US 20220175018A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0175018 A1**

Tuttle (43) **Pub. Date: Jun. 9, 2022**

(54) **PRE-ROLLED CONE FILLING, PACKING, FINISHING, AND EXTRUDING METHOD AND APPARATUS**

(71) Applicant: **Wesley D. Tuttle**, Spokane Valley, WA (US)

(72) Inventor: **Wesley D. Tuttle**, Spokane Valley, WA (US)

(21) Appl. No.: **17/446,284**

(22) Filed: **Aug. 27, 2021**

Related U.S. Application Data

(63) Continuation-in-part of application No. 17/111,503, filed on Dec. 3, 2020.

Publication Classification

(51) **Int. Cl.**

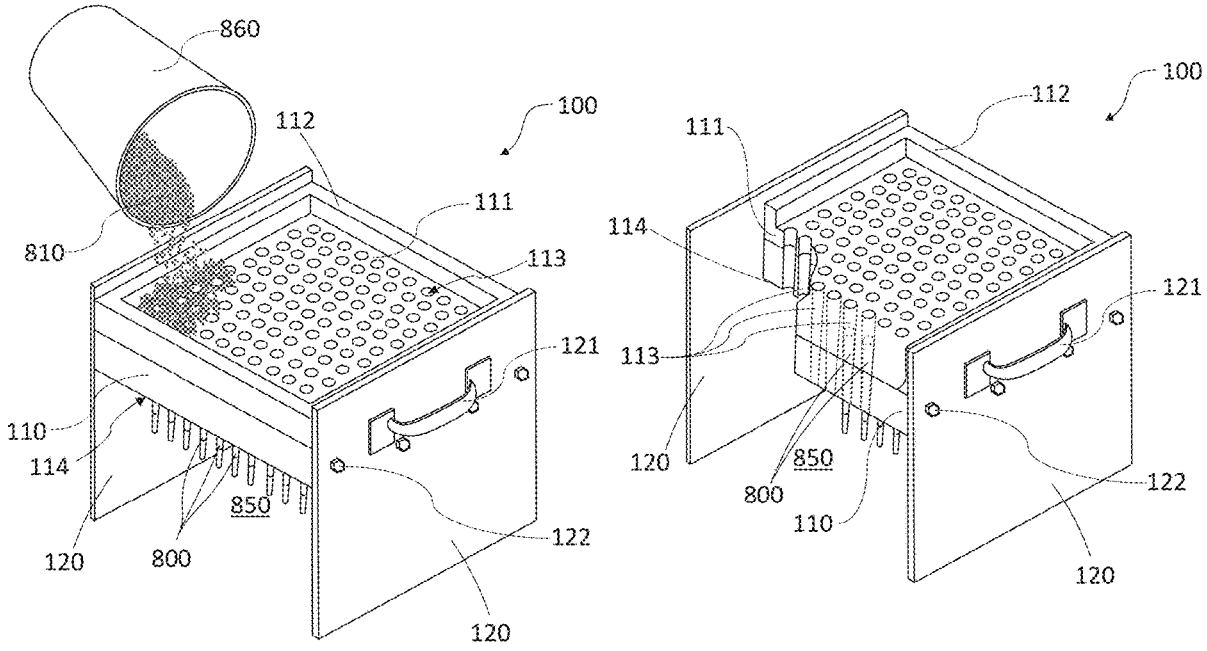
A24C 5/02	(2006.01)
A24C 5/54	(2006.01)

(52) **U.S. Cl.**

CPC . ***A24C 5/02*** (2013.01); ***A24C 5/54*** (2013.01)

(57) **ABSTRACT**

Apparatus and method adapted for making and extruding cigarettes, such as marijuana cigarettes, the apparatus comprised of a plate with a working surface, an extruding surface, a rim portion, a plurality of tapered holes that hold pre-rolled cones, a base attached to the plate, and having crimping means, tamping means, and extruding means for finishing cigarettes, these means provided as individual devices or a combination devices, the method comprising placing pre-rolled cones into the apparatus, pouring the filling material onto the plate and shaking it, inserting the crimping means and moving it to pack and crimp the pre-rolled cones, inserting the tamping means for closing the pre-rolled cones, and inserting the extruding means for extruding the finished cigarettes onto the catcher.



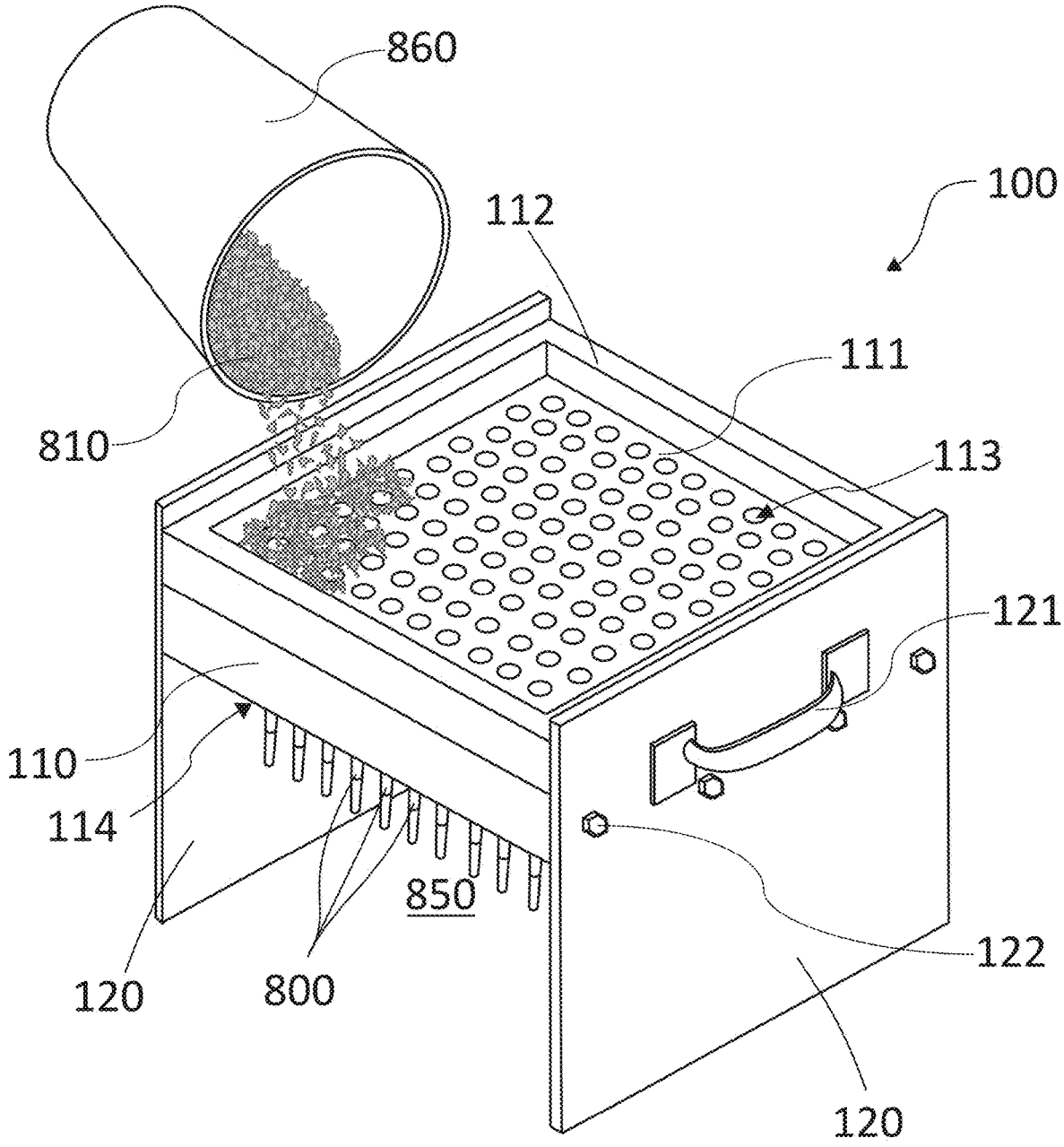


FIG. 1A

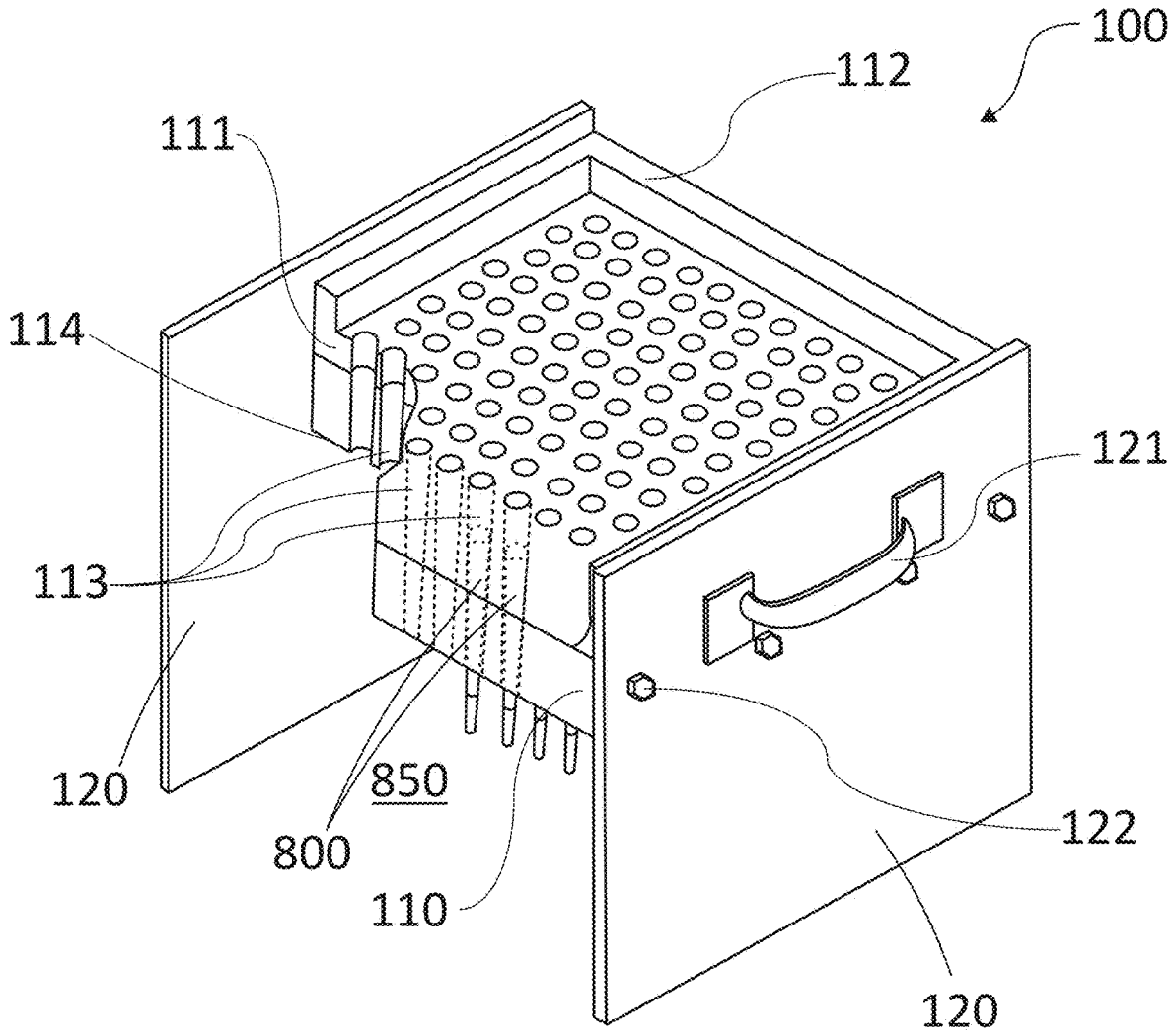


FIG. 1B

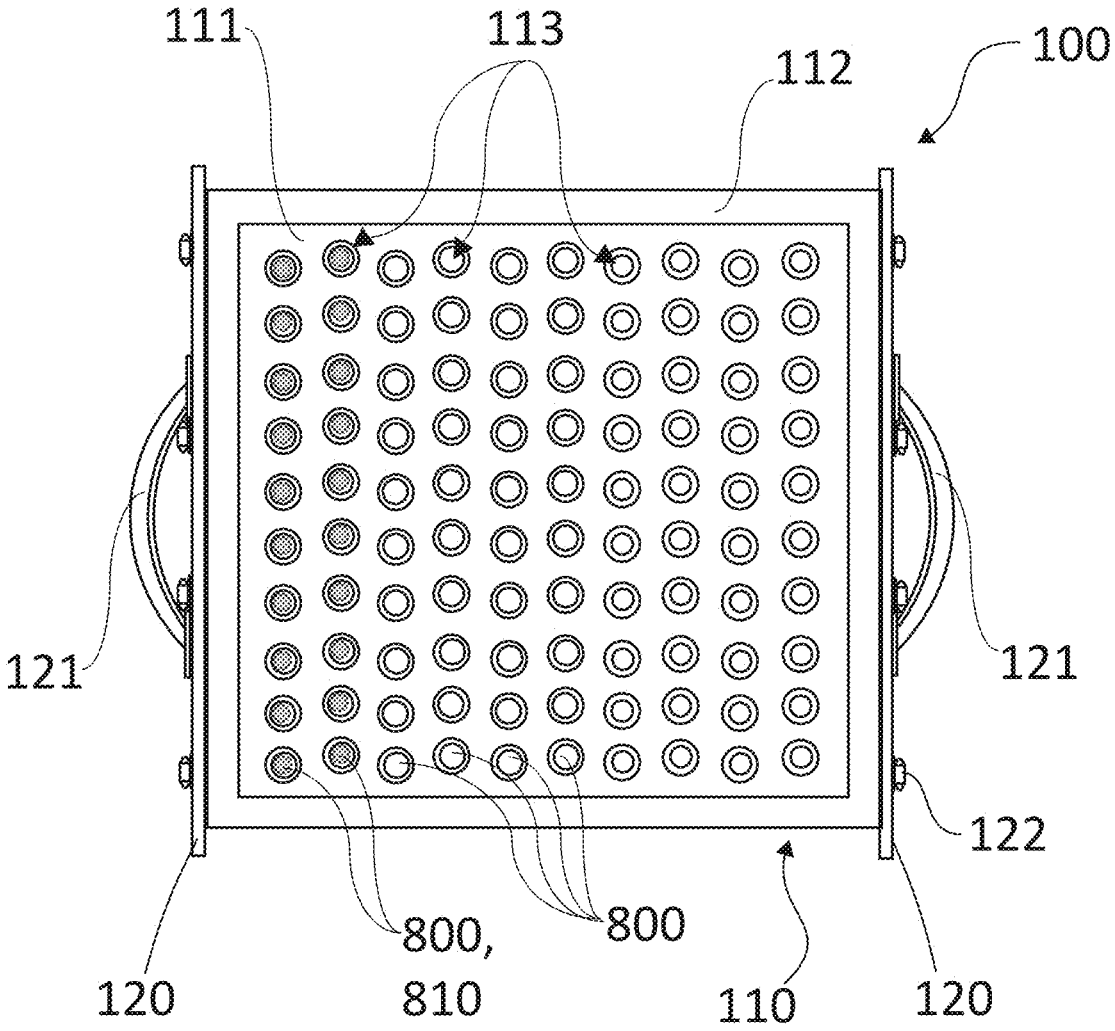


FIG. 1C

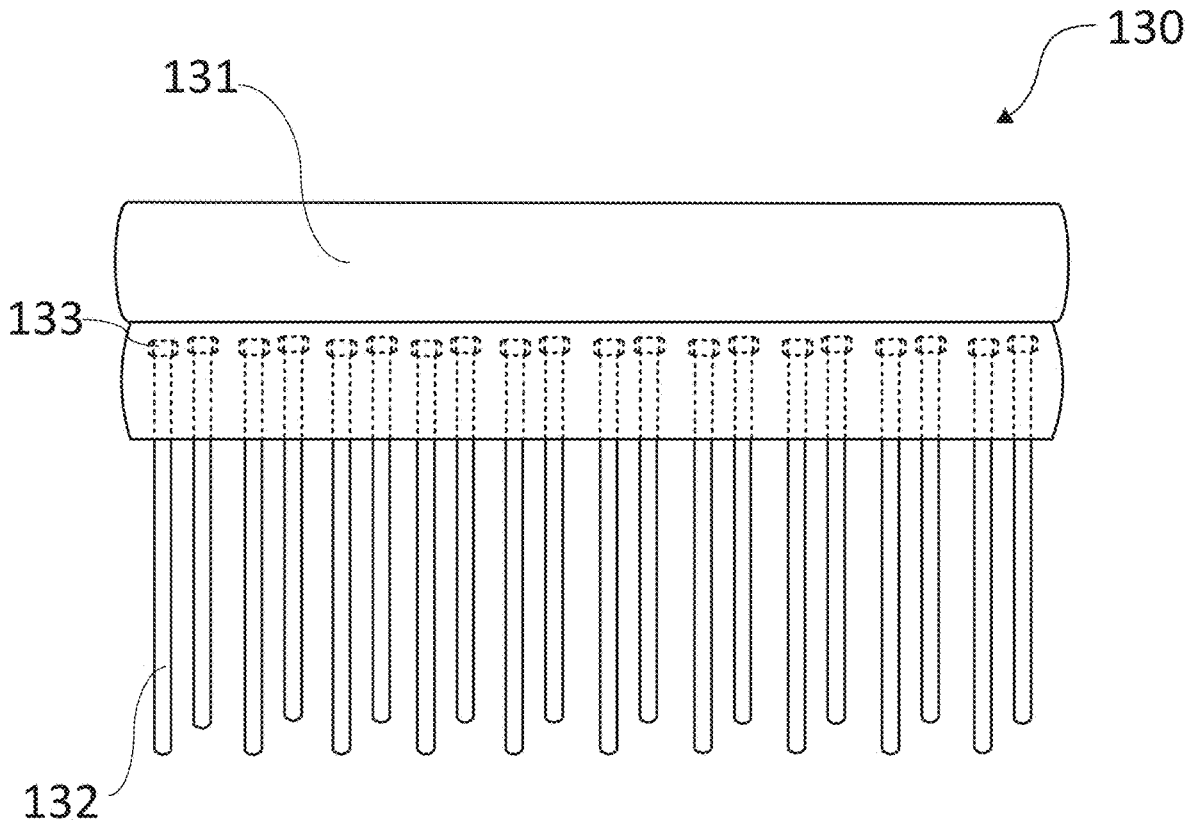


FIG. 2A

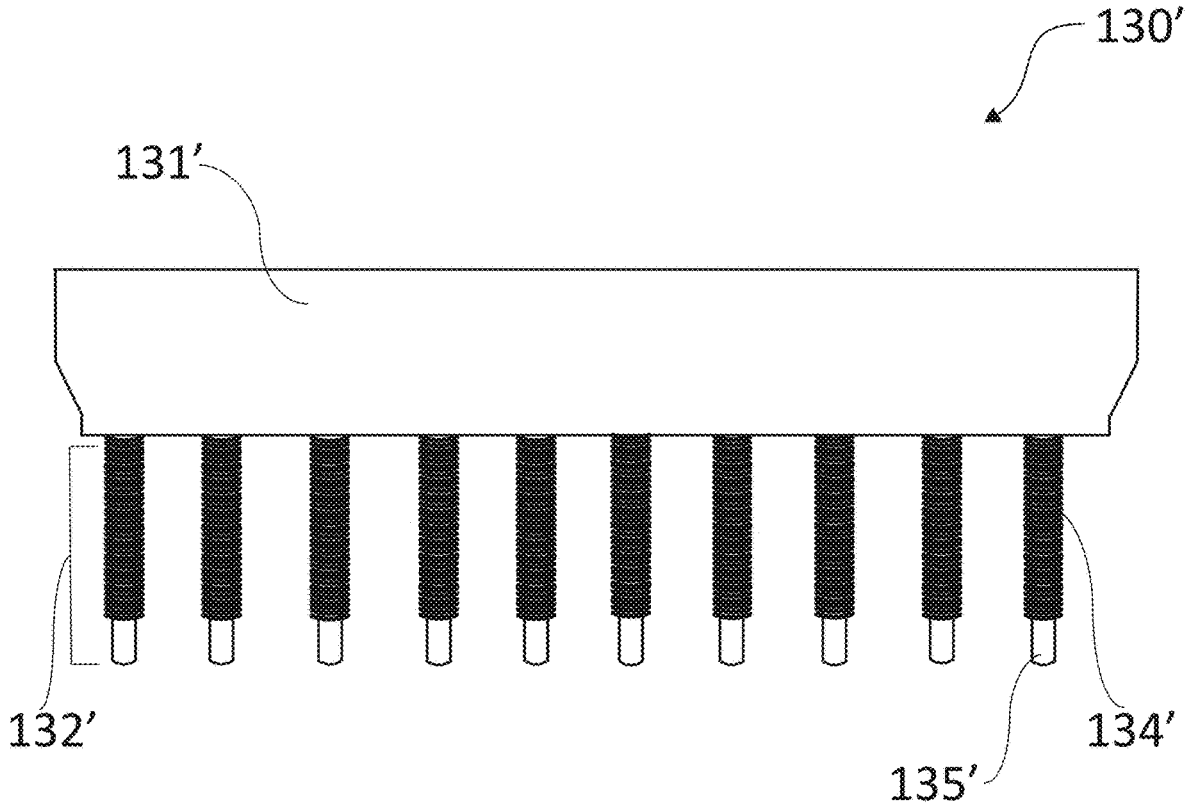


FIG. 2B

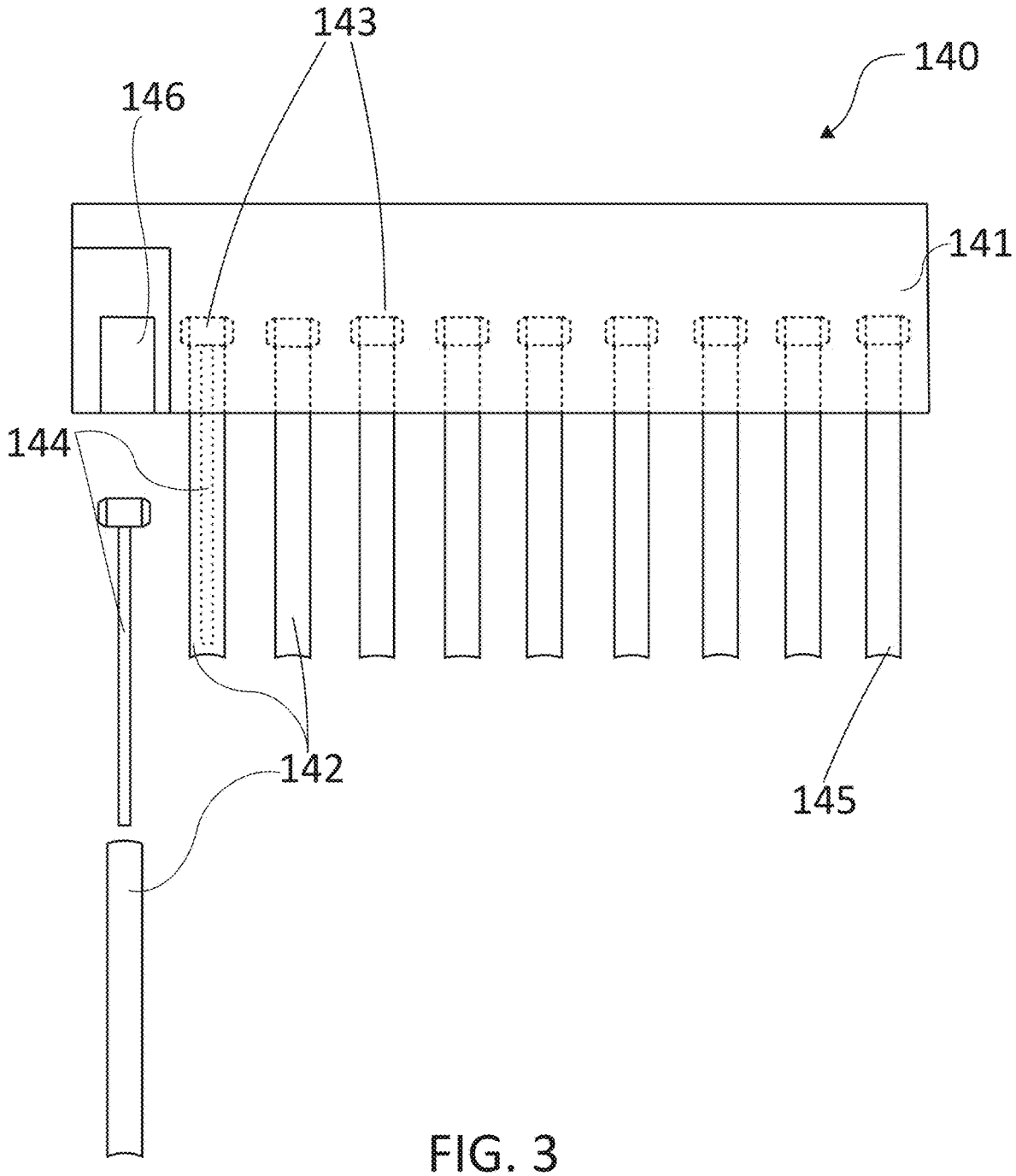


FIG. 3

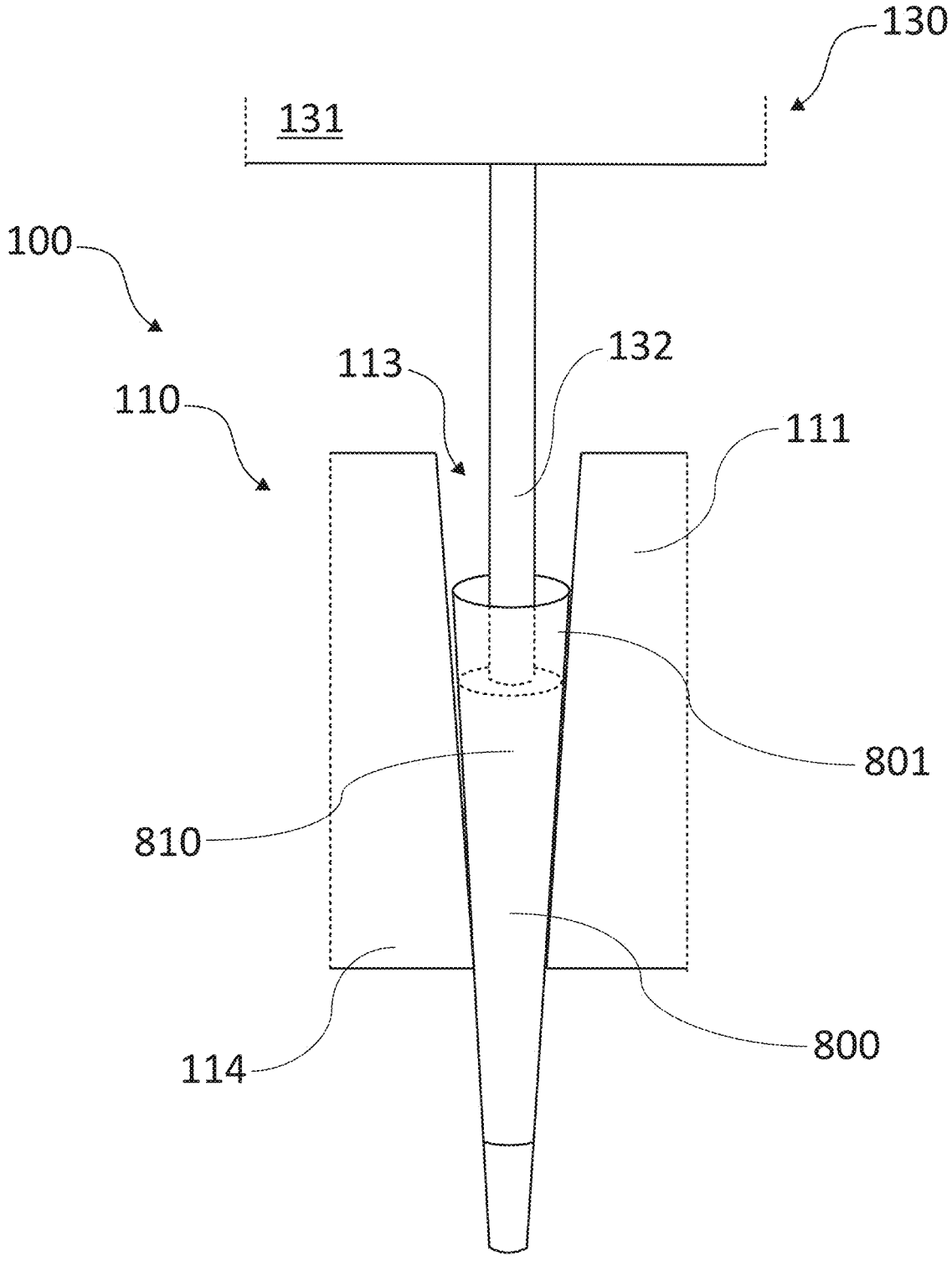


FIG. 4

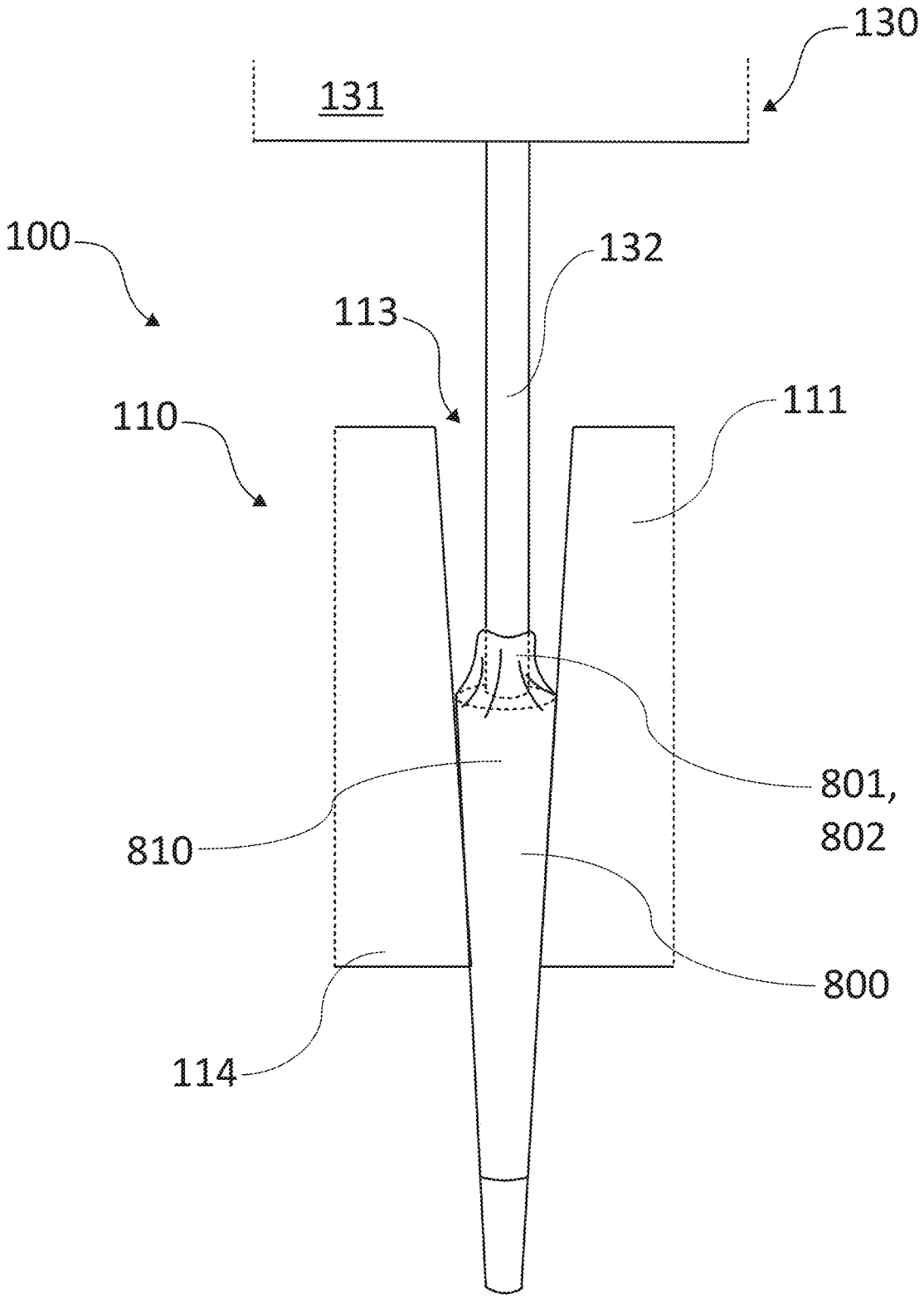


FIG. 5

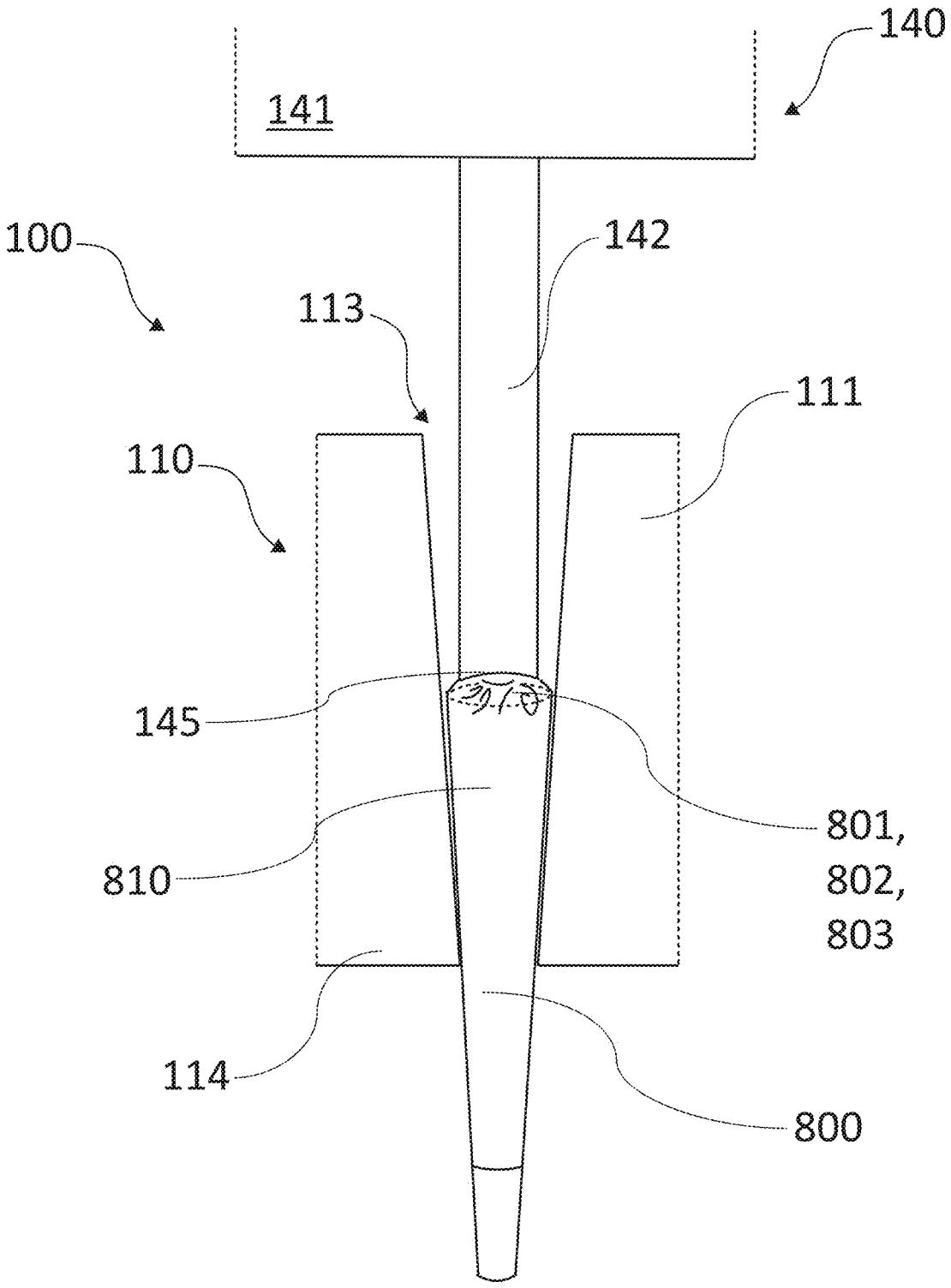


FIG. 6

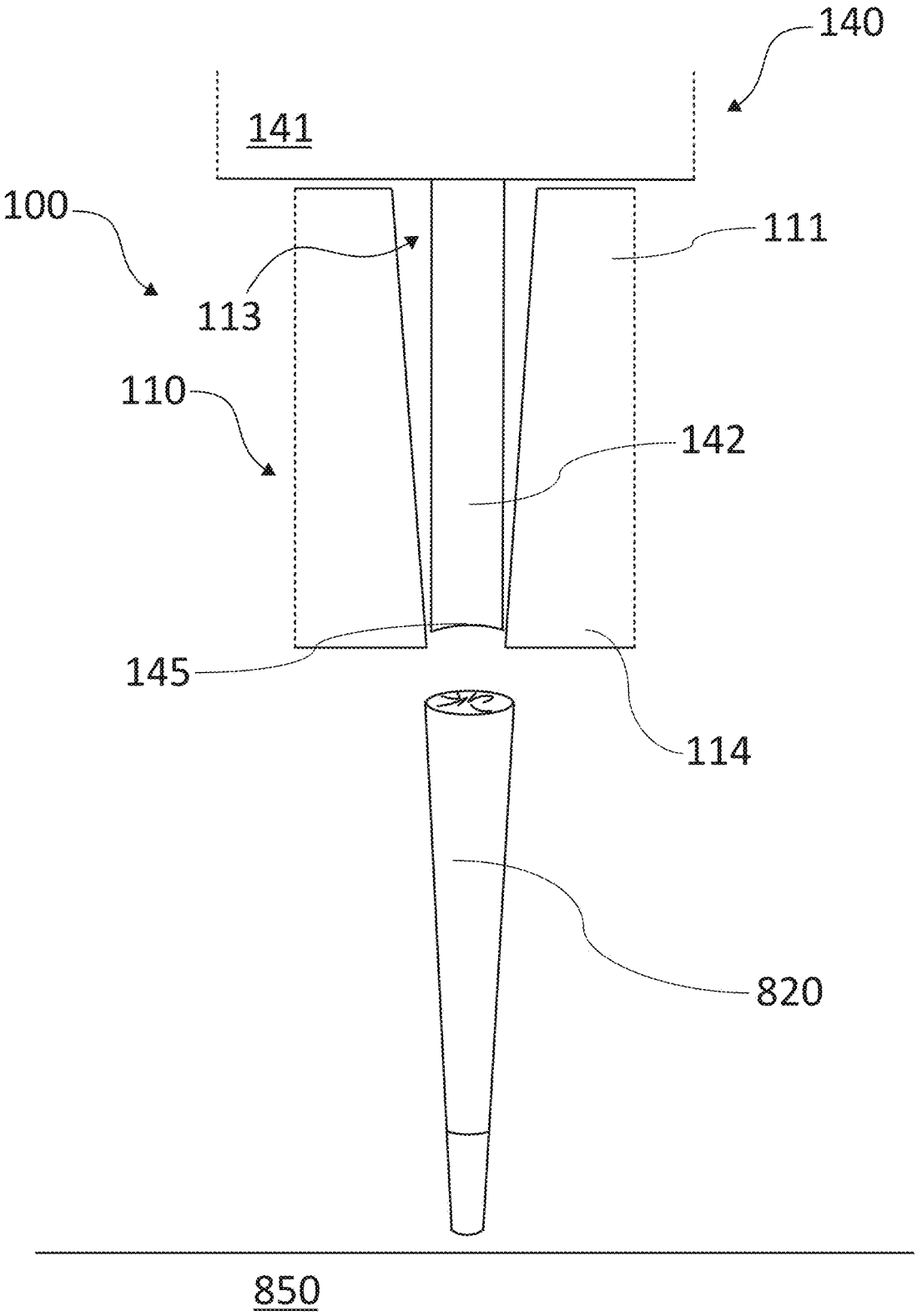


FIG. 7

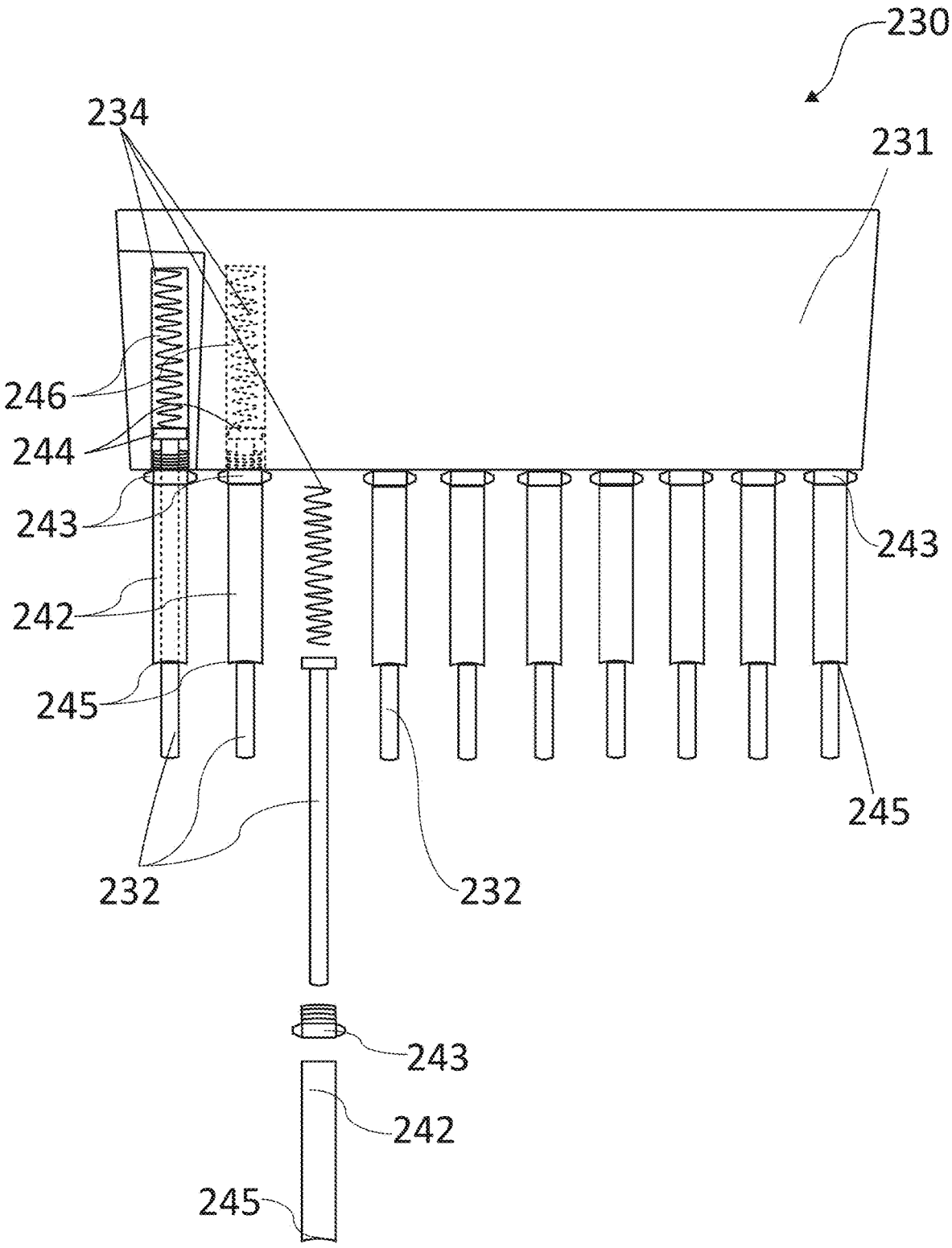


FIG. 8

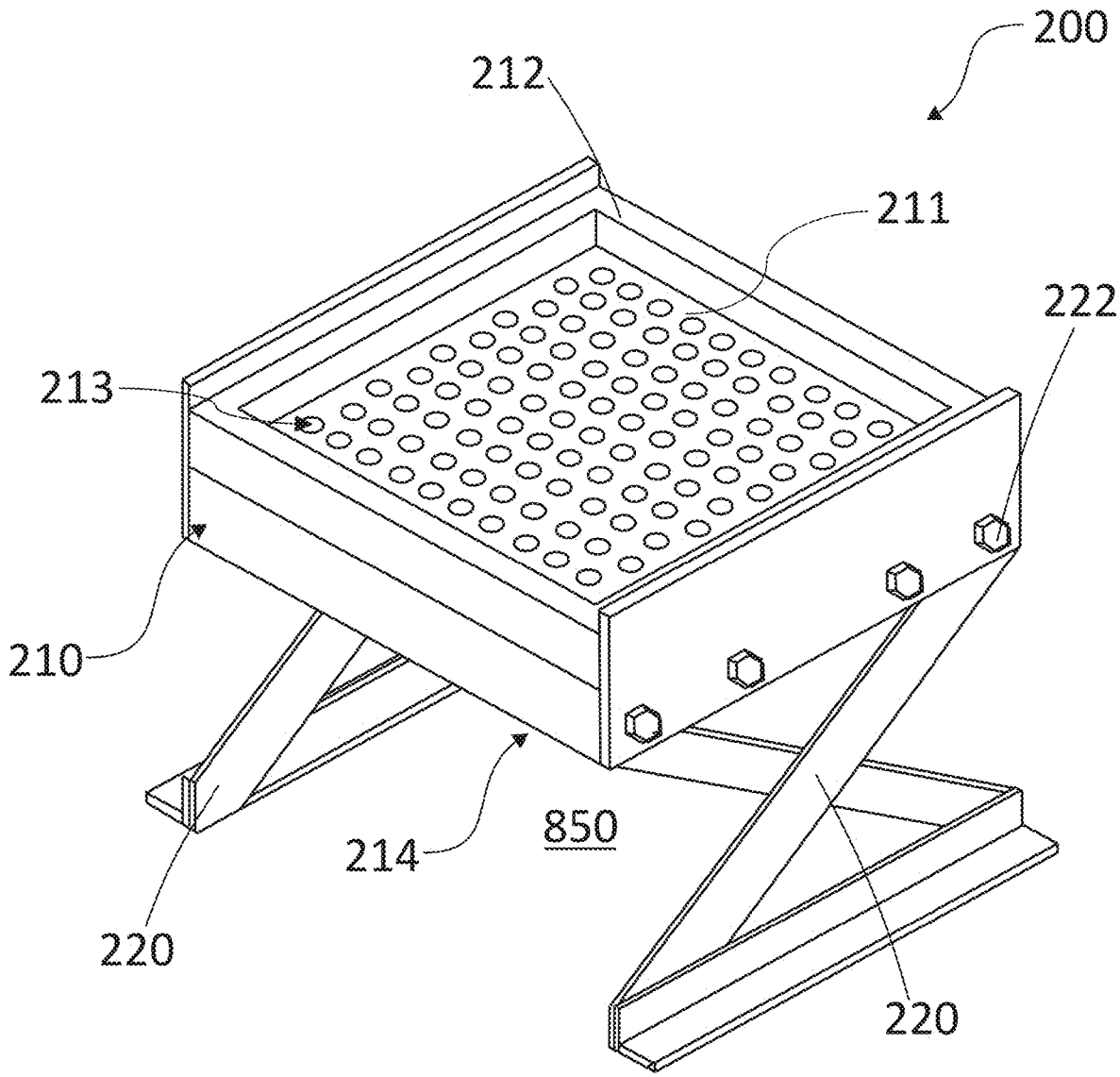


FIG. 9

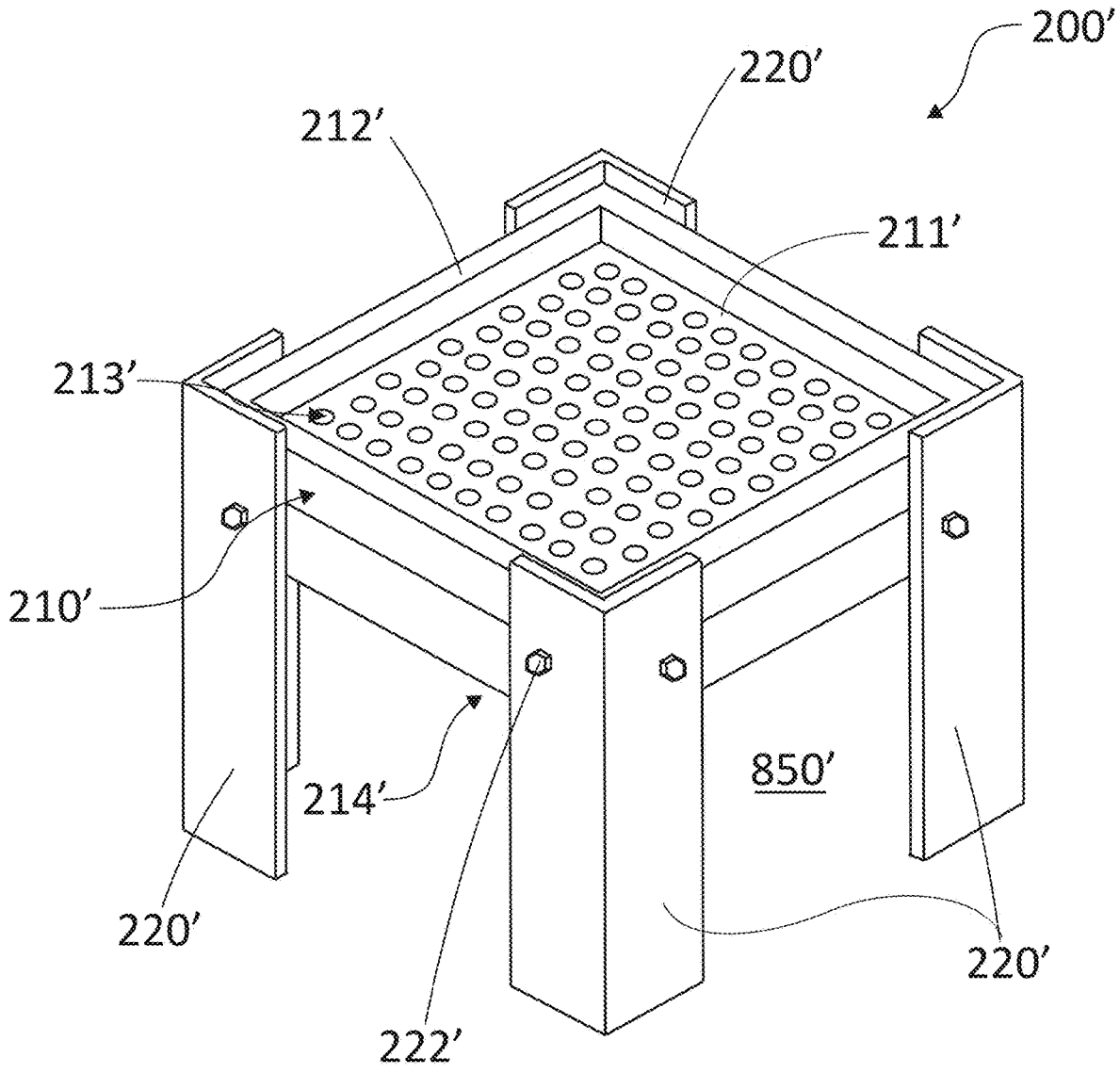


FIG. 10

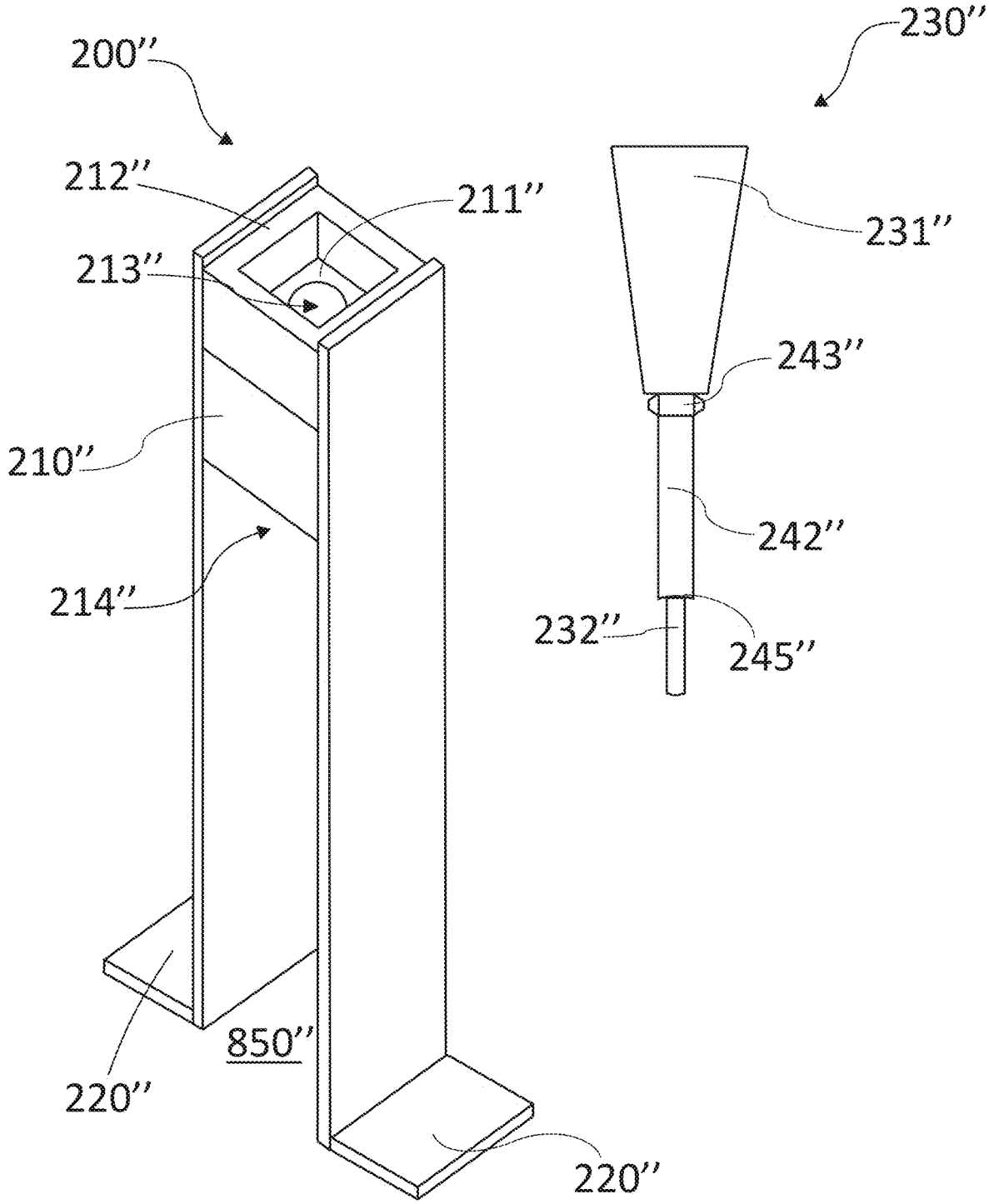


FIG. 11

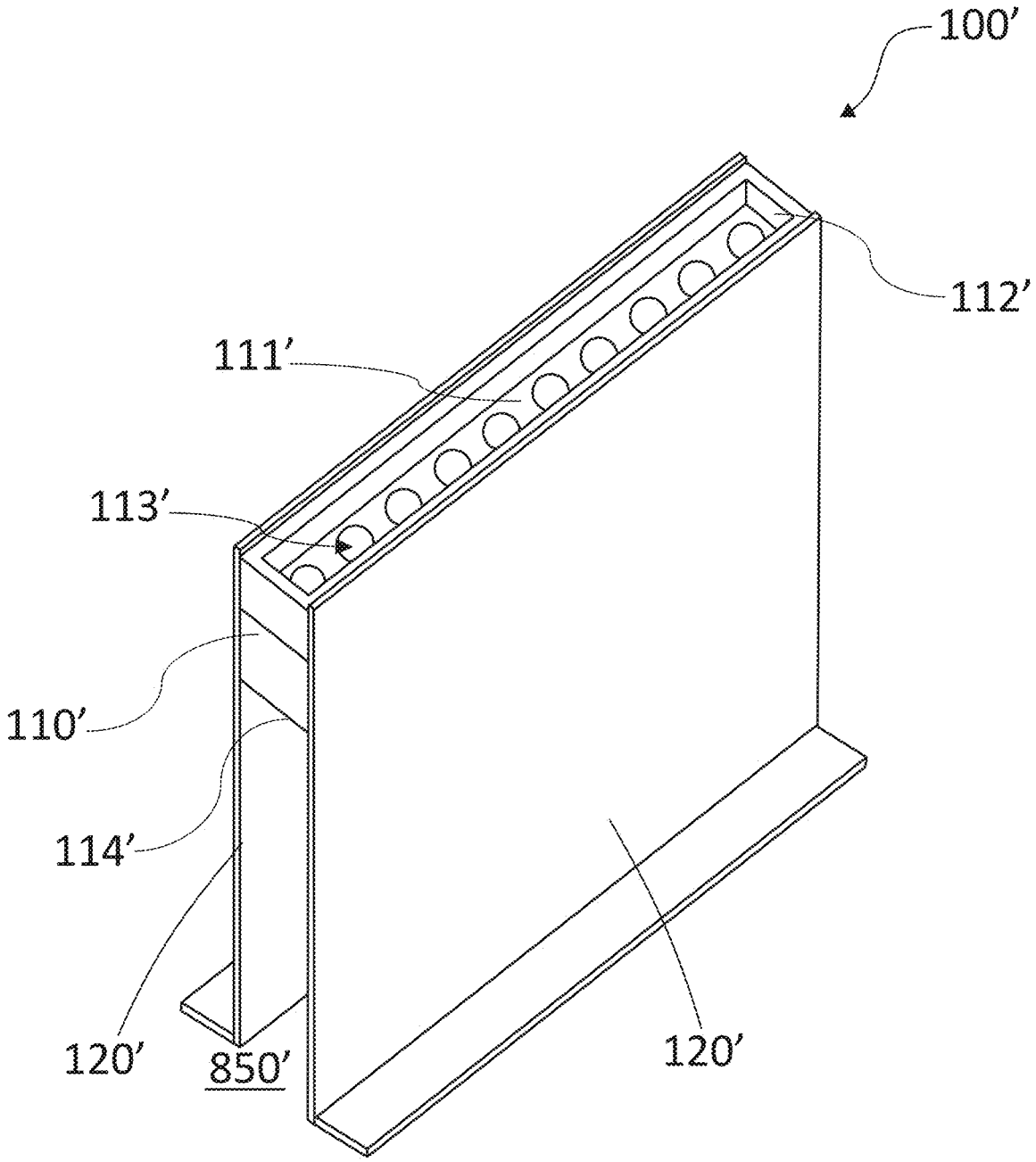


FIG. 12

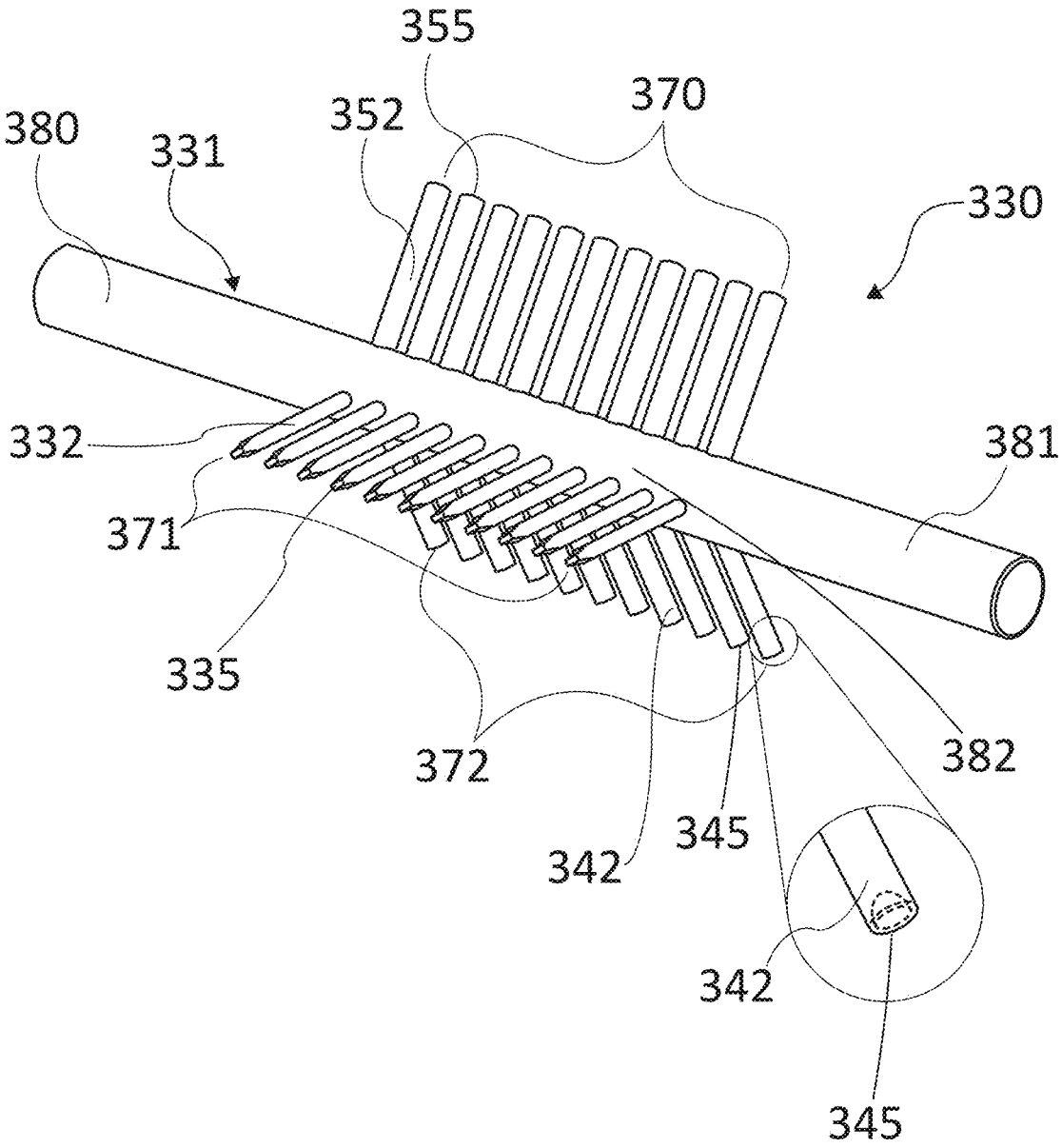


FIG. 13

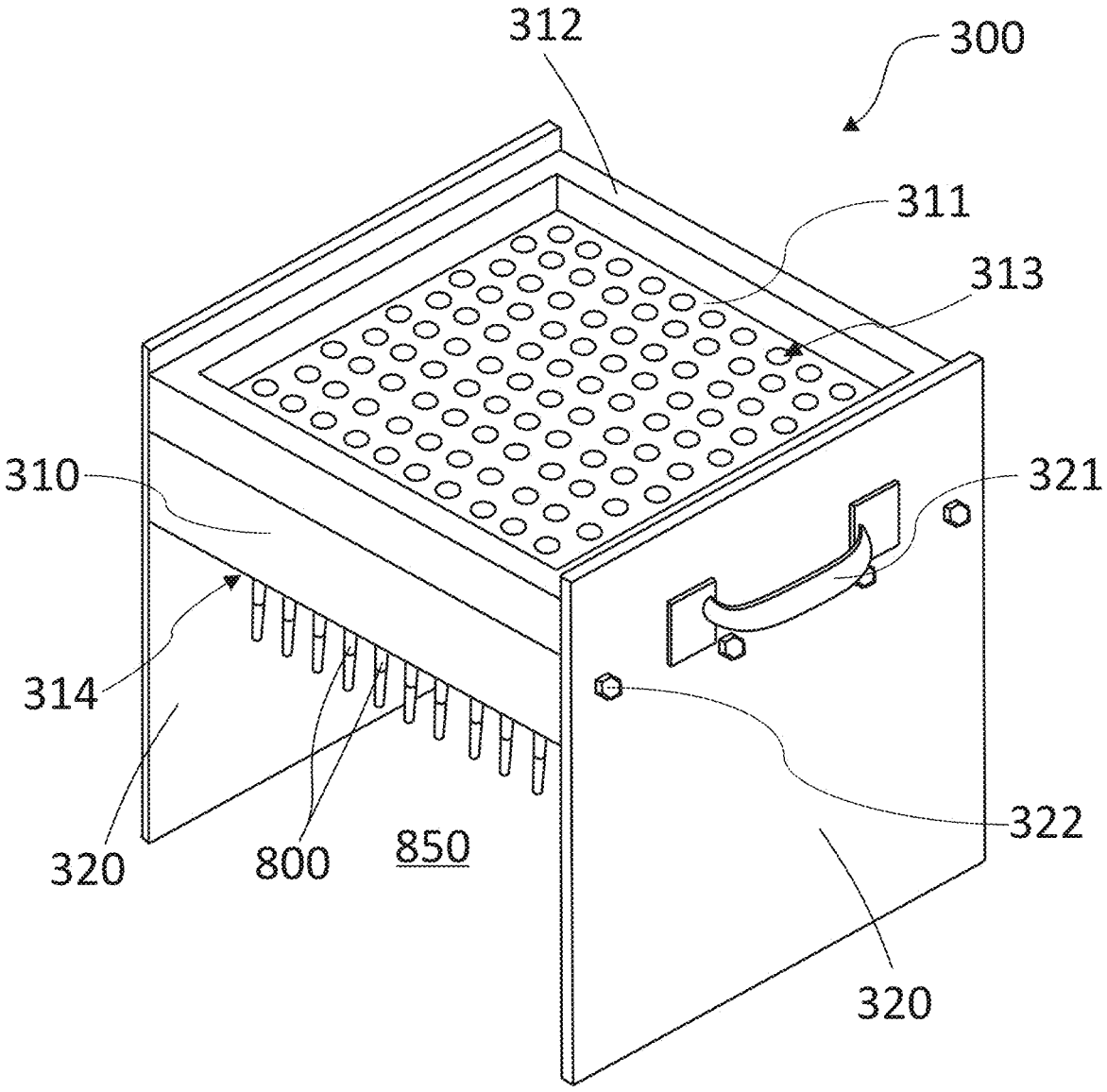


FIG. 14

PRE-ROLLED CONE FILLING, PACKING, FINISHING, AND EXTRUDING METHOD AND APPARATUS

CONTINUITY AND CLAIM OF PRIORITY

[0001] This is a Continuation-In-Part (CIP) U.S. non-provisional patent application depending upon a co-pending original U.S. Non-provisional patent application Ser. No. 17/111,503 filed on Dec. 3, 2020 (hereafter also referred to as the Parent Application).

FIELD

[0002] The invention relates to methods and apparatus for making cigarettes, and more particularly, the invention relates to methods and apparatus for packing, finishing, and extruding pre-rolled cones into marijuana cigarettes.

BACKGROUND

[0003] In the past, there have been many ways smokable plant-based materials, the most common of which is tobacco, have been prepared for human consumption by way of smoking a cigarette. Due to a widespread consumption of tobacco as cigarettes, there have been many automated machines that mass produce cigarettes of various kinds, most of which are cylinder-shaped.

[0004] However, as marijuana use and production have become variously legalized in various states across the United States, and to a degree federally in accordance with the 2018 Farm Bill, there has been an increased interest in preparation of marijuana plant materials for smoking. Thus, as more widespread interest in marijuana cigarettes has increased, there has been a need for quick and easy methods of marijuana cigarette production. Automated cigarette machines are not fit for this purpose, since marijuana has more resin and is therefore stickier than tobacco, and it cannot be produced by current automated machines that are designed to produce tobacco cigarettes.

[0005] Therefore, various inventions and methods have been proposed for preparing marijuana for consumption. For example, U.S. Pat. No. 10,806,173 B2, Method and Apparatus for Custom Rolling a Smokable Product, to Tully, shows a system using a mandrill that assists in rolling smokable material that is subsequently removed into the rolled cylindrical cigarette. However, the Tully patent allows only for one at a time making of cylindrical cigarettes. To overcome this limitation and as pre-rolled cones have become popular, other methods and devices have been proposed for preparing different shaped and sized cigarettes.

[0006] For example, U.S. Pat. No. 10,647,529 B2, Packing Device for Consumable Materials, to Busnardo, defines a portable packing device for consumable materials having an outer sleeve and a telescoping inner sleeve which is spring loaded, allowing the user to press the protruding upper portion of the inner sleeve, creating tension and vibration needed to compress the consumable materials into a pre-rolled cone. Similarly, published patent application US 2017/0119043, Apparatus for Filling and Packing Pre-Formed Conical Cigarette Wrappers, to Swanson, describes a conical cigarette wrapper along with a one-at-a-time holder with a tamping surface attached to a shaft. Further, published patent application US 2014/0182604, Device and Method for Manufacturing Tobacco Products, to Hutton, shows a primarily cylindrical plastic tube for use in manufacture of smoking products with various diameters and geometries, and with a removable-top funnel with a segmented cylinder for removal of the final product. There are also automated machines that are known in the art that prepare marijuana cigarettes either as cylindrical or conical cigarettes.

[0007] While the above-mentioned inventions have overcome the problem of stickiness of marijuana and the need for the ability to accommodate differently-shaped and differently-sized cigarettes, these devices are either expensive automated commercial machines or a device that may only accommodate and produce one cigarette at time. Therefore, a cheaper, single-operator machine that allows for all steps of filling, packing, crimping, closing, and extruding of multiple marijuana cigarettes at the same time is needed. Such a machine would ideally allow an individual to manufacture multiple marijuana cigarettes quickly and efficiently. Further, the size and the ease of use of such a machine apparatus would give advantage over other much larger mass production machines in the industry. Still further, such a machine would fill, pack, crimp, close and extrude one or more marijuana cigarettes using a single multi-part apparatus, allowing for quick and easy use at home and at low cost.

SUMMARY

[0008] In accordance with an aspect and embodiment of the disclosure, a pre-rolled cone filling, packing, finishing, and extruding apparatus (also referred to herein as a "cigarette manufacturing apparatus" or "the apparatus") is adapted for making and extruding cigarettes such as marijuana cigarettes onto a catcher, such as a table, a floor, a bucket, or other catching device. The pre-rolled cone filling, packing, finishing, and extruding apparatus comprises a plate having a working surface and a rim portion. The plate defines at least one tapered hole communicating with the working surface, and each tapered hole is wider where it communicates with the working surface of the plate than it is where it communicates with the final extruding surface of the plate. The plate is adapted to receive and hold a pre-rolled cone into each tapered hole. A base is attached to the plate. The base is adapted for holding the plate sufficiently spaced from the catcher, such as a table surface. The sufficient space between the plate and the catcher allows each pre-rolled cone received by each tapered hole to be suspended above the catcher to allow for extruding of a finished cigarette. The pre-rolled cone filling, packing, finishing, and extruding apparatus further comprises a packing and crimping device and a closing and extruding device. The packing and crimping device comprises a handle having at least one thin rod attached to the handle. The packing and crimping device is adapted to pack and crimp each pre-rolled cone within each tapered hole of the plate. The closing and extruding device comprises a handle having at least one tube having a concave tip attached to a shaft that is 1-2 millimeters shorter than the concave tube. Each tube is thicker (e.g., has a larger outside and inside diameter) than each thin rod of the packing and crimping device. The closing and extruding device is adapted to close each pre-rolled cone and extrude each finished cigarette from within a corresponding tapered hole of the plate.

[0009] The plate may preferably be of a thickness adapted to facilitate crimping of a pre-rolled cone when marijuana is introduced into each pre-rolled cone sitting in a corresponding tapered hole defined in the plate, and each pre-rolled

cone having been filled, packed, and crimped, with a smokable material therein, is extruded through the plate. In other words, after each pre-rolled cone is filled, packed, and crimped, with a smokable material therein, it is pushed down the tapered hole until it pops out of the location where the tapered hole communicates with the, typically lower, extruding surface of the plate. The plate may preferably be at least 1.5625 inches thick, and preferably no more than 1.6875 inches thick. The base may preferably have a plurality of legs, such as two or four legs, but other numbers of legs may be used without departing from the scope of the invention as claimed.

[0010] The handle of the packing and crimping device, and the handle of the finishing and extruding device, may each preferably be made of high-density polyethylene (HDPE). Other materials, such as wood, may also be used. The plate may also preferably be comprised of HDPE.

[0011] In accordance with an aspect and embodiment of the disclosure, each of the at least one tubes of the closing and extruding device may be made of a hollow plastic tube with a concaved tip. Alternatively, each tube may be made of other materials, such as wood, metal, aluminum, or the like, suitable to the purpose of being sufficiently rigid to be used to push and compress (i.e., extrude) the filled pre-rolled cones out of the plate through its corresponding tapered hole. In this embodiment comprising tubes, each tube attaches to the handle by a shaft, such as a stainless-steel fastener inserted into each tube, and each tube is longer than each corresponding shaft. Each of the tubes may also be attached to the handle by other means suitable to the aforementioned purpose.

[0012] In accordance with an aspect and embodiment of the disclosure, each of the at least one thin rods of the packing and crimping device may preferably be made of a compressed stiff spring attached interposed and interconnecting between the handle and each thin rod. Each thin rod may be made of plastic and held by way of an integral collar (as part of the plastic rod) at the end of the compressed stiff spring. The aforementioned construction serves to allow some flexibility in action while working the packing and crimping device so as to align with the tapered holes in the plate and to allow a gentle circular motion to fold and crimp collapsed paper over an end of the cigarette as an initial, partial, closing. Accordingly, other materials suitable to this purpose and action may be used without departing from the scope of the invention as claimed.

[0013] In accordance with an aspect and embodiment of the disclosure, each of the at least one tapered holes defined in the plate is adapted to correspond to the taper of a pre-rolled cone, whether of a 98 mm size, or a 109 mm size, such that when the packing and crimping device gently packs each pre-rolled cone with filling material such as marijuana, each pre-rolled cone is packed but is preferably not yet pushed further into the pre-rolled cones' respective tapered holes. This pushing, or extruding, ideally doesn't happen until a later step than the filling and packing steps are completed so that additional material may be filled into the pre-rolled cone before an upper edge of the paper of the cone gets crimped—which crimp would prevent further material (such as marijuana) from getting into the cones. Once each pre-rolled cone is completely filled and packed, it is ready to be finished and extruded. Thus, it will thus be appreciated that the packing and crimping/finishing device is first used gently to pack each pre-rolled cone with material without first crimping the upper edge of each pre-rolled cone, since doing so may prevent further filling of the cones if necessary. After filling and gentle packing is completed, some initial crimping may be imparted by the packing and crimping device since the stickiness of the marijuana being packed into the pre-rolled cone with the packing and crimping device causes some crimping. And this is why packing must be done gently to prevent too early of crimping. After completion using the packing and crimping/finishing device, the closing and extruding device is then applied to each tapered hole having a filled and packed pre-rolled cone therein, the closing and extruding device thus being used to push each pre-rolled, filled, and packed cone further into its respective tapered hole. This latter process, known as extruding, causes each pre-rolled cone to begin to crimp further in earnest—or further crimp as some initial crimping has already begun with the filling and packing process (due to the stickiness of the marijuana pulling the paper inwardly with use of the packing and crimping/finishing device). And as each filled and packed pre-rolled cone is pushed further into its respective tapered hole using the closing and extruding device, the upper edge of each pre-rolled cone is folded further inwardly. In other words, as each pre-rolled cone is pushed further into its tapered hole with the closing and extruding device, they further close, they are extruded (compacted) until each pre-rolled cone is simultaneously pushed further and further into its respective tapered hole, and they are still further extruded until each finished cigarette is finally pushed out onto, or into, the catcher.

[0014] In accordance with an aspect and embodiment of the disclosure, the at least one tapered hole comprises a plurality of tapered holes arranged in a pattern, preferably of aligned columns and rows in the overall plate working surface shape of a square or a rectangle. In this embodiment, the at least one thin rod of the packing and crimping device comprises a plurality of thin rods arranged in a corresponding pattern, such as corresponding with either one or more rows of tapered holes in the plate. The plurality of thin rods is adapted to be brought into alignment with the plurality of tapered holes. Furthermore, the at least one tube of the closing and extruding device comprises a plurality of tubes arranged in a similarly corresponding pattern. The plurality of tubes is also adapted to be brought into alignment with the plurality of tapered holes in at least one row. In this aspect and embodiment of the disclosure, the at least one tube of the closing and extruding device also comprises a plurality of tubes oriented in a corresponding pattern. Thus, the plurality of tubes is adapted to be brought into alignment with the plurality of tapered holes in at least one row, but optionally in a corresponding pattern comprising more than one row.

[0015] In accordance with an aspect and embodiment of the disclosure, a pre-rolled cone filling, packing, finishing, and extruding apparatus, or cigarette manufacturing apparatus, is adapted for making and extruding cigarettes, such as marijuana cigarettes, onto a catcher (such as, for example, a tabletop or floor that is not part of the apparatus, or alternatively, a bucket onto which the plate and base are attached). The cigarette manufacturing apparatus has a plate having a working surface, a rim portion, and an extruding surface (opposite the working surface). The plate defines at least one tapered hole communicating with the working surface. Each tapered hole is wider where it communicates with the working surface of the plate, and each tapered hole tapers to be narrower where it communicates with the

(preferably lower) extruding surface. The plate is adapted to receive and hold a pre-rolled cone into each tapered hole, wherein preferably each tapered hole is also tapered to correspond with (i.e., adapted to receive and hold) a given size, such as a 98 mm size, or a 109 mm size, of pre-rolled cone. A base is attached to the plate and adapted for holding the plate sufficiently spaced from the catcher. The sufficient space allows each pre-rolled cone, which is adapted to be held and received by each corresponding tapered hole, to be suspended relative to the catcher to allow for extruding of a finished cigarette onto the catcher. The cigarette manufacturing apparatus further comprises a combination packing, crimping, closing, and extruding device having a handle with at least one thin rod extending from a spring from, and preferably within, the handle. Each rod is adapted to fill and crimp a pre-rolled cone retained within a corresponding tapered hole. The handle in accordance with this aspect and embodiment also has a tube corresponding to each thin rod. Each tube also extends from the handle, and each tube preferably has an outside diameter that is larger than each corresponding thin rod. Each thin rod is preferably adapted to reside partially within a corresponding tube. Each tube closes and extrudes a finished cigarette from within each corresponding tapered hole.

[0016] The base may preferably comprise a plurality of legs. The number of legs may be two, but other numbers of legs may be used. The handle of the combination packing, crimping, closing, and extruding device may preferably be made of high-density polyethylene (HDPE). However, the handle may be made of other materials known in the art, such as wood. The plate may also preferably be of HDPE.

[0017] Preferably, the plate thickness may preferably be at least 1.5625 inches thick and no more than 1.6875 inches thick, at least as pertaining to pre-rolled cones of the 98 mm size and the 109 mm size. Each tapered hole may preferably be adapted to correspond to the taper of a pre-rolled cone such that when the combination packing, crimping, closing, and extruding device packs each pre-rolled cone with filling material, such as marijuana, each pre-rolled cone is pushed further into the plate. This pushing of pre-rolled cone crimps the upper edge of each pre-rolled cone inwardly. When the combination packing, crimping, closing, and extruding device closes each pre-rolled cone, each pre-rolled cone is simultaneously pushed further into its corresponding tapered hole. Thus, the cigarette manufacturing apparatus as a whole is adapted for transforming the pre-rolled cone and filling material into a cigarette, until each finished cigarette extrudes onto, or into, the catcher.

[0018] In accordance with this aspect and embodiment of the disclosure, the at least one tapered hole may preferably be a plurality of tapered holes. In such embodiment, the at least one thin rod of the combination filling, crimping, closing, and extruding device preferably comprises a plurality of thin rods that are adapted to align with the plurality of tapered holes, and the at least one tube of the combination packing, crimping, closing, and extruding device preferably comprises a plurality of tubes that are adapted to align with the plurality of tapered holes.

[0019] In accordance with an aspect and embodiment of the disclosure, the at least one tapered hole comprises a plurality of tapered holes oriented in a pattern of rows. In such embodiment, the at least one thin rod of the combination packing, crimping, closing, and extruding device comprises a plurality of thin rods that align with a plurality of tapered holes in at least one row, and the at least one tube of the combination packing, crimping, closing, and extruding device comprises a plurality of tubes that align with a plurality of tapered holes in at least one row.

[0020] In accordance with an aspect and embodiment of the disclosure, a pre-rolled cone filling, packing, finishing, and extruding apparatus, or cigarette manufacturing apparatus, is adapted for making and extruding cigarettes, such as marijuana cigarettes, onto a catcher (such as, for example, a tabletop or floor that is not part of the apparatus, or alternatively, a bucket onto which the plate and base are attached). The cigarette manufacturing apparatus has a plate having a working surface, an extruding surface (opposite and parallel to the working surface), and a rim portion. The plate defines at least one tapered hole communicating with the working surface and the extruding surface. Each tapered hole is wider where it communicates with the working surface of the plate, and each tapered hole tapers to be narrower where it communicates with the extruding surface. The plate is adapted to receive and hold a pre-rolled cone into each tapered hole, wherein preferably each tapered hole is also tapered to correspond with (i.e., adapted to receive and hold) a given size of pre-rolled cone. A base is attached to the plate and adapted for holding the plate sufficiently spaced from the catcher. The sufficient space allows each pre-rolled cone, which is adapted to be held and received by each corresponding tapered hole, to be suspended relative to the catcher to allow for extruding of a finished cigarette onto the catcher. The cigarette manufacturing apparatus further comprises a three-pronged packing, crimping, closing, and extruding device comprising a handle having a first type of prong, a second type of prong, and a third type of prong extending from the handle. The first type of prong is comprised of at least one crimping rod (similar to and previously referred to as thin rod in other embodiments). Each crimping rod is adapted to fill and crimp a pre-rolled cone retained within a corresponding tapered hole. Each crimping rod may preferably have a narrow flat tip similar to a slotted screwdriver tip. The second type of prong is comprised of at least one tamping rod (similar to and previously referred to as a tube in other embodiments). Each tamping rod may have a concaved tip or a flattened tip. Each tamping rod has a diameter that is larger than that of each crimping rod. Each tamping rod closes each pre-rolled cone in each corresponding tapered hole. The third type of prong is comprised of at least one ejecting rod (whereas previously the tube acted as both a tamping and an ejecting rod) that is longer in length than each tamping rod. Each ejecting rod is used to extrude a finished cigarette from within each corresponding tapered hole past the extruding surface and onto the catcher.

[0021] The base may preferably comprise a plurality of legs. The number of legs may be two, but other numbers of legs may be used. The handle of the three-pronged packing, crimping, closing, and extruding device may preferably be made of HDPE. However, the handle may be made of other materials known in the art, such as wood. The plate may also preferably be of HDPE but may be made of other materials known in the art. Each of the crimping rod of the first type of prong, the tamping rod of the second type of prong, and the ejecting rod of the third type of prong may preferably comprised of polyoxymethylene (POM), which is a machinable plastic. However, other materials known in the art may be used.

[0022] The handle of the three-pronged packing, crimping, closing, and extruding device may preferably be comprised of an elongated pole with a first holdable surface at one end of the pole and a second holdable surface on the opposite end of the pole. The first and second holdable surfaces extend beyond the length of the longest side of the plate so there is enough grip space for a person to hold the handle by the two holdable surfaces without hitting the plate or rim around the plate with the person's knuckles when the first, second, and third type of prong of the three-pronged packing, crimping, closing, and extruding device is inserted into the tapered holes of the plate. The handle also comprises a middle portion between the first holdable surface and the second holdable surface. The first, second, and third type of prongs extend from the middle portion of the pole preferably at 120 degrees apart from one another around the circumference of a transverse cross-section of the middle portion of the pole. The 120 degrees angle between the different type of prongs is preferrable, but other degree of angles may be used. The handle can be of different shape than a pole and any other shape suitable to the purpose for which it is used may be used.

[0023] In accordance with an aspect and embodiment of the disclosure learned after further testing and development since filing of the Parent Application, the plate may preferably be of a thickness adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 50 mm through and including 420 mm. Thus, the plate thickness may be any thickness required to close any commercially manufactured pre-rolled paper cone size, such as pre-rolled paper cone size of 84 mm size, 98 mm size, 109 mm size, or any other size that is currently commercially available and may become available in the future. The plate thickness is adapted to provide the amount of resistance required to close the pre-rolled cones for each size as the pre-rolled cone is pushed further down into the tapered hole by pressure applied by the three-pronged packing, crimping, closing, and extruding device during crimping, packing, and tamping processes. In such embodiment, the at least one tapered hole defined in the plate is adapted to correspond to the taper of a pre-rolled cone of sizes between and including 50 mm through and including 420 mm. As the pre-rolled cone increases in size and diameter, each tapered hole preferably will increase to accommodate the corresponding pre-rolled cone size. When each crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device packs each pre-rolled cone with filling material, such as marijuana, each pre-rolled cone is pushed further into the tapered hole. As each pre-rolled cone is pushed further into the tapered hole, the tapered hole begins to crimp an upper edge of each pre-rolled cone so that when each tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device closes each pre-rolled cone, each pre-rolled cone is simultaneously pushed further into the tapered hole. Once each pre-rolled cone has been closed into a finished cigarette, each ejecting rod of the third type of prong of the three-pronged packing, crimping, closing, and extruding device is used to push and extrude each finished cigarette past the extruding surface of the plate and out onto the catcher. Thus, the size of the tapered hole and the plate thickness will be dependent on the pre-rolled cone size. The at least one crimping rod, the at least one tamping rod, and the at least one ejecting rod of the first, second, and third type of prongs, respectively, of the three-pronged packing, crimping, closing, and extruding device may be adapted to lengths and diameters that correspond with the change in size of the tapered hole and the plate thickness.

[0024] For example, in one embodiment, the plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 98 mm through and including 109 mm. In this embodiment, the plate is preferably 2 inches thick, the tapered hole is preferably 12.5 mm in diameter where it communicates with the working surface of the plate and preferably 9.85 mm in diameter where it communicates with the extruding surface of the plate. Each crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.25 inches in diameter and preferably 2.375 inches in length. Each tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.375 inches in diameter and preferably 2.5 inches in length. Each ejecting rod of the third type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.3125 inches in diameter and preferably 3 inches in length.

[0025] In a different embodiment, the plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 70 mm through and including 84 mm. The plate in this embodiment is preferably 1.875 inches thick, and the tapered hole is preferably 10.75 mm in diameter where it communicates with the working surface of the plate and preferably 7.85 mm in diameter where it communicates with the extruding surface of the plate. Each crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.25 inches in diameter and preferably 2.375 inches in length. Each tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.3125 inches in diameter and preferably 2.5 inches in length. Each ejecting rod of the third type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.25 inches in diameter and preferably 2.875 inches in length.

[0026] In accordance with this aspect and embodiment of the disclosure, the at least one tapered hole comprises a plurality of tapered holes. The at least one crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device preferably comprises a plurality of crimping rods, each preferably having a narrow flat tip (similar to that of a typical slotted head screw driver), adapted to align with the plurality of tapered holes, wherein a wider portion of the tip is prevented from going further into the tapered hole so as to not over-pack the cone using this portion of the tool. The at least one tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device preferably comprises a plurality of tamping rods, each preferably having a concaved tip (though cross-section flat tip may be used as well) and a diameter larger than a diameter of each of the plurality of crimping rods, adapted to align with the plurality of tapered holes. The at least one ejecting rod of the third prong of the three-pronged packing, crimping, closing, and extruding device preferably comprises a plurality of ejecting rods, each preferably having a flat tip (viewed in cross-section) and a smaller diameter and a longer length than each of the tamping rod, that are likewise adapted to align with the plurality of tapered holes. In accordance with an aspect and

embodiment of the disclosure, the at least one tapered hole comprises a plurality of tapered holes oriented in a pattern of rows. The at least one crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device comprises a plurality of crimping rods that align with a plurality of tapered holes in at least one row. The at least one tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device comprises a plurality of tamping rods that align with a plurality of tapered holes in at least one row. The at least one ejecting rod of the third prong of the three-pronged packing, crimping, closing, and extruding device comprises a plurality of ejecting rods that align with a plurality of tapered holes in at least one row.

[0027] Further it would be appreciated that any of the forgoing plates with different thicknesses may be used in connection with any of the packing and crimping device, the closing and extruding device, the combination packing, crimping, closing, and extruding device, and the three-pronged packing, crimping, closing, and extruding device.

[0028] In accordance with an aspect and embodiment of the disclosure, a pre-rolled cone finishing and extruding method for filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto, or into, a catcher, is comprised of:

[0029] Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate, wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of the plurality of finished cigarettes past the extruding surface onto, or into, the catcher, a packing and crimping device having a handle attached to a plurality of thin rods adapted to fill, pack and crimp a corresponding plurality of pre-rolled cones within the plurality of tapered holes, and a closing and extruding device having a handle attached to a plurality of tubes that is thicker (e.g., has a larger diameter) than the plurality of thin rods, and is adapted to close the plurality of pre-rolled cones and extrude a plurality of finished cigarettes from within the plurality of tapered holes;

[0030] Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

[0031] Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

[0032] Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones held in the plurality of tapered holes;

[0033] Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

[0034] Step F: inserting each thin rod of the packing and crimping device into the plurality of tapered holes with the plurality of pre-rolled cones and moving each thin rod of the packing and crimping device in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

[0035] Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges causing the upper edge of each pre-rolled cone to crimp inwardly as the pressure from each thin rod begins, with more pressure applied to push each pre-rolled cone slightly further into each corresponding tapered hole to bring the upper edge of each pre-rolled cone inwardly and such that the stickiness of the marijuana also pulls the upper edge of each pre-rolled cone inwardly;

[0036] Step H: inserting each tube of the closing and extruding device into corresponding tapered holes, and pushing the crimped end of each pre-rolled cone to fold to close off the pre-rolled cone; and

[0037] Step I: exerting further pressure onto the closing and extruding device having the plurality of tubes located in corresponding tapered holes, to extrude the plurality of finished cigarettes out of the plurality of tapered holes past the extruding surface and onto, or into, the catcher.

[0038] In accordance with another aspect and embodiment of the disclosure, a pre-rolled cone finishing and extruding method for filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto a catcher, is comprised of the following steps:

[0039] Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface, and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of a plurality of finished cigarettes, and a combination packing, crimping, closing, and extruding device having a handle attached by means of a plurality of springs to a corresponding plurality of thin rods adapted to fill and crimp a corresponding plurality of pre-rolled cones within the plurality of tapered holes, the handle also being attached to a plurality of hollow tubes within which each corresponding thin rods partially resides, each hollow tube's inner and outer diameters being wider than each corresponding thin rod and adapted to close and extrude the finished cigarettes from within the plurality of tapered holes;

[0040] Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

[0041] Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

[0042] Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones in the plurality of tapered holes;

[0043] Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

[0044] Step F: inserting each thin rod of the combination packing, crimping, closing, and extruding device into the plurality of tapered holes with the plurality of pre-rolled cones and moving the plurality of thin rods of the combination packing, crimping, closing, and extruding device around in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

[0045] Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges causing the upper edge of each of the plurality of pre-rolled cones to crimp inward as the pressure from the plurality of thin rods begins, with more pressure applied to push each of the plurality of pre-rolled cones slightly further into each of the corresponding plurality of tapered holes to bring the upper edge of each the plurality of pre-rolled cones inwardly and such that the stickiness of the marijuana also pulls the upper edges of the plurality of pre-rolled cones inwardly;

[0046] Step H: pushing down further so as to cause the plurality of tubes of the combination packing, crimping, closing, and extruding device and pushing the crimped end of each of the plurality of pre-rolled cones to fold to close off the plurality of pre-rolled cones; and

[0047] Step I: exerting further pressure onto the combination packing, crimping, closing, and extruding device to extrude the plurality of finished cigarettes out of the plurality of tapered holes past the extruding surface and onto, or into, the catcher.

[0048] In accordance with another aspect and embodiment of the disclosure, a pre-rolled cone finishing and extruding method for filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto a catcher, is comprised of the following steps:

[0049] Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface, and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate, wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of the plurality of finished cigarettes from the plurality of tapered holes past the extruding surface and onto the catcher, a three-pronged packing, crimping, closing, and extruding device having a handle having a first prong, a second prong, and a third prong extending from the handle, the first prong having a plurality of crimping rods each having a narrow flat tip (similar to that of a slotted screw driver), adapted to fill and crimp the plurality of pre-rolled cones within the plurality of tapered holes, the second prong having a plurality of tamping rods each with one of a flat and a concaved tip (as seen in cross-section view of the tips), each tamping rod having a diameter that is larger than each crimping rod, adapted to close the corresponding plurality of pre-rolled cones within the plurality of tapered holes, and the third prong having a plurality of ejecting rods each with a flat tip (as seen in cross-section view of the tips), each ejecting rod smaller in diameter and longer in length than each tamping rod, adapted to extrude a plurality of finished cigarettes from within the plurality of tapered holes;

[0050] Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

[0051] Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

[0052] Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones in the plurality of tapered holes;

[0053] Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

[0054] Step F: inserting each of the plurality of crimping rods of the three-pronged packing, crimping, closing, and extruding device into each of the corresponding plurality of tapered holes with the plurality of pre-rolled cones and moving the plurality of crimping rods of the three-pronged packing, crimping, closing, and extruding device around in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

[0055] Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges, causing the upper edge of each of the plurality of pre-rolled cones to crimp inward as the pressure from each of the plurality of crimping rods begins, with more pressure applied to push each of the plurality of pre-rolled cones slightly further into each of the corresponding plurality of tapered holes to bring the upper edge of each the plurality of pre-rolled cones inwardly and such that the stickiness of the marijuana also pulls the upper edges of the plurality of pre-rolled cones inwardly;

[0056] Step H: removing the plurality of crimping rods and inserting the plurality of tamping rods of the three-pronged packing, crimping, closing, and extruding device, and pushing the crimped end of each pre-rolled cone to fold to close off the pre-rolled cone; and

[0057] Step I: removing the plurality of tamping rods and inserting the plurality of ejecting rods of the three-pronged packing, crimping, closing, and extrud-

ing device and exerting pressure onto the closing and extruding device to extrude the plurality of finished cigarettes out of the plurality of tapered holes past the extruding surface and onto the catcher.

[0058] The subject matter of the present invention is particularly pointed out and distinctly claimed in the concluding portion of this specification. However, both the organization and method of operation, together with further advantages and objects thereof, may best be understood by reference to the following descriptions taken in connection with accompanying drawings.

BRIEF DESCRIPTIONS OF DRAWINGS

[0059] FIG. **1**A is a perspective view of a portion of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus (hereafter also referred to as a "cigarette manufacturing apparatus" or "the apparatus") in accordance with one or more aspects of the disclosure, with a plurality of tapered holes oriented in a pattern of 10 rows and 10 columns and a base comprised of two legs, the apparatus shown being loaded with filling material, such as marijuana.

[0060] FIG. **1**B is a perspective view of the portion of the embodiment shown in FIG. **1**A and further showing broken out a portion of the plate of the apparatus of FIG. **1**A, wherein the plate and dotted lines show how the tapered holes may hold a plurality of pre-rolled cones.

[0061] FIG. **1**C is a top view of the portion of the embodiment shown in FIG. **1**A and further showing some of the rightmost tapered holes empty, some of the next rightmost tapered holes holding pre-rolled cones, and some of the leftmost tapered holes holding pre-rolled cones filled with filling material.

[0062] FIG. **2**A is a side view of an embodiment of a packing and crimping device portion of a filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, the device having a plurality of thin rods oriented in a pattern of two offset rows and adapted for use with the apparatus of FIGS. **1**A-**1**C.

[0063] FIG. **2**B is a side view of another embodiment of a packing and crimping device portion of a filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, the device having a plurality of thin rods oriented in a pattern of a row that are each comprised of a spring and a plastic tip adapted for use with the portion of the filling, packing, finishing, and extruding apparatus of FIGS. **1**A-**1**C.

[0064] FIG. **3** is a partially-exploded side view of another embodiment of a closing and extruding device portion of a filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, the device having a plurality of tubes, with a portion of the handle shown broken out, as well as with dotted lines, to show how the plurality of tubes attach to the handle.

[0065] FIG. **4** is a close-up longitudinal cross-section side view of a tapered hole of a portion of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, showing the tapered hole holding a pre-rolled cone filled with material within the plate, and further showing a thin rod of a packing and crimping device inserted into the pre-rolled cone.

[0066] FIG. **5** is a close-up longitudinal cross-section side view of a tapered hole of a portion of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, showing the tapered hole holding a pre-rolled cone filled with material within the plate, and further showing a thin rod of a packing and crimping device in the process of crimping the upper edge of the pre-rolled cone.

[0067] FIG. **6** is a close-up longitudinal cross-section side view of a tapered hole of a portion of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, showing the tapered hole holding a pre-rolled cone filled with material within the plate, and further showing a tube of a closing and extruding device pushing against the crimped upper edge to close the pre-rolled cone.

[0068] FIG. **7** is a close-up longitudinal cross-section side view of a tapered hole of a portion of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, showing the tapered hole, and further showing a tube of a closing and extruding device pushing and extruding a finished cigarette from the tapered hole.

[0069] FIG. **8** is a side view of a combination packing, crimping, closing, and extruding device portion of a filling, packing, finishing, and extruding apparatus and having a plurality of thin rods and tubes oriented in a row in accordance with one or more aspects of the disclosure, the device being shown partially broken out to show the internal structure and workings of the device at a portion of the handle, as well as with dotted lines to show how the handle attaches the tubes, the thin rods, and the springs.

[0070] FIG. **9** is a perspective view of an embodiment of a portion of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with a plurality of tapered holes oriented in a pattern of 10 rows and a base comprised of two legs that differ from the base of FIGS. **1**A-**1**C.

[0071] FIG. **10** is a perspective view of another embodiment of a portion of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with a plurality of tapered holes oriented in a pattern of 10 rows and a base comprised of four legs.

[0072] FIG. **11** is a perspective view of another embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with a single tapered hole and a base comprised of two legs, and a combination packing, crimping, closing, and extruding device comprised of one thin rod and one tube.

[0073] FIG. **12** is a perspective view of another embodiment of a portion of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with a plurality of tapered holes oriented in a pattern of a row and a base comprised of two legs.

[0074] FIG. **13** is a perspective view of a three-pronged packing, crimping, closing, and extruding device portion of a filling, packing, finishing, and extruding apparatus and having a first type of prong comprising a plurality of crimping rods, a second type of prong comprising a plurality of tamping rods, and a third type of prong comprising a plurality of ejecting rods extending from a handle.

[0075] FIG. **14** is a perspective view of a portion of an embodiment of a pre-rolled cone filling, packing, finishing,

and extruding apparatus in accordance with one or more aspects of the disclosure, with a plurality of tapered holes oriented in a pattern of 10 rows and 10 columns and a base comprised of two legs, having a thicker plate size than shown in FIGS. **1A-1C**.

DETAILED DESCRIPTION

[0076] The present disclosure provides various embodiments of a pre-rolled cone filling, packing, finishing, and extruding apparatus (hereafter referred to also as a "cigarette manufacturing apparatus" or "the apparatus"), use applications thereof, and related methods of filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto a catcher.

[0077] Some terminologies have changed as improvements have been made to the apparatus. The old term "thin rod" and the new term "crimping rod" refers to the same/similar part of the invention in different embodiments of the apparatus without departing from the scope of the invention as claimed. The old term "tube" and the new term "tamping and ejecting rod" refers to the same/similar part of the invention in different embodiments without departing from the scope of the invention as claimed. In embodiments with the three-pronged packing, crimping, closing, and extruding device, "tamping and ejecting rod" have been separated into two different types of rods, "tamping rod" and "ejecting rod", without departing from the scope of the invention as claimed. It will be appreciated by those skilled in the art that as different pre-rolled cone sizes come out, the plate thickness, as well as diameters of tapered holes, diameters and lengths of crimping rod (thin rod), tamping and ejecting rod (tube), tamping rod, and ejecting rod may change to accommodate the change in pre-rolled cone diameters and lengths without departing from the scope of the invention as claimed. Further it will be appreciated that any of the following plates with different thicknesses may be used in connection with the packing and crimping device, the closing and extruding device, the combination packing, crimping, closing, and extruding device, and the three-pronged packing, crimping, closing, and extruding device, all without departing from the scope of the invention as claimed.

[0078] Referring generally to FIGS. **1A-1C**, there is shown a perspective view of an embodiment of a portion **100** of a pre-rolled cone filling, packing, crimping, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure. The apparatus portion **100** comprises a plate **110**, having a working surface **111**, an extruding surface **114** parallel to the working surface **111**, and a rim portion **112**. The plate **110** may preferably be of a thickness adapted to facilitate crimping of a pre-rolled cone **800**, and preferably a plurality of cones **800**, as filling material **810**, such as marijuana, is introduced into the cone. After, filling, packing, crimping, and finishing, the pre-rolled cones **800** are extruded through the plate **110** past the extruding surface **114** and onto a catcher **850**, such as a floor, a tabletop, or a basin. The preferred thickness for the plate **110** is at least 1.5625 inches thick and no more than 1.6875 inches thick when adapted for size 98 mm and 109 mm pre-rolled cones **800**. The plate **110** may be made of known materials in the art, such as wood, metal, high-density polyethylene (HDPE), plastic, acrylic, and other moldable and machinable materials.

[0079] The plate **110** defines at least one tapered hole **113**. The tapered holes **113** are preferably a plurality of tapered holes **113** for this embodiment and the tapered holes **113** are oriented in a pattern of 10 rows. The rows may be offset as shown, they may be arranged into columns, or the tapered holes **113** may be arranged into any other desirable pattern. The tapered holes **113** are wider where they communicate with the working surface **111** and narrows as they extend further away from the working surface **111**. The tapered holes **113** receive and hold pre-rolled cones **800** and are preferably designed to hold 98 mm and 109 mm pre-rolled cones **800**. Each of the tapered holes **113** correspond to the taper of a pre-rolled cone **800** to facilitate crimping of the pre-rolled cone **800** as the pre-rolled cone **800** is pushed down into the tapered hole **113**.

[0080] The base **120** attached to the plate **110** may be two legs **120** as illustrated, but another number of legs may be used. The two legs **120** in this embodiment are attached to the plate **110** using screws **122**, but other means of attachment known in the art, such as glue, may be used. The embodiment portion shown in FIG. **1A** also has handles **121** attached to the legs **120** for easy portability of the apparatus **100**. The base **120** holds the plate **110** up in a position sufficiently spaced from the catcher **850** to allow the pre-rolled cones **800** to partially hang out of the corresponding tapered holes **113** while the tapered holes **113** hold the pre-rolled cones **800**. The catcher **850** may be any surface that may be used to catch and gather extruded cigarettes, such as a table, a floor, a bin, or a basin. There should be enough space for the extruded cigarette to fall onto, or into, the catcher **850**.

[0081] The filling materials **810**, such as marijuana, from a container means **860** may be poured onto the working surface **111** as illustrated. The rim **112** prevents the filling material **810** from spilling off the plate **110** while the plate **110** is tilted and shaken sideways so the filling material **810** enters into the tapered holes **113** and falls into the pre-rolled cones **800** held within the tapered holes. Packing and crimping devices, and closing and extruding devices are not shown in FIG. **1A-1C**, but will be detailed below in FIGS. **2-3** and later FIGS.

[0082] Referring specifically to FIG. **1B**, there is shown a perspective view of a portion **100** of an embodiment of the pre-rolled cone filling, packing, finishing, and extruding apparatus of FIG. **1A** and showing a broken plate **110** segment to show how pre-rolled cones **800** may be received by the tapered holes **113**. The left most corner of the plate **110**, including some of the rim **112** and the working surface **111**, is illustrated as broken to show two tapered holes **113** broken into halves and shown as solid lines within the plate **110**. Four of the tapered holes **113** are shown in dotted lines to represent the outline of the tapered holes **113** defined within the plate **110**. As described in FIG. **1A**, the tapered hole **113** is wider where it communicates with the working surface **111** of the plate **110**. Each of the tapered holes **113** correspond to the taper of a pre-rolled cone **800** to facilitate crimping of the pre-rolled cone **800** as the pre-rolled cone **800** is pushed down the tapered hole **113**. Two pre-rolled cones **800** are present in two outlined tapered holes **113** to show how each tapered hole **113** would receive and hold a pre-rolled cone **800**. As illustrated, each tapered hole **113** is slightly bigger than a pre-rolled cone **800** to allow downward movement of the pre-rolled cone **800** as it is filled, packed, crimped, closed, and extruded from the plate **110**. The pre-rolled cones **800** may preferably be of 98 mm size and 109 mm size. Two of the dotted tapered holes **113** are

left empty as comparison. A handle **121** attached to the base **120** and the base **120** as two legs **120** attached to the plate **110** are also illustrated to allow easy shaking of this portion **100** of the apparatus to allow better filling of materials **810** on the working surface **111** and into the pre-rolled cones **800**.

[0083] Referring specifically to FIG. **1**C, there is shown atop view of the portion **100** of the embodiment of the pre-rolled cone filling, packing, finishing, and extruding apparatus of FIGS. **1**A and **1**B. The portion **100** of the apparatus of FIGS. **1**A and **1**B has a plate **110**, a working surface **111**, and a rim portion **112**. A base **120**, comprising two legs **120** in this embodiment, is attached to the plate **110**, using screws **122**. However, other means of attachment, such as glue, may be used. The two legs **120** are shown each with a handle **121** for easy positioning and moving of the portion **100** of the apparatus, but it will be appreciated that handles could also be attached directly to the plate **110**. As discussed in connection with FIGS. **1**A and **1**B, the plate **110** defines 100 tapered holes **113** in a pattern oriented in 10 rows for this embodiment. As shown in FIG. **1**C, the leftmost two columns of tapered holes **113** each receives and holds a pre-rolled cone **800** filled with the filling material **810** (shaded gray), which preferably may be marijuana. The next four columns of tapered holes **113** to the right are each shown having received and holding a pre-rolled cone **800** to illustrate how pre-rolled cones **800** may be received and held in the tapered holes **113**. The four rightmost columns of tapered holes **113** are empty to illustrate the tapering of the tapered holes **113**.

[0084] Referring to FIG. **2**A, there is shown a side view of an embodiment of a packing and crimping device **130** of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure. The packing and crimping device **130** comprises a handle **131** attached to at least one thin rod **132**, which is a plurality of thin rods **132** for this embodiment. The thin rods **132** may be attached to the handle **131** by inserting the thin rod **132** into hollowed out areas of the handle **131** and securing by fastener means **133** as shown in FIG. **2**A. However, other means of attachment known in the art, such as glue or force fit, may be used. The embodiment shown in FIG. **2**A has 20 thin rods **132** oriented in a pattern of two rows, and it is meant to be used with a plate **110** having tapered holes **113** oriented in a pattern of at least two rows. For example, this embodiment of the packing and crimping device **130** may be used with the 10-row plate **110** of FIGS. **1**A-**1**C. Thin rods **132** may preferably be made of metal, but other materials, such as plastic, may be used. The handle **131** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials.

[0085] FIG. **2**B is a side view of another embodiment of a packing and crimping device **130'** portion of a cigarette manufacturing apparatus in accordance with one or more aspects of the disclosure. The packing and crimping device comprises a handle **131'** attached to at least one thin rod **132'** that are a plurality of thin rods **132'** oriented in a pattern of a row for this embodiment. The handle **131'** may be made of known materials in the art, such as known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials. The plurality of thin rods **132'** in this embodiment are 10 thin rods **132'** that are each comprised of a spring **134'** and a plastic tip **135'**. Each spring **134'** attaches interposed and interconnecting between the handle **131'** and the plastic tip **135'**. The spring **134'** may be attached to the handle **131'** by attachment means known in the art, such as glue or embedding the end of the spring **134'** into the handle **131'**. The spring **134'** may preferably be of diameter big enough for the plastic tip **135'** to be inserted and held secure within the spring **134'**. Other means of attaching the plastic tip **135'** to the spring **134'** known in the art, such as glue, may be used. The spring **135'** portion of the thin rod **132'** allows more delicate placement of the thin rod **132'** within a tapered hole (not shown) and within a pre-rolled cone (not shown). The spring **135'** also allows for flexibility in action for the plastic tip **135'** of the thin rod **132'** to easily move in a circular pattern when the packing and crimping device **130'** fills and crimps a pre-rolled cone **800**. It will be appreciated the handle **131'** and thin rods **132'** will be constructed, for example possibly with a plurality of pieces combined in such a way as to partially enclose the thin rods, and for example bolts similar to bolts **133** of FIG. **2**A, and in a way that will lend structural strength to the device needed in order to withstand pressures of tamping, packing, and crimping as contemplated herein. The packing and crimping device **130'** is adapted for use with the apparatus **100** of FIGS. **1**A-**1**C. However, the packing and crimping device **130'** may be used with any other embodiment of the apparatus **100** that has at least 10 tapered holes (not shown) in a row, such as the apparatus **100'** of FIG. **12**.

[0086] FIG. **3** is a partially-exploded side view of an embodiment of a closing and extruding device **140** in accordance with one or more aspects of the disclosure, with a portion of the handle **141** shown broken out, as well as with dotted lines, to show how the plurality of tubes **142** attach to the handle **141**. It will be appreciated that the handle **141** may be comprised of a plurality of pieces combined in such as a way to partially enclose bolts **143** and portions of the tubes **142**. The closing and extruding device **140** comprises a handle **141** attached to at least one tube **142**, which may preferably be a plurality of tubes **142**. In this embodiment, the plurality of tubes **142** are 10 tubes **142**. Each of the tubes **142** is attached to the handle **141** by a bolt **143** with a shaft **144** that is inserted within the tube **142** in order to give the device structural strength to withstand pressing and extruding pressures. The length of the shaft **144** of the bolt **143** may preferably be 1-2 millimeters shorter than the length of the tube **142**. The bolt **143** may be made of metal, such as stainless steel, but other materials known in the art, such as plastic or acrylic, may be used. The bolt **143** may attach to the handle **141** by inserting the bolt **143** and tube **142** combination into a hollow **146** within the sleeve that fits tightly around the bolt **143** and the tube **142** combination. Other means of attachment known in the art, such as glue, may be used.

[0087] Each of the tubes **142** are designed to be of a larger diameter than the thin rods (shown in FIGS. **2**A and **2**B) and has a concaved tip **145**, which allows for catching and closing of crimped upper edges of pre-rolled cones (not shown). The tube **142** may preferably be made of plastic, such as Nylon, or any other material such as wood, metal, aluminum, or the like, suitable to the purpose of being sufficiently rigid to be used to push and compress the filled pre-rolled cones out of the plate, as shown in FIGS. **1**A-**1**C, and through the tapered hole as shown in FIGS. **1**A-**1**C. The

handle **141** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials.

[0088] FIG. **4** is a close-up longitudinal cross-section side view of a tapered hole **113** in a plate **110** of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure. The tapered hole **113** is wider where the tapered hole **113** communicates with the working surface **111** of the plate **110** and narrower where the tapered hole **113** communicates with the extruding surface **114** of the plate **110**. The tapered hole **113** is shown holding a pre-rolled cone **800** filled with filling material **810**, marijuana **810** in this illustration, within the plate **110**. The circular dotted line within the pre-rolled cone **800** represents the top of the filling material **810** that has filled the pre-rolled cone **800**. The portion of the pre-rolled cone **800** above the circular dotted line is the upper edge **801** of the pre-rolled cone that will be crimped as shown in FIG. **5**. A thin rod **132** of a packing and crimping device **130** is shown inserted into the pre-rolled cone **800** and standing above the top of the filling material **810**, in a position ready to start the packing and crimping process once the pre-rolled cone has been filled. The thin rod **132** is attached to a handle **130**.

[0089] A thin rod of a combination packing, crimping, closing, and extruding device **230**, **230"** (shown in FIG. **8** and FIG. **11**) of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus **200**, **200'**, **200"** (shown in FIGS. **9-11**) in accordance with one or more aspects of the disclosure would work the same as the thin rod **132** of the packing and crimping device **130** shown in FIG. **4** at this stage of filling, packing, and finishing (crimping).

[0090] FIG. **5** is a close-up longitudinal cross-section side view of a tapered hole **113** of an embodiment of a plate **110** of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, and represents a continuation of the filling, packing, closing, and extruding apparatus (and associated method as described hereinafter) started in FIG. **4**. The tapered hole **113** is wider where the tapered hole **113** communicates with the working surface **111** of the plate **110** and narrower where the tapered hole **113** communicates with the extruding surface **114** of the plate **110**. The tapered hole **113** is shown holding a pre-rolled cone **800** filled with filling material **810**, marijuana, within the plate **110**. The circular dotted line within the pre-rolled cone **800** represents the top of the filling material **810** that has filled the pre-rolled cone. The portion of the pre-rolled cone **800** above the circular dotted line is the upper edge **801** of the pre-rolled cone.

[0091] In FIG. **5**, a thin rod **132** of a packing and crimping device **130** is shown inserted into the pre-rolled cone **800**. The thin rod **132** is attached to a handle **130**. As an operator moves the handle **130** and pushes and moves the thin rod **132** in a circular pattern repeatedly within the pre-rolled cone **800**, marijuana **810** will begin to pack. As marijuana **810** is pushed down the body of the pre-rolled cone by the motion, marijuana **810** will stick to the side and the upper edge **801** of the pre-rolled cone and will tend to pull the upper edge down towards the top of the material represented by the dotted circular line. Thus this portion of the process must be gently repeated in a circular up and down motion away from the sides of the paper at first to avoid too early of crimping of the pre-rolled cone. As the repeated circular pattern motion and the pressure from the operator starts to push the pre-rolled cone **800** down into the tapered hole **113** (after filling has been completed and initial crimping of the pre-rolled cone is now desired), the gradual narrowing of the tapered hole **113** will cause the upper edge **801** of the pre-rolled cone to come closer together. As the pre-rolled cone **800** continues to move down the tapered hole **113**, the stickiness of the marijuana **810** will cause the ever-closer upper edge **801** to crimp into a crimped edge **802**.

[0092] A thin rod **232**, **232"** (shown in FIG. **8** and FIG. **11**) of a combination packing, crimping, closing, and extruding device **230**, **230"** (shown in FIG. **8** and FIG. **11**) of a portion of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus (portions of which are shown in FIGS. **9-10**, and the entire apparatus of which is shown in FIG. **11**) in accordance with one or more aspects of the disclosure would work the same as the thin rod **132** of the packing and crimping device **130** shown in FIG. **4** at this stage of the filling, packing, and finishing operation. However, as the pre-rolled cone **800** is pushed further into the tapered hole **113**, **213**, **213'**, **213"** of the apparatus portion **200**, **200'**, **200"** and an operator puts more pressure into the handle **231**, **231"**, of the combination packing, crimping, closing, and extruding device **230**, **230"**, the spring **234** above the thin rod will start to compress and portions of the thin rod **232**, **232"** will be pulled up into the tube **242**, **242"** until the spring is maximally compressed and the tube is engaged.

[0093] FIG. **6** is a close-up longitudinal cross-section side view of a tapered hole **113** of a plate **110** of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, and an extruding portion continuation of the filling, packing, and closing, portions illustrated in FIGS. **4** and **5**. The tapered hole **113** is wider where the tapered hole **113** communicates with the working surface **111** of the plate **110** and narrower where the tapered hole **113** communicates with the extruding surface **114** of the plate **110**. The tapered hole **113** is shown holding a pre-rolled cone **800** filled with filling material **810**, marijuana, within the plate **110**. The circular dotted line within the pre-rolled cone **800** represents the top of the filling material **810** that has filled the pre-rolled cone. The portion of the pre-rolled cone **800** above the circular dotted line is the upper edge **801** of the pre-rolled cone.

[0094] A tube **142** of a closing and extruding device **140** is shown pressing against the now packed pre-rolled cone **800**. The tube **142** is attached to a handle **140**. The tube **142** is thicker in diameter than the diameter of the thin rod **132** (shown in FIGS. **4** and **5**) and has a concaved tip **145**, thereby easily catching onto the crimped edge **802** of the pre-rolled cone **800**. Pushing of the tube **142** into the tapered hole **113** causes the crimped edge **802** of the pre-rolled cone **800** to catch and fold down. As the operator continues to push the tube **142** onto the pre-rolled cone **800** within the tapered hole **113**, the motion causes all the folds of the crimped edge **802** to close and compacted into a closed top **803**. The pushing of the tube **142** against the pre-rolled cone **800** also moves the pre-rolled cone further down into the tapered hole **113**, getting it ready for an extrusion phase.

[0095] A tube **242**, **242"** of a combination packing, crimping, closing, and extruding device **230**, **230"** (shown in FIG. **8** and FIG. **11**) of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus (a portion of which is shown in FIGS. **9-10**, and the entire apparatus of

which is shown in FIG. **11**) in accordance with one or more aspects of the disclosure would work the same as the tube **142** of the closing and extruding device **140** shown in FIG. **6** at this extruding stage of the operation. As discussed, the spring **234** should be maximally compressed, sliding the thin rod **232**, **232"** upwardly such that the tube should be engaged and ready for usage at this extruding phase of the operation.

[0096] FIG. **7** is a close-up longitudinal cross-section side view of a tapered hole **113** of a plate **110** of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, and there is shown an apparatus portion for continuation in an extruding method portion of the filling, packing, and closing method portions illustrated in FIGS. **4-6**. The tapered hole **113** is wider where the tapered hole **113** communicates with the working surface **111** of the plate **110** and narrower where the tapered hole **113** communicates with the extruding surface **114** of the plate **110**. A closing and extruding device **140** and its handle **141** and a tube **142** are shown. As the concaved tip **145** of the tube **142** pushes against the now closed pre-rolled cone **800** (not yet extruded as shown in FIG. **6**), until the finished cigarette **820** is pushed further down into the tapered hole **113** where finally it is extruded from the tapered hole **113** and the plate **110** onto, or into, the catcher **850**. In FIG. **7**, the tube **142** has been pushed all the way into the tapered hole **113** with sufficient force to push past the extruding surface **114** and extrude the finished cigarette **820** onto the catcher **850**, which may preferably be a flat surface such as a tabletop. The finished cigarette **820** thus extruded is ready for immediate user consumption by smoking.

[0097] A tube **242**, **242"** (shown in FIG. **8** and FIG. **11**) of a combination packing, crimping, closing, and extruding device **230**, **232"** (shown in FIG. **8** and FIG. **11**) of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus (a portion of which is shown in FIGS. **9-10**, and the entire apparatus of which is shown in FIG. **11**) in accordance with one or more aspects of the disclosure would work the same as the tube **142** of the closing and extruding device **140** shown in FIGS. **6** and **7**.

[0098] FIG. **8** is a side view of a combination packing, crimping, closing, and extruding device **230** having at least one thin rod **232** of a plurality of thin rods **232**, and having at least one tube **242** of a plurality of tubes **242** in accordance with one or more aspects of the disclosure. The plurality of thin rods **232** and the plurality of tubes **242** are 10 thin rods **232** and 10 tubes **242** oriented in a row for this embodiment. The combination packing, crimping, closing, and extruding device **230** is shown partially broken out at the leftmost portion of the handle **231** to show the internal structure and workings of the combination packing, crimping, closing, and extruding device **230**.

[0099] Each of the thin rods **232** is thinner than each of the corresponding tubes **242**, and each thin rod **232** is adapted to reside partially within a corresponding tube **242**. The handle **231** has a hollow space **246** for each of the thin rod **232** and tube **245** combination. A spring **234** resides within the hollow space **246** and connects with a head **244** of a thin rod **232**. The spring **234** allows the thin rod **232** to slide upwards and into the corresponding tube **242** as the spring **234** is compressed, as described in FIG. **6**. This compressing and sliding of the thin rod **232** allows for exposure of the concaved tip **245** of the corresponding tube **242** for usage. The spring **234** may attach to the head **244** of the thin rod **232** and the handle **231** by force fit, welding, glue or any other attachment means known in the art. The spring **234** may also be freely held within the hollow space **246** without any attachment to either the head **244** of the thin rod **232** or the handle **231**, such as would be the case if a union nut and threaded collar **243** were to hold the assembly in the hollow space. A tube **242** may preferably be attached to the handle **231** by a union nut **243**. The tube **242** may be glued, threaded, welded, or otherwise fitted into the union nut **243** to be held in place. Other methods of attaching the tube **242** to the union nut **243** known in the art may be used. The union nut **243** may be stainless steel, but other materials known in the art may be used. The thin rods **232** may preferably be made of metal, but other materials, such as plastic, may be used. The tubes **242** may preferably be made of plastic, such as Nylon, or any other material such as wood, metal, aluminum, or the like, suitable to the purpose of being sufficiently rigid to be used to push and compress the filled pre-rolled cones **800** out of the plate **110** through the tapered holes **113**. The handle **231** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials.

[0100] As illustrated, the leftmost portion of the handle **231** is broken out to show the hollow **246** within the handle **231** and to illustrate how a spring **234**, a thin rod **232**, union nut **243**, and a tube **242** are attached to the handle **231**. The second leftmost hollow **246**, spring **234**, head portion of the thin rod **232**, and a portion of the union nut **243** are shown in dotted lines to outline how these parts would be held internally within the handle **241**. The third leftmost is a broken apart exploded view of the spring **234**, the thin rod **232**, the union nut **243**, and the tube **242** to illustrate how different parts are assembled.

[0101] The embodiment of combination packing, crimping, closing, and extruding device **230** in FIG. **8** has 10 thin rods **232** and its corresponding tubes **242** oriented in a pattern of one row, meant to be used with a plate **110** having tapered holes **113** oriented in a pattern of at least one row. For example, this embodiment of the combination packing, crimping, closing, and extruding device **230** may be used with the 10 row plate **210** of FIGS. **9** and **10**. The dotted lines are to show how the handle **231** attaches the tubes **242**, the thin rods **232**, and the springs **234**.

[0102] FIG. **9** is a perspective view of a portion **200** an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with at least one tapered hole **213** preferably being a plurality of tapered holes **213**. The portion **200** of the pre-rolled cone filling, packing, finishing, and extruding apparatus comprises a plate **210**, a working surface **211**, an extruding surface **214**, and a rim portion **212**. The plate **210** may preferably be of a thickness adapted to facilitate crimping of a pre-rolled cone **800** as filling material **810**, such as marijuana, is introduced into the pre-rolled cone and the pre-rolled cone is extruded through the plate **210**. The preferred thickness for the plate **210** is at least 1.5625 inches thick and no more than 1.6875 inches thick. The plate **210** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials. At least one tapered hole **213** is preferably comprised of a plurality of tapered holes **213**, as shown in this embodiment, which are oriented in a pattern of 10 rows. The tapered holes **213** are widest where they communicate with the working surface **211** and

narrowest where they communicate with the extruding surface **214**. The tapered holes **213** receive and hold pre-rolled cones **800** and are preferably designed to hold 98 mm and 109 mm pre-rolled cones. Each of the tapered holes **213** correspond to the taper of a pre-rolled cone **800** to facilitate crimping of the pre-rolled cone as the pre-rolled cone is pushed down the tapered hole **213**.

[0103] The base **220** attached to the plate **210** may be two legs **220** as illustrated, but other number of legs may be used. The two legs **220** differ in shape from the base **120** shown in FIGS. **1**A-**1**C to show how different types of base **120**, **220** may be used for the embodiments of the apparatus **100**, **200**. The base **220** should hold the plate **210** up in a position sufficiently spaced from the catcher **850** to allow pre-rolled cones **800** to partially hang out of the tapered holes **213** while the tapered holes **213** hold the pre-rolled cones. The catcher **850** may be any surface that may be used to catch and gather extruded cigarettes **820**, such as a tabletop, a floor, or other catch basin. There should be enough space for the extruded cigarette **820** to fall onto the catcher **850**. In this embodiment, the two legs **220** are attached to the plate **220** by screws **222**, but other means of attachment known in the art, such as for example welding, may be used.

[0104] FIG. **10** is a perspective view of a portion **200'** of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with at least one tapered hole **213'** being a plurality of tapered holes **213'** oriented in a pattern of 10 rows and a base **220'** comprised of four legs **220'**. The portion **200'** of a pre-rolled cone filling, packing, finishing, and extruding apparatus comprises a plate **210'**, a working surface **211'**, an extruding surface **214'**, and a rim **212'**. The portion **200'** is the same in every aspect as the portion **200** of FIG. **9** except for the number of legs **220'**. The four legs **220'** are attached to the plate **210'** using screws **222'**, but other means of attachment known in the art, such as glue or welding, may be used.

[0105] FIG. **11** is a perspective view of an embodiment of a pre-rolled cone filling, packing, finishing, and extruding apparatus, comprising portion **200"** (comprising a plate **210"** and base/legs **220"**) and portion **230"** (comprising a combination packing, crimping, closing, and extruding device **230"**), in accordance with one or more aspects of the disclosure. The plate **210"** of portion **200"** defines a single tapered hole **213"**, and the base **220"** is comprised of two legs **220"**. Further, the plate **210"** of the portion **200"** of the pre-rolled cone filling, packing, finishing, and extruding apparatus further comprises a working surface **211"**, an extruding surface **214"**, and a rim **212"**. The plate **210"** may preferably be of a thickness adapted to facilitate crimping of a pre-rolled cone **800** (see FIG. **1**A) as filling material **810**, such as marijuana, is introduced into the pre-rolled cone and the pre-rolled cone is extruded through the plate. The preferred thickness for the plate **210"** is at least 1.5625 inches thick and no more than 1.6875 inches thick. The plate **210"** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials. The tapered hole **213"** is widest where it communicates with the working surface **211"** and narrowest where it communicates with the extruding surface **214"**. The tapered hole **213"** receives and holds pre-rolled cone **800** and is preferably designed of a size to readily hold 98 mm and 109 mm pre-rolled cones. The tapered hole **213"** thus corresponds to the taper of a pre-rolled cone **800** and facilitates crimping of the pre-rolled cone as it is pushed down the tapered hole **213"**.

[0106] The base **220"** attached to the plate **210"** may be two legs **220"** as illustrated, but another number of legs may be used without departing from the scope and spirit of the invention as claimed. The base **220"** should hold the plate **210"** up in a position sufficiently spaced from the catcher **850"** to allow a pre-rolled cone to partially hang out of the tapered hole **213"** while the tapered hole holds it. The catcher **850"** may be any surface that may be used to catch and gather an extruded cigarette, and may comprise a tabletop, a floor, a catch basin, or other similar device. Accordingly, there should be enough space for the extruded cigarette to fall onto the catcher **850"**. In this embodiment, the two legs **220"** are attached to the plate **220"** by welding, or glue, but other means of attachment known in the art may be used.

[0107] FIG. **11** also illustrates a combination packing, crimping, closing, and extruding device **230"** portion of a cigarette manufacturing apparatus in accordance with the invention and which is comprised of one thin rod **232"** and one tube **242"** attached to a handle **231"**. The thin rod **232"** is thinner than the inside and outside diameters of the tube **242"**, and the thin rod **232"** is adapted to reside partially within the tube **242"**. The handle **231"** has a hollow space for the thin rod **232"** and tube **245"** combination as described similarly in connection with FIG. **8**. A spring **234"** not shown resides within the hollow **246** (not shown) and connects with a head **244"** (not shown) of the thin rod **232"** similarly to that described in connection with FIG. **8**. The spring allows the thin rod **232"** to slide upwards and into the tube **242"** as the spring is compressed, as described in FIG. **8**. This compressing and sliding of the thin rod **232"** allows for exposure of the concaved tip **245"** of the tube **242"** for usage as previously described to finish and extrude the cigarette **820**. The tube **242"** may preferably be attached to the handle **231"** by a union nut **243"**. The tube **242"** may be glued, or otherwise fitted onto the union nut **243"** to be held in place. Other methods of attaching the tube **242"** to the union nut **243"** known in the art may be used. The thin rod **232"** may preferably be made of metal, but other materials, such as plastic, may be used. The tube **242"** may preferably be made of plastic, such as Nylon, or any other material such as wood, metal, aluminum, or the like, suitable to the purpose of being sufficiently rigid to be used to push and compress the filled pre-rolled cones **800** out of the plate **210"** through the tapered hole **213"**. The union nut **243"** may be made of stainless steel any other materials known in the art suitable to the purpose of such to interconnect the tube **242"** and thin rod **232"** to the handle **231"**. The handle **231"** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials.

[0108] FIG. **12** is a perspective view of an embodiment of a portion **100'** of a pre-rolled cone filling, packing, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure, with a plurality of tapered holes **113'** defined by a plate **110'** and oriented in a pattern of a row, together with a base **120'** comprised of two legs **120'**. The plate **110'** of the pre-rolled cone filling, packing, finishing, and extruding apparatus comprises a working surface **111'**, and a rim **112'**. The plate **110'** may preferably be of a thickness adapted to facilitate crimping of a pre-rolled cone

800 (see FIG. **1**A) as filling material **810** such as marijuana, is introduced into the pre-rolled cone (not shown) and the pre-rolled cone (not shown) is extruded through the plate **110'** past extruding surface **114'**. The preferred thickness for the plate **110'** is at least 1.5625 inches thick and no more than 1.6875 inches thick. The plate **110'** may be made of known materials in the art, such as wood, metal, HDPE, plastic, acrylic, and other moldable and machinable materials. The tapered holes **113'** are wider where they communicate with the plate's working surface **111'**, and the tapered holes become narrower where they communicate with a lower extruding surface **114'** at the bottom of the plate **110'**. The tapered holes **113'** are adapted to receive and hold pre-rolled cones **800** and are preferably designed to hold 98 mm and 109 mm pre-rolled cones. Each of the tapered holes **113'** correspond to the taper of a pre-rolled cone **800** to facilitate crimping of the pre-rolled cone as it is pushed down each respective corresponding tapered hole.

[0109] The base **120'** attached to the plate **110'** may be comprised of two legs **120'** as illustrated, but another number of legs may be used as will be appreciated by those of skill in the art. The base **120'** should hold the plate **110'** up in a position sufficiently spaced from the catcher **850'** to allow pre-rolled cone **800** to partially hang out of the tapered holes **113'** while the tapered holes hold corresponding pre-rolled cones. The catcher **850'** may be any surface that may be used to catch and gather an extruded cigarette **810** (see FIG. **7**), such as a tabletop, a floor, or other catch basin. There should be enough space for the extruded cigarette **820** to fall onto the catcher **850'**. In this embodiment, the two legs **120'** are attached to the plate **120'** by welding, by glue, by screws, or other means of attachment known in the art.

[0110] FIG. **13** is a perspective view of a three-pronged packing, crimping, closing, and extruding device **330** having a first type of prong (also referred to as first prong) **371**, a second type of prong (second prong) **372**, and a third type of prong (third prong) **370**. The first prong **371** may be comprised of at least one crimping rod **332** (similar to that referred to as thin rod **132** in FIGS. **1**, **2**A, **4** and **5**, **144** in FIG. **2**A, **132'** in FIG. **2**B, **232** in FIG. **8**, and **242"** in FIG. **11**) but preferably be comprised of a plurality of crimping rods **332**, each with a narrow flat tip **335** similar to a slotted screwdriver tip. The plurality of crimping rods **332** will be adapted to align with the plurality of tapered holes. The narrow flat tip **335** is used to pack the pre-rolled cone with filling material, such as marijuana, and to crimp the upper edge of the pre-rolled cone. The crimping rod **332** is of a diameter that allows for easy and sufficient packing of the filing material into the pre-rolled cone, and the narrow flat tip **335** is so designed to easily catch and crimp down the upper edge of the pre-rolled cone as the material fills and sticks to the upper edge of the pre-rolled cone. The second prong **372** may be comprised of at least one tamping rod **342** but preferably be comprised of a plurality of tamping rods **342**. The plurality of tamping rods **342** will be adapted to align with the plurality of tapered holes. Each tamping rod **342** may preferably have a concaved tip **345** (as viewed in a cross-section view of the tip) and a diameter larger than a diameter of each of the crimping rod **332**. The concaved tip **345** allows for easier catching and closing of the crimped upper edge of the pre-rolled cone as pressure is applied on the tamping rod **342** to push each pre-rolled cone further down the corresponding tapered hole. However, the tamping rod **342** may have a flattened tip (as viewed in a cross-section view of the tip) in other embodiments. The third prong **370** may be comprised of at least one ejecting rod **352** but preferably be comprised of a plurality of ejecting rods **352**. Each ejecting rod **352** may preferably have a flat tip (as viewed in cross-section view of the tip) and a smaller diameter and a longer length than each of the tamping rods **342**. The separation of tamping and ejecting rod (similar to that previously referred to as tube **142** in FIGS. **3**, **6**, and **7**, as tube **242** in FIG. **8**, and as tube **242"** in FIG. **11**) into separate tamping rods **342** and ejecting rods **352** has advantages of easier tamping and ejecting. As shown in FIG. **13**, the plurality of crimping rods **332** is oriented in a row to form the first prong **371**, the plurality of tamping rods **342** is oriented in a row to form the second prong **372**, and the plurality of ejecting rods **352** is oriented in a row to form the third prong **373**. Each of the crimping rod **332** of the first type of prong **371**, the tamping rod **342** of the second type of prong **372**, and the ejecting rod **352** of the third type of prong **370** may be preferably comprised of polyoxymethylene (POM), which is a machinable plastic. However, other materials known in the art may be used. Those skilled in the art will appreciate that a narrow flat tip **332** may be applied to the crimping rod (thin rod shown as **132** in FIGS. **2**A, **4** and **5**, as **132** in FIG. **2**A, as **132'** in FIG. **2**B, as **232** in FIG. **8**, and as **232"** in FIG. **11**).

[0111] As shown in FIG. **13**, the handle **331** of the three-pronged packing, crimping, closing, and extruding device **330** may preferably be comprised of an elongated pole **331** with a first holdable surface **380** at one end of the pole **331** and a second holdable surface **381** on the opposite end of the pole **331**. The first and second holdable surfaces **380**, **381** extend beyond the length of a longest side of the plate (not shown) so there is enough grip space for a person to hold the handle **331** by the two holdable surfaces **380**, **381** without hitting the plate or rim around the plate with the person's knuckles when the first, second, or third type of prong **371**, **372**, **370** of the three-pronged packing, crimping, closing, and extruding device **330** is inserted into the tapered holes of the plate. The handle **331** also comprises a middle portion **382** between the first holdable surface **380** and the second holdable surface **381**. The first, second, and third type of prongs **371**, **372**, **370** extend from the middle portion **382** of the pole **331** at 120 degrees apart from one another around the circumference of a transverse cross-section middle portion **382** of the pole **331**. The 120 degrees angle between the first, second and third prongs **371**, **372**, **370** is preferrable, but other degrees of angles may be used. The handle **331** may be of different shape than a circular cross-section pole **331** and any other shape suitable to the purpose may be used. The handle **331** of the three-pronged packing, crimping, closing, and extruding device **330** may preferably be made HDPE. However, the handle may be made of other materials suitable to the purpose, such as wood.

[0112] Referring still to FIG. **13**, the at least one crimping rod **371** of the first type of prong of the three-pronged packing, crimping, closing, and extruding device **330** preferably comprises a plurality of crimping rods **332**, each preferably having a narrow flat tip (similar to that of a typical slotted head screw driver), adapted to align with the plurality of tapered holes (e.g., **113**, **113'**, **213**, **213'**, **313**), wherein a wider portion of the tip appearing as a screw driver tip is prevented from going further into the tapered hole so as to not over-pack the cones **800** using this portion of the tool **330**. The at least one tamping rod **372** of the

second type of prong of the three-pronged packing, crimping, closing, and extruding device preferably comprises a plurality of tamping rods **342**, each preferably having a concaved tip **345** as shown magnified at **342** (though cross-section flat tip may be used as well) and a diameter larger than a diameter of each of the plurality of crimping rods, adapted to align with the plurality of tapered holes **113**, **113'**, **213**, **213'**, **313**. The at least one ejecting rod **370** of the third prong of the three-pronged packing, crimping, closing, and extruding device **330** preferably comprises a plurality of ejecting rods **352**, each preferably having a flat tip **355** (viewed in cross-section) and a smaller diameter and a longer length than each of the tamping rods **342**, that are likewise adapted to align with the plurality of tapered holes **113**, **113'**, **213**, **213'**, **313**.

[0113] In accordance with an aspect and embodiment of the disclosure, the at least one tapered hole **113**, **113'**, **213**, **213'**, **313** comprises a plurality of tapered holes oriented in a pattern of rows. The at least one crimping rod **371** of the first type of prong of the three-pronged packing, crimping, closing, and extruding device **330** comprises a plurality of crimping rods **342** that align with a plurality of tapered holes in at least one row. The at least one tamping rod **372** of the second type of prong of the three-pronged packing, crimping, closing, and extruding device comprises a plurality of tamping rods **342** that align with a plurality of tapered holes **213**, **213'** in at least one row. The at least one ejecting rod **370** of the third prong of the three-pronged packing, crimping, closing, and extruding device **330** comprises a plurality of ejecting rods **352** that align with a plurality of tapered holes **113**, **113'**, **213**, **213'**, **313** in at least one row.

[0114] It will be appreciated that in accordance with the various aspects and embodiments of the disclosure, each of the at least one tapered holes defined in the plate is adapted to correspond to the taper of a pre-rolled cone, such that when the crimping rod (thin rod) of the packing and crimping device, the combination packing, crimping, closing, and extruding device, or three-pronged packing, crimping, closing, and extruding device gently packs each pre-rolled cone with filling material such as marijuana, each pre-rolled cone is packed but is preferably not yet pushed further into the pre-rolled cones' respective tapered holes. This pushing, or extruding, ideally doesn't happen until a later step than the filling and packing steps are completed so that additional material may be filled into the pre-rolled cone before an upper edge of the paper of the cone gets crimped—which crimp would prevent further material (such as marijuana) from getting into the cones. Once each pre-rolled cone is completely filled and packed, it is ready to be finished and extruded. Thus, it will thus be appreciated that the crimping rod (thin rod) is first used gently to pack each pre-rolled cone with material without first crimping the upper edge of each pre-rolled cone, since doing so may prevent further filling of the cones if necessary. After filling and gentle packing is completed, some initial crimping may be imparted by the crimping rod (thin rod) since the stickiness of the marijuana being packed into the pre-rolled cone with the crimping rod (thin rod) causes some crimping. And this is why packing must be done gently to prevent too early of crimping. After completion of using the crimping rod (thin rod), the tamping and extruding rod (tube) of the closing and extruding device, the combination packing, crimping, closing, and extruding device, or the tamping rod of three-pronged packing, crimping, closing, and extruding device is then applied to each tapered hole having a filled and packed pre-rolled cone therein, the tamping and ejecting rod (or tube as mentioned in a prior embodiment) or the tamping rod thus being used to push each pre-rolled, filled, and packed cone further into its respective tapered hole. This process, known as closing, causes each pre-rolled cone to begin to crimp further in earnest—or further crimp as some initial crimping has already begun with the filling and packing process (due to the stickiness of the marijuana pulling the paper inwardly with use of the packing and crimping/finishing device). And as each filled and packed pre-rolled cone is pushed further into its respective tapered hole using the tamping and ejecting rod (tube) or tamping rod, the upper edge of each pre-rolled cone is folded further inwardly. In other words, as each pre-rolled cone is pushed further into its tapered hole with the tamping and ejecting rod (tube) or tamping rod, they further close forming each finished cigarette. Then, the tamping and ejecting rod (tube) of the closing and extruding device, the combination packing, crimping, closing, and extruding device, or ejecting rod of the three-pronged packing, crimping, closing, and extruding device, is used to extrude each finished cigarette until each finished cigarette is simultaneously pushed further and further into its respective narrowest point in the tapered hole communicating with the extruding surface of the plate, and they are still further extruded until each finished cigarette is finally pushed past the extruding surface and out onto, or into, the catcher.

[0115] In an embodiment, as seen in FIG. **14**, the plate **310** may be thicker (or alternatively thinner as well) than the plate **110** seen in FIG. **1**A-**1**C. FIG. **14** shows a perspective view of an embodiment of a portion **300** of a pre-rolled cone filling, packing, crimping, finishing, and extruding apparatus in accordance with one or more aspects of the disclosure. The apparatus portion **300** comprises a plate **310**, having a working surface **311**, an extruding surface **314** parallel to the working surface **311**, and a rim portion **312**. The plate **310** defines a plurality of tapered holes **313** communicating with the working surface **311** and the extruding surface **314**. Each tapered hole **313** is wider where it communicates with the working surface **311** and narrower where it communicates with the extruding surface **314**. In FIG. **14**, the base **320** attached to the plate **310** comprise two legs with a handle **321** on each side. The base **320** is secured to the plate using screws **322**. The difference between plates **110** shown in FIG. **1**A-**1**C and plate **310** in FIG. **14** is the thickness of the plate. The plate **310** may be of a thickness adapted to handle filling and crimping of any pre-rolled paper cone **800** of sizes between and including 50 mm through and including 420 mm. Thus, the thickness of the plate **310** may be any thickness required to close any commercially manufactured size of the pre-rolled paper cone **800** (smaller or larger), such as sizes of 84 mm, 98 mm, 109 mm or any other size that is currently commercially available or may become available in the future, all while functioning as described herein to allow packing, crimping, and extruding of finished cigarettes. The thickness of the plate **310** is adapted to provide the amount of resistance required to close the pre-rolled cones **800** for each size. In such embodiment, the tapered holes **313** defined in the plate **310** is adapted to correspond to the taper of a pre-rolled cone **800** of sizes between and including 50 mm through and including 420 mm. As the pre-rolled cone **800** increases in size and diameter, each tapered hole **113** diameter at where it meets the working surface **311** of the plate and diameter at where it meets the

extruding surface **314** of the plate preferably will increase to accommodate the corresponding pre-rolled cone **800** size and diameter while still functioning as described herein. The diameters and lengths of the crimping rod (thin rod), tamping and ejecting rod (tube), tamping rod and ejecting rod will preferably change to accommodate the new plate thickness and tapered hole dimeters. While the thickness of the plate, the diameters and lengths of tapered holes, crimping rods, tamping and ejecting rods, tamping rods, and ejecting rods change, it will be appreciated that apparatus **300** of FIG. **14** functions the same as that of FIGS. **1**A-**1**C as described previously. Two examples, one with plate **311** at 2 inches thick and one with plate **311** at 1.875 thick, are shown in the table below showing preferred dimensions:

plate	Tapered Hole Diameter at Working	Tapered Hole Diameter at Extruding	Crimping Rod		Tamping Rod		Ejecting Rod	
Thickness	Surface	Surface	Diameter	Length	Diameter	Length	Diameter	Length
2 inches	12.5 mm	9.85 mm	0.25 inches	2.375 inches	0.375 inches	2.5 inches	0.3125 inches	3 inches
1.875 inches	10.75 mm	7.85 mm	0.25 inches	2.375 inches	0.3125 inches	2.5 inches	0.25 inches	2.875 inches

[0116] In an embodiment, the plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 98 mm through and including 109 mm. This plate may be preferably used to produce a cigarette containing 1 g of marijuana. In this embodiment, the plate is preferably 2 inches thick, the tapered hole is preferably 12.5 mm in diameter where it communicates with the working surface of the plate and preferably 9.85 mm in diameter where it communicates with the extruding surface of the plate. Each crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.25 inches in diameter and preferably 2.375 inches in length. Each tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.375 inches in diameter and preferably 2.5 inches in length. Each ejecting rod of the third type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.3125 inches in diameter and preferably 3 inches in length.

[0117] In a different embodiment, the plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 70 mm through and including 84 mm. This plate may preferably be used to produce a cigarette containing 0.5 g of marijuana. This embodiment of plate is preferably 1.875 inches thick, and the tapered hole is preferably 10.75 mm in diameter where it communicates with the working surface of the plate and preferably 7.85 mm in diameter where it communicates with the extruding surface of the plate. Each crimping rod of the first type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.25 inches in diameter and preferably 2.375 inches in length. Each tamping rod of the second type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.3125 inches in diameter and preferably 2.5 inches in length. Each ejecting rod of the third type of prong of the three-pronged packing, crimping, closing, and extruding device is preferably 0.25 inches in diameter and preferably 2.875 inches in length.

[0118] Thus, in accordance with an aspect of the disclosure, there is provided a pre-rolled cone finishing and extruding method for filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto, or into, a catcher, is comprised of:

[0119] Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface, and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate, wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of the plurality of finished cigarettes past extruding surface onto, or into, the catcher, a packing and crimping device having a handle attached to a plurality of thin rods adapted to fill, pack and crimp a corresponding plurality of pre-rolled cones within the plurality of tapered holes, and a closing and extruding device having a handle attached to a plurality of tubes that is thicker (e.g., has a larger diameter) than the plurality of thin rods, and is adapted to close the plurality of pre-rolled cones and extrude a plurality of finished cigarettes from within the plurality of tapered holes;

[0120] Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

[0121] Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

[0122] Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones held in the plurality of tapered holes;

[0123] Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

[0124] Step F: inserting each thin rod of the packing and crimping device into the plurality of tapered holes with the plurality of pre-rolled cones and moving each thin rod of the packing and crimping device in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

[0125] Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges causing the upper edge of each pre-rolled cone to crimp inwardly as the pressure from each thin rod begins, with more pressure applied to push each pre-rolled cone slightly further into each corresponding tapered hole to bring the upper edge of each pre-rolled cone inwardly and such that the stickiness of the marijuana also pulls the upper edge of each pre-rolled cone inwardly;

[0126] Step H: inserting each tube of the closing and extruding device into corresponding tapered holes, and pushing the crimped end of each pre-rolled cone to fold to close off the pre-rolled cone; and

[0127] Step I: exerting further pressure onto the closing and extruding device having the plurality of tubes located in corresponding tapered holes, to extrude the plurality of finished cigarettes out of the plurality of tapered holes past the extruding surface and onto, or into, the catcher.

[0128] In accordance with another aspect and embodiment of the disclosure, a pre-rolled cone finishing and extruding method for filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto a catcher, is comprised of the following steps:

[0129] Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface, and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of a plurality of finished cigarettes, and a combination packing, crimping, closing, and extruding device having a handle attached by means of a plurality of springs to a corresponding a plurality of thin rods adapted to fill and crimp a corresponding plurality of pre-rolled cones within the plurality of tapered holes, the handle also being attached to the plurality of hollow tubes within which each corresponding thin rod partially resides, each hollow tube's inner and outer diameters being wider than each corresponding thin rod and adapted to close and extrude the finished cigarettes from within the plurality of tapered holes;

[0130] Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

[0131] Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

[0132] Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones in the plurality of tapered holes;

[0133] Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

[0134] Step F: inserting each thin rod of the combination packing, crimping, closing, and extruding device into the plurality of tapered holes with the plurality of pre-rolled cones and moving the plurality of thin rods of the combination packing, crimping, closing, and extruding device around in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

[0135] Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges causing the upper edge of each of the plurality of pre-rolled cones to crimp inward as the pressure from the plurality of thin rods begins, with more pressure applied to push each of the plurality of pre-rolled cones slightly further into each of the corresponding plurality of tapered holes to bring the upper edge of each the plurality of pre-rolled cones inwardly and such that the stickiness of the marijuana also pulls the upper edges of the plurality of pre-rolled cones inwardly;

[0136] Step H: pushing down further so as to cause the plurality of tubes of the combination packing, crimping, closing, and extruding device and pushing the crimped end of each of the plurality of pre-rolled cones to fold to close off the plurality of pre-rolled cones; and

[0137] Step I: exerting further pressure onto the combination packing, crimping, closing, and extruding device to extrude the plurality of finished cigarettes out of the plurality of tapered holes and past the extruding surface onto, or into, the catcher.

[0138] In accordance with another aspect and embodiment of the disclosure, a pre-rolled cone finishing and extruding method for filling, packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto a catcher, is comprised of the following steps:

[0139] Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface, and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate, wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of the plurality of finished cigarettes from the plurality of tapered holes past the extruding surface and onto the catcher, a three-pronged packing, crimping, closing, and extruding device having a handle having a first prong, a second prong, and a third prong extending from the handle, the first prong having a plurality of crimping rods each having a narrow flat tip, adapted to fill and crimp the plurality of pre-rolled cones within the plurality of tapered holes, the second prong having a plurality of tamping rods each with one of a flat and

a concaved tip, each tamping rod having a diameter that is larger than each crimping rod, adapted to close the corresponding plurality of pre-rolled cones within the plurality of tapered holes, and the third prong having a plurality of ejecting rods each with a flat tip, each ejecting rod smaller in diameter and longer in length than each tamping rod, adapted to extrude a plurality of finished cigarettes from within the plurality of tapered holes;

[0140] Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

[0141] Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

[0142] Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones in the plurality of tapered holes;

[0143] Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

[0144] Step F: inserting each of the plurality of crimping rods of the three-pronged packing, crimping, closing, and extruding device into each of the corresponding plurality of tapered holes with the plurality of pre-rolled cones and moving the plurality of crimping rods of the three-pronged packing, crimping, closing, and extruding device around in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

[0145] Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges, causing the upper edge of each of the plurality of pre-rolled cones to crimp inward as the pressure from each of the plurality of crimping rods begins, with more pressure applied to push each of the plurality of pre-rolled cones slightly further into each of the corresponding plurality of tapered holes to bring the upper edge of each the plurality of pre-rolled cones inwardly and such that the stickiness of the marijuana also pulls the upper edges of the plurality of pre-rolled cones inwardly;

[0146] Step H: removing the plurality of crimping rods and inserting the plurality of tamping rods of the three-pronged packing, crimping, closing, and extruding device, and pushing the crimped end of each pre-rolled cone to fold to close off the pre-rolled cone; and

[0147] Step I: removing the plurality of tamping rods and inserting the plurality of ejecting rods of the three-pronged packing, crimping, closing, and extruding device and exerting pressure onto the closing and extruding device to extrude the plurality of finished cigarettes out of the plurality of tapered holes past the extruding surface and onto the catcher.

[0148] Those skilled in the art will recognize the inventive principles disclosed are not limited to the embodiments disclosed herein, and that various aspects of the disclosed embodiments may be combined to achieve additional embodiments.

[0149] In the preceding description, numerous details were set forth. It will be apparent, however, to one skilled in the art, that the present invention may be practiced without some of these specific details. Additionally, one skilled in the art will recognize the inventive principles disclosed are not limited to the embodiments disclosed herein, and that various aspects of the disclosed embodiments may be combined to achieve yet additional embodiments. In some instances, well-known structures and devices are shown in block diagram form, rather than in detail, in order to avoid obscuring the present invention.

[0150] The pre-rolled cone filling, packing, finishing, and extruding apparatus and methods of the present disclosure address problems with prior art apparatus and methods of filling, packing, finishing, and extruding cigarettes, especially marijuana cigarettes. This is because the present apparatus and methods help to alleviate the problem of quickly mass processing marijuana into a plurality of cigarettes without using complex machinery. Thus, the present apparatus and methods will enhance the making of a plurality of marijuana cigarettes for immediate consumption by smoking by providing means that are inexpensive, portable, one person operated, convenient, fast, and easy. Further, it will be appreciated that the present invention may be adapted to non-human mechanical mass production means, comprising a similar plate having a rim and defining tapered holes, together with a base, a packing, finishing, closing, and extruding device, or devices, all operated using machine based pouring and shaking techniques, as with cams to facilitate filling, and robotic arms or booms to facilitate packing, finishing, and extruding of cigarettes, all without departing from the scope and spirit of the invention as claimed. Thus, while a preferred embodiment of the present disclosure has been shown and described, it will be apparent to those skilled in the art that many changes and modifications may be made without departing from the claimed subject matter in its broader aspects. For example, it will be appreciated that one skilled in the art may mix and match the various components of the various embodiments of the claimed subject matter without departing from the true spirit of the claims. The appended claims are therefore intended to cover all such changes and modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A pre-rolled cone filling, packing, finishing, and extruding apparatus, adapted for making and extruding cigarettes, such as marijuana cigarettes, onto a catcher, comprising:

a plate comprising a working surface, an extruding surface parallel to the working surface, and a rim portion, said plate defining at least one tapered hole communicating with the working surface and the extruding surface, wherein each tapered hole is wider where it communicates with the working surface of said plate and narrower where it communicates with the extruding surface of said plate, said plate adapted to receive and hold a pre-rolled cone into each tapered hole;

a base attached to said plate wherein said base is adapted for holding said plate sufficiently spaced from the catcher to allow each pre-rolled cone received by each tapered hole to be suspended sufficiently spaced from the catcher to allow for extruding of a finished cigarette past said extruding surface and onto a catcher;

a packing and crimping device comprising a handle having at least one crimping rod attached to the handle and adapted to fill, pack, and crimp each pre-rolled cone within each tapered hole; and

a closing and extruding device comprising a handle having at least one tamping and ejecting rod, wherein each tamping and ejecting rod is thicker than each crimping rod, and adapted to close each pre-rolled cone and extrude each finished cigarette from within the corresponding tapered hole past the extruding surface and onto the catcher.

2. The apparatus of claim **1**, wherein said plate is of a thickness adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 50 mm through and including 420 mm and wherein each of the at least one tapered hole defined in said plate is adapted to correspond to the taper of a pre-rolled cone of sizes between and including 50 mm through and including 420 mm such that when said packing and crimping device packs each pre-rolled cone with filling material, such as marijuana, each pre-rolled cone is pushed further into the tapered hole, such that the tapered hole begins to crimp an upper edge of each pre-rolled cone, and such that when said closing and extruding device closes each pre-rolled cone, each pre-rolled cone is simultaneously pushed further into the tapered hole until each finished cigarette extrudes past the extruding surface and onto the catcher.

3. The apparatus of claim **2**, wherein the at least one tapered hole comprises a plurality of tapered holes arranged in a pattern; wherein the at least one crimping rod of said packing and crimping device comprises a plurality of crimping rods, each having a narrow flat tip, arranged in a corresponding pattern wherein the plurality of crimping rods are adapted to be brought into alignment with the plurality of tapered holes; and wherein the at least one tamping and ejecting rod of said closing and extruding device comprises a plurality of tamping and ejecting rods, each having a concaved tip, arranged in a corresponding pattern wherein the plurality of tamping and ejecting rods are adapted to be brought into alignment with the plurality of tapered holes.

4. The apparatus of claim **2**, wherein said plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 98 mm through and including 109 mm, wherein said plate is at least 2 inches thick, wherein the tapered hole is at least 12.5 mm in diameter where it communicates with the working surface of said plate and at least 9.85 mm in diameter where it communicates with the extruding surface of said plate, wherein the crimping rod of said packing and crimping device is at least 0.25 inches in diameter and at least 2.375 inches in length, and wherein the tamping and ejecting rod of said closing and extruding device is at least 0.3125 inches in diameter and at least 3 inches in length.

5. The apparatus of claim **2**, wherein said plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 70 mm through and including 84 mm, wherein said plate is at least 1.875 inches thick, wherein the tapered hole is at least 10.75 mm in diameter where it communicates with the working surface of said plate and at least 7.85 mm in diameter where it communicates with the extruding surface of said plate, wherein the crimping rod of said packing and crimping device is at least 0.25 inches in diameter and at least 2.375 inches in length, and wherein the tamping and ejecting rod of said closing and extruding device is at least 0.25 inches in diameter and at least 2.875 inches in length.

6. A pre-rolled cone filling, packing, finishing, and extruding apparatus, adapted for making and extruding cigarettes, such as marijuana cigarettes, onto a catcher, comprising:

a plate comprising a working surface, an extruding surface parallel to the working surface, and a rim portion, wherein said plate defines at least one tapered hole communicating with the working surface and the extruding surface, wherein each tapered hole is wider where it communicates with the working surface of said plate and narrower where it communicates with the extruding surface of said plate, said plate adapted to receive and hold a pre-rolled cone into each tapered hole;

a base attached to said plate and adapted for holding said plate sufficiently spaced from the catcher to allow each pre-rolled cone adapted to be held and received by each corresponding tapered hole to be suspended relative to the catcher to allow for extruding of a finished cigarette onto the catcher; and

a combination packing, crimping, closing, and extruding device comprising a handle having at least one crimping rod, each crimping rod adapted to fill and crimp a pre-rolled cone retained within a corresponding tapered hole, the handle also having a tamping and ejecting rod corresponding to each crimping rod, each tamping and ejecting rod also extending from the handle, each tamping and ejecting rod having an outside diameter that is larger than each corresponding crimping rod diameter for tamping and ejecting and each crimping rod is adapted to reside partially within a corresponding tamping and ejecting rod, wherein each tamping and ejecting rod close said pre-rolled cone from within each corresponding tapered hole to form a finished cigarette and extrude the finished cigarette from within each corresponding tapered hole and the extruding surface.

7. The apparatus of claim **6**, wherein said plate is of thickness adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 50 mm through and including 420 mm and wherein each of the at least one tapered hole defined in said plate is adapted to correspond to the taper of a pre-rolled cone of sizes between and including 50 mm through and including 420 mm such that when said combination packing, crimping, closing, and extruding device packs each pre-rolled cone with filling material, such as marijuana, each pre-rolled cone is pushed further into said plate which crimps an upper edge of each pre-rolled cone and such that when said combination packing, crimping, closing, and extruding device closes each pre-rolled cone each pre-rolled cone is simultaneously pushed further into its corresponding tapered hole, the apparatus being adapted for transforming the pre-rolled cone and filling material into a cigarette until each finished cigarette extrudes past the extruding surface and onto the catcher.

8. The apparatus of claim **7**, wherein the at least one tapered hole comprises a plurality of tapered holes, wherein the at least one crimping rod of said combination packing, crimping, closing, and extruding device comprises a plurality of crimping rods, each having a narrow flat tip, that are adapted to align with the plurality of tapered holes; and wherein the at least one tamping and ejecting rod of said combination packing, crimping, closing, and extruding

device comprises a plurality of tamping and ejecting rods, each having a concaved tip, that are adapted to align with the plurality of tapered holes.

9. The apparatus of claim **7**, wherein said plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 98 mm through and including 109 mm, wherein said plate is at least 2 inches thick, wherein the tapered hole is at least 12.5 mm in diameter where it communicates with the working surface of said plate and at least 9.85 mm in diameter where it communicates with the extruding surface of said plate, wherein the crimping rod of said packing and crimping device is at least 0.25 inches in diameter and at least 2.375 inches in length, and wherein the closing and extruding rod of said closing and extruding device is at least 0.3125 inches in diameter and at least 3 inches in length.

10. The apparatus of claim **7**, wherein said plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 70 mm through and including 84 mm, wherein said plate is at least 1.875 inches thick, wherein the tapered hole is at least 10.75 mm in diameter where it communicates with the working surface of said plate and at least 7.85 mm in diameter where it communicates with the extruding surface of said plate, wherein the crimping rod of said packing and crimping device is at least 0.25 inches in diameter and at least 2.375 inches in length, and wherein the tamping and ejecting rod of said closing and extruding device is at least 0.25 inches in diameter and at least 2.875 inches in length.

11. A pre-rolled cone filling, packing, finishing, and extruding apparatus, adapted for making and extruding cigarettes, such as marijuana cigarettes, onto a catcher, comprising:

a plate comprising a working surface, an extruding surface parallel to the working surface, and a rim portion, wherein said plate defines at least one tapered hole communicating with the working surface and the extruding surface, wherein each tapered hole is wider where it communicates with the working surface of said plate and narrower where it communicates with the extruding surface of said plate, said plate adapted to receive and hold a pre-rolled cone into each tapered hole;

a base attached to said plate and adapted for holding said plate sufficiently spaced from the catcher to allow each pre-rolled cone adapted to be held and received by each corresponding tapered hole to be suspended relative to the catcher to allow for extruding of a finished cigarette onto the catcher; and

a three-pronged packing, crimping, closing, and extruding device comprising a handle having a first prong, a second prong, and a third prong extending from the handle; wherein the first prong is comprised of at least one crimping rod, each crimping rod adapted to fill and crimp a pre-rolled cone retained within a corresponding tapered hole; wherein the second prong is comprised of at least one tamping rod, each tamping rod adapted to close each pre-rolled cone in each corresponding tapered hole; and wherein the third prong is comprised of at least one ejecting rod, each ejecting rod adapted to extrude a finished cigarette past the extruding surface from within each corresponding tapered hole.

12. The apparatus of claim **11**, wherein the plate is of thickness adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 50 mm through and including 420 mm and wherein each of the at least one tapered hole defined in said plate is adapted to correspond to the taper of a pre-rolled cone of sizes between and including 50 mm through and including 420 mm such that when said three-pronged packing, crimping, closing, and extruding device packs each pre-rolled cone with filling material, such as marijuana, each pre-rolled cone is pushed further into the tapered hole, such that the tapered hole begins to crimp an upper edge of each pre-rolled cone, and such that when said three-pronged packing, crimping, closing, and extruding device closes each pre-rolled cone, each pre-rolled cone is simultaneously pushed further into the tapered hole until each finished cigarette extrudes past the extruding surface and onto the catcher.

13. The apparatus of claim **12**, wherein the at least one tapered hole comprises a plurality of tapered holes; wherein the at least one crimping rod of the first prong of said three-pronged packing, crimping, closing, and extruding device comprises a plurality of crimping rods, each having a narrow flat tip, adapted to align with the plurality of tapered holes; wherein the at least one tamping rod of the second prong of said three-pronged packing, crimping, closing, and extruding device comprises a plurality of tamping rods, each having a concaved tip and a diameter larger than a diameter of each of the crimping rod, adapted to align with the plurality of tapered holes; and wherein the at least one ejecting rod of said the third prong of said three-pronged packing, crimping, closing, and extruding device comprises a plurality of ejecting rods, each having a flat tip and a smaller diameter smaller and a longer length than each of the tamping rod, that are adapted to align with the plurality of tapered holes.

14. The apparatus of claim **12**, wherein the at least one tapered hole comprises a plurality of tapered holes oriented in a pattern of rows; wherein the at least one crimping rod of the first prong of said three-pronged packing, crimping, closing, and extruding device comprises a plurality of crimping rods that align with a plurality of tapered holes in at least one row; wherein the at least one tamping rod of the second prong of said three-pronged packing, crimping, closing, and extruding device comprises a plurality of tamping rods that align with a plurality of tapered holes in at least one row; and wherein the at least one ejecting rod of the third prong of said three-pronged packing, crimping, closing, and extruding device comprises a plurality of ejecting rods that align with a plurality of tapered holes in at least one row.

15. The apparatus of claim **12**, wherein said plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 98 mm through and including 109 mm, wherein said plate is at least 2 inches thick, wherein the tapered hole is at least 12.5 mm in diameter where it communicates with the working surface of said plate and at least 9.85 mm in diameter where it communicates with the extruding surface of said plate, wherein the crimping rod of the first prong of said three-pronged packing, crimping, closing, and extruding device is at least 0.25 inches in diameter and at least 2.375 inches in length, wherein the tamping rod of the second prong of said three-pronged packing, crimping, closing, and extruding device is at least 0.375 inches in diameter and at least 2.5 inches in length, and wherein the ejecting rod of the third

prong of said three-pronged packing, crimping, closing, and extruding device is at least 0.3125 inches in diameter and at least 3 inches in length.

16. The apparatus of claim **12**, wherein said plate is adapted to handle filling and crimping of any pre-rolled paper cone of sizes between and including 70 mm through and including 84 mm, wherein said plate is at least 1.875 inches thick, wherein the tapered hole is at least 10.75 mm in diameter where it communicates with the working surface of said plate and 7.85 mm in diameter where it communicates with the extruding surface of said plate, wherein the crimping rod of the first prong of said three-pronged packing, crimping, closing, and extruding device is at least 0.25 inches in diameter and at least 2.375 inches in length, wherein the tamping rod of the second prong of said three-pronged packing, crimping, closing, and extruding device is at least 0.3125 inches in diameter and at least 2.5 inches in length, and wherein the ejecting rod of the third prong of said three-pronged packing, crimping, closing, and extruding device is at least 0.25 inches in diameter and at least 2.875 inches in length.

17. The apparatus of claim **12**, wherein said plate is comprised of high-density polyethylene (HDPE), the handle of said three-pronged packing, crimping, closing, and extruding device is HDPE, and the first, second, and third prongs of said three-pronged packing, crimping, closing, and extruding device are comprised of polyoxymethylene (POM).

18. The apparatus of claim **12**, wherein the handle of said three-pronged packing, crimping, closing, and extruding device is comprised of an elongated pole with a first holdable surface at one end of the pole, a second holdable surface on the opposite end of the pole, the first and second holdable surfaces extending beyond the length of a longest side of said plate, and a middle portion between the first holdable surface and the second holdable surface, wherein the first, second, and third prongs extend from the middle portion of the pole at 120 degrees apart from one another around the circumference of a transverse cross-section middle portion of the pole.

19. The apparatus of claim **11**, wherein said base comprises a plurality of legs.

20. A pre-rolled cone finishing and extruding method for packing, finishing, and extruding cigarettes, such as marijuana cigarettes, onto a catcher, comprising:

Step A: obtaining a pre-rolled cone filling, packing, finishing, and extruding apparatus with a plate comprising a working surface, an extruding surface, and a rim portion, and the plate defining a plurality of tapered holes communicating with the working surface and the extruding surface, wherein the plurality of tapered holes are wider where each tapered hole communicates with the working surface of the plate and narrower where each tapered hole communicates with the extruding surface of the plate, the plate adapted to receive and hold a plurality of pre-rolled cones into the plurality of tapered holes, a base attached to the plate, wherein the base is sufficiently spaced from the catcher to allow the plurality of pre-rolled cones received by the plurality of tapered holes to be suspended at least sufficiently spaced from the catcher to allow for extruding of the plurality of finished cigarettes from the plurality of tapered holes past the extruding surface and onto the catcher, a three-pronged packing, crimping, closing, and extruding device having a handle having a first prong, a second prong, and a third prong extending from the handle, the first prong having a plurality of crimping rods each having a narrow flat tip, adapted to fill and crimp the plurality of pre-rolled cones within the plurality of tapered holes, the second prong having a plurality of tamping rods each with one of a flat and a concaved tip, each tamping rod having a diameter that is larger than each crimping rod, adapted to close the corresponding plurality of pre-rolled cones within the plurality of tapered holes, and the third prong having a plurality of ejecting rods each with a flat tip, each ejecting rod smaller in diameter and longer in length than each tamping rod, adapted to extrude a plurality of finished cigarettes from within the plurality of tapered holes;

Step B: placing a plurality of pre-rolled cones into the plurality of tapered holes in the plate;

Step C: pouring the filling material, such as marijuana, for the plurality of pre-rolled cones onto the working surface of the plate such that the filling material is contained within the working surface by the rim portion of the plate;

Step D: shaking and tilting the plate to guide the filling material into the plurality of pre-rolled cones in the plurality of tapered holes;

Step E: repeating steps B through D until the plurality of pre-rolled cones are filled;

Step F: inserting each of the plurality of crimping rods of the three-pronged packing, crimping, closing, and extruding device into each of the corresponding plurality of tapered holes with the plurality of pre-rolled cones and moving the plurality of crimping rods of the three-pronged packing, crimping, closing, and extruding device around in a gentle up and down circular pattern repeatedly within the plurality of tapered holes (but in the center of each hole at first away from the pre-rolled paper cone edges) to pack the marijuana into the plurality of pre-rolled cones;

Step G: continuing the up and down circular pattern closer to the pre-rolled paper cone edges, causing the upper edge of each of the plurality of pre-rolled cones to crimp inward as the pressure from each of the plurality of crimping rods begins, with more pressure applied to push each of the plurality of pre-rolled cones slightly further into each of the corresponding plurality of tapered holes to bring the upper edge of each the plurality of pre-rolled cones inwardly and such that the stickiness of the marijuana also pulls the upper edges of the plurality of pre-rolled cones inwardly;

Step H: removing the plurality of crimping rods and inserting the plurality of tamping rods of the three-pronged packing, crimping, closing, and extruding device, and pushing the crimped end of each pre-rolled cone to fold to close off the pre-rolled cone; and

Step I: removing the plurality of tamping rods and inserting the plurality of ejecting rods of the three-pronged packing, crimping, closing, and extruding device and exerting pressure onto the closing and extruding device to extrude the plurality of finished cigarettes out of the plurality of tapered holes past the extruding surface and onto the catcher.

* * * * *