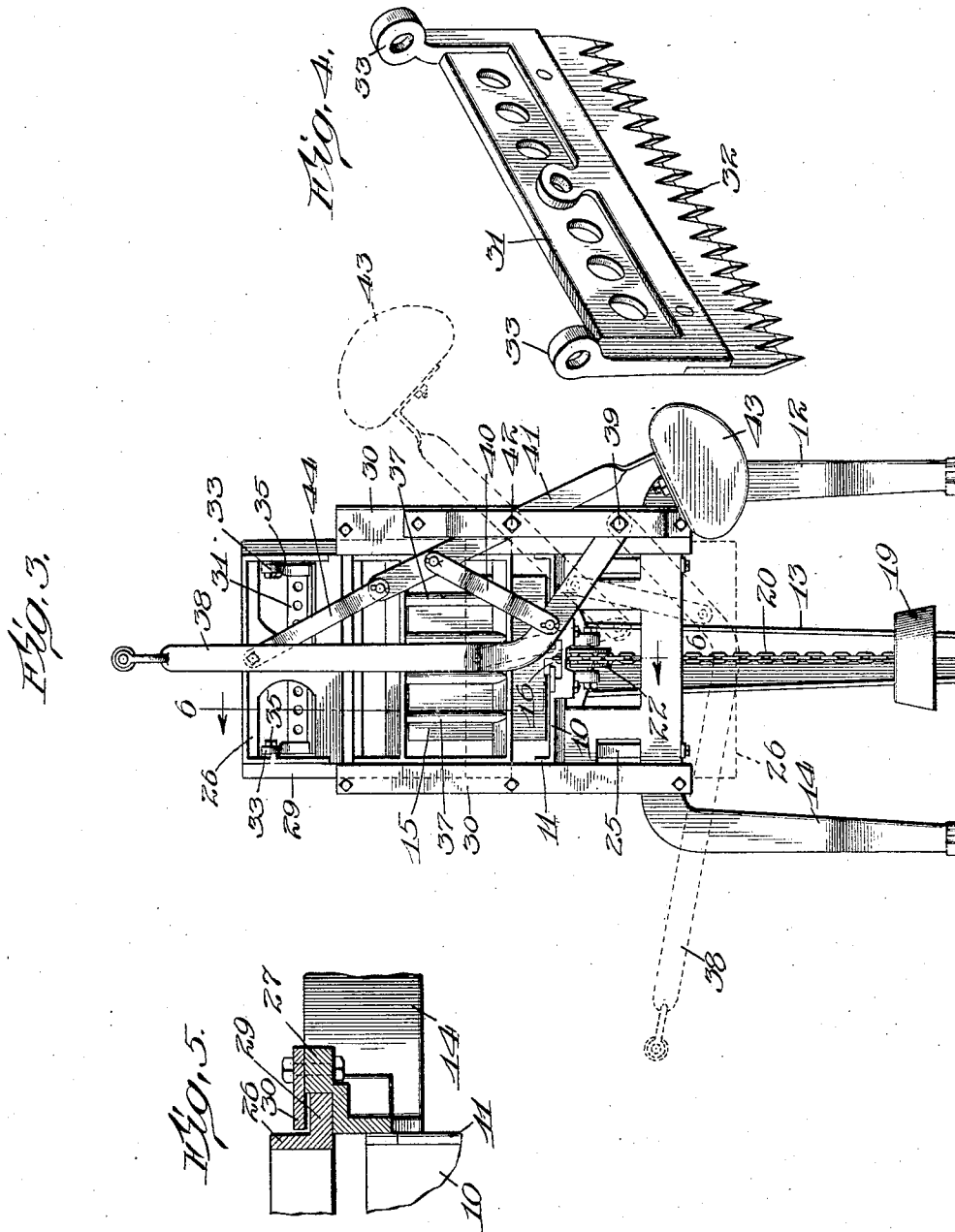
Inventor:
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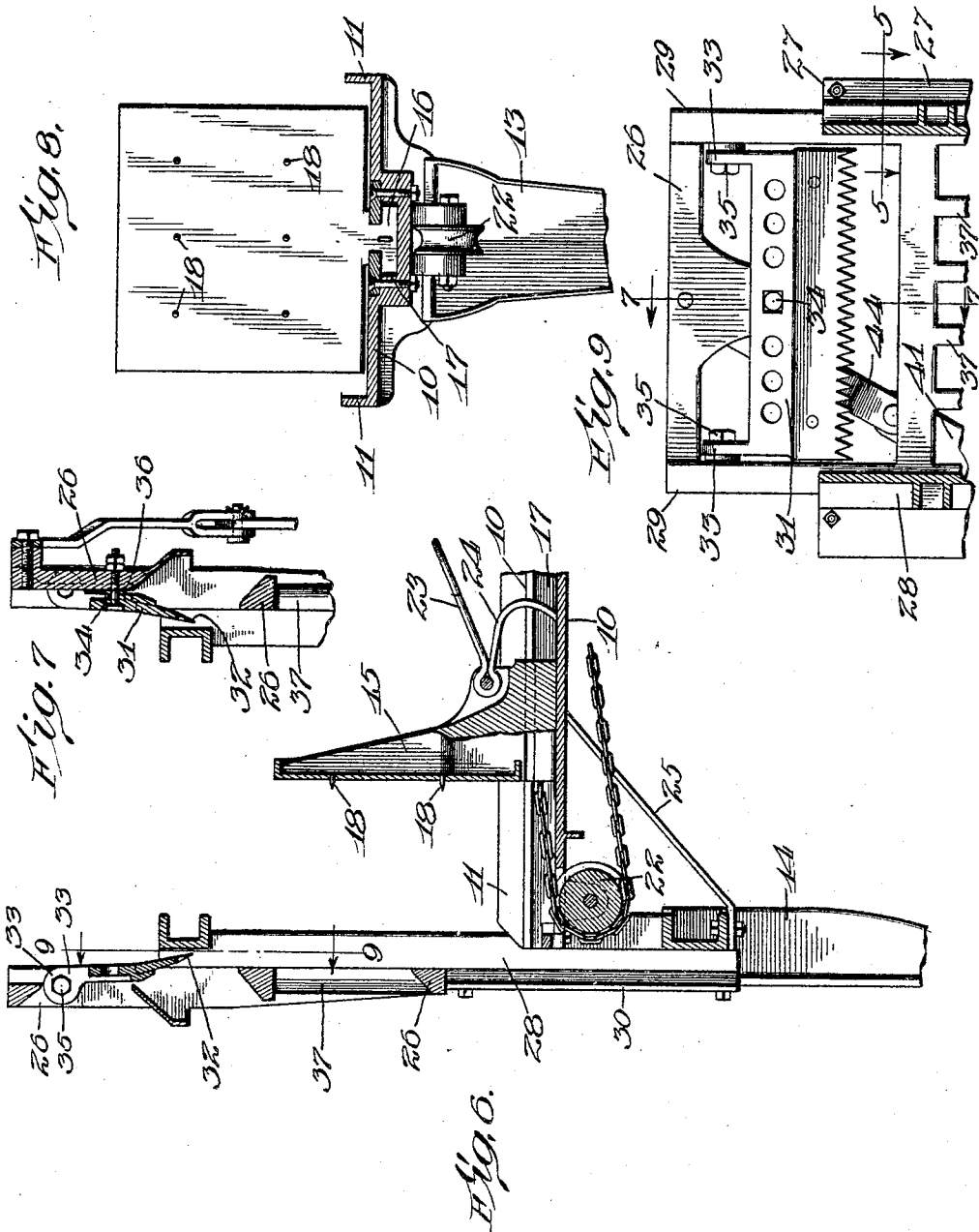
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3 SHEETS—SHEET 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE S. BLAKESLEE, OF CHICAGO, ILLINOIS.

ICE-SHAVING MACHINE.

933,154.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed January 4, 1906. Serial No. 294,600.

To all whom it may concern:

Be it known that I, GEORGE S. BLAKESLEE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ice-Shaving Machines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to machines for shaving ice, and has for its object to provide a new and improved machine by which ice in the form of a block or cake may readily be reduced to the condition of chipped ice.

To this end my invention consists in providing means for automatically feeding the ice to the shaving or chipping mechanism; in providing means by which the shaving or chipping mechanism may easily be operated; and in various other improvements which are hereinafter pointed out.

What I regard as new is set forth in the claims.

In the accompanying drawings,—Figure 1 is a side elevation of my improved machine; Fig. 2 is a plan view; Fig. 3 is a front elevation; Fig. 4 is a perspective view of the chipping or shaving blade; Fig. 5 is a detail, being a cross-section on line 5—5 of Fig. 9; Fig. 6 is a vertical section on line 6—6 of Fig. 3; Fig. 7 is a vertical section on line 7—7 of Fig. 9; Fig. 8 is a vertical cross-section illustrating the arrangement of the feeding-mechanism; and Fig. 9 is a vertical section on line 9—9 of Fig. 6.

Referring to the drawings,—10 indicates the feed-table, best shown in Figs. 2, 6 and 8, which is provided with lateral marginal flanges 11 to hold the block of ice in place and is mounted on legs or pedestals 12—13—14, as shown in Figs. 1 and 3.

15 indicates a feed plate or head, which is arranged in an upright position on the table 10 and is adapted to slide longitudinally thereof, being provided with a downward extension or slide 16 which moves in a longitudinal slot 17 in the feed-table, as shown in Figs. 6 and 8. The front or vertical face of the head 15 is preferably provided with pins 18 which engage the ice and prevent it from slipping sidewise. The head 15 is moved forward to feed the ice by a counterbalance-weight 19 connected with the lower portion of the head by a chain 20, or other flexible connection, which runs over sheaves 21—22, as shown in

Figs. 1 and 6. The sheave 22 is located at the forward end of the table, while the sheave 21 is near the rear end and is underneath the table, so that as the weight descends the feed-head 15 is moved forward. The head is provided with a handle 23 by which it may be readily drawn back when another block of ice is to be put in place.

24 indicates an arm connected with the handle 23 for supporting it in a convenient position.

25 indicates braces, which brace the legs 12—14 from the feed-table 10.

26 indicates a vertically-sliding frame, 70 which is fitted between uprights 27—28 at opposite sides of the frame of the machine so as to slide therebetween. As shown in Fig. 5, the frame 26 is provided with lateral flanges 29 which are overlapped by plates 30, as shown in Figs. 2 and 5. By this construction the frame 26 is free to slide vertically.

31 indicates a chipping or shaving blade having teeth 32 at its lower edge, as shown 80 in Fig. 4. Said blade is provided at its end with ears 33 by which it is secured to the side portions of the frame 26. It is also secured intermediately to the frame 26 by a bolt 34, as shown in Fig. 7. The ears 33 are 85 secured in place by bolts 35, as shown in Fig. 6.

As illustrated in Fig. 7, one or more washers 36 may be placed upon the bolt 34 between the blade 31 and the frame 26. By 90 this construction the blade 31 may be adjusted to vary its inclination to a vertical plane and yet may be rigidly secured in position.

As is best shown in Figs. 6 and 7, the 95 blade 31 is set at an inclination to the perpendicular, and the frame 26 extends down at a considerable distance below the teeth 32. The lower portion of the frame 26 is provided with vertical bars 37, as shown in 100 Figs. 3 and 6. By this construction, the lower portion of the frame 26 serves as a stop against which the forward end of the ice block bears during the chipping or shaving operation, so that by varying the 105 extent to which the teeth 32 project beyond the plane of the adjacent face of the frame 26 the thickness of the chippings or shavings may be varied. The principle is similar to that of an ordinary plane.

The frame 26 is reciprocated by means of a lever 38 fulcrumed at one end upon a bolt 110

or pivot 39, as shown in Fig. 3. Said lever is connected intermediately by a link 40 with a swinging arm or lever 41 fulcrumed intermediately upon a bolt or pivot 42, which, in the construction shown, is placed vertically over the fulcrum 39. The outer end of the lever 41 carries a counterbalance-weight 43, while at its opposite end portion it is connected with the lever 38 by the link 40, and also with the frame 26 by a link 44. Said link is preferably connected with the extreme upper portion of the frame 26, as shown in Fig. 3.

The normal position of the lever 38 is upright, as shown in Fig. 3,—it being so held by the counterbalance-weight 43. This also holds the frame 26 in its uppermost position. When the lever 38 is depressed, as shown in dotted lines in Fig. 3, the inner end of the lever 41 is drawn downward carrying the frame 26 down and moving the blade 31 down over the inner end of the block of ice. This operation also carries the counterbalance-weight 43 up to the position shown in dotted lines in Fig. 3, so that when the lever 38 is released it at once returns to its upright position. By this construction the power applied to the lever 38 is transmitted to the sliding frame 26 in the most favorable manner, being applied thereto substantially in a vertical direction at all times during the shaving operation,—thus not only securing the maximum effect, but also relieving the machine from lateral strain. The operating parts of the shaving-mechanism are substantially balanced by the weight 43, so that there is no waste of power, and consequently only sufficient power need be applied to overcome the resistance of the ice to the blade.

While I have described particularly the embodiment of my invention illustrated in the accompanying drawings, I wish it to be understood that I do not restrict myself to such details of construction, except in so far as they are particularly claimed, as my invention includes generically the subject-matter of the broader claims.

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

1. In an ice shaving machine, the combination of means for supporting the ice, a standard rising from said ice-supporting means, shaving mechanism, a lever pivoted to said standard and connected with said shaving mechanism for reciprocating the same, and a second lever pivoted to said standard and extending in the same direction as that of the first-mentioned lever and connected therewith for actuating it.

2. In an ice-shaving machine, the combination of means for supporting the ice, reciprocating shaving-mechanism, means for advancing the ice toward said shaving mechanism, a swinging lever, a link connecting said lever at one end with said shaving-mechanism, a second lever, and a link connecting said second lever between its ends with said first-mentioned lever at one side of the fulcrum thereof.

3. In an ice shaving machine, the combination with means for supporting the ice, shaving mechanism adapted to be reciprocated vertically, and means adapted to advance the ice toward said shaving mechanism, of a lever fulcrumed at an intermediate point on said machine, a counterbalance weight secured to one end of said lever, a link connecting the other end of said lever to said shaving mechanism, a second lever pivotally mounted on said machine, and a second link connecting said second lever with said first lever at a point between the fulcrum of said first lever and the point of connection of said first link thereto, whereby by the reciprocation of said second lever said shaving mechanism is reciprocated vertically.

4. In an ice shaving machine, the combination with means for supporting the ice, shaving mechanism adapted to be reciprocated vertically, a feeding head movable toward and from said shaving mechanism along said ice-supporting means, and means adapted to move said feeding head toward said shaving mechanism, of a lever fulcrumed on said machine, a link connecting the end of said lever with said shaving mechanism, a second lever extending in the same general direction as said first lever and fulcrumed below the pivot point of said first lever, and a second link connecting said two levers.

5. In an ice shaving machine, the combination with means for supporting the ice, shaving mechanism adapted to be reciprocated vertically, and means adapted to automatically feed a piece of ice toward said shaving mechanism, of a lever fulcrumed on said machine, a link connecting the end of said lever with said shaving mechanism, a second lever fulcrumed below the pivot point of said first lever at a distance therefrom, and a second link connecting said levers at points removed from the fulcrums thereof.

GEORGE S. BLAKESLEE.

Witnesses:

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