

638924

AUSTRALIA  
Patents Act 1990

PATENT REQUEST: PETTY PATENT

I/We, being the person(s) identified below as the Applicant(s), request the grant of a patent for an invention described in the accompanying petty complete specification.

Full application details follows.

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Invention Title: INKING HEAD

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Address: (As Above)

Inventor: David Granville Llewelyn

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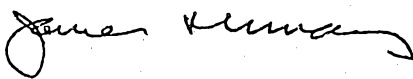
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Drawing numbers recommended to accompany the abstract: 1 and 2

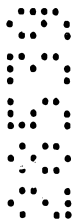
Dated: 19 November 1992

DENHAM COOPER-SOUTHAM and

DAVID GRANVILLE LLEWELYN

By: 

of JAMES MURRAY & CO.



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## NOTICE OF ENTITLEMENT

We, DENHAM COOPER-SOUTHAM & DAVID GRANVILLE LLEWELYN

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being the applicant in respect of Application no. 28539/92 state the following:-

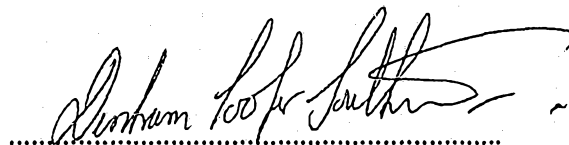
### Part 1

The persons nominated for the grant of the patent:  
are the actual inventors

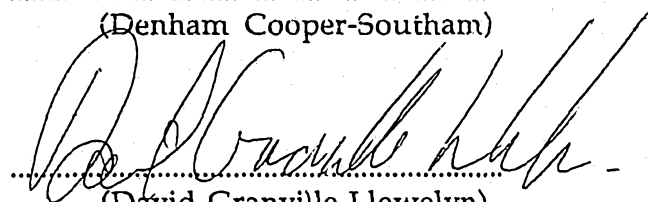
DENHAM COOPER-SOUTHAM

and

DAVID GRANVILLE LLEWELYN



(Denham Cooper-Southam)



(David Granville Llewelyn)

29<sup>th</sup> April 1993

(Date)



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(Australian Petty Patent)

(54) Title  
INKING HEAD

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(56) Prior Art Documents  
AU 21198/83 B41J 27/18

(57) Claim

1. An inking head for use in an inking apparatus for ribbons,  
which inking head comprises:-
  - a. a storage receptacle for ink provided with an  
elongated outlet for the ink; and
  - b. a generally plate-like dispenser having at least one  
exit means in communication with the elongated outlet,  
wherein the dispenser is replaceable to provide a selected  
rate of dispensation of the ink from the inking head onto  
a ribbon to be inked.

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**PETTY PATENT SPECIFICATION**

APPLICANT: DENHAM COOPER-SOUTHAM  
AND: DAVID GRANVILLE LLEWELYN  
NUMBER:  
FILING DATE:

Invention Title: INKING HEAD

The invention is described in the following statement:-

TITLE: Inking Head

FIELD OF THE INVENTION: This invention relates to an inking head for use in an inking apparatus for ribbons bearing dot matrix or like ink for use in typewriters, printers and like apparatus.

BACKGROUND TO THE INVENTION: An apparatus which can ink or re-ink ribbons rapidly and with a minimal wastage of ink is described in co-pending petty patent application no. 28 540/2;

A particular advantage of the present invention is the provision of an inking head which is particularly useful in conjunction with the apparatus of the co-pending application but which could also be used with previously known inking apparatus.

BRIEF SUMMARY OF THE INVENTION: This invention provides an inking head for use in an inking apparatus for ribbons, which inking head comprises:

1. a storage receptacle for ink provided with an elongated outlet or outlets for the ink; and
2. a generally plate-like dispenser having at least one exit means in communication with the elongated outlet or outlets,

wherein the dispenser is replaceable to provide a selected rate of dispensation of ink from the inking head onto a ribbon to be inked.



BRIEF DESCRIPTION OF THE DRAWINGS: The drawings illustrate several exemplary embodiments of the invention, in which:-

Figure 1 is a perspective view from one side of an inking head connected to various other integers according to the invention and also according to co-pending petty patent application no 28540/92 ;

Figure 2 is an exploded view from one side of a receptacle and dispenser according to the invention; and

Figure 3 is a plan view of four dispensers according to the invention.

DETAILED DESCRIPTION OF THE INVENTION: The receptacle according to the invention may be, for example, a rectangular box-like means. The elongated outlet is preferably a single slot but may, for example, comprise a series of elongated slots generally in line with each other. In another embodiment, the series of elongated slots may be positioned parallel to each other.

The dispenser is preferably provided with either a single exit means in communication with the elongated outlet or a set of such exit means in communication with the elongated outlet. The members of the set are preferably in line with each other so that they communicate at selected intervals along the central, longitudinal line of the elongated outlet with the interior of



the receptacle. However, the set of exit means may be located in one of a number of other patterns positioned across the dispenser. Such embodiments may be used where the elongated slots are parallel to each other.

The receptacle is also preferably provided with connector means whereby the receptacle may be connected to the dispenser, for example, by means of threaded studs attached to the receptacle and which penetrate through corresponding holes in the dispenser. Threaded nuts may be used to attach the dispenser to the receptacle. The dispensers may also be supplied with guide means, such as elongated, lateral recesses, for use in controlling travel of the ribbon through or over the inking head. The location and size of these recesses may vary according to the size of the ribbon.

A number of dispensers may be combined with the receptacle in such a way that movement of a selected dispenser into position with respect to the elongated outlet may be used to control the rate of flow of ink from the combination onto a ribbon.

Turning to Figure 1, an inking head 1 comprises a lower receptacle 2 (as viewed in use) attached to an upper dispenser 3 by means of penetrating connector means 4 and 4A. A ribbon to be inked is indicated by numeral 5.

A solenoid-actuated valve 6 is located immediately below and



close to receptacle 2. Valve 6 is used to open and close a connection to receptacle 2 to control the flow of ink to receptacle 2.

The combination of dispenser, receptacle and valve is shown as mounted on a frame 7. A magnetic mount 8 is shown as attached to frame 7 for positioning of the inking head with respect to a vertically positioned locating means; see the co-pending petty patent.

Turning to Figure 2, the upper wall 9 of a receptacle 2 (see Figure 1) is shown as having a longitudinally positioned slot 10. A dispenser 3 is shown as having two locating apertures 11 and 11A for co-operation with corresponding threaded studs 12 and 12A located on upper wall 9, which <sup>form</sup> ~~from~~ part of connector means 4 and 4A respectively; see figure 1.

A single exit means 13 is shown as located at approximately the mid-point of a longitudinal line about the middle of dispenser 3. Dispenser 3 is also shown as having two lateral grooves 14 and 14A to guide ribbon 5; see Figure 2.

In Figure 3, four dispensers 3, 3A, 3B and 3C are shown. Dispenser 3 has a single exit means 13 and dispenser 3A has two exit means 13A and 13B. Dispensers 3B and 3C also have two exit means (not numbered).



The claims defining the invention are as follows:

1. An inking head for use in an inking apparatus for ribbons, which inking head comprises:-
  - a. a storage receptacle for ink provided with an elongated outlet for the ink; and
  - b. a generally plate-like dispenser having at least one exit means in communication with the elongated outlet, wherein the dispenser is replaceable to provide a selected rate of dispensation of the ink from the inking head onto a ribbon to be inked.
2. An inking head as claimed in claim 1, which is connected to a solenoid operated valve means in close proximity to the inking head whereby the ink supply to the inking head is controlled with sufficient speed to prevent significant escape of ink from the inking head.
3. An inking head as claimed in claim 1, substantially as described with reference to the accompanying drawings.

Dated this 19th day of November , 1992

DENHAM COOPER-SOUTHAM AND

DAVID GRANVILLE LLEWELYN

By Their Patent Attorneys

JAMES MURRAY & CO.

### ABSTRACT

An inking head (1) for use in an inking apparatus for ribbons, which inking head comprises:-

- a. a storage receptacle (2) for ink provided with an elongated outlet for the ink; and
- b. a generally plate-like dispenser (3) having at least one exit means (13) in communication with the elongated outlet(10),

wherein the dispenser is replaceable to provide a selected rate of dispensation of the ink from the inking head onto a ribbon to be inked.

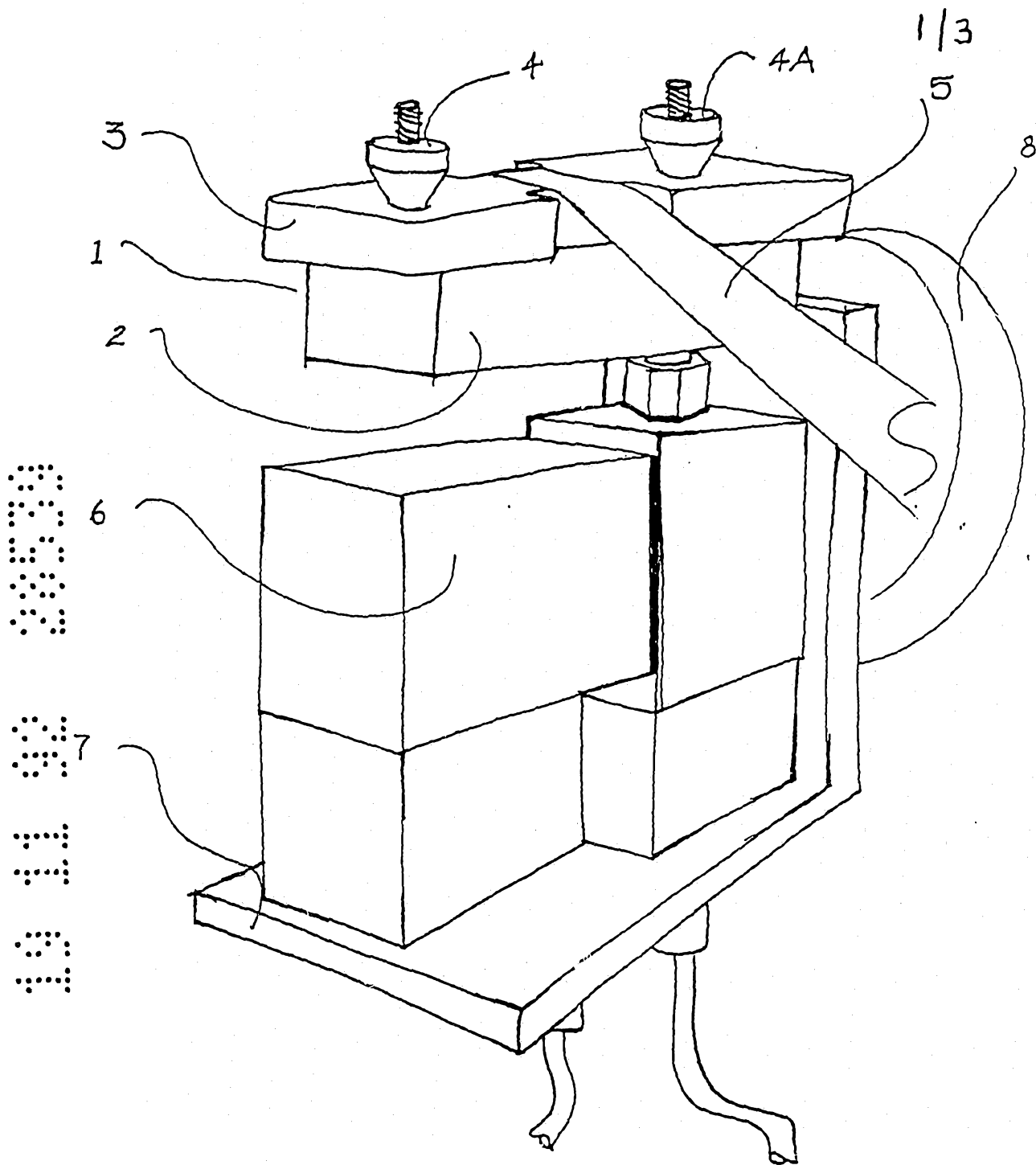


FIGURE 1

FIGURE 2

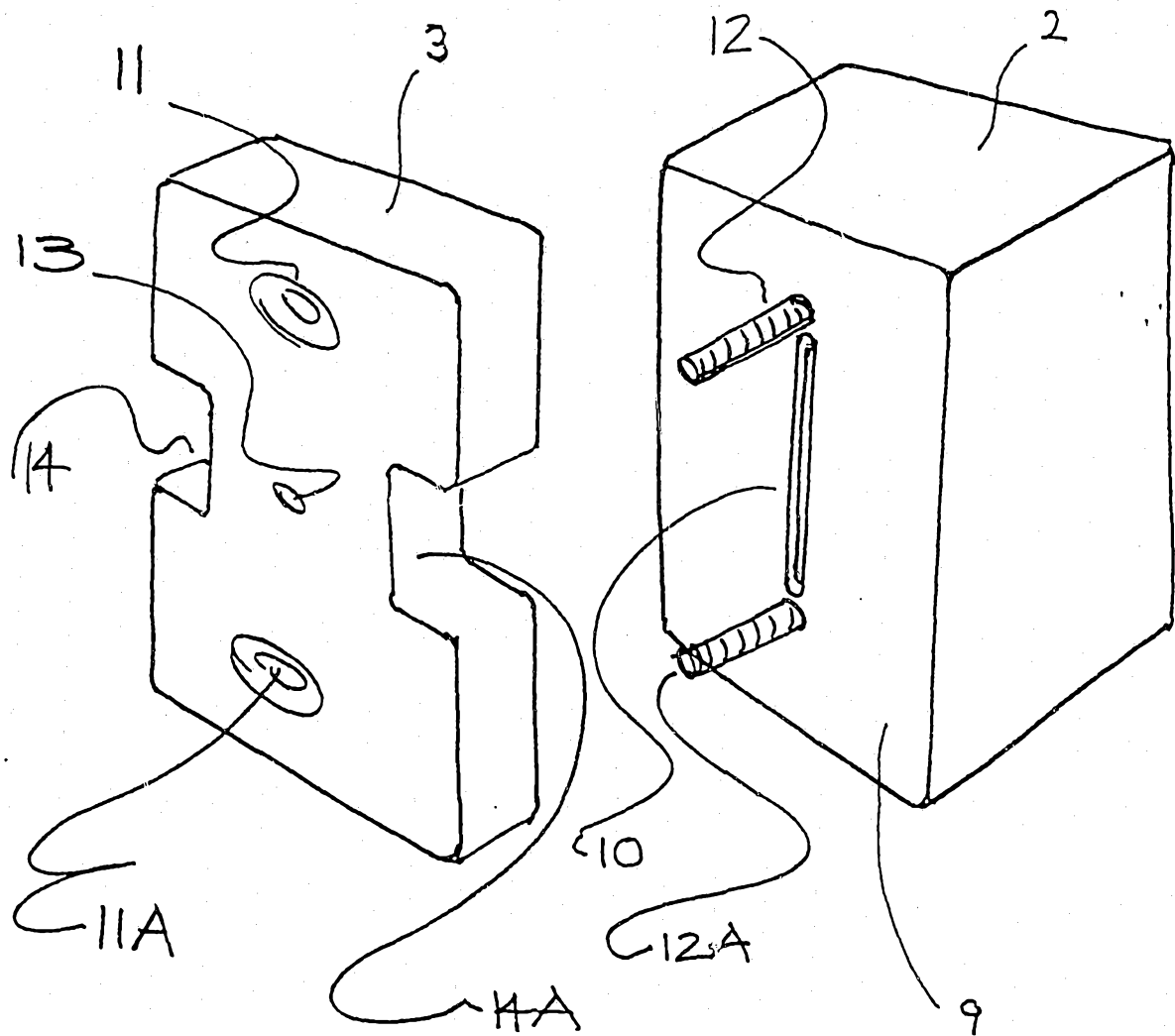


FIGURE 3

3/3

