

E. T. DENNIS.
 PICKER FOR COUPONS, LABELS, AND THE LIKE.
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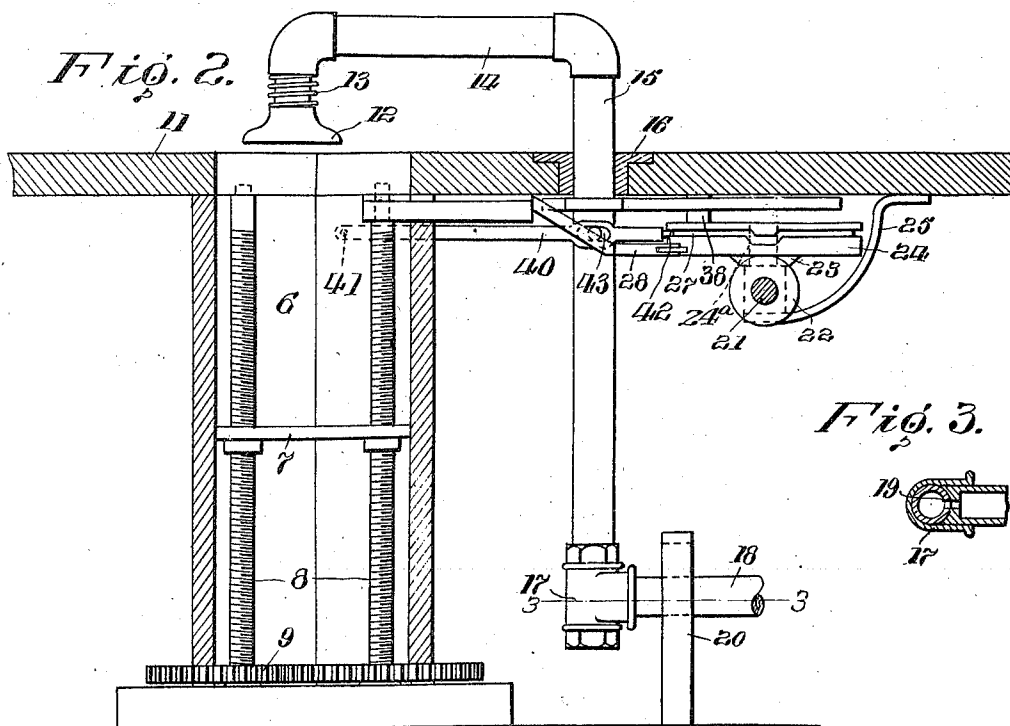
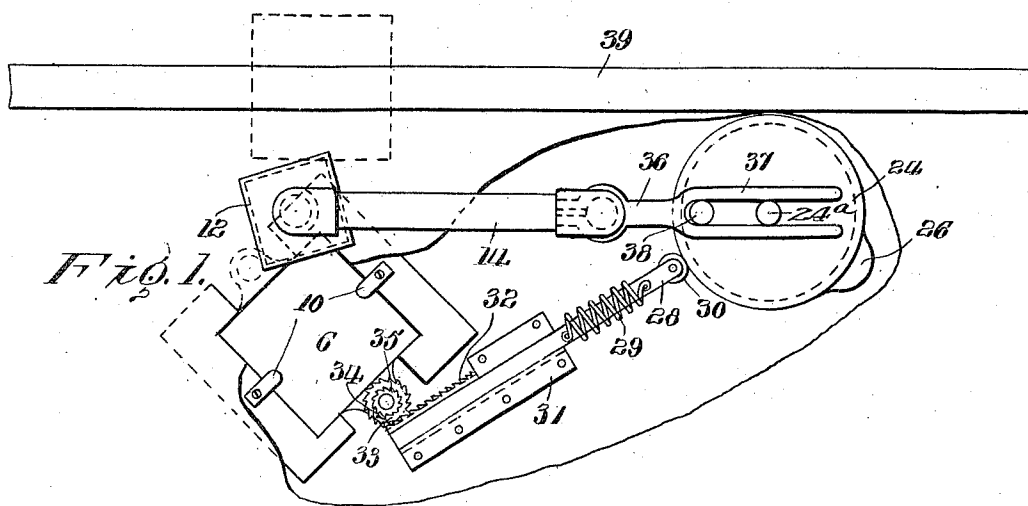
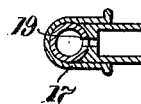


Fig. 3.



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WITNESSES

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UNITED STATES PATENT OFFICE.

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PICKER FOR COUPONS, LABELS, AND THE LIKE

1,039,109.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed September 16, 1911. Serial No. 649,712.

To all whom it may concern:

Be it known that I, EDWARD T. DENNIS, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Pickers for Coupons, Labels, and the Like, of which the following is a specification.

This invention relates to pickers for coupons, labels and the like and will be found especially useful for feeding coupons, labels, tickets and similar pieces of paper or other fabric to various machines for subsequent operations.

One use to which the invention may be put is for picking coupons which are fed to tobacco package machines, in which packages the coupons are placed. It is of course capable of various other uses.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a top plan view, partly broken away. Fig. 2 is a side elevation. Fig. 3 is a section on the line 3—3 of Fig. 2.

The device utilizes a suction tube for the purpose of lifting the coupons or the like from a magazine, and after lifting the same the tube swings to deposit the coupons onto any suitable conveyer. The coupons consist of thin paper slips.

Referring specifically to the drawings, 6 indicates a magazine for containing the coupons, slips or the like, and this has a movable bottom 7 which is carried by screws 8 of low pitch, and which is raised or lowered as the screws turn. The screws are geared together by gears 9. At the top of the magazine are small clips or fingers 10 for holding the slips down or in position at the top of the magazine. When the slips are picked up the upper one will be slipped from under these fingers. The magazine opens at the top through a table or bench 11.

12 indicates a suction nozzle backed by a coiled spring 13 permitting a certain amount of vertical movement of the nozzle, which nozzle is carried by the depending end of a swinging pipe 14 which connects to a vertical pipe 15 mounted at the top in a guide 16 in the bench and at the bottom in a T fitting 17 which is connected to a pipe 18 leading to any suitable exhaust fan or other device to produce suction. The lower end of the pipe is formed with a valve in the fitting T, as indicated at 19, which is opened when the pipe is in one position and which is closed

when the pipe is in a different position, whereby the suction is alternately opened and closed as the pipe is turned one way or the other, the open position corresponding to the position of the pipe when the suction nozzle 12 is directly over the magazine.

The pipe has an oscillating motion as stated and also moves up and down, the pipe 18 working in a vertical guide 20 to permit the vertical movement.

The movements referred to are communicated to the pipe from a drive shaft 21 which has a gear 22 meshing with a gear 23 on a double cam 24 carried by a shaft 24^a the top of which is flush with the upper surface of the cam disk 24, these parts being supported by a bracket 25. The cam has a peripheral rise 26, as well as a peripheral groove with a drop 27. The rise 26 acts against a sliding rod 28 pressed against the cam by a spring 29, with a roller 30 at the bearing on the cam to decrease friction. The rod 28 slides in a guide 31 and carries a rack 32 which engages a gear 33 mounted loosely on the upper end of one of the screws 8. The gear 33 is a ratchet gear carrying a pawl 34 which engages a ratchet 35 fast on the screw so that as the rod 28 is reciprocated the screws are turned in one direction to raise the bottom 7 and feed the stack of coupons upwardly in slow progression as they are taken off the top by the suction nozzle.

The pipe 15 is oscillated by means of a lever 36 fastened thereto and terminating in a fork 37. A crank pin 38 is fixed to the cam 24 and works in the fork to oscillate the lever as the cam rotates, and accordingly the nozzle 12 is swung from position over the magazine to position over the conveyer illustrated diagrammatically at 39. When swung over the magazine the valve 19 opens, and when swung over the conveyer it closes.

To lift and drop the suction nozzle a lever 40 is provided fulcrumed at 41, at one end and projecting at 42, at the other end, into the cam groove 27, and connected to the pipe 15 by means of a pin and slot at 43. As the cam rotates the pipe 15 and the nozzle 12 are lifted and lowered. The drop of the nozzle is sufficient to bring it in contact with the top coupon in the magazine, and the suction which then takes place causes the coupon to adhere to the nozzle which is then lifted and by means of the lever 36 is swung to position over the con-

veyer 39, and the suction being then cut off the coupon drops by gravity onto the conveyer and is carried forward for subsequent operation. At each oscillation of the pipe the screws 8 are turned a trifle, by the means above described, to feed the coupons in the magazine.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

In a machine of the kind described, the combination of a magazine adapted to hold coupons or the like, a bottom therein, a screw on which the bottom is mounted, a vertically movable pipe having an overhanging portion terminating in a downwardly directed nozzle adapted to lift coupons from the magazine, said pipe being also mounted for oscillation to swing the nozzle toward

and from the magazine, means to intermittently produce suction through the pipe, a lifting lever connected to the pipe, a throw lever connected to the pipe, a slide having an operative connection to the screw to intermittently turn the same as the slide is reciprocated, and a wheel having a cam groove into which the lifting lever projects, a cam rise adapted to operate the slide, and a crank pin operatively engaging the throw lever, whereby both of said levers and the slide are operated by rotation of the wheel.

In testimony whereof, I affix my signature in presence of two witnesses.

EDWARD T. DENNIS.

Witnesses:

M. L. BLACKBURN,
W. A. CHILDREY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."