Dec. 23, 1952 M. HAUSER ET AL 2,622,520

APPARATUS FOR MOISTENING PRINTING PLATES IN PRINTING MACHINES

Filed Feb. 5, 1949

Fig. 1

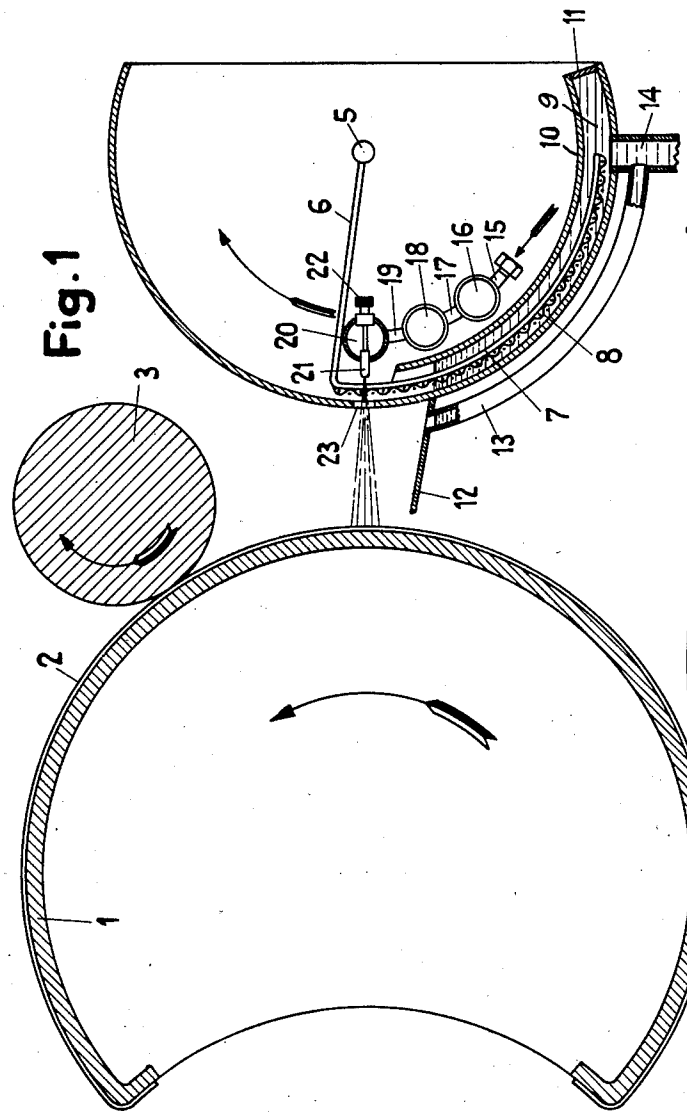
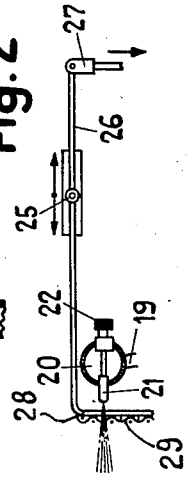


Fig. 2



INVENTORS
MAX HAUSER AND
ERNST WAGNER
By Singer, Ellert, Stern & Carlberg
ATTORNEYS

Patented Dec. 23, 1952 2,622,520

UNITED STATES PATENT OFFICE

2,622,520

APPARATUS FOR MOISTENING PRINTING PLATES IN PRINTING MACHINES

Max Hauser, Zurich, and Ernst Wagner, Kusnacht, by Zurich, Switzerland; said Hauser assignor to said Wagner

Application February 5, 1949, Serial No. 74,726
In Switzerland October 6, 1948

1 Claim. (Cl. 101—147)

1

The present invention relates to a process for moistening printing plates in printing machines and relates also to apparatus for carrying out this process.

According to the present invention the process consists in blowing compressed air through a sieve which is wetted with liquid periodically, or with rotary presses, continuously. This process enables finely divided liquid to be obtained which is deposited uniformly on the printing plates.

The invention will be further described by way of example, with reference to the accompanying diagrammatic drawings in which:

Fig. 1 shows an apparatus for carrying out the process mentioned. In it the parts essential for understanding the invention are shown in cross section.

Fig. 2 shows a detail of an alternative form.

1 designates a cylinder carrying printing plates 2, to which cylinder the plates are fastened in a known manner (not shown). The highest colour roller is denoted by the numeral 3. A casing 4 is fitted before the cylinder 1. In this casing a shaft 5 is rotatably mounted concentrically with the casing. This shaft carries on arms 6, an arc shaped curved frame 7 which is covered with a fine meshed sieve 8. This frame 7 can, as shown in the drawing, be contained in a liquid container 9. The latter is bounded outwardly by the wall of the casing 4 and inwardly by a wall 10 running parallel thereto and at its lower end by a closing wall 11. The depth of the container 9 is such that the frame 7 can be completely immersed therein.

Outwardly of the casing 4 an intercepting plate 12 is provided which is connected to a liquid supply pipe 14 by means of a pipe 13. On the inside of the container 9 is arranged a pressure air pipe 15 which is connected to two pipes 17 through a first header 16, and thence to three pipes 19 through a second header 18, and finally to a nozzle head 20. The latter is provided with nozzles 21, the apertures of which can be regulated by spindles 22. Compressed air supplied through the pipe 15 is therefore fed through the different pipes and headers to the nozzles 21, and thereafter is blown through that part of the sieve in front of the nozzles, so that liquid adhering to the sieve is carried along and blown on to the cylinder 2. To enable the liquid to

2

escape from the casing, a slot 23 is provided in the latter. Liquid falling down is intercepted by the plate 12 and led back to the supply pipe 14 which is connected to a liquid container or the like, in a manner not shown.

By suitable means (not shown) the arms 6 and with them the frame 7, and the sieve 8 are periodically lifted in the direction of the arrow I and allowed to fall in a direction opposite to the direction of this arrow. The nozzles could of course be given any periodical movement, for instance in lateral direction.

Advantageously, the apparatus is so regulated that the sieve is raised from the completely depressed to the completely raised position during the same period in which the plate bearing parts of the cylinder move past the mouths of nozzles 21.

Depression of the sieve 8 follows accordingly during the period in which the part of the cylinder not provided with plates moves past the nozzles 21.

The sieve 8 is very fine meshed and consists of canvas. The number of the nozzles 21 is chosen to suit the apparatus being used; in practice, several nozzles per inch are provided. These are individually regulable and individual nozzles can be completely cut off also, so that the wetting of the plates in any single case can be regulated.

The sieve 8 is preferably detachable and replaceable by another sieve, so that a sieve can be used, the mesh of which is well suited to the nature of the plates 2.

In the modification shown in Fig. 2, pipes 19, nozzle head 20, nozzles 21, and spindles 22, correspond with the same parts indicated by the same numerals in Fig. 1. A straight frame 28 is covered with a fine meshed sieve 29. About a point 25, a lever 26 is oscillatable. Point 25 is displaceable along said lever 26. Oscillation of lever 26 is effected by displacement of a link 27. The displacement of link 27 is effected by means not shown. With a constant amount of movement of the link 27, variation of the pivot point 25 varies the amplitude of the motion of the sieve 29, with a consequent change in the amount of liquid sprayed therethrough.

We claim:

In a moistening device for use with a rotary cylinder of a printing press carrying a printing

plate, a sieve in the shape of a segmental cylindrical surface of a length approximating the width of the plate to be moistened, a liquid container, means for oscillating said sieve on an axis corresponding to the axis of the cylindrical surface and parallel to the printing cylinder, said means being adapted to oscillate the sieve in timed relation to the printing cylinder rotation between one position in which the sieve is submerged in said liquid, and another in which it is withdrawn from the liquid, and a series of compressed air nozzles arranged along the adjacent

to the inner surface of said sieve and directed towards said printing plate.

MAX HAUSER.
ERNST WAGNER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
841,142	Gramlich	Jan. 15, 1907
2,101,202	Stevens	Dec. 7, 1937
2,389,730	Ilec	Nov. 27, 1945