

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 35

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NOBORU INAMINE
and ATSUSHI HARADA

Appeal No. 96-3746
Application 08/236,007¹

HEARD: December 11, 1997

Before COHEN, MEISTER and CRAWFORD, Administrative Patent Judges.
CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1-6 and 9-33. Claims 7-8 have been canceled.

Appellants' invention is an ink supply control device.

¹ Application for patent filed May 2, 1994. According to appellants, this application is a continuation of application 08/100,342 filed August 2, 1993, which is a continuation of application 07/882,594 filed May 13, 1992, both abandoned.

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Claim 1 is illustrative of the subject matter on appeal and recites:

1. An ink supply control device for a stencil printing machine which controls the supply of printing ink to an ink reservoir formed in a printing drum according to a signal produced from an ink amount detecting device which produces a first signal when the amount of ink stored in said ink reservoir is detected to be greater than a prescribed level, and a second signal when the amount of ink stored in said ink reservoir is detected to be less than said prescribed level, comprising:

an arithmetic computing device for computing a relative relationship between a time period during which said ink amount detecting device produces said first signal and a time period during which said ink amount detecting device produces said second signal;

an ink amount determining device for determining if the amount of ink in said ink reservoir is less than said prescribed level or not according to a result of said computing by said arithmetic computing device; and

an ink supply device for supplying printing ink to said ink reservoir when an output from said ink amount determining device indicates that the amount of ink in said ink reservoir is less than said prescribed level.

THE REFERENCES

The following references were relied on by the examiner to support the final rejection:

Maeno et al. (Maeno)	4,796,054	Jan. 3, 1989
Barney	5,103,728	Apr. 14, 1992

THE REJECTIONS

Claims 1-6, 9-28 and 30-33 stand rejected under 35

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U.S.C. § 103 as being unpatentable over Barney.

Claim 29 stands rejected under 35 U.S.C. § 103 as being unpatentable over Barney in view of Maeno.

Rather than reiterate the examiner's statement of the rejections and the arguments of the examiner and the appellants in support of their respective positions, reference is made to the Examiner's Answer (Paper No. 29), the Appellant's Brief (Paper No. 28) and Reply Brief (Paper No. 31) for the full exposition thereof.

OPINION

In reaching our conclusion on the issues raised in this appeal, we have carefully considered appellants' specification and claims, the applicable law, the applied references and the respective viewpoints advanced by the appellants and the examiner. As a consequence of our review, we have made the determination that the examiner's rejections should be reversed.

In order for the examiner to set forth a prima facie case of obviousness, he must establish why one having ordinary skill in the art would be led to the claimed invention by the reasonable teachings or suggestions found in the prior art, or by a reasonable inference to the artisan contained in such teachings or suggestions. See In re Sernaker, 702 F.2d 989, 217 USPQ 1

(Fed. Cir. 1983).

We find that Barney discloses an ink level control system which utilizes an ultrasonic transducer to measure the distance between the transducer and the ink in an ink fountain thereby sensing the ink level in the fountain (Col. 2, lines 17-19). A microprocessor controller is in communication with the transducer and functions to evaluate the long term behavior of the ink level in the ink fountain using a mean value formation based on periodic sampling by the ultrasonic transducer on ink level measurements (Col. 2, lines 42-45). The long term ink level is adjusted by a surface variability index VI to correct for ink surface variations (Col. 4, lines 15-20). This new adjusted long term ink level is applied to a comparator with a predetermined set-point level SP (Col. 4, lines 21-32). This set-point is imputed by an operator and is based on the operator's experience in judging the correct level to maintain acceptable ink coverage consistency (Col. 4, lines 28-31). If the adjusted long term ink level is greater than the set point, an ink feed cycle is started (Col. 4, lines 23-26). The ink level is then repeatedly measured until the adjusted long term ink level is less than the set point at which time, ink feed cycle is terminated (Col. 4, lines 33-38).

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We agree with the examiner that the signal which initiates the feed cycle when the adjusted long term ink level is greater than the set point may be considered the first signal as recited in claim 1 and the signal which terminates the feed cycle when the adjusted long term ink level is less than the set point may be considered the second signal. However, in Barney, ink is supplied to the ink fountain in the form of a feed cycle wherein for some portion of the cycle the control valve is open and for some portion of the cycle the control valve is closed (Col. 4, line 33, Col. 6, line 61 - Col.7, line 3). The total cycle time is chosen to allow the ink in the ink fountain to seek a new level when ink feed has occurred.

We find no disclosure or suggestion in Barney of:

an arithmetic computing device for computing a relative relationship between a time period during which said ink amount detection device produces said first signal and a time period during which said ink amount detecting device produces said second signal.

As is recited in Claim 1, Barney never compares the ink signals but rather compares the ink levels and as such Barney does not compute a relative relationship between the time periods during which the first signal and the second signal are produced.

The examiner in discussing the disclosure of Barney stated:

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When the long term ink level is detected as greater than the set-point ink level...the time duration of an ink feed cycle necessary for filling the ink level to the preset ink level so as to obtain the first signal is calculated, ink feed cycle is initiated and the ink supply control valve is opened.
[Examiner's Answer pages 4-5]

Barney does not calculate the ink feed cycle necessary for filling the ink level. Rather, Barney calculates or choose an ink cycle, which is the sum of the on time of the control valve and the off time of the control valve so as to allow the ink level to seek a new level. The control valve cycles on and off until repeated measurements of the ink level indicates that the feed cycles should be terminated.

The examiner has stated that Barney is capable of carrying out the broadly recited algorithm functions recited in the present claims. However, the examiner has no factual basis for this conclusion.

In view of the foregoing, we will reverse the examiner's rejection of claims 1-6, 9-28 and 30-33 under 35 U.S.C. § 103 as being unpatentable over Barney.

We have reviewed the disclosure of Maeno but find nothing therein to remedy the deficiencies of Barney. Therefore, we will also reverse the examiner's rejection of claim 29.

The decision of the examiner is reversed.

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REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
JAMES M. MEISTER)	
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)	
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