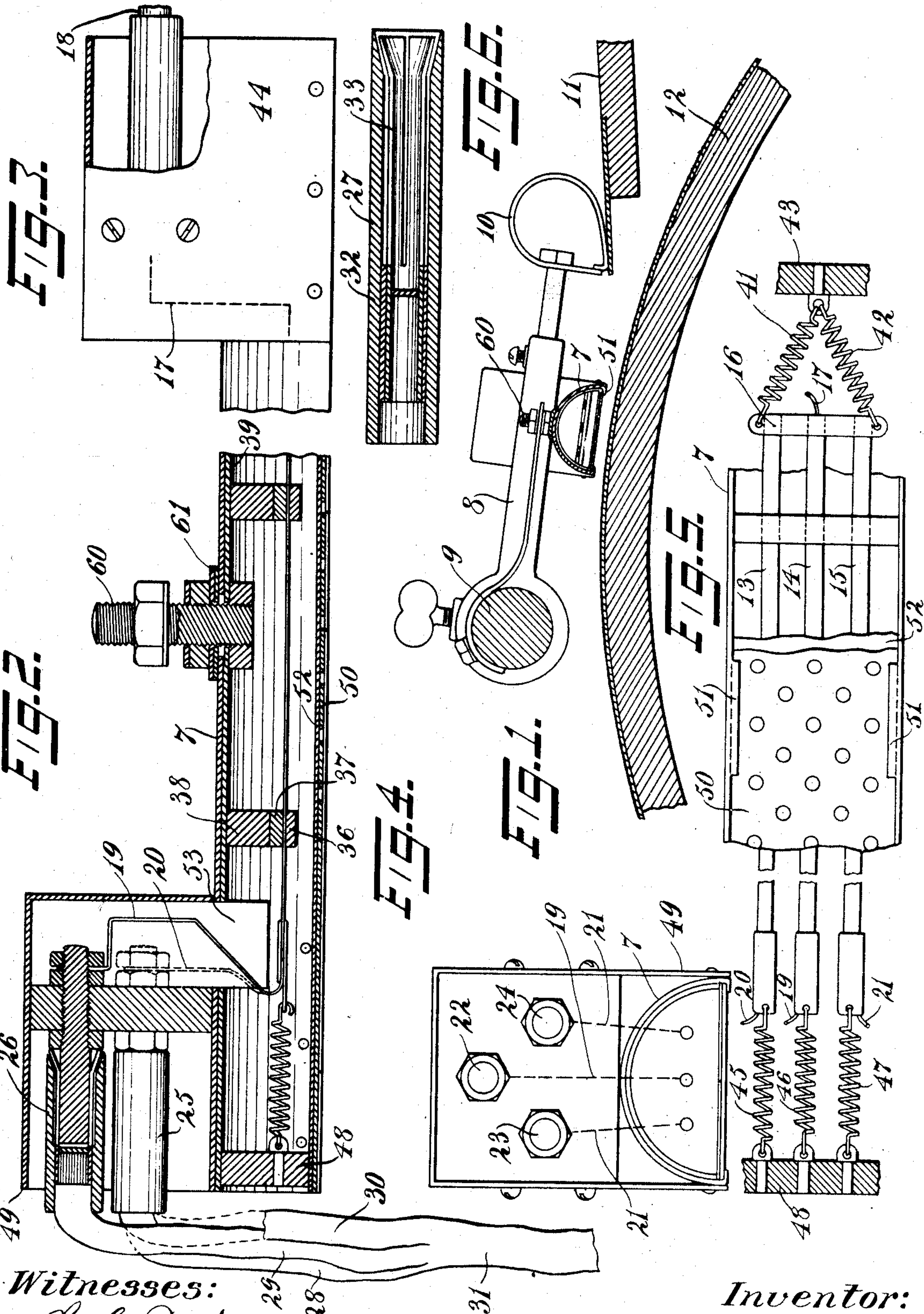


978,704.

Patented Dec. 13, 1910.



Witnesses:

L. C. Gadeau.  
H. D. Penney

Inventor:

William J. Daningburg,  
By his Attorney, J. H. Richard.



# UNITED STATES PATENT OFFICE.

WILLIAM J. DANINGBURG, OF NEW YORK, N. Y.

## ATTACHMENT FOR PRINTING-PRESSES.

978,704.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed July 5, 1910. Serial No. 570,374.

*To all whom it may concern:*

Be it known that I, WILLIAM J. DANINGBURG, a citizen of the United States, residing in New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Attachments for Printing-Presses, of which the following is a specification.

This invention has for its object to provide means for producing an intense heat in close proximity to the cylinder of a printing press adjacent the guides by electrical means, at the same time to prevent any danger of fire from undue heat being communicated to the paper that is being printed and delivered.

A further object is to provide means for readily controlling the amount or intensity of the heat generated.

In the accompanying drawing representing embodiments of my invention Figure 1 shows the device in section, as applied to a press. Fig. 2 shows enlarged a vertical section through one end portion of the device. Fig. 3 is a fragmentary view showing the other end. Fig. 4 is an end elevation of the device from the right hand end. Fig. 5 is a fragmentary bottom plan view, and Fig. 6 is a section through one of the plugs or terminals.

The device is shown as comprising a shell 7 shown as somewhat semi-circular and is suitably supported by arms 8 from the cross bar 9 that supports the guides 10 for a cylinder press in the usual manner. The guides cooperate with the feed table 11 and are raised and lowered in the usual manner well known in the art. The shell 7 is supported to be in close proximity to the cylinder 12 of the press between the guide and the cross bar. When the paper is fed in, the bar rocks and the guide rises as is well understood, and hence the shell will rise also a short distance. Upon completion of the revolution of the press the printed sheet will again pass under the guide rod 9 to be delivered to the tapes or the fly. At this time the guide 10 is not raised and the shield 7 will be in close proximity to the paper that at this portion of the revolution is held in contact with the cylinder.

The shell is provided with one or a series of electrical conductors extending from end to end in the shell and removed from its bottom plane so that they will not be too near the paper or cylinder. Three conductors 13,

14 and 15 are shown in the form of thin flat bands, that are preferably of some good resistance material such as German silver or similar composition. In the construction shown these conductors are secured at one end to a cross bar 16, and connect by a wire 17 with a terminal 18. At the other extremities of the bands, wires 19, 20 and 21 connect with three terminals 22, 23 and 24 whereby each of the bands has a separate terminal. Spring plugs 25, 26 and 27 are provided, one of which is shown separately in Fig. 6, and connect by wires 28, 29 and 30 with a lead wire 31. Each of these plugs comprises an insulating shell 32 and a conducting sleeve 33 that is longitudinally split to frictionally engage the plugs 22-24. By this means the current flowing in through wire 31 and having exit through wire 18, can be caused to pass through any one, or two, or all of the three bands as desired. And by having these bands of different ohmic resistance, seven different combinations can be produced. Preferably the current is taken from the resistance box of the electric motor that operates the press, when driven by a motor. Hence as the current is increased or diminished the amount of heat generated will vary according to the duty required. These bands preferably are supported by asbestos blocks 36, 37 on opposite sides that are suspended by lugs 38 from the shell 7. And the shell 7 that is preferably of metal is shown provided with a lining of asbestos 39. At each end the bands are elastically supported to prevent their sagging when they become heated as would otherwise be the case. The cross bar 16 is connected by wire coils 41 and 42 with an insulated piece 43 secured in the end casing 44 of the shell. At the other end the bands have springs 45, 46 and 47 connecting them with an insulating block 48 secured in the end casing 49. It will be seen that these bands are placed some distance inside of the bottom plane of the shell.

At the bottom of the shell is preferably provided an insulating band or plate, to prevent any possibility of the wires sagging to engage the paper or the paper rising up to engage the wire; thus preventing any possibility of fire or unduly heating the paper. The shell is provided at its bottom with a plate 50 of perforated metal that is held in place by lugs 51 bent inwardly at the bottom of the shell. On top of this plate inside



of the casing is placed a thin layer or sheet of suitable insulating material such as asbestos 52, that will permit heat to be radiated from the device yet absolutely prevent any possible contact or arcing between the electrically heated bands and the bottom plate, or the sheet of paper on the cylinder. The shell is shown as secured to the bars 8 that are fast on the rock bar 9, by bolts 60 secured to the top of the shell and suitably insulated therefrom by mica washers 61 on the outside and by the asbestos lining of the shell 39 on the inside. The effect of this heating device is to take the dampness and moisture of the sheet before it passes around the cylinder and is printed. And when the printed sheet again passes beneath the electrical heater, it will have the effect of drying and setting the ink, and thereby preventing the effect known as offset when the sheets are delivered, and especially when they are jogged up. This heater will also perform the function of removing or preventing the static electric charge that is frequently present in printed sheets which tends to prevent their being lined up on the delivery board.

Having thus described my invention, I claim:

1. In a cylinder press, the combination with the cylinder, the feed table and the guides, of a shell extending across the cylinder in close proximity thereto a short distance beyond the guides, electric conductors extending longitudinally in the shell located inside of the bottom plane of the shell, and an insulating plate carried by the shell below the conductors.

2. In a cylinder press, the combination with the cylinder, the feed table and the guides, of a shell extending across the cylinder in close proximity thereto near the guides, electric conductors extending longitudinally in the shell located inside of the bottom plane of the shell, said shell being

carried by the guide supports of the press to be raised and lowered therewith.

3. In a cylinder press, the combination with the cylinder, the feed table and the guides, of a shell extending across the cylinder in proximity thereto a short distance beyond the guides, electric conductors extending longitudinally in the shell and located inside of the bottom plane of the shell, and spring members at the end portions of the conductors, the said springs having their connection with the shell insulated therefrom.

4. In a cylinder press, the combination with the cylinder, the feed table and the guides, of a shell extending across the cylinder in proximity thereto a short distance beyond the guides, electric conductors extending longitudinally in the shell and located inside of the bottom plane of the shell, spring members at the end portions of the conductors, the said springs having their connection with the shell insulated therefrom, the device having a terminal at one end connected with the conductors independent of the springs, the other end of the device having a separate terminal for each conductor, and a wire connecting the terminals with each of the said conductors.

5. In a cylinder press, the combination with the cylinder, the feed table and the guides, of a shell extending across the cylinder in close proximity thereto a short distance beyond the guides, electric conductors extending longitudinally in the shell located inside of the bottom plane of the shell, an insulating plate carried by the shell below the conductors, and a strip of metal outside of said insulating strip.

WILLIAM J. DANINGBURG.

Witnesses:

FRED. J. DOLE,  
WILLIAM H. REID.