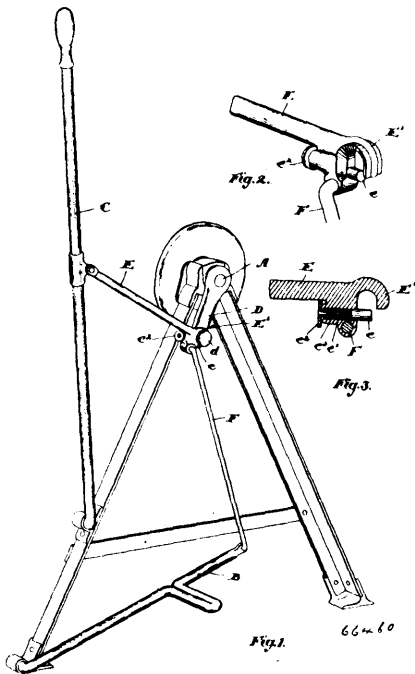


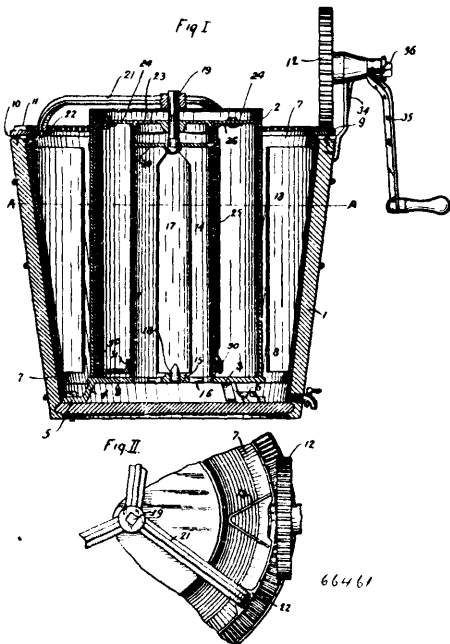
and means for withdrawing the plunger, as and for the purpose specified. 4th. The combination with the trunnions and crank and



the driving means, of a detachable spring held connection between the driving means and the crank, as and for the purpose specified.

#### No. 66,461. Ice Cream Freezer.

(Réfrigérant pour crème à la glace.)



Lafayette D. Railsback, Indianapolis, Indiana, and Mamie L. Ifft, Washington, Columbia U.S.A., 2nd March, 1900; 6 years. (Filed 2nd January, 1900.)

*Claim.*—1st. An ice cream freezer including an outer ice receptacle, a hollow annular cream can mounted within said receptacle above its bottom to leave an ice receptacle below said cream can, and an inner ice receptacle formed by the hollow of the cream can and

having no bottom, whereby the space about, beneath and within the hollow of the cream can forms practically a single ice chamber, and means for forcing the ice from the outer to the inner receptacle. 2nd. An ice cream freezer including a stationary cream can, a revoluble plate or support at the upper end of the cream can, a loosely mounted band at the lower end of the cream can provided with a socket an arm secured to the plate or support above and extending down and detachably entering the socket in said band, and a scraper or worker secured to such arm. 3rd. An ice cream freezer including a stationary cream can, an ice chamber within the cream can, a rotatable plate or support at the upper end of the cream can, radially adjustable arms extending downward from each end of said plate or support, a band provided with sockets detachably engaged by said arms, a scraper on each of said arms, said arms being so located that the scraper on one arm will engage the outer wall of the cream can, and the other will engage the inner wall thereof. 4th. An ice cream freezer including a stationary hollow cream can, ice chambers surrounding and within the hollow of the cream can, a rotatable plate or support at the upper end of the cream can, a band loosely surrounding the inner wall of the cream can having sockets in it, a pair of arms secured to the plate or support and extending down into said sockets and detachable therefrom, a scraper secured to said arms, one arm being attached to the plate or support at such point as to cause its scraper to engage the outer wall of the cream can, and the other arm being so located as to cause its scraper to engage the inner wall of the cream can. 5th. An ice cream freezer including a suitable vessel, a stationary hollow cream can centrally secured therein, a lining for said vessel that is movable and has a toothed outwardly extending annular flange that rests upon the upper edge of said vessel, a bracket secured to the side of said vessel, a gear carried in said bracket that meshes with and drives the rack on said lining, a frame extending across the upper end of the freezer secured to said lining, means within the ice chamber within the cream can for agitating the ice therein, a plate or support at the upper end of the cream can for carrying suitable scrapers and workers, means for detachably connecting said frame, the plate or support for the scrapers and workers and the means for agitating the ice in the central ice chamber so that they will all rotate together.

#### No. 66,462. Nitro Explosive. (Nitro-explosif.)

James Findlay Torrence Sargent, assignee of Ansel Moffatt, both of Indianapolis, Indiana. U.S.A., 2nd March, 1900; 6 years. (Filed 26th June, 1899.)

*Claim.*—1st. The process producing nitrate starch which consists in eliminating the moisture from the starch and subjecting it to a nitrating bath at a temperature below the point where the heat caused by the reaction will rupture the starch granules, whereby the product consists of granules of the same physical form as the original starch granules, and its stability thereby insured, substantially as set forth. 2nd. The process of producing nitrate of starch which consists in removing the moisture from the starch by dry heat, reducing its temperature to below the point where its granules will rupture in the nitrating bath, mixing said starch into said nitrating bath made and maintained during the operation at a temperature below said point, and then purifying and drying the same, whereby the product consists of unruptured granules and its stability thus insured, substantially as set forth. 3rd. The process of making a stable nitrate of starch consisting in removing the moisture from the starch, then cooling the starch, and then treating said dried and cooled starch in a nitrating bath at such temperature where rupture of the starch granule will not occur during nitration, substantially as set forth. 4th. The process of producing nitrate of starch consisting in submitting dried starch to the action of a nitrating bath or below 4° Centigrade, diluting the mixture with water sufficient to lower its specific gravity to below 1.30, washing, neutralizing and drying the product, substantially as set forth. 5th. The process of producing nitrate of starch consisting in drying the starch until practically free from moisture, cooling the same in closed vessels, mixing the same into a nitrating bath of a temperature maintained during the operation below 4° Centigrade, allowing the starch to macerate, then diluting the bath to not over 1.30 specific gravity, then washing, neutralizing and drying the nitro starch product, substantially as set forth. 6th. The process of producing nitrate of starch consisting in drying the starch until free from moisture as nearly as may be, placing the dried starch while hot in closed vessels, reducing its temperature in said vessels to below 4° Centigrade, preparing a bath of nitric and sulphuric acids, reducing its temperature to below 4° Centigrade, mixing said dried starch into said bath while maintaining its temperature below 4° Centigrade, permitting the starch to thoroughly macerate, diluting the mixture into ice or water in a refrigerating apparatus so that the heat caused by the reaction between the acid and water shall not cause the temperature to rise above 4° Centigrade, and proportioning the water or ice so that the diluted acids shall not exceed 1.30 in specific gravity, removing the diluted acids by subsidence of the nitro starch and decantation of the acids, washing the greater portion of the acids from the nitro starch, then boiling the nitro starch with an alkalinized lye sufficient to maintain a distinct alkaline reaction, until soluble matters are dissolved, washing the nitro starch with water until soluble matter is practically eliminated, and finally drying into the finished product, substantially as set forth.