Oct. 25, 1966 J. JURNÝ 3,280,733

DAMPENING DEVICE OF A PRINTING MACHINE

Filed Nov. 4, 1964 2 Sheets-Sheet 1

Fig. 2.

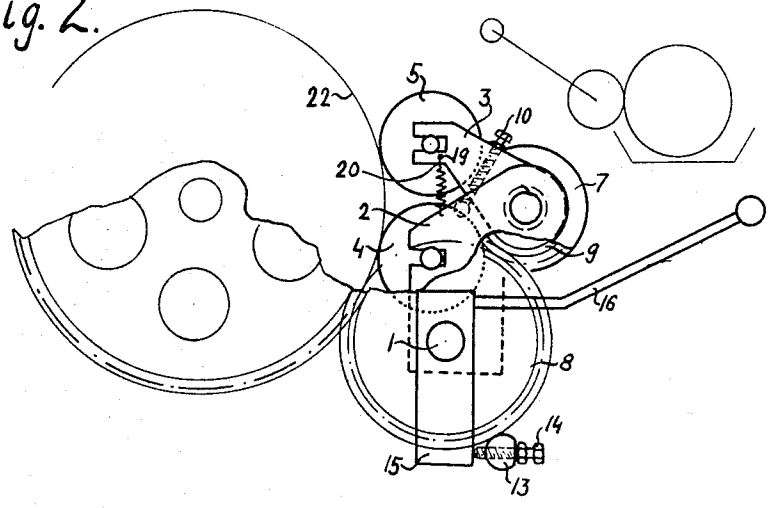
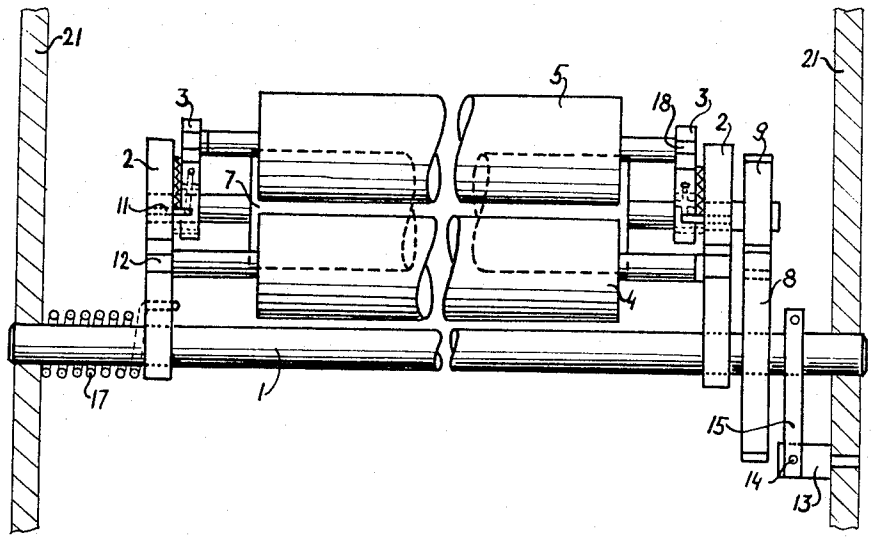


Fig. 1.



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Filed Nov. 4, 1964 2 Sheets-Sheet 2

Fig. 3

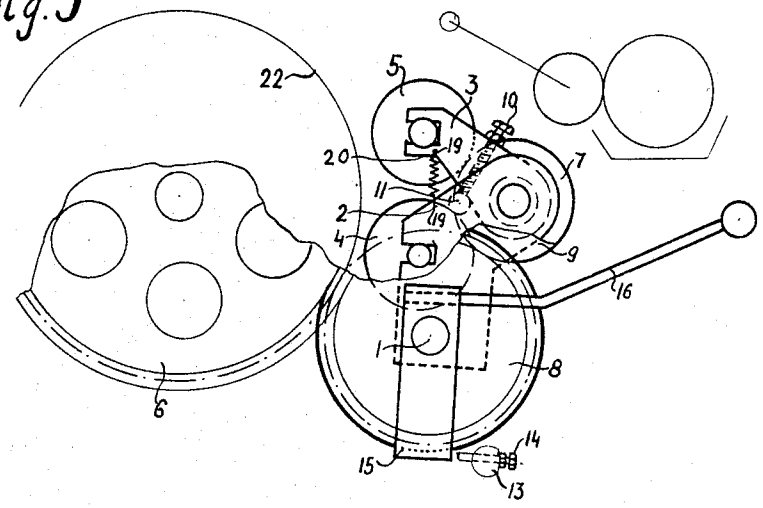
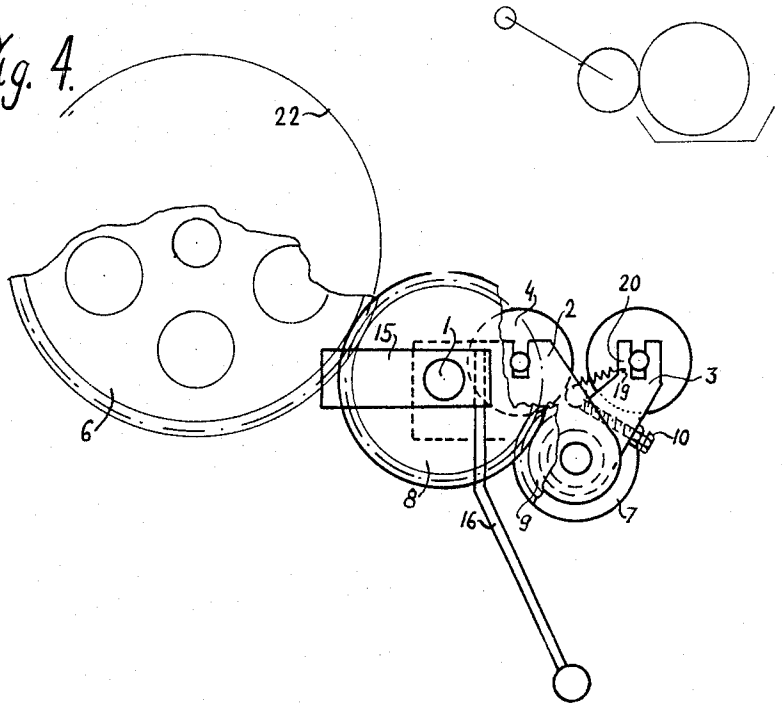


Fig. 4.



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DAMPENING DEVICE OF A PRINTING MACHINE

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2 Claims. (Cl. 101—147)

The invention relates to a device for damping the printing plate of offset printing machines.

The damping device of offset printing machines must satisfy the requirements of perfect damping of the printing plate, of easy operation and exchange of the damping rollers. The latter requirement is of particular importance in the case of printing machines for small dimensional print because in this case the printed editions are relatively low so that the damping roller must be often exchanged.

In damping devices of offset printing machines in accordance with the known state of art the damping rollers and the distributing rollers are mounted in holders which permit their adjustment into pressure contact with the printing form and the distributing roller. The damping rollers in a damping device of this type are stably mounted directly in the side pieces of the machine. It is therefore very difficult to remove the damping rollers from the machine and it is often necessary to remove also the feed roller or ductor, or the wading roller to permit access to the damping rollers. If printing is interrupted, the damping rollers are removed from the printing plate by means of mechanisms which cause a swinging movement of arms in which the damping rollers are mounted.

It is a general object of this invention to eliminate the mentioned drawbacks of the known state of the art.

Stated briefly but more specifically, the invention relates to the damping device of a printing machine, the characteristic feature of which resides in the fact that in a pair of side pieces with a removably mounted bottom damping roller there is pivoted a pair of holders in which is removably mounted a top damping roller and where the pivoted pair of side pieces is mounted on the shaft of a toothed wheel, the pair of holders being pivoted on the shaft of a rubbing-down roller.

The invention will be best understood from the following specification to be read in conjunction with the accompanying drawings in which is illustrated a preferred example of embodiment.

In the drawings:

FIG. 1 illustrates a partial elevation of the device;

FIG. 2 is a side elevation of the device in the working position, that is in the position where the damping rollers are in pressure contact with the printing plate and the distributing roller;

FIG. 3 illustrates a side elevation of the device where the damping rollers are removed from the printing plate; and

FIG. 4 illustrates a side elevation of the device in the case of complete tilting.

Referring now more particularly to the accompanying figures, it is seen that the device consists of separate side pieces **2** mounted on a shaft **1** which is pivoted in side pieces **21** of the printing machine. In the separate side pieces is mounted the bottom damping roller **4** whose bearings **12** are set into grooves of the said side pieces **2**.

In the said side pieces **2** is also pivoted the distributing roller **7** and holders **3** in the grooves of which is mounted

by means of bearings **18** a top damping roller **5**. To the side portions **2** and holders **3** are attached pins **19** on which is held a spring **20**. The holders **3** are provided with adjustable screws **10** which rest against stops **11** held in the side pieces **2**. On end of a spring **17** which is slipped over the shaft **1** is attached to side pieces **21** of the machine and its other end is attached to side piece **2**. To the shaft **1** is attached a lever **15** which rests against a set screw **14** passing through the holder **13** held in side pieces **21** of the printing machine. A manual lever **16** is attached to lever **15**. The toothed wheel **9** which is attached to distributing roller **7** engages with toothed wheel **8** which is pivoted on shaft **1**. Toothed wheel **8** engages with toothed wheel **6** attached to the shaft of printing roller **22**.

The device in accordance with the invention operates in the following manner: On interruption of printing, a nonillustrated manual, mechanical or automatic device tilts away side pieces **2** with the damping rollers **4**, **5** and the distributing roller **7**, in such a manner that the damping rollers **4**, **5** are not in contact with the printing form attached to the printing roller **22**. If the damping rollers **4**, **5** are to be exchanged, the side pieces **2** with all their accessories are tilted down into the horizontal position. In this position they are arrested by means of a nonillustrated device so that the damping roller can be readily removed and replaced or exchanged without first requiring removal of other rollers. This tilting operation can be carried out without interrupting the drive because the interposed toothed wheel **8** which transmits the movement from the printing roller **22** to the distributing roller **7** is pivoted directly on shaft **1** which is rotated to accomplish tilting. The damping rollers **4**, **5** can be readily adjusted to the necessary pressure contact with the printing roller **22** and the distributing roller **7**. This adjustment is accomplished for the bottom damping roller **4** by adjusting a set screw **14** which acts as an adjustable stop against rotation produced by spring **17** which produces the necessary pressure. The top damping roller **5** is adjusted by means of set screws **10** which produced rotation of holder **3**. Further pressure against stop **11** is achieved by means of spring **20**. By this movement the top damping roller **5** is pressed between the printing roller **22** and the distributing roller **7**. Due to the fact that the bearings **18** of the top damping roller **5** are freely movable in the grooves of holders **3**, the upper damping roller is readily adjusted to the necessary pressure.

It can be seen from the above that the advantages of the device in accordance with the invention reside in the following facts: This simple device in accordance with the invention permits by mere rotation of the shaft to which are attached to the side pieces of the damping rollers to remove the damping rollers from the printing plate. Rotation or tilting of the damping device into the horizontal position facilitates largely removal of the damping rollers because they are now easily accessible and the other rollers of the damping device need not be removed. Adjustment of the damping rollers to the necessary pressure with the printing plate and the distribution roller is also easy and is accomplished by mere turning of the side pieces in which the damping rollers are mounted.

What I claim is:

1. In a printing machine, a damping device comprising:

a pair of tiltable side pieces;

a bottom damping roller removably mounted in said pair of tiltable side pieces;

a pair of holders pivoted in said pair of tiltable side pieces;

a top damping roller removably mounted in said pair of pivoted holders;

a shaft carrying rotary driving means and the said pair of tiltable side pieces;

a rubbing-down roller with a shaft pivoted in said pair of tiltable side pieces;

the said pair of holders being pivoted on the said shaft of the said rubbing-down roller.

2. A damping device as claimed in claim 1, wherein

the said pair of tiltable side pieces and holders are provided with set screws.

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