COMMISSIONER'S DECISION

OBVIOUSNESS: No Invention Over the Teachings of the Prior Art.

The application relates to automated poultry feeders for providing a predetermined quantity of feed at a prescribed period or periods. The basic idea was shown in the cited art. A second control means was used to disable the system when food supply ran out. The feature was also shown in the cited art. Combining the two produced no new or improved result worthy of a patent monopoly.

FINAL ACTION: Affirmed.

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This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated November 20, 1973 on application 115,583 (Class 119-47). The application was filed on June 14, 1971 in the name of Forrest L. Ramser and is entitled "Restricted Feeding Apparatus." The Patent Appeal Board conducted a Hearing on April 16, 1975 at which Mr. H. O'Gorman represented the applicant.

The application relates to automated poultry feeders for providing a predetermined quantity of feed at a prescribed period or periods during the day. The system includes first and second control means. The first control means is associated with at least one of the feed dispensing stations and operable to energize the conveyor when the food in that station falls below a preselected level. The second control means is associated with the hopper and operates to de-energize the conveyor when the feed in the hopper falls below a predetermined level. A timer may also be added to the circuit for feeding at selected time intervals.

In the Final Action the examiner refused claims 1 to 6 (claim 7 was not refused) as lacking patentable subject matter over the following United States Patents:

2,801,610	Aug. 6, 1957	Wallace
2,867,314	Jan. 6, 1959	Hansen
2,970,532	Feb. 7, 1961	Skelton
3,033,163	May 8, 1962	Hostetler

In that action the examiner stated (in part):

> The rejection of the subject matter which was previously presented as claims 1-5 and is now presented as claims 1-6 is maintained and the reason for such rejection is based on obviousness. The cited Hostetler et al patent teaches a mechanical poultry feeder system whereby the quantity of feed distributed is regulated as a function of the rate at which feed is consumed by the poultry with the poultry being free to consume as much feed as desired since the feed is continuously supplied so long as it is being demanded by the poultry. A control means is associated with the feeding stations and causes the energization of the drive means whenever the amount of feed in the station is below a preselected level.
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> Applicant wishes to restrict the total amount of feed during any one period of feeding. There appears to be many obvious alternatives for obtaining this desired result. For instance, one may utilize a timer to control the total operation of the system or one may utilize a weighing system as a control means or one may utilize a control means based upon sensing the level of the mass of feed. Applicant has chosen the latter alternative, i.e. a known means associated with a hopper and operable upon the reduction of feed in the hopper below a predetermined level of disable and drive means. More specifically applicant chooses to utilize a normally open switch associated with the hopper such that presence of feed therein will bias the switch to the closed position to permit the drive means to be energized. This specific control means being utilized for the same purpose i.e. to prevent operation of the system when the material in one hopper has been reduced below a predetermined level is known as shown, for example, by the cited Skelton patent. Therefore claims 1 and 4 are rejected since the use of the known alternative of a level sensing means being incorporated in the known unrestricted feeding system is obvious. The placing in circuit of the first and second control means with the conveyor drive means is obvious and claim 2 is rejected.
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> The utilization of a timer to control the interval of operation of the drive means is well known, as shown, for instance, by the cited patent to Wallace et al. The placement of the timer in circuit between a power source and the drive means is not a patentable feature. There is no inventive ingenuity associated with utilizing a conventional timer to control all or a part of a feeding system. Therefore claim 3 is obvious in view of the cited Hostetler et al patent and the knowledge exhibited by the cited Wallace et al and Skelton patents.
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> In claim 5 applicant recited a boot having a discharge opening and placing the switch in association with the boot. However the cited Hansen patent shows a hopper which acts like a boot, i.e. it could be utilized at the bottom of the Wallace et al device and perform as an equivalent of applicant's device. Therefore the use of an extension such as a boot would be obvious. Also the placement of the switch does not represent an unexpected solution to any existing problem and therefore this feature lacks patentability. Therefore claim 5 is obvious in view of the cited Hostetler et al and Skelton patents and the knowledge exhibited by the cited Hansen and Wallace et al patents.

> The use of a plurality of interconnected tubular sections, flexible auger means and a plurality of longitudinally spaced apertures is obvious in view of the cited Wallace et al or Hansen patents. Therefore claim 6 is obvious in view of the cited Hostetler et al and Skelton patents and the knowledge exhibited by the cited Wallace et al or Hansen patents.

The applicant in his response to the Final Action dated Feb. 18, 1974 stated (in part):

> This claim (claim 1) has been rejected as obvious over Hostetler et al U.S. Patent 3,033,163 in view of the knowledge exhibited by Skelton U.S. Patent 2,970,532. In Hostetler '163, as shown in column 5, lines 16-22, a mercury switch 108 halts operation of a motor 79 and the associated feed-conveying auger 78 when a maximum desired feed level is reached. A feed cutoff switch 108' is also provided for the end tray 28a'. See column 5, lines 60-61. Contrary to the Examiner's statement at the bottom of Report page 1, the Hostetler '163 control means associated with the feeding station does not cause energization of the drive whenever the amount of feed in the station is below a preselected level. In Skelton '532, a switch 31 opens to halt system operation when a minimum feed level is reached. See column 3, lines 59-64.
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> Nothing in either patent teaches the claimed "first control means ... constituting a means for the energization of said drive means whenever the amount of food in said station is below a preselected level." Nothing teaches starting a feed conveyor drive in response to a sensed maximum or minimum feed level, as claimed in this application. Claim 1 is thus believed allowable.
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> Since claims 2-7 all depend, directly or indirectly, from claim 1, they all further define the patentable subject matter of claim 1. Hence, they are likewise believed allowable.
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> Of particular interest in this regard is claim 3, which has been rejected over Hostetler '163 in view of the knowledge exhibited by Skelton '532 and Wallace 2,801,610. Wallace '610 discloses a time-clock unit adapted to complete a circuit and effect operation of a motor 38 for driving an auger conveyor. (Column 3, lines 27-30). The Examiner states that "one may utilize a timer to control the total operation of the system..." but that general proposition - whether correct or incorrect - does not address the specific control system claimed here, which calls for "a timer (claim 2) which ... will open to disable and prevent further energization of said drive means" (claim 3). The general knowledge exhibited by the cited patents does not teach this specific structure.
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> Claim 5 calls for "a boot" carrying both "the discharge opening" and "said normally open switch" used to halt feed flow when a minimum feed level is obtained in the feed discharge bin ....

The Hostetler patent discloses a mechanical poultry feeder system including feeding trays, whereby the quantity of feed distributed is regulated as a function of the rate at which feed is consumed by the poultry, with the poultry being free to consume as much feed as desired since the feed is continuously supplied so long as it is being demanded by the poultry. A control means is associated with the last feeding tray on the line, and causes the energization of the drive means whenever the amount of feed in said feeding tray is below a preselected level.

The Hansen reference discloses an auger type conveyor for delivering material such as forage, and such material being distributed evenly from the conveyor throughout the length thereof.

The Wallace reference discloses a conveyor system for feeding poultry. A time-clock unit is shown intermediate a power source and the drive means of the system. The time-clock is adapted to complete a circuit and effect operation of a motor at suitable intervals, which intervals may be adjusted at will.

The Skelton reference relates to apparatus for feed preparation, and discloses a control means responsive to a selected amount of material in the hopper or bin portion of the apparatus. The pressure of the contents of the hopper causes bulging of one particular side wall, which then contacts an actuator causing the switch controls to close when the hopper is full, and to open when the hopper is empty.

As mentioned the application relates to feed dispensing apparatus, and more particularly to automated poultry feeders for providing a predetermined quantity of feed at a prescribed period or periods during the day. Claim 1 reads:

> Feed dispensing apparatus for the restricted feeding of poultry or the like, said apparatus comprising: a hopper designed to accommodate a quantity of feed and having a discharge opening; conveyor apparatus, including drive means, associated with said discharge opening for transporting feed from said hopper to a plurality of feed stations; and a control system for said feed dispensing apparatus, said control system including first and second control means, said first control means being associated with at least one of said feed stations and constituting a means for the energization of said drive means whenever the amount of food in said station is below a preselected level, said second control means being associated with said hopper and operable upon the reduction of feed in said hopper below a predetermined level to disable said drive means, whereby only a prescribed amount of food may be dispensed.

The question which the Board must consider is whether the applicant has made a patentable advance in the art over the references cited.

The applicant's main argument, especially emphasized at the Hearing, is that "the combination as claimed is not taught from the general knowledge exhibited by the cited patents." It is recognized, however, that in a novel combination sufficient evidence of presumption of thought, design, or skilful ingenuity must be present before it can be considered as an invention.

We will now consider the rejected claims.

Clearly claim 1 is met by Hostetler with exception of the second control means. Hostetler as noted discloses a mechanical poultry feeder system whereby the quantity of food distributed is regulated as a function of the rate at which feed is consumed by the poultry. A control means is associated with the last feeding tray and causes the energization of the drive means whenever the amount of feed in said tray falls below a preselected level.

The second control means is associated with the hopper and operable upon the reduction of feed in said hopper below a predetermined level to disable the drive means. This is merely a pressure regulated cut-off switch which was known and used in the prior art. Skelton's disclosure on page 2, column 3, starting at line 54 reads: "Each switch is provided

with a contact actuator, the free end of which bears against a diaphragm which is exposed to the pressure of the contents of the bin to be bulged outwardly against the contact actuator and to close the switch contacts as shown (when full). If the contents of the bin fall below the level of the diaphragm the switch will open to stop the movement of the apparatus, thereby precluding it from continuing to function."

The applicant argues that "nothing in either patent (Hostetler or Skelton) teaches the claimed "first control means ... constituting a means for the energization of said drive means whenever the amount of food in said station is below a predetermined level." In discussing the prior art at line 25, page 1, however, the applicant states: "When the poultry have consumed enough feed to reduce the quantity at the control station (feeding tray) below said predetermined level, the cut-off switch is released and the feed conveyor again energized to raise the level of feed..." We have also noted that Hostetler discloses a similar means to control the amount of food in the feeding trays.

The applicant also maintained that "nothing teaches starting a feed conveyor drive in response to a sensed maximum or minimum feed level, as claimed in this application." In discussing the prior art the applicant covers this point. Page 1 of the disclosure, starting at line 14, reads:

> The controlling of the distribution of feed to the pans or trough is commonly done by means of a cut-off switch which is located at a control feeding station in each series. The cut-off switch is in circuit with the conveyor motor and is actuated when a predetermined quantity of feed has accumulated in the feed pan at the control feeding station. Actuation of the cut-off switch interrupts the power circuit to the particular conveyor drive motor associated with said control station, thus stopping the conveyor and the distribution of feed to the stations associated therewith, to prevent the pans or troughs from being filled to overflowing which results in a needless waste of the feed. When the poultry have consumed enough feed to reduce the quantity at the control station below said predetermined level, the cut-off switch is released and the feed conveyor again energized to raise the level of feed.

In considering the above discussion and the facts presented, it is our view that claim 1 is not directed to a patentable advance over the art cited and what is considered the knowledge of workmen skilled in this art. Claim 2, which depends on claim 1, specifies that the "control means are placed in circuit with said conveyor drive means." This merely completes the combination and what would be understood from claim 1.

Claim 3, which depends on claim 2, relates to a timer placed in the circuit to control the drive means during selected time intervals. This procedure is known in the art as evidenced by Wallace in his poultry feeder, where the disclosure on page 2, column 3, starting at line 24, reads:

> The operation of the motor 38 may preferably be controlled by a time-clock unit 39 of any conventional construction. The main requirement of such a time-clock unit 39 is that the same is adapted to complete a circuit and effect operation of the motor 38 at suitable intervals, which intervals may be adjusted as will be subsequently explained.

And line 8, column 4, reads:

> In actual operation, it has been found that by suitable setting of the timing unit 39 so as to effect an intermittent or periodic operation of the agitator and screw, the same may be calculated so as to provide sufficient feed for all ages of poultry for example. It has specifically been determined that in a suitable apparatus of the nature herein discussed, poultry which has attained the age of approximately 6 weeks, requires that the screw be operated for a period of about 3 minutes each half hour. It will be obvious that correspondingly long periods (or shorter periods) may be provided for so as to deposit sufficient feed at each one of the openings to care for a large number of chickens or the like who are being fed by the unit. In an actual apparatus constructed in accordance with the disclosure herein, the period of time during which operation is effected may be increased gradually as the chickens grow and since regular feeding is productive, growth is more uniform and encouraged thereby.

In discussing claim 3 the applicant argued that a timer to control the total operation "does not address the specific control system claimed here, which call for 'a timer (claim 2) which ... will open to disable and prevent further energization of said drive means' (claim 3)." Surely the Wallace patent teaches substantially the same thing. Claim 3, in our view therefore, is not directed to a patentable advance in the art.

Claim 4, which depends on claim 1, and claim 5, which depends on claim 4, relate to features of the second control and a specific portion of the hopper known as a "boot." The use of a similar control feature is shown by Skelton on a portion of the hopper which is equivalent to a boot. Hostetler uses a similar arrangement to a boot, but calls it a "feed intake box." Hansen also uses a similar arrangement to a boot. Therefore the addition of these features to claim 1 is not patentably significant.

The use of a plurality of interconnected tubular sections, flexible auger means and a plurality of longitudinally spaced apertures (claim 6) are shown by Wallace and Hansen. Therefore, the features of claim 6 are not patentably distinctive over refused claim 1.

The argument in the affidavit, submitted by Mr. Robert A. Murto, that "none of the cited patents, taken together or in combination, teach this claim structure," is noted. It has been authoritatively stated, however, that the art of combining two or more parts, whether they be new or old, or partly new and partly old, so as to obtain a new result, or a known result in a better, cheaper, or more expeditious manner, is valid subject matter if there is sufficient evidence of presumption of thought, design, or skillful ingenuity in the invention and novelty in the combination. Every slight difference in the application of a well known thing should not and does not constitute ground for a patent, for there would be no end to the

interference with trade and with the liberty of adopting any mechanical contrivance if such were the case. (See Merco Nordstrom Valve Co. v Comer (1942) Ex. C.R. 138 at 155).

The Board is mindful that when assessing an alleged invention the combination of a claim as a whole must be considered. Nonetheless, even if the combination in the claims be novel, it, in our view, lacks the prerequisite of inventive ingenuity. In other words no result has been achieved which can be considered to have flowed from an inventive step.

The Board is satisfied that claims 1 to 6 are not directed to a patentable advance in the art, and recommends that these claims be refused.

J.F. Hughes,
Assistant Chairman,
Patent Appeal Board.

I concur with the findings of the Patent Appeal Board and refuse to allow claims 1 to 6. The applicant has six months within which to delete these claims or appeal this decision under the provision of Section 44 of the Patent Act.

Decision accordingly,

A.M. Laidlaw,
Commissioner of Patents

Dated at Hull, Quebec
this 28th day of
April, 1975

Agent for Applicant

Messrs. Smart & Biggar,
Ottawa, Ontario.