

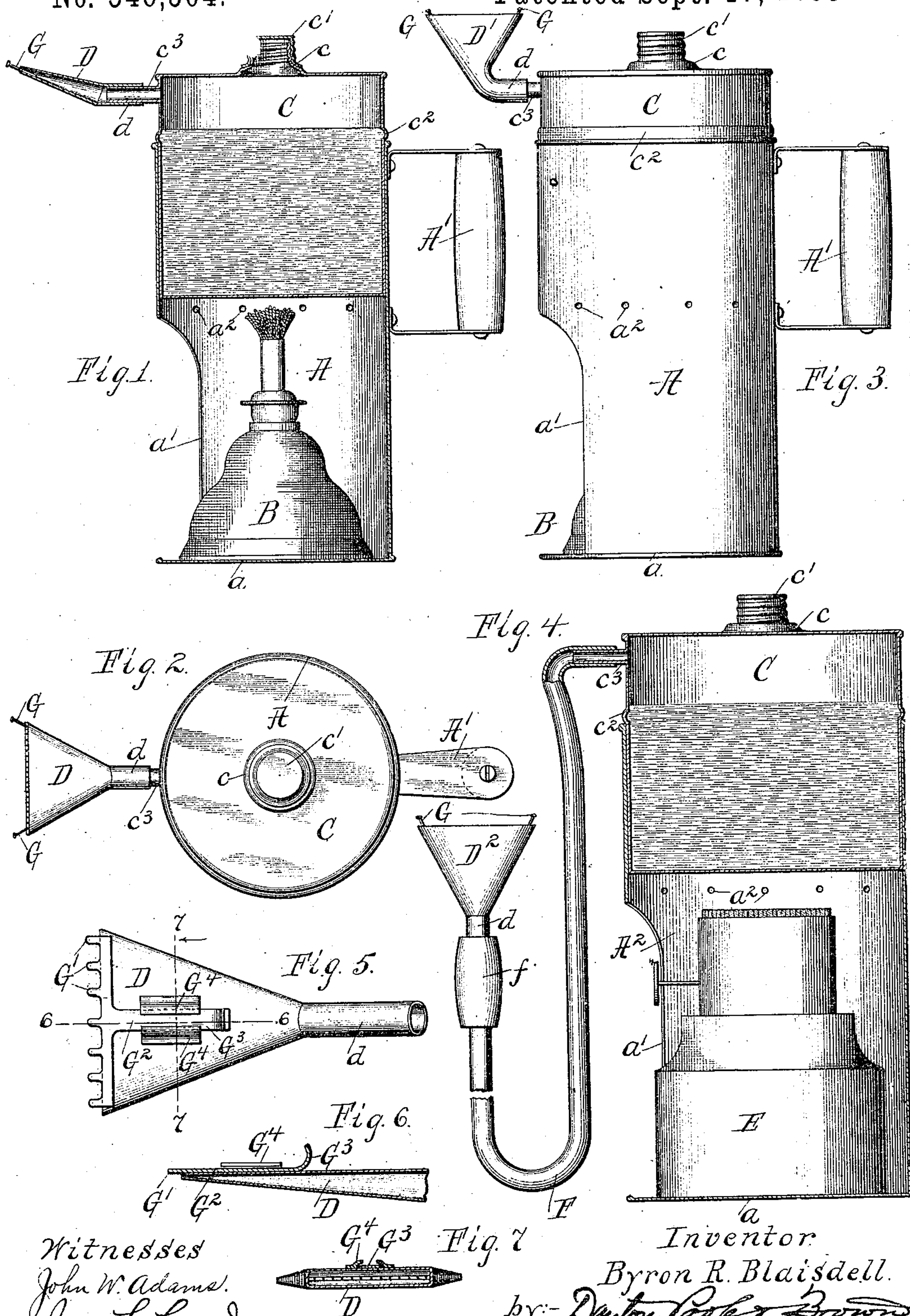
(No Model.)

B. R. BLAISDELL.

MOISTENER OR SOFTENER FOR WALL PAPER, PAINTS, &c.

No. 546,504.

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Witnesses
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UNITED STATES PATENT OFFICE:

BYRON R. BLAISDELL, OF PLANO, ILLINOIS.

MOISTENER OR SOFTENER FOR WALL-PAPER, PAINTS, &c.

SPECIFICATION forming part of Letters Patent No. 546,504, dated September 17, 1895.

Application filed November 4, 1892. Serial No. 450,991. (No model.)

To all whom it may concern:

Be it known that I, BYRON R. BLAISDELL, of Plano, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Moisteners or Softeners for Wall-Paper, Paints, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to appliances for moistening laid or hung wall-paper for the purpose of facilitating the removal or stripping of such paper from the walls, ceilings, &c., upon which it has been hung or laid.

My invention is also applicable to the softening of paints, varnishes, &c., in order to facilitate the scraping or removal of the same from the surfaces to which they have been applied, and to various other similar and analogous kinds of work.

The objects of my invention are to produce a portable and convenient apparatus for generating steam or other hot vapors and for spraying such vapors rapidly upon the paper, paint, &c.; so as to rapidly and effectively moisten or soften the same preparatory to the removal thereof; furthermore, to produce a hot-vapor sprayer which, in addition to the advantages above enumerated, shall be simple, compact, and durable in construction and capable of rapid manipulation without inconvenience to the user and which shall also be readily and freely portable.

To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a central transverse vertical section of a hot-vapor generator and sprayer embodying my invention, the apparatus being adapted for wall and similar vertical work. Fig. 2 is a plan view of the same. Fig. 3 is a side elevation of the same, the spraying-nozzle being slightly modified to conform to the requirements of ceiling and similar horizontal work. Fig. 4 is a view, partly in central trans-

verse vertical section and partly in side elevation, of a modified form of apparatus adapted for cornice, molding, and similar irregular or intricate work. Fig. 5 is an inverted plan view of a modified form of attachment for the spraying-nozzle. Fig. 6 is a longitudinal section of the same, taken on the line 6 6 of Fig. 5 and inverted. Fig. 7 is a cross-section of the same, taken on the line 7 7 of Fig. 5.

In the said drawings, Figs. 1 and 2, A designates an inclosing-casing for the heater and also for the liquid receptacle or holder, this casing being shown as of sheet metal and also as of cylindrical form, open at its upper end and having its lower end closed by a bottom *a*. At one side, near the upper end thereof, the casing A is shown as provided with a suitable handle A', and at its opposite side, near the lower end thereof, said casing is shown as provided with an opening *a'*.

The handle A' is for the purpose of permitting the generator to be moved over the papered or painted surface in proper manner, as required by the work, while the opening *a'* is primarily for admitting sufficient air within the casing to support combustion by the heater. Incidentally the opening *a'* is shown as of such form and size as will permit a suitable heater to be passed through the opening when the heater is being placed in or removed from the casing A. In this instance I have shown the heater as in the form of an alcohol-burning lamp B, of usual construction, which rests removably upon the bottom *a* of the casing A, and which is of such size as to be readily passed through the opening *a'* of the casing; but I desire it to be distinctly understood that my invention contemplates the use of any type of heat-generator which is adapted to be placed in and thus be carried by the casing A. Hence although I have shown a lamp B as resting upon the closed bottom *a* of the casing A it is to be understood that the bottom of the casing A may be left open and that a burner or heat-generator may be connected thereto by a lantern-coupling, or that various other ways of connecting the burner to the casing may be adopted without departing from the essential spirit of my invention. I have also shown a number of apertures *a''* as formed through the sides of the casing A, near the middle thereof, these

apertures serving as outlets for the smoke and gaseous products of combustion.

C designates a tank or receptacle for water or other liquid which is to be vaporized, this tank being shown, also, as of cylindrical form and as fitting closely but removably within the upper end of the casing A, so as to be directly over the burner or heat-generator. A rib c^2 is shown as formed in the sides of the tank or receptacle, so as to rest upon the upper edge of the casing A, and thus sustain the tank or receptacle C in proper position in the casing. The top of the tank or receptacle is also shown as provided with a filling-orifice c , closed normally by a removable cap c' , so that water or other liquid can be poured into the tank or receptacle. At one side the tank or receptacle C is also shown as provided with a tubular discharge c^3 , which is preferably located close to the top of the tank and which serves as an outlet for the hot vapors. To this tubular outlet is connected, preferably in a detachable manner, a spraying-nozzle D, which is preferably also of such shape as to impart a flat form to the escaping-jet of hot vapor. This nozzle may be either of sheet metal or of wood, or of any other suitable or preferred material, and said nozzle is also shown as of flattened triangular form, the base of such triangle being presented outwardly and at the apex of the triangle, there being a tubular extension d , which closely embraces the tubular outlet c^3 of the tank or reservoir C.

It will thus be seen that the tank or reservoir having been filled with water or other suitable liquid and the lamp or burner having been ignited for a sufficient time steam or hot vapor will be generated in the tank or reservoir, and that owing to the position of the tank or reservoir relative to the burner such steam or hot vapor can be generated in a very short time; also, that the steam or hot vapor flows through the outlet c^3 and into the nozzle D, from which it escapes in the form of a thin flat jet. If now the operator grasps the handle A' and moves the nozzle D upward and downward in close proximity to the paper on the wall, the steam will penetrate or permeate deeply into the paper, and when condensed therein will soak the paper, so that it can be readily stripped or scraped from the wall. It is obvious that the paper can thus be more quickly and thoroughly soaked or saturated than if water were applied as such directly to the paper, owing to the more rapid penetration of the steam. In fact I have found not only such to be the case, but also that a considerable number of layers of papers can be simultaneously, very rapidly, and thoroughly soaked or saturated by virtue of the great penetrative power of the steam. Thus one important advantage of my invention will be perceived, it being customary to repaper apartments several times without in each instance removing the old layer or layers of paper. Consequently, when it became

necessary to remove accumulated layers of the paper, much time and labor were required to thoroughly soak or saturate and remove all of the layers. The steam saturates several layers as quickly as water applied as such can saturate a single layer, and where but a single layer is to be saturated the advantage in rapidity of work is correspondingly great.

In Fig. 1 I have shown the nozzle D as extending obliquely upward and outward and also flatwise from side to side of the casing, so that the entire apparatus can be moved upward and downward for the most effective application of the jet.

In Fig. 3 precisely the same apparatus is shown as illustrated in Figs. 1 and 2, and like parts in these three figures are designated by like letters of reference. In Fig. 3, however, the nozzle D' is shown as extending vertically upward instead of obliquely upward and outward, as in Figs. 1 and 2, and in this instance also the nozzle is shown as extending flatwise at right angles to its position in Figs. 1 and 2. The upward extension of the nozzle adapts the apparatus for work upon ceilings or in other horizontal overhead situations. The difference in the direction of the nozzle flatwise is not very important, involving only sidewise instead of backward and forward movements of the apparatus.

In Fig. 4 I have shown a modified form of construction, which adapts the apparatus to be used upon cornices, moldings, and other irregular surfaces or in concealed or restricted situations which would preclude access with the entire apparatus. In this instance the casing A² is shown as of practically the same form as the casing A, before described, the handle A' being, however, omitted in this instance. An oil-stove E is shown as here used for supplying heat; but as a more important modification a flexible tube or pipe F is shown as connecting the nozzle D² with the tubular outlet c^3 of the tank or reservoir C. This tube or pipe is shown as embracing at one of its ends, the outlet c^3 and as embracing at its other end the tubular nozzle extension d . This tube or pipe may be of any desired length of any suitable or preferred material, and its outer end may be provided with a hollow handle f , of wood or other material which is a poor conductor of heat, so as to avoid all inconvenience to the workman in moving the nozzle from point to point. Thus it will be seen that the casing may be set near to the surface to be operated upon—as, for example, upon a step-ladder—and that the nozzle D² can be passed in all directions freely over all irregularities of such surfaces without any hinderance by the casing.

In order that the surface of the wall may be evenly and rapidly treated with the steam or hot vapor, I have provided the nozzles with attachments or guides, by which they may be moved in direct contact with the surfaces to be treated, thereby holding the mouth of the

nozzle parallel with the wall, and at the same time preventing any possibility of clogging the vent of the nozzle, and thereby preventing also all liability of the steam or hot vapor being deflected backward into the workman's face. In Figs. 1, 2, 3, and 4 these attachments are shown as in the form of pins or projections G, which enter the slits or vents of the nozzles and which are longitudinally movable therein, so as to be protruded more or less therefrom, and which also have sufficient frictional engagement with the edges of the slits to retain their positions. Thus it will be seen that in using the apparatus as above described the outer ends of the pins G may be moved in direct contact with the surface being operated upon without injury to the latter and without any possibility of completely or partially closing the nozzle-vent, and also without danger of bringing the vent so close to the surface as to cast the steam or hot vapor in the workman's face. In Figs. 5, 6, and 7 I have shown attachments which serve this same purpose, but which avoid all possibility of inconvenience or injury to the workman's hands, such as might result when adjusting the pins G while steam or hot vapor is escaping from the nozzle. In this instance a number of projections G' are shown as carried at the outer end of the slide G², this slide having a rearward extension G³, terminating at its rear end in a finger-piece and working stiffly between two guides G⁴ on the outer side of the nozzle. Thus by grasping the finger-piece the slide may be moved, so as to extend the projections G' more or less beyond the vent of the nozzle, and such operation necessitates no exposure of the operator's hands to contact with the steam or hot vapor issuing from the nozzle.

It will be observed that I have spoken both of "steam" and of "hot vapor" as being generated in the tank C and as issuing from the nozzle, and I will explain the significance of these expressions. The apparatus is equally useful for removing paints, varnishes, and similar oily pigments as for removing wall-paper. When wall-paper is to be moistened, steam alone will suffice, but when paint, varnish, or other similar substances are to be softened preparatory to removal other substances are to be used in lieu of or in addition to water. Thus a proper proportion of ammonia may be mixed with the water, or vari-

ous other substances, well known to those skilled in this class of work, may be used in the form of hot vapors. All possibility of injury of the material, such as is produced by the usual paint-scorchers, is thus avoided.

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

1. An apparatus for moistening or softening substances, comprising a suitable casing, a heat-generator located in the lower part of the casing, and a tank or receptacle located in the casing, directly over the heat-generator, said tank being provided with a flat discharging nozzle having a plurality of projections extending beyond the discharge orifice, substantially as set forth.

2. An apparatus for moistening or softening substances, comprising a suitable casing, a heat-generator removably located in said casing, and a tank or receptacle located removably in the upper part of the receptacle directly over the heat-generator, and provided with a flat discharging spray nozzle having a plurality of guides extending beyond the discharge orifice, substantially as set forth.

3. An apparatus for moistening or softening substances, comprising a casing, a tank or receptacle carried thereby, a heat-generator also carried by said casing, and a flat spraying discharge-nozzle provided with guide projections at each end of the orifice flexibly connected to said tank or receptacle, substantially as set forth.

4. An apparatus for moistening or softening substances, comprising a steam generator and a discharge-nozzle provided with adjustable guide comprising a series of connected projections placed adjacent to the vent of the nozzle, substantially as set forth.

5. An apparatus for moistening or softening substances, comprising a steam generator and a discharge-nozzle carrying a movable slide having projections placed adjacent to the vent of the nozzle, substantially as set forth.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

BYRON R. BLAISDELL

Witnesses:

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M. GRAHAM.