

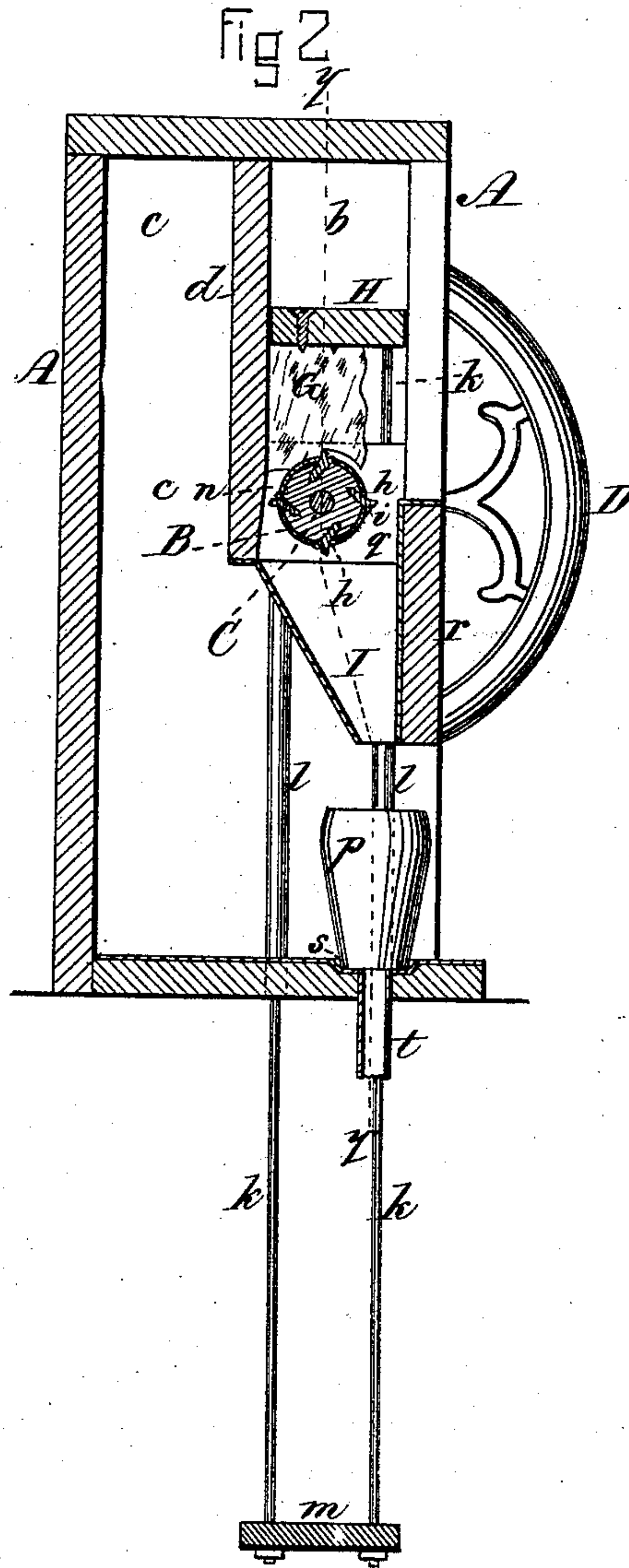
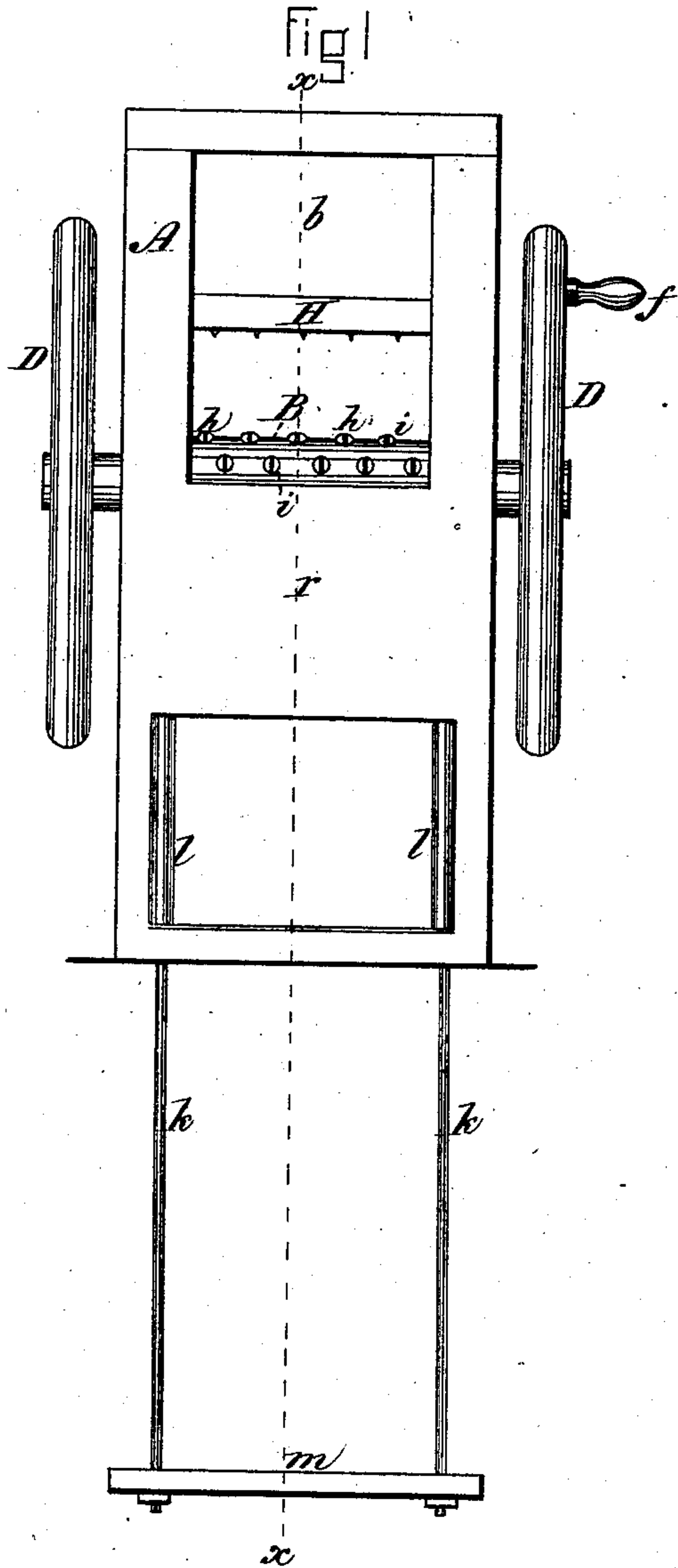
(No Model.)

2 Sheets—Sheet 1.

M. GONZALES.
MACHINE FOR SHAVING ICE.

No. 281,686.

Patented July 24, 1883.



WITNESSES

W. J. Cambridge
E. S. Hanson

INVENTOR

Manuel Gonzales
per J. P. Eschmacker

(No Model.)

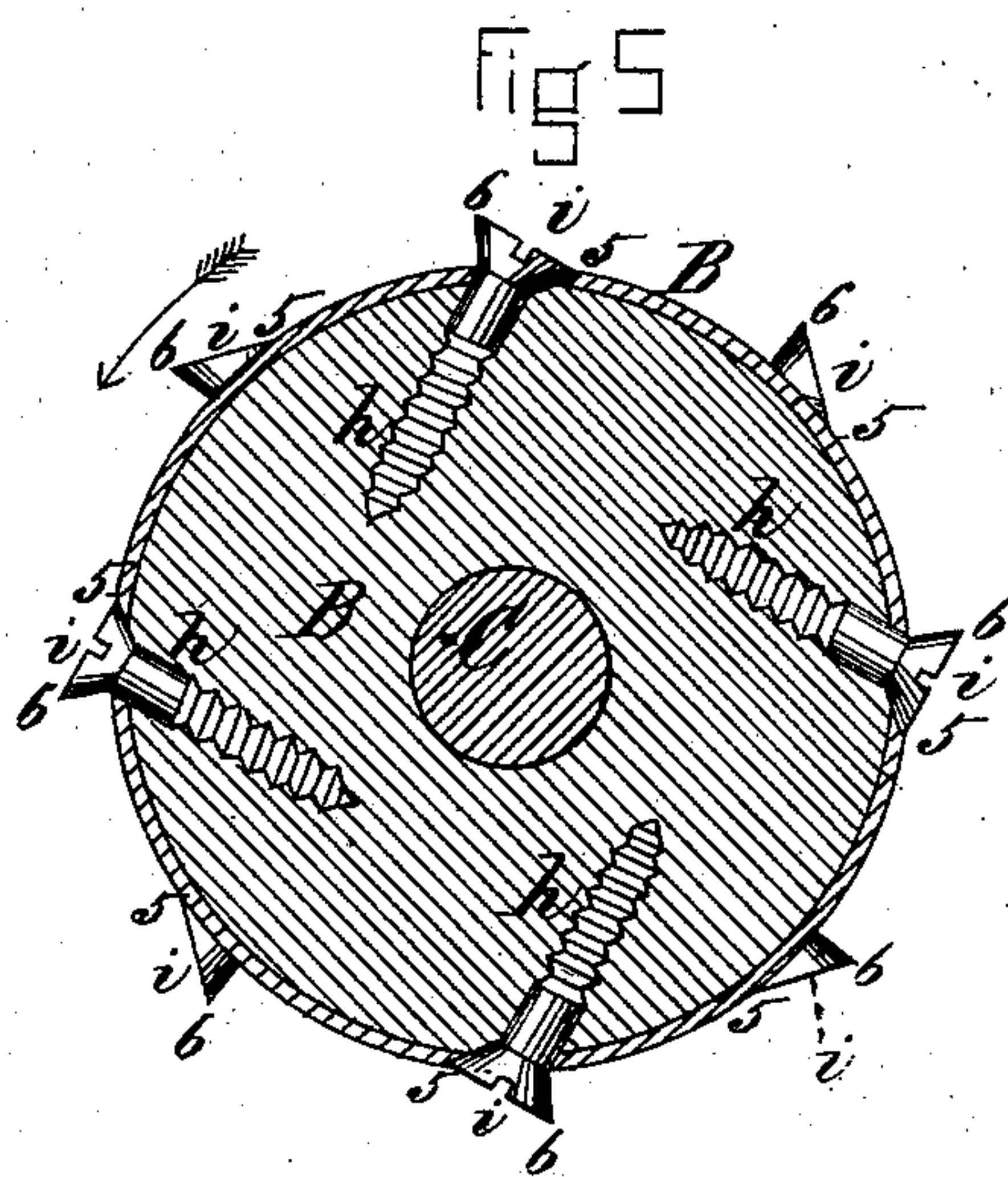
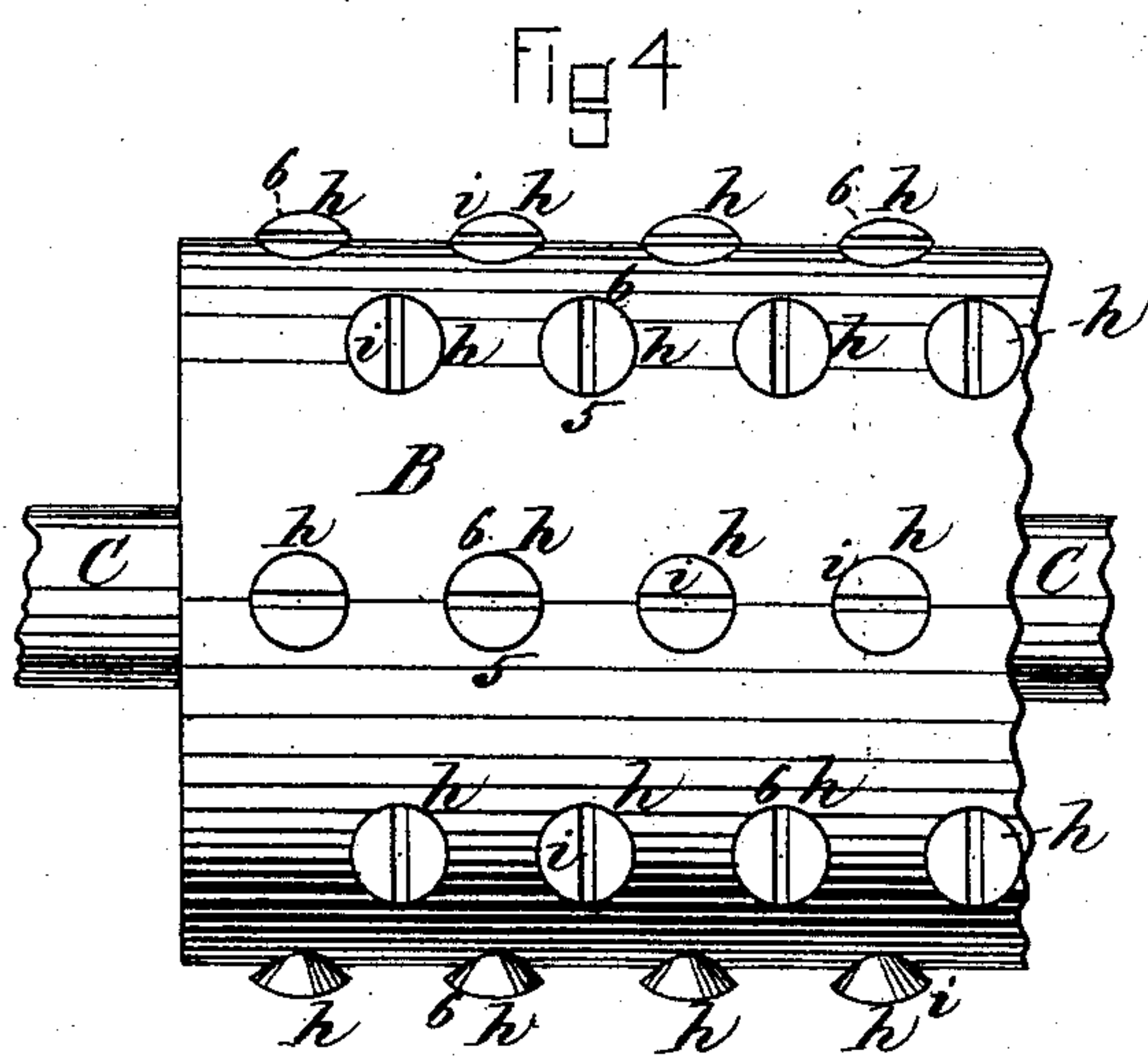
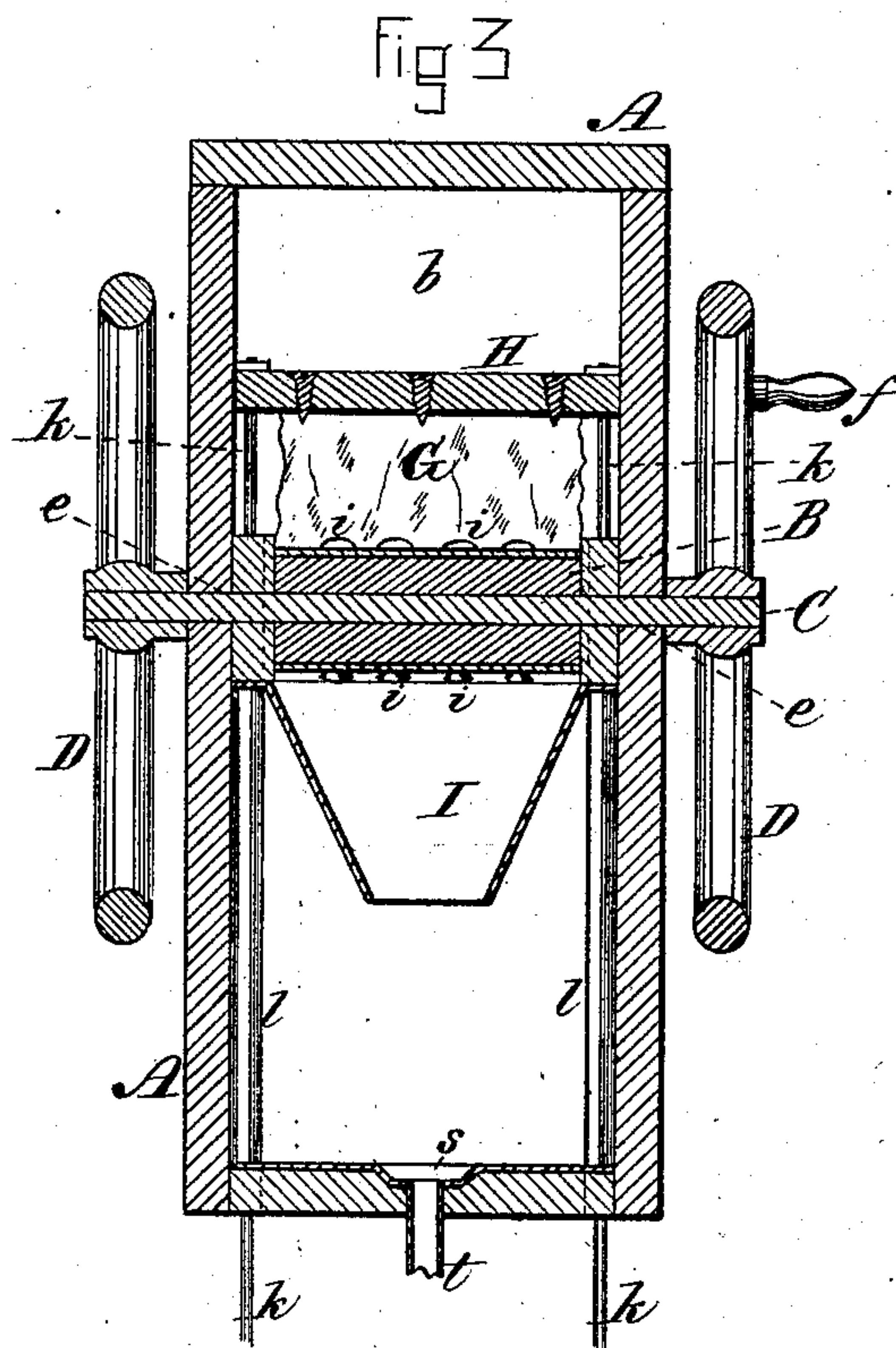
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per P. B. Teschemacher
Atty

UNITED STATES PATENT OFFICE.

MANUEL GONZALES, OF JACKSONVILLE, FLORIDA, ASSIGNOR TO JAMES W. TUFTS, OF MEDFORD, MASSACHUSETTS.

MACHINE FOR SHAVING ICE.

SPECIFICATION forming part of Letters Patent No. 281,686, dated July 24, 1883.

Application filed May 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, MANUEL GONZALES, of Jacksonville, in the county of Duval and State of Florida, have invented certain Improve-
5 ments in Machines for Shaving Ice, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

10 Figure 1 is a front elevation of an ice-shaving machine constructed in accordance with my invention. Fig. 2 is a vertical section of the same on the line *x x* of Fig. 1. Fig. 3 is a vertical section of the same on the line *y y* of
15 Fig. 2. Fig. 4 is a plan of a portion of the ice-shaving cylinder, drawn to an enlarged scale. Fig. 5 is a transverse vertical section of the cylinder and its cutters, enlarged.

My invention relates to certain improve-
20 ments in machines for shaving ice to be used for cooling soda-water and other beverages, and for other purposes; and it has for its object to cheapen the cost of construction, and at the same time render the machine capable
25 of performing its work in a rapid and effective manner.

To this end my invention consists in a rotating shaving-cylinder having its cutters composed of screw-heads, which project beyond
30 the surface of the cylinder, the screws being so arranged that the sharp edges of their heads will cut or shave the ice held in contact therewith as the cylinder is rotated.

My invention also consists in the combination, with the shaving-cylinder, of a follower adapted to slide within the casing over the cylinder, and operated by rods or cords connected with a foot-plate or treadle, whereby the ice
40 is pressed down upon and kept in contact with the shaving-cylinder as the latter is rotated, a suitable funnel or conductor being employed to guide the shaved ice down into the tumbler or receptacle placed to receive it.

In the said drawings, A represents the casing of the machine, preferably composed of marble, the upper portion of its interior being divided into two portions, *b c*, by a vertical partition, *d*.

50 B is the ice-shaving cylinder, which is immovably fixed upon a horizontal shaft, C, having its bearings at *e*; and to the opposite ends of

this shaft, outside the casing A, are secured two heavy balance-wheels, D D, one of which is provided with a crank-handle, *f*, to enable the cylinder to be revolved by the hand, the
55 wheels D increasing the momentum and giving a steady and uniform motion to the cylinder.

The cylinder B is preferably formed of hard wood covered with a sleeve composed of silver-plated copper tubing or other suitable
60 metal, which is provided with rows of perforations, to allow of the insertion of a series of screws, *h*, which are turned into the wood forming the main portion of the cylinder. These screws are each preferably inserted at an angle to the radius of the cylinder, as seen in
65 Figs. 2 and 5, with their heads *i* projecting beyond the line of the circumference, the inclination of the shank of the screw causing the outer flat surface of the head *i* to incline outward from the point 5, where it touches the
70 surface of the cylinder, to the point 6, the sharp outwardly-projecting edges of the heads *i* thus forming cutters for shaving the ice. The screw-heads are arranged in parallel rows,
75 those of one row being opposite the spaces between those of the contiguous row on either side, by which arrangement the entire surface of the ice in contact with the cylinder will be exposed to the shaving operation of the cut-
80 ters, which are rendered self-sharpening by their own action in cutting the ice.

An exceedingly simple and effective shaving-cylinder can thus be produced at a very low cost, and in case one of the screw-cutters
85 should become broken or injured it can be readily removed and replaced by another at a trifling expense and without the employment of skilled labor.

The block of ice G to be shaved is kept down
90 firmly in contact with the cylinder B, as seen in Figs. 2 and 3, by means of a follower or presser-plate, H, the ends of which slide in suitable guideways at the sides of the interior of the casing A, and have secured thereto rods
95 or wire cords *k*, which pass through guide-tubes *l* and extend down below the bottom of the casing, where they are attached to a foot-plate or treadle, *m*, by placing the foot upon which any desired force may be exerted to hold
100 the ice down upon the cylinder while the latter is being rotated by the hand applied to the

crank f , the follower being provided on its under side with a series of sharp points or projections, which penetrate the ice and prevent it from slipping. As the ice is shaved it falls through the narrow space n between the cylinder and the partition d into a funnel-shaped spout or conductor, I , arranged beneath the cylinder, by means of which it is guided into the tumbler p or other receptacle placed beneath to receive it. The space q between the front of the cylinder B and the portion r of the casing affords an opportunity to insert a small stick or rod, for the purpose of clearing the spout I in case it should become obstructed by the accumulation of shaved ice. At the bottom of the casing is a cavity, s , communicating with a drip or waste pipe, t , through which the water produced by the melting of the ice may escape.

The unoccupied portion c of the casing may be employed, if desired, as a receptacle for containing cream or sirup for use with soda-water.

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

1. In an ice-shaving machine, a rotating shaving-cylinder having its cutters composed of screw-heads arranged to project beyond the surface of the cylinder, substantially as and for the purpose set forth.

2. In an ice-shaving machine, the combination, with the cylinder B , of a series of cutters composed of screws, each inserted at an angle to the radius of the cylinder, to produce an outward inclination of the head, substantially as described.

3. In an ice-shaving machine, the combination, with the casing A and the ice-shaving cylinder B , of the sliding follower or presser-plate H , provided with rods or cords k , extending below the casing and attached to a foot-plate or treadle, m , all constructed to operate substantially in the manner and for the purpose set forth.

Witness my hand this 2d day of May, A. D. 1883.

MANUEL GONZALES.

In presence of—

JOS. F. FORUS,

WM. H. SIMPSON, Jr.