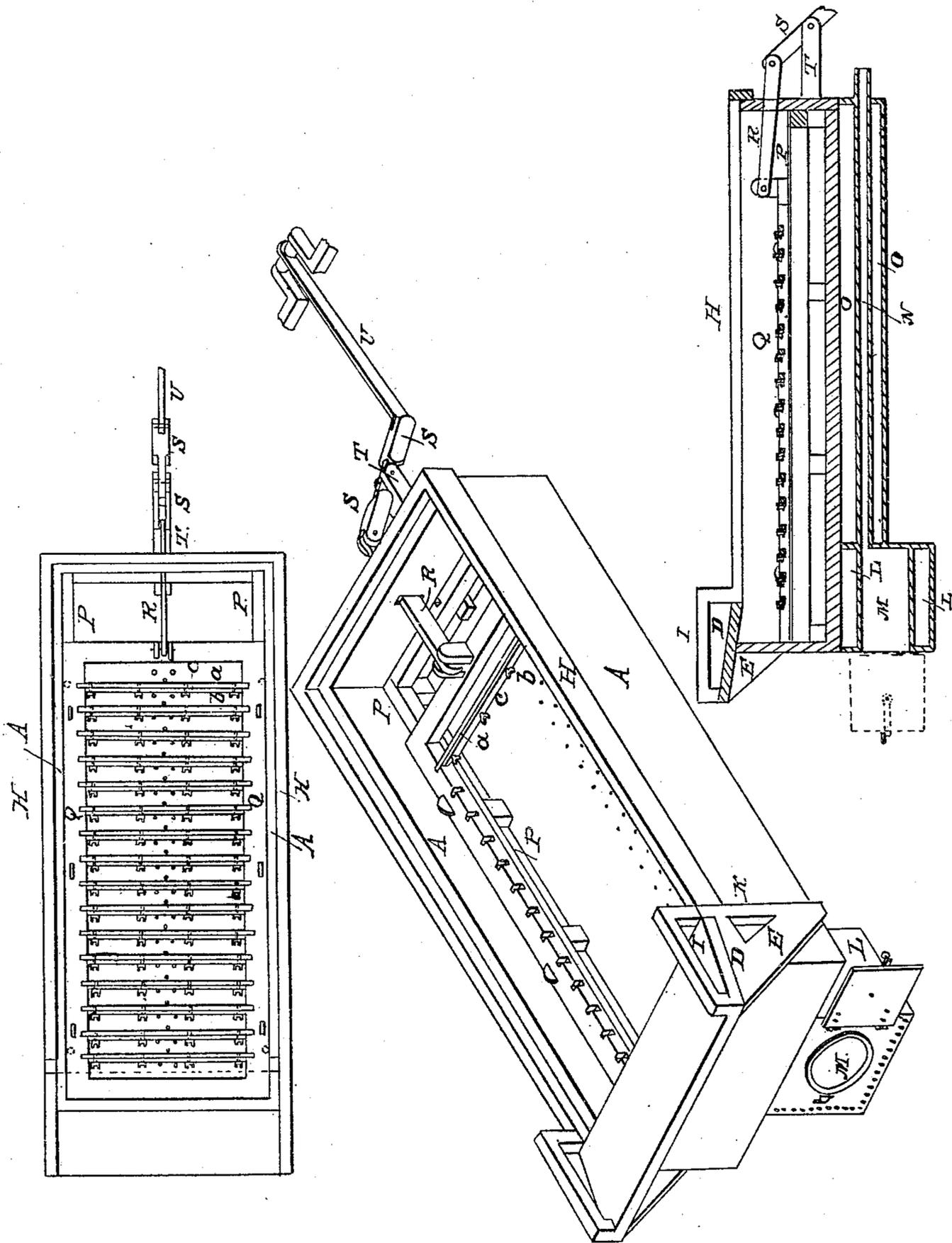


J. TIBBALS.  
Making Oakum.

No. 1,077.

Patented Feb. 8, 1839.



# UNITED STATES PATENT OFFICE

JAMES TIBBALS, OF HADDAM, CONNECTICUT.

## IMPROVEMENT IN MACHINES FOR MAKING OAKUM.

Specification forming part of Letters Patent No. 1,077, dated February 8, 1839.

*To all whom it may concern:*

Be it known that I, JAMES TIBBALS, of Haddam, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Machinery for the Making of Oakum; and I do hereby declare that the following is an exact description of the same as invented or improved by me.

Make of two-inch plank a box, A, (as in the annexed drawing,) water-tight, and open at the top, sixteen feet long, six feet wide, and two and a half feet deep. On the top of the box at that end thereof under which the furnace is to be set place a piece of board, D, three inches thick, three feet and one-eighth of a foot wide, and of the same length with the width of the box, so that one part thereof shall rest on the box and be screwed or otherwise fastened thereto, and the residue shall project over the end of the box. Support this projection by a brace, E, on either side, extending from the bottom of the box against the uprights K, diagonally to the extreme end of the projection, which is elevated about six inches by beveling. Construct a cover for the top of the box, consisting of eleven equal or nearly equal separate and movable parts. (Not represented in the drawing.) On the sides of the box at the top screw two waste-boards, H, of convenient width, and of the same thickness with the sides of the box, so that the upper edge of the waste-boards shall be level with the top of the movable covers. On the sides of the box near the end of the projecting piece place two rails, I, each three inches square, and three feet and a half long, on the two uprights K, one resting on and rising six inches above the projecting piece, and the other rising the same height, but extending downward nearly to the bottom of the box. These rails are used to hang the oakum on for draining after the operation is performed. Construct of wood or iron a furnace-box, L, water-tight, and two and a half feet square. In this box place a small copper furnace, M, eighteen inches in diameter and two feet long, resting on iron supporters, so that no part shall be near the box, if of wood, and allowing free passage for water round the furnace. The rim of the mouth of the furnace is screwed to the box so as to make the box water-tight, and the mouth of the furnace is closed with a

copper or sheet-iron door. From the inner end of the furnace extends a copper pipe, N, about three inches in diameter, to carry off the smoke from the furnace. This pipe is inclosed in a box, called the "funnel-box," O, twelve inches square and thirteen feet long, extending from the furnace-box to the other end of the main box, so that the whole length is sixteen feet. The pipe and furnace are both inclosed in water. The furnace-box and funnel-box are both screwed to the center of the main box, in the bottom whereof a suitable number of holes are bored for the free passage of water into the furnace-box and funnel-box. On the inside of the main box at the sides thereof place eight posts—four on a side, one in each corner, and two at equal intermediate distances—each two and one-fourth inches square, and three and three-fourths inches high. On these posts lay a frame with sides and end pieces corresponding to the box, the sides and ends being framed three inches by six inches, and the upper surface of the side pieces being shod with iron to serve as a railway, P, for the carriage Q. Make and place on the railway the carriage formed of a frame of sides and end pieces fourteen feet long, the side and end pieces being one-eighth wider than the sides and end pieces of the railway, and three inches thick, with three friction-rolls on each of the side pieces, and resting on six cast wheels made of brass or iron, and each six inches in diameter, so that the carriage rests upon a perfect level. Set off at each end of this carriage six inches and divide the residue into sixteen equal parts, so as to admit sixteen bars, a. Make these bars each three inches wide and one and one-third of an inch thick. Let them edgewise into the carriage about two-thirds of their width. Each of these bars has four screws, b, set at equal distances, fastened into the bar, and lying horizontally when placed in the carriage. Each screw has placed on the end of it a nut with a handle, and underneath these nuts a bar of iron, c, extends from the outermost screw on one end to the outermost screw on the other. This bar corresponds to the other bar, except that slants are cut opposite the screws on one side, so that the bar may be removed without interfering with the screws; or this bar may be turned edgewise to the

other bar and bent round the screws, so as to give the nuts a fair bearing. The junk is cut from fourteen to eighteen inches long. The strands of the stock are opened or separated by the hand, and one end thereof placed between the screws, and laid in succession from side to side in the whole sixteen bars, which are then let into the carriage. The sixteen bars thus filled with strands, amounting to about one hundred and seventy pounds, are called a "washing." Fill the box with water to the top of the railway, and keep it scalding hot. From the end of the carriage extends a pitman, R, made of wood of a suitable size, or of one-and-a-half-inch round iron, three feet nine inches to the upper end of a vertical balance-beam, S. This balance-beam is hung in a mortise in a piece of timber, T, framed into the center of the end of the box. On the lower end of the balance-beam is another pitman, U, connected with a wheel, having a crank of twelve inches sweep, which governs the distance of the motion. The revolution of the wheel, moved by any competent power, impels the machine carrying the junk equably to and fro in the hot water. Continue the motion from five to ten minutes, and the strands will be formed two-thirds of their length into oakum. Then lift the lids, take out the bars successively and lay them on the lids. Shift the strands end for end, and replace the bars in the carriage. Keep the wheel in motion again from five to ten minutes, when the other

ends of the strands will be washed and the whole will be fit to take out and hang on the rails to drain. After draining spread the oakum on lines to dry, and thence carry it to be finished.

The annexed drawing is referred to as a part of this specification.

The dimensions of the machine, as hereinbefore described, correspond with those of the machine which I use; but it is obvious that the dimensions may be varied in any degree or proportion to suit the operator, and that the machine may be larger or smaller as occasion may require.

I do not claim any one of the parts of the machine above described, taken separately, as my invention or improvement; but

I do claim as my invention or improvement—

The combination of the said horizontal carriage and its appendages with the other parts of the said machine, as above described, carrying junk in strands equably back and forth in hot water, and the application of the principle of vibratory motion, in the manner set forth, thereby created to the manufacture of oakum.

Dated at Middletown the 24th day of March, A. D. 1838.

JAMES TIBBALS.

Witnesses:

SYLVESTER STOCKING,  
JONA. BARNES.