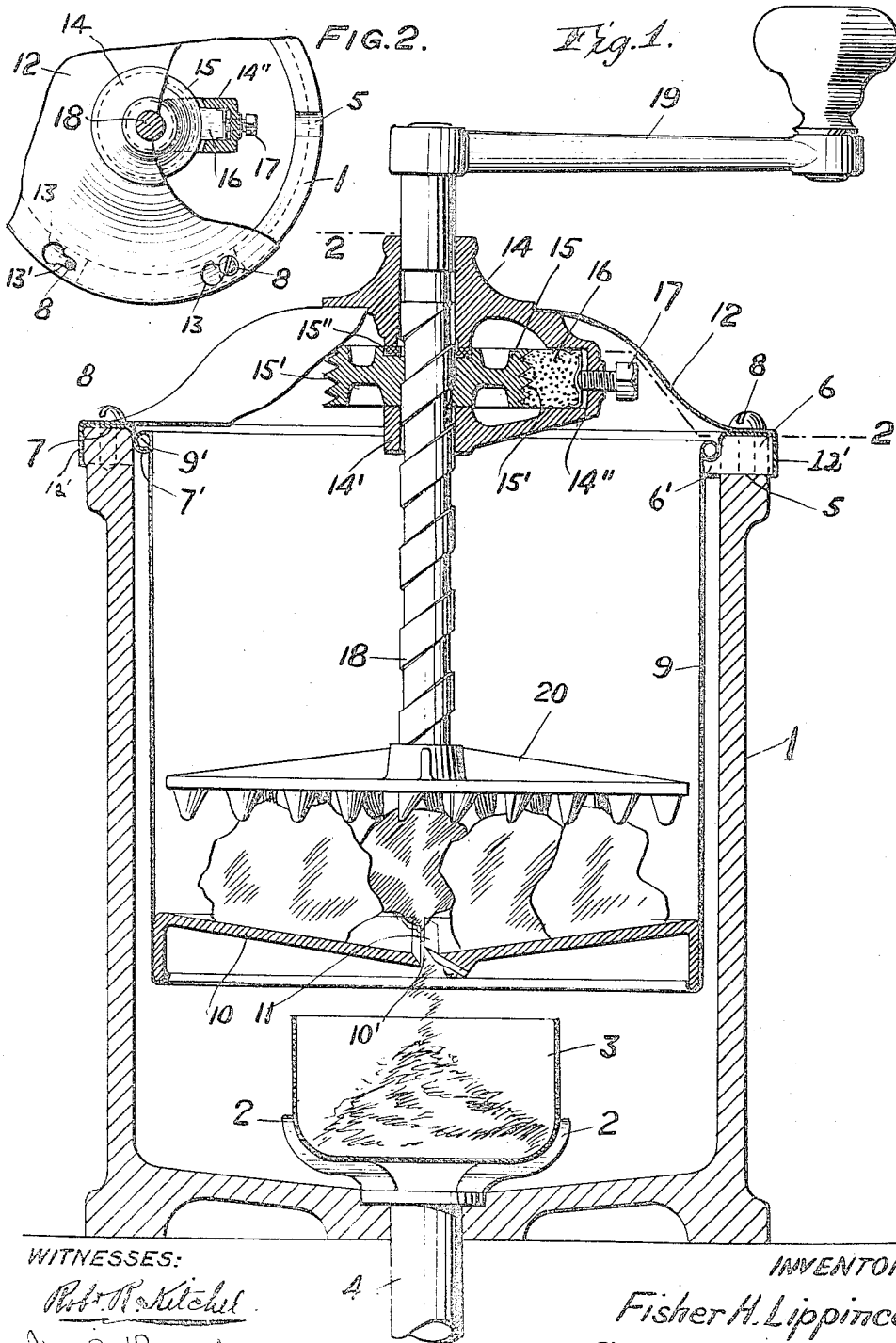


P. H. LIPPINCOTT.
ICE SHAVING MACHINE.
APPLICATION FILED OCT. 19, 1910.

1,077,482.

Patented Nov. 4, 1913.



UNITED STATES PATENT OFFICE.

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ICE-SHAVING MACHINE.

1,077,482.

Specification of Letters Patent.

Patented Nov. 4, 1913.

Application filed October 19, 1910. Serial No. 587,800.

To all whom it may concern:

Be it known that I, FISHER H. LIPPINCOTT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Ice-Shaving Machines, of which the following is a specification.

My invention is an ice shaving apparatus of improved construction comprising means for regulating the operation so that rapid feeding is effected in moving the ice engaging mechanism into and out of action, and in shaving, the feed is automatically adjusted so that the resistance of the work is limited to a desired degree and the bite of the cutting knife is kept within the desired limits.

My invention is further characterized by special features of construction combined with the means for effecting the operations specified.

The characteristic features of my improvements are fully disclosed in the following description and the accompanying drawings in illustration thereof.

In the drawings, Figure 1 is a sectional elevation of apparatus embodying my invention, and Fig. 2 is a broken sectional plan view of the same taken on the line 2-2 of Fig. 1.

The apparatus, as illustrated in the drawings, comprises the cylindrical vessel 1 having the rests 2 in the bottom thereof, for holding the shaved ice receiver 3, and the duct 4 for draining off water.

The rim of the vessel is provided with recesses 5 in which are engaged blocks 6 having bearings 6' projecting into the vessel; and a sheet metal ring 7 provided with the bearing 7' is supported by the rim and the blocks, headed studs 8 passing through the ring into the blocks so as to secure them together.

A cylindrical shell 9 is supported in the vessel by a top flange 9' thereon which rests on the flange 7', and the shell's conical bottom 10 is provided with a slot 10' in which is set the shaving knife 11 above the receiver 3.

A cover 12, having the peripheral flange 12' for engaging the vessel's rim, is provided with the eyelets 13 and the intersecting slots 13', the eyelets being adapted for passing the heads of the studs and the

slots engaging these heads when the positioned cover is turned to the right.

The cover 12 carries the connected bearings 14 and 14' between which is journaled a wheel 15 having circular peripheral serrations 15' and the frictional ring 15'' set in the hub, the ring making contact with the bearing 14. A friction block 16 is held in the bearing 14'', which connects the bearings 14 and 14', and a set screw 17, which engages the bearing 14'', presses the block against the serrations with desired degree of force.

A screw 18, revoluble by the crank 19 thereon, is journaled in the bearings 14 and 14' and threaded in the wheel 15. The screw has fixed to the inner end thereof the toothed disk 20 adapted for clutching ice supported on the bottom 10 and revolving it over the knife 11, by which the shaving is effected.

In operation, when the cover 12 is engaged to the studs 8, by lifting the crank 19 the shell 9 is lifted out of the vessel 1 through the connecting parts 6 and 7. When the cover is turned anti-clockwise it is disengaged from the studs and can be removed, with the screw and its connections. When ice has been placed in the shell and the parts assembled, upon revolving the crank, the screw runs freely through the wheel and carries the clutching disk rapidly into engagement with the ice. When contact with the ice checks the free downward movement of the screw, its further revolution exerts an upward thrust on the wheel which is now revolved at a rate depending upon the frictional resistance due to the bearings 14 and 16, the resistance being variable by adjusting the set screw 17. Upon reversing, the screw runs freely through the wheel and rapidly elevates the ice clutch or disk.

Having described my invention, I claim:—

1. An ice crushing machine comprising a casing; ice comminuting means mounted in the lower end of said casing, a longitudinally movable and rotative follower mounted in the upper end of the casing, and means supported by the upper end of the casing engaging said follower to cause the feeding movement of said follower toward the lower end of said casing, said means adapted to yield upon an excessive resistance to said

feeding movement to prevent said feeding movement.

2. An ice shaving machine comprising a vessel having a recess in the rim thereof, a
5 shell having a ring with a block thereon adapted to engage said recess, cutting mechanism carried by said shell, a cover, and means for engaging said cover to said ring.

10 3. An ice shaving machine comprising a vessel having a recess in the rim thereof, a block adapted for engagement in said recess, a ring fixed to said block, a shell having

means for engaging said ring, cutting mechanism carried by said shell, headed studs fixed to said ring, and a cover having means 15 for engaging said studs.

In witness whereof I have hereunto set my name this 18th day of October 1910, in the presence of the subscribing witnesses.

FISHER H. LIPPINCOTT.

Witnesses:

JOS. G. DENNY, Jr.,
JNO. C. HOWARD.