May 3, 1949. E. A. EKSTROM 2,468,965

ELECTRICALLY HEATED GILDING TOOL

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Fig. 1.

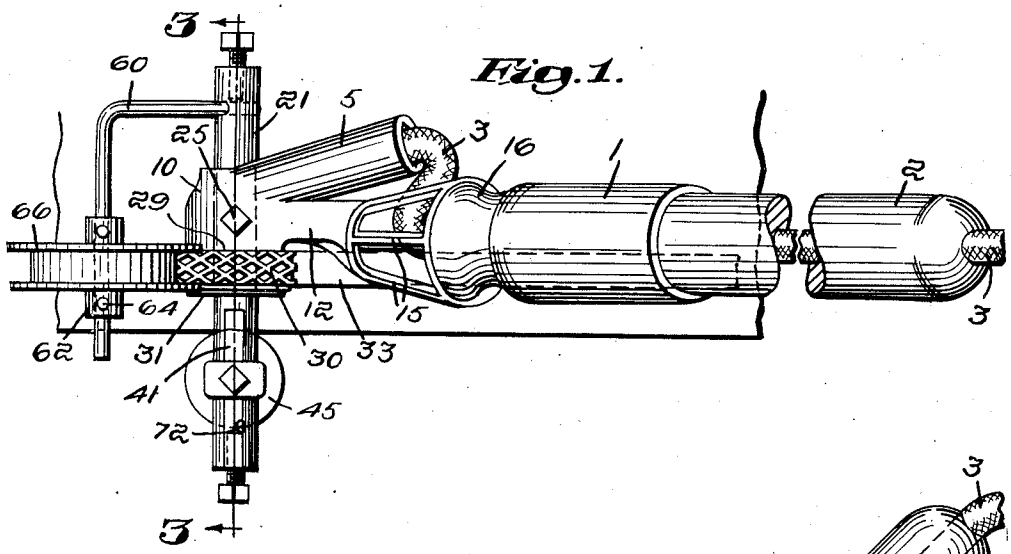
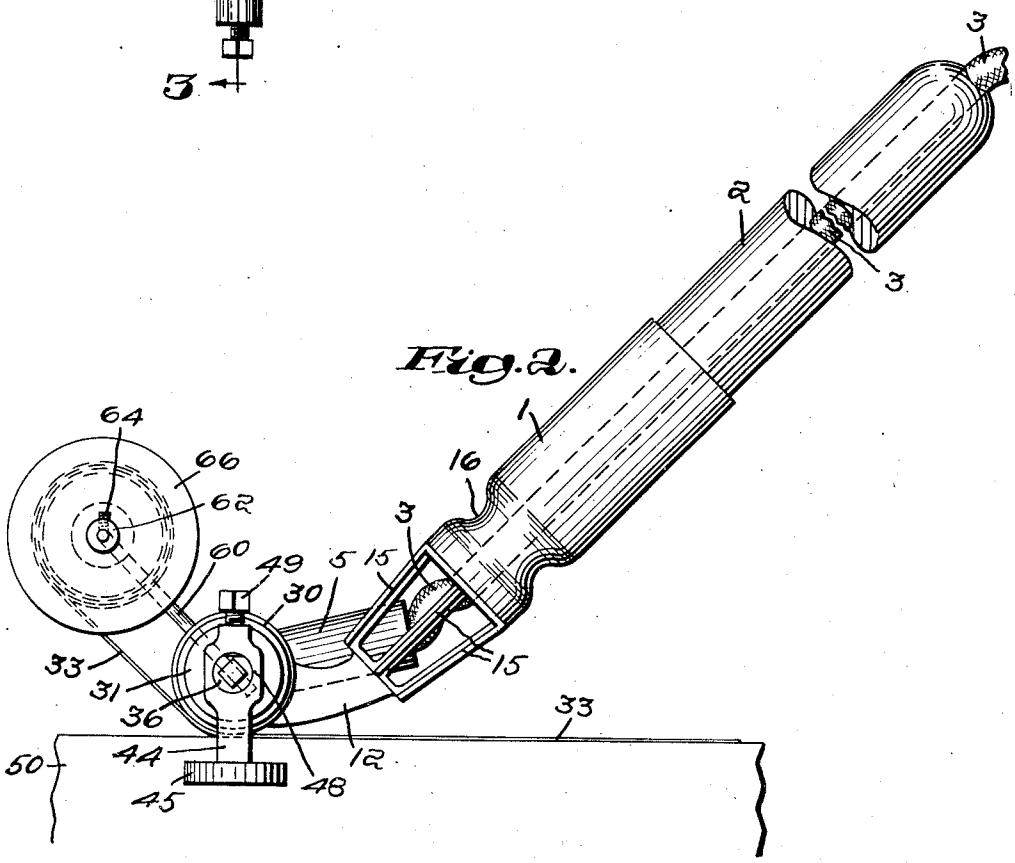


Fig. 2.



Inventor:
Earl A. Ekstrom
By James R. Hodder
Attorney

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Fig. 3.

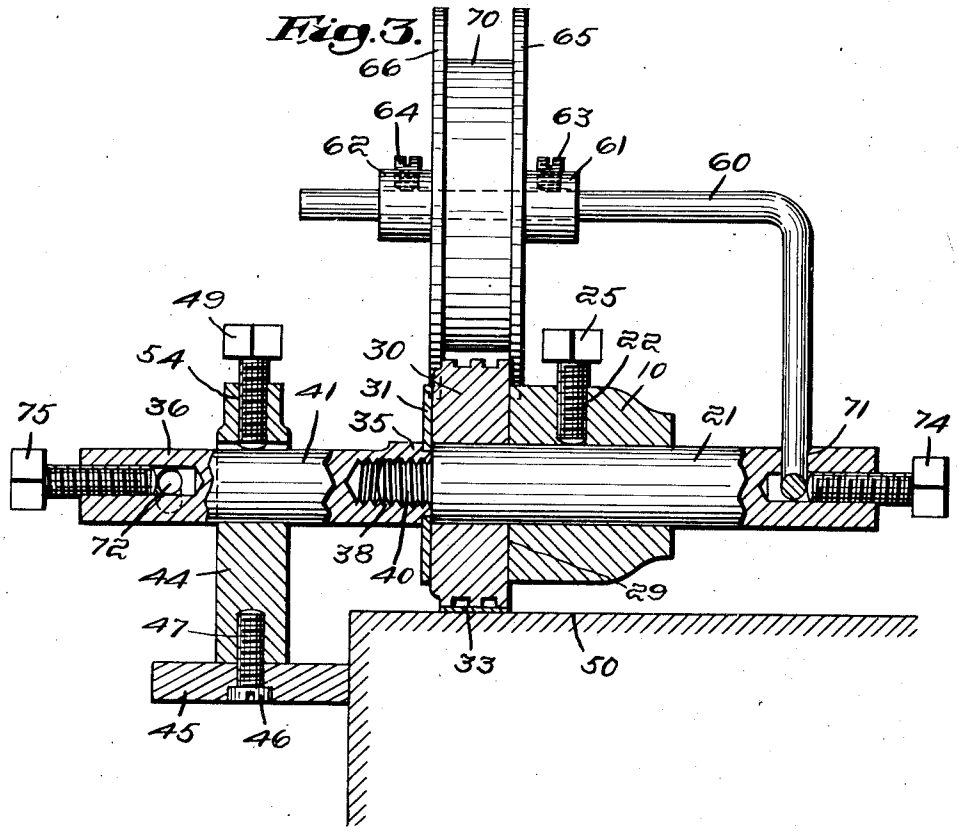
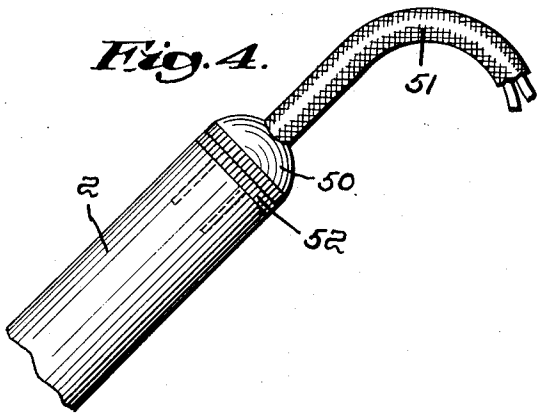


Fig. 4.



Inventor:
Earl A. Ekstrom
By James R. Hodder
Attorney

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ELECTRICALLY HEATED GILDING TOOL

Earl A. Ekstrom, Saugus, Mass., assignor to Fort Hill Engraving Company, Boston, Mass., a corporation of Massachusetts

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1 Claim. (Cl. 41—7)

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My present invention is a novel and improved hand-operated electrically heated gilding tool for use in applying designs on the desired types of articles, and to employ gold, silver, or other sized colored transfer material.

An important object of my present invention is to improve and perfect such manually-operated gilding tools and to provide an efficient and convenient electrically heated unit in combination therewith which will impart heat to the gilding tool and also protect the hand-holding portion of the device from damage or injury to the operator.

Heretofore it has been customary to form such gilding tools, which included a handle of considerable length to supply the necessary leverage in moving an engraved roller over sized metallic leafs or strips, to transfer the same to the article being ornamented. Originally such engraved rolls were heated by a gas flame, although efforts to heat such a roll by gas attachment have been made; but all these prior devices have proven to be unsatisfactory.

My present device includes a removable electrical heating unit and comprises a novel and improved construction, permitting an interchangeability of gilding rolls for any size of roll, all to be applied to the same handle, together with adjustable and automatic leaf-dispensing devices, in combination with an adjustable edge guide to locate more accurately the positioning of the gilding roll on the work, and in combination with heat-diffusing means to permit an efficient application of heat directly to the gilding roll but freeing the hand-holding portion of the handle from an objectionable or injurious transfer of heat thereto.

In carrying out my invention, I provide a hollow handle member which would include a metallic ferrule or end for the lower hand-hold, which is, in turn, connected to a handle of considerable length to give leverage from the shoulder of the operator to the hand-holding portion adjacent the gilding roll. Both the handle and ferrule are so formed as to permit heat-conducting wires to pass therethru, thus being out of the way of the operator, and said wires are led to a removable electrical heating unit housed or fitted closely adjacent to the gilding roll for efficient heat transfer.

Novel and improved devices are provided to quickly and readily change gilding rolls of varying widths or dimensions, to adjust and readily adapt an automatic leaf-dispensing element carrying the sized strip in alignment and cooperating with the gilding roll, together with an adjustable edge guide, and all in compact, efficient, and strong construction.

Referring to the drawings illustrating a preferred embodiment of my present invention:

Fig. 1 is a plan view;

Fig. 2 is a side elevational view;

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Fig. 3 is an end view partly in cross-section on an enlarged scale looking from the left of Figs. 1 and 2; and

Fig. 4 is a fragmentary view of a detachable plug for wire and handle connection.

As shown in the drawings, a hollow metallic ferrule 1 is provided, to which is fitted a wooden handle 2 bored lengthwise to contain therein electric conducting wires 3 which extend thru the handle and ferrule to a removable heating unit fitted within a hollow extension 5, formed on a hub 10 as shown in Figs. 1 and 2. Also formed on the hub 10 is a shank 12, and integral therewith is an open-work spider 15 connecting the shank with the ferrule 1. Preferably I form the ferrule 1, spider 15, shank 12, and stem 5 as a single casting and at an appropriate angle so that the handle and ferrule will afford a convenient position as a lever between the shoulder and the operator and the hand-holding portion of the device adjacent the gilding roll during the operation. The metallic parts are all in heat-receiving position to the electric heating unit within the stem 5, and thus the openwork spider 15 is important in diffusing heat between the heating unit and associated parts and the hand-holding portion of the ferrule 1, thus protecting the hand-holding portion from becoming objectionably hot to the detriment or injury of the operator.

Preferably, also, I form an annular depression 16 at the lower end of the hand-holding ferrule 1 to afford a convenient grip for the operator. The hub 10 has a bored opening at right angles to the handle part of the device, thru which a shaft 21 is fitted, said shaft being adjustably held in said bore by a set screw 25 threaded thru an appropriate tapped opening 22 in the top of the hub 10, see Fig. 3.

On this shaft 21 is fitted a gilding tool 30 adapted to roll freely upon said shaft between the adjacent face 29 of the hub 10 and a washer 31. Any selective gilding tool desired, of varying width and diameter, may be fitted to roll on the shaft 21 for transferring the desired design from the gilding tool thru the sized or metallic transfer strip 33 onto the work. Relative adjustment of the hub 10 and shaft 21 provide for quick and ready fitting of the gilding roll in position, and said roll being in contact with the area of the face 29 in heat-receiving relation to the electrical heating unit in the extension 5 serves to heat the gilding roll.

In order to hold the washer 31 in position, any suitable means may be effective but, as herein shown, I prefer to retain the washer 31 by fitting the same over the shouldered end 35 of a supplemental shaft 36, which shaft has one end recessed and tapped, as shown at 38, to be threaded over a correspondingly threaded stem 40 cut on the adjacent end portion of the shaft 21, as clearly shown in Fig. 3. This supplemental shaft 36

has its upper surface slightly flattened, as indicated at 41, and a depending bracket 44 is fitted thereover, carrying at its lower end a freely rotating roll 45 rotatably secured to the depending end of the bracket 44 by a headed set screw 49 threaded into a correspondingly tapped recess 47 in the end portion of the bracket 46. This roll 45 constitutes an edge guide to steady and align the gilding roll on the edge of the worktable 50 or the article being ornamented by transfer from the strip 33 as the heated gilding roll 30 is rolled thereover. This roll 45 may be mounted in a suitable ball-bearing, if desired, to facilitate the guiding operation.

The bracket 44 is adjustably secured lengthwise of the supplemental shaft 36 by having the bracket 44 provided with an opening 48 therethru to fit snugly and slidingly over the shaft 36 and is secured thereto by a set screw 49 rotating in a correspondingly tapped recess 54 in the end of the bracket 44, preferably bearing upon the slightly flattened surface 41 in the top of the supplemental shaft 36, as shown in Fig. 3. Thus the bracket 44 may be adjusted lengthwise and a corresponding relative adjustment of the gilding tool 30 secured.

In order to hold and dispense the leaf strip, I arrange for interchangeability of a spool or roll so that varying widths proportional to the width of the gilding roll 30 may be quickly and easily fitted. For this purpose, I provide a right-angled bracket 60, preferably of round wire, having one arm fitted to be positioned parallel with the shaft 21, on which are slidingly fitted hubs 61 and 62, each held in adjusted position by set screws 63 and 64, respectively, which bear against flanges 65 and 66. Or, if desired, the flanges 65 and 66 may be welded to be formed integral with the hubs 61 and 62 which, thus, permit adjustment of these flanges widthwise of the parallel arm 60 to hold loosely between them a roll or spool 70 on which any width of sizing 33 is rolled, and may be readily unrolled therefrom as the gilding tool is moved by the operator along the work. The flanges 65 and 66 may be also adjusted to provide suitable friction on the spool 70 so as to insure an even unwinding or withdrawal of the strip 33.

The opposite end of the arm 60 is adapted to extend thru an opening 71 in the shaft 21 at the right, viewing Fig. 3, or a corresponding opening 72 in the supplemental shaft. In the end of the shaft 71 is tapped an opening thru which the shank of a set screw 74 is fitted to clamp the end of the arm 60 fitted therein and, similarly, a set screw 75 is threaded thru a correspondingly tapped recess in the end of the supplemental shaft 36 so that the arm 60 may be interchangeably held in either the shaft 21 or the supplemental shaft 36.

The operation of the device will be readily understood. The gilding wheel 30 may be fitted in position either by unthreading the supplemental shaft and sliding the gilding wheel over the end portion of the shaft 20, and thereupon fitting the washer 31 and re-attaching the supplemental shaft 36; or the arm 60 may be removed and the set screw 25 released, and the hub 10 slid off the shaft 21, and thereupon the gilding roll of desired diameter, style, width, or engraved surface is fitted thereon against the washer 31, whereupon the hub 10 is slid in position and the set screw 25 tightened. The arm 60 is then fitted and with the flange 66 removed from the end of the arm 60, the spool 70 carrying the sized strip material is applied and the flange 66 and hub 62 again assembled and the two flanges 56 and 66 positioned in alignment with the roll 30 and the set screws 63 and 64 tightened to hold the flanges in desired frictional engagement with the spool 70, as well as holding said spool in alignment with the gilding roll 30. Thereupon the guiding roll 45 is adjusted by loosening said screw 49 and sliding the bracket 44 to position the gilding tool 30 in desired operative relationship with the work.

An edge of the strip 33 is led under the gilding roll and the electric current being supplied thru a suitable rheostat, or electric outlet (not shown), to the heating unit and time allowed for heat transfer to the gilding roll being made, the device is ready for operation.

The operator grasps the ferrule 1 and the top of the handle 2 may be rested against the shoulder of the operator or be held by the other hand to give proper leverage, the groove 16 affording a convenient means of grasping the ferrule, and protecting the operator from allowing his hand to slip down on the heated part of the device, as well as to afford a grip or hand-hold on the ferrule, the open spider effect 15 also protecting the lower hand of the operator from damage or injury from the heat carried by the hub 10, the gilding roll, and the shank 12, while the roll is drawn lengthwise over the work to be ornamented.

While I have illustrated the handle 2 and cord 3 as permanently connected, it may be desirable to have a disconnectable plug between the cord carrying the electrical wires from the source of power to the wire 3 in the handle. Accordingly, I have illustrated in Fig. 4 such a detachable connection, wherein the end of the handle 2 is provided with a suitable socket plug member 52, with a cooperating member 50 provided with prongs to fit in such socket and to which the current-carrying wires 51 are secured. Thus, the handle and tool can be instantly disconnected and re-connected when desired, or a different tool attached.

I claim:

An electrically heated hand-gilding tool of the class described, having in combination a hub formed with a hollow extension integral therewith, a removable electrical heating unit adapted to be fitted in said extension, a handle attached to the hub, a heat-diffusing open spider between said hub and handle, a metal leaf-applying wheel rotatably mounted on a shaft extending thru said hub, an arm adjustably secured at one end of said shaft adapted to carry a strip-holding roll in alignment with said applying wheel, means to hold said roll in adjusted position constituting friction-engaging devices controlling the reels of strip material from said roll, an adjustable worktable edge-guiding device secured to said shaft, and current-conducting wires led thru the handle and said open spider to the removable heating element.

EARL A. EKSTROM.

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