

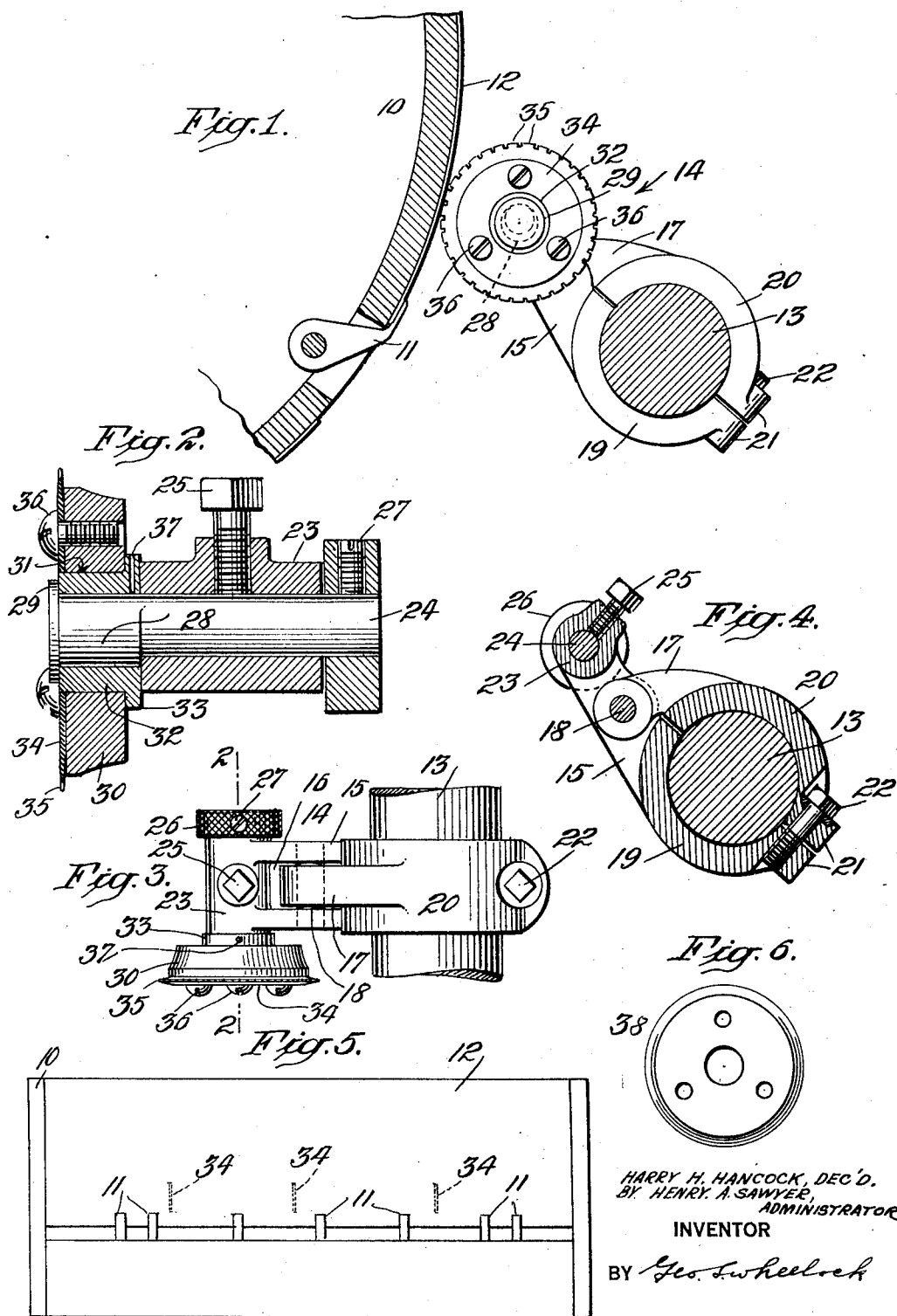
Nov. 10, 1931.

H. H. HANCOCK

1,831,660

PRINTING PRESS ATTACHMENT

Filed April 30, 1929



UNITED STATES PATENT OFFICE

HARRY H. HANCOCK, DECEASED, LATE OF LYNN, MASSACHUSETTS, BY HENRY A. SAWYER, ADMINISTRATOR, OF LYNN, MASSACHUSETTS; NELLIE A. SAWYER, EXECUTRIX OF SAID HENRY A. SAWYER, DECEASED, ASSIGNOR TO ALICE B. HANCOCK, OF LYNN, MASSACHUSETTS

PRINTING PRESS ATTACHMENT

Application filed April 30, 1929. Serial No. 359,214.

The invention relates to printing press attachments which are operative on all types of cylinder presses and which operate automatically and simultaneously with the printing, while the sheet is under the control of the grippers.

One of the objects of the present invention is to provide means whereby perforating, slitting or scoring wheels or disks may be interchangeably substituted on the attachment, whereby the attachment is adapted for use in connection with either perforating, slitting or scoring, and such work may be done in any position of the sheet providing a gripper holds the sheet securely on either side of the attachment.

Another object of the invention is to provide means for obtaining a sensitive adjustment of the perforating, slitting or scoring wheels or disks, thereby desirably regulating the pressure of the same on the sheet of paper to be perforated, slit or scored.

Still other objects of the invention are to provide a perforating, slitting and scoring attachment, having the above objects in view and which is exceedingly simple considering its advantages, and which may be sold at a fair price to the purchasers.

These being among the objects of the present invention, the same consists of certain features of construction and combinations of parts to be hereinafter described and then claimed with reference to the accompanying drawings illustrating a preferred embodiment of the invention, and in which:

Figure 1 is a fragmentary section of a printing press cylinder showing the improved attachment applied in cooperative relation therewith and including a perforating disk;

Fig. 2 is an enlarged section on the line 2—2 of Fig. 3;

Fig. 3 is a plan of the attachment mounted on a support;

Fig. 4 is a section through the clamping jaws for mounting the attachment on a shaft, other parts of the attachment being either in section or in elevation;

Fig. 5 is a diagrammatic elevation of a printing press cylinder showing the grippers

and in dotted lines indicating the position of the perforating, slitting or scoring disks; and

Fig. 6 is a side elevation of a slitting or scoring disk.

Referring to Figs. 1 to 5 inclusive, the printing cylinder 10 is provided with the usual grippers 11 for holding the sheet of paper 12. A supporting shaft 13 is adapted to be mounted in fixed position in front of the printing cylinder 10 and parallel therewith, and it is sufficiently close to the cylinder so that an improved attachment 14 mounted thereon may extend to the cylinder for operative relation therewith.

The attachment comprises a bracket 15 which is provided with an opening 16 which receives the inner end of an arm 17, a pivot 18 passing through the bracket 15 and the said inner end of arm 17. At the corresponding outer ends of bracket 15 and arm 17, the same are provided with semi-circular clamping jaws 19, 20, which in turn are provided with ears or lugs 21 through which passes a set-screw 22 for a wrench head whereby it may be turned. When the set-screw 22 is removed from the jaws 19, 20 they may be opened out and passed over the supporting shaft 13 and then the set-screw may be used to clamp the bracket 15 in the required adjusted position upon the shaft 13. The bracket may be adjusted to any desired position around the axis of the shaft 13 and also freely longitudinally of the shaft, so as to place the attachment in the required position relative to the grippers 11.

The free end of the bracket 15 is provided with a sleeve 23 which is formed integral therewith, and within the sleeve there is snugly fitted a turnable adjustable shaft 24, which as shown in Figs. 1 and 2 is cylindrical for the portion that is received in the sleeve 23. A wrench head set-screw 25 is threaded into the sleeve 23 so that its inner end may be tightened against the shaft 24, or may be freed therefrom for enabling a slight turn of the said shaft in either direction within the sleeve. Upon the cylindrical portion of the shaft 24, just beyond one end of the sleeve 23, there is located a collar 26

which is preferably knurled and into which is threaded a counter-sunk set-screw 27 for fixing the collar to said shaft. The collar 26 provides means for manually turning and adjusting the shaft 24 about its longitudinal axis.

The end of the shaft 24 beyond the collar 26 is formed with a peripheral eccentric portion 28 which furnishes a journal bearing for the perforating, slitting or scoring disk, and the outer end thereof is provided with an annular flange 29. A rotary circular head 30 is provided having a central hole 31 extending through it, wherein a bushing 32 is rigidly fixed as by brazing, soldering or otherwise, and said bushing has an annular flange 33 at its inner end between the sleeve 23 and the rotary head 30. The bushing 32 is held between the adjacent end of the sleeve 23 and the flange 29 so that it enables the head 30 to rotate around the eccentric portion 28 of the shaft 24.

A wheel or disk 34 is provided as shown in Figs. 1 and 2 with perforating teeth 35 which are adapted to come in contact with the sheet carried by the cylinder 10 and to perforate said sheet, or the edge of the disk 34 may be provided with other suitable means for impressing or acting upon the sheet. Set-screws 36 pass through suitable holes in the disk 34 and are threaded into the rotary head 30 for rigidly securing the disk to said head, and the combined thickness of the head and the disk preferably correspond to the length of the unflanged portion of the bushing 32. The screws 36 are removable so that other disks may be freely fixed to the head 30. An oil hole 37 extends through the bushing 32 so that the bearing surfaces of the bushing and the eccentric shaft portion 28 may be lubricated. In Fig. 6 a disk 38 is shown which may either be a slitting or scoring disk and may be placed upon the head 30 in substitution for the perforating disk 34.

When the improved attachment is mounted in proper position so that the perforating, slitting or scoring disk or wheel will contact with the sheet of paper, a final fine adjustment of the perforating or impressing edge of the disk relative to the sheet is obtained by loosening the set-screw 25, turning the shaft 24 slightly in one direction or the other until the desired final adjustment is obtained, and then retightening the screw 25. It is customary in the use of the attachment to start with light pressure and to work gradually up to the required amount by controlling the adjustment from the manual control member 26. Perforating, slitting and scoring may be done in any position of the sheet providing a gripper properly secures the sheet. By removing the knurled collar 26 forming the manual control member, the shaft 24 may be turned, end for end, making it possible to use the disks or wheels on either side of the

bracket 15. The parts of the frame including the supporting bracket and concomitant parts are preferably of unbreakable composition metal, the shaft 24 of steel, and the disks or wheels are preferably made of French finish tool steel, hardened and ground.

It is obvious that the invention is susceptible of modification as parts may be substituted, parts added or modified and the like and still be within the spirit of the invention as defined in the appended claims.

What is claimed as new, is:

1. In a printing press attachment, the combination of a supporting bracket, a turnable shaft supported thereon and having one end projecting beyond the bracket, securing means for holding the shaft against turning and longitudinal movement, the shaft having a peripheral rigid eccentric portion at its projecting end, a head rotatable on the outside of the eccentric portion, and having a central bushing bearing on the eccentric portion, and a disk attached to the head and having an impression edge adapted to rotate the disk and head by operating on the paper passing through the press.

2. In a printing press attachment, the combination of a supporting bracket, a shaft mounted in the bracket, adjusting means at one end of the shaft for turning the shaft, the shaft having a peripheral rigid eccentric portion at its other end outside of the bracket setting means for fixing the shaft in an adjusted position whereby to change the position of the eccentric portion with respect to the longitudinal axis of the shaft, the bracket and setting means being located between the adjusting means and the eccentric portion, and a disk rotatable on the eccentric portion by means of the printing cylinder, and having an impression edge for operating on the paper passing through the press.

3. In a printing press attachment, the combination of a supporting bracket, a turntable shaft supported thereon, securing means for holding the shaft against turning, the shaft having an integral peripheral eccentric portion at one end a flange on the outer end of the eccentric portion, a head rotatable on the eccentric portion, between the flange and the adjacent end of the bracket, and a disk carried by the head and having an impression edge adapted to rotate the disk and head by operating on the paper passing through the press.

4. In a printing press attachment, the combination of a supporting bracket provided at one end with means for mounting the attachment in operative relation to the printing cylinder, a transverse sleeve on the other end of the bracket, a shaft having a cylindrical portion journaled in the sleeve and an eccentric portion outside the sleeve, adjusting means on the cylindrical portion for turning the

shaft, a set screw threaded into the sleeve and engaging with the cylindrical portion of the shaft for setting the shaft in an adjusted position, a head having a bushing journaled
5 on the eccentric portion for free rotation, a disk fixed to the head and having an impression edge adapted to rotate the disk and head by operating in contact with the paper passing through the press, and means on the outer
10 end of the eccentric portion for confining the head and disk thereon.

5. In a printing press attachment, the combination of a supporting bracket provided at one end with means for mounting it in
15 operable relation to a printing cylinder, a turnable shaft supported on the other end of the bracket, securing means for holding the shaft against turning, the shaft having at one end an eccentric portion rigid with it, the
20 outer surface of which portion forms a journal bearing located outside of the bracket, and a disk having an opening which receives the eccentric journal bearing, the disk being rotatable thereon by means of the printing cylinder, and having a working edge for
25 operating on the paper passing through the press.

HARRY H. HANCOCK,
Deceased,

30 By HENRY A. SAWYER,
Administrator.

35

40

45

50

55

60

65