H. C. GAMMETER.

PAPER STRIPPING DEVICE FOR PRINTING PRESSES.

APPLICATION FILED MAY 14, 1908.

970,441. **Patented Sept. 13, 1910.**

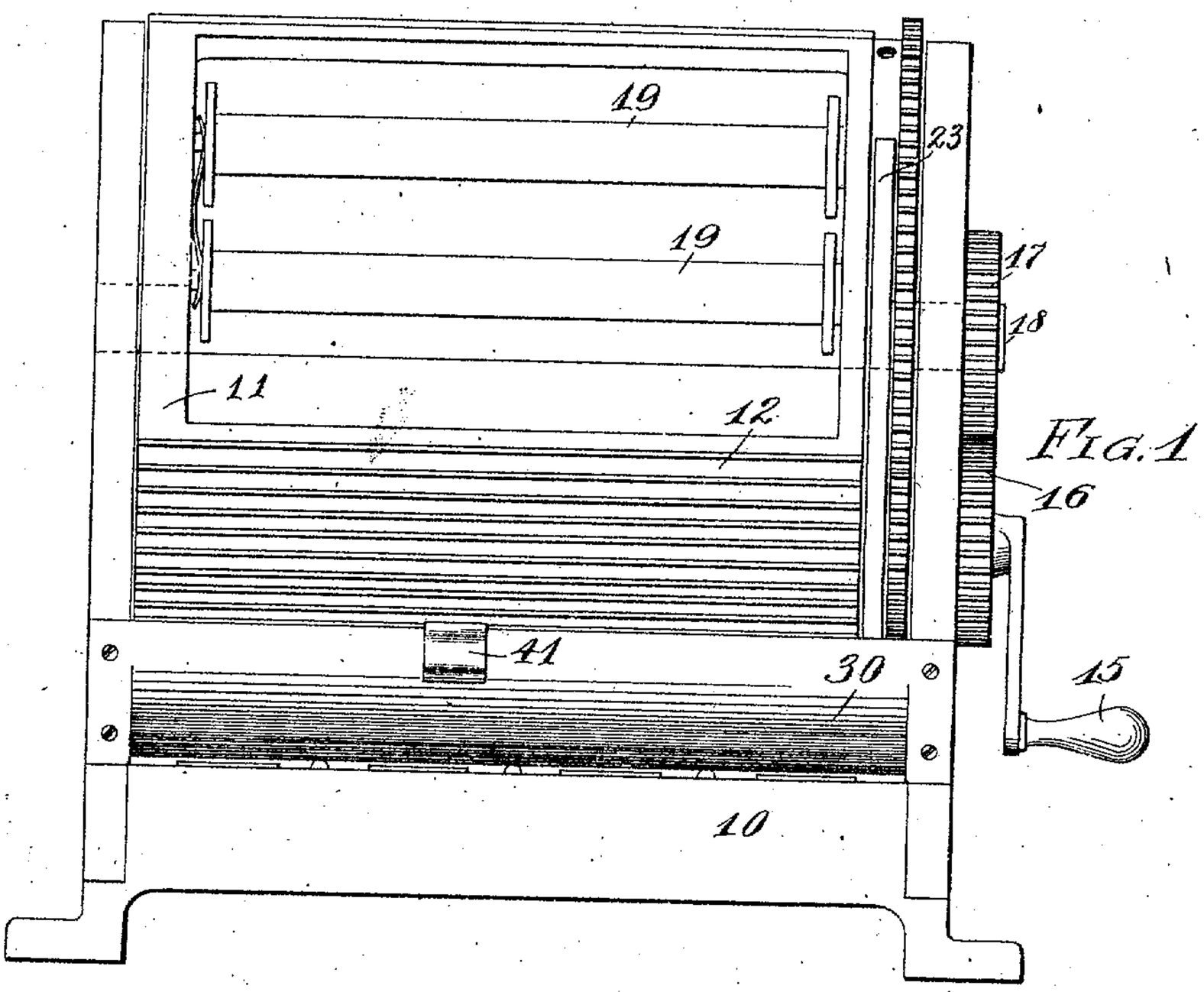

FIG. 1

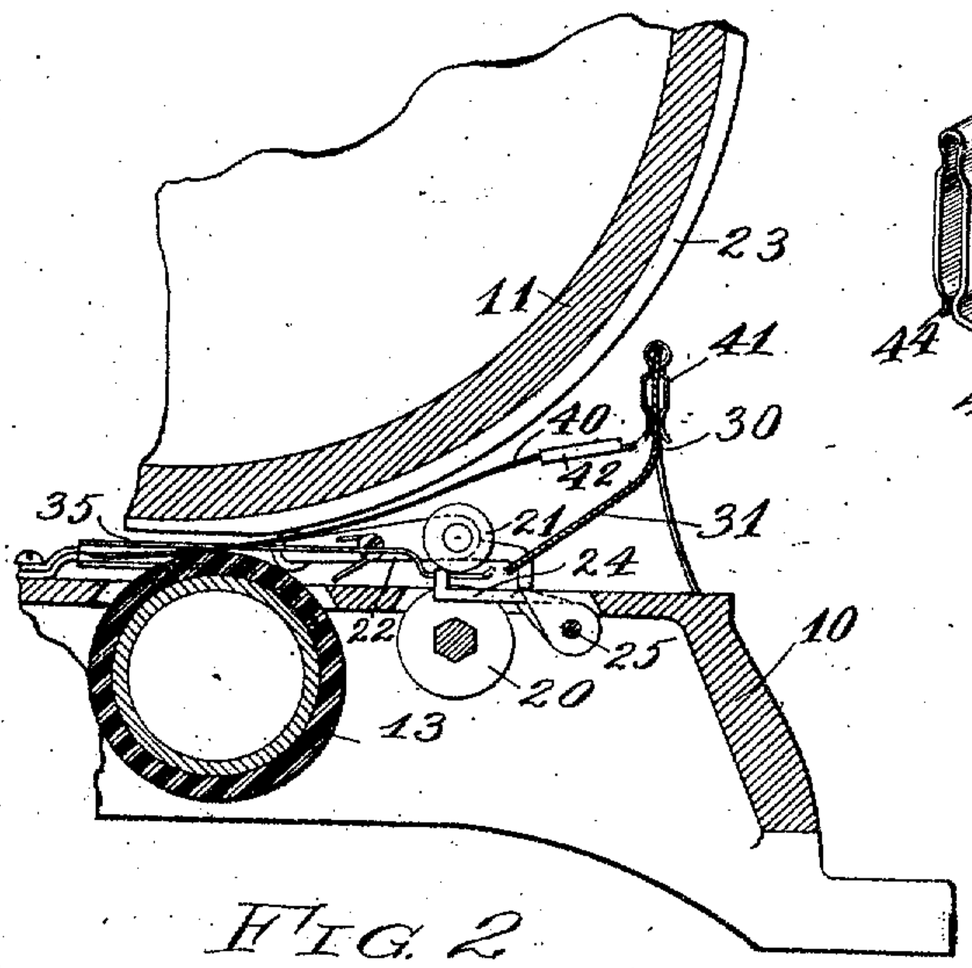

FIG. 2

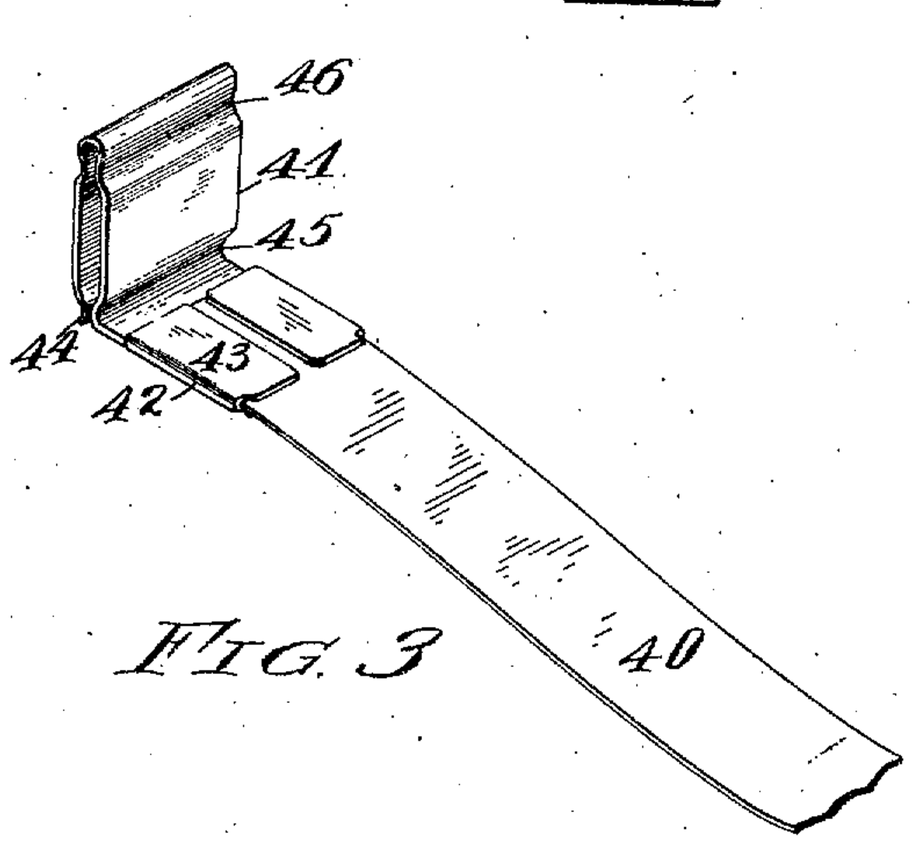

FIG. 3

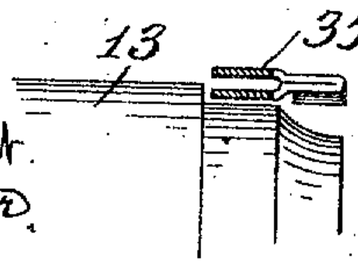

FIG. 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

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PAPER-STRIPPING DEVICE FOR PRINTING-PRESSES.

970,441. Specification of Letters Patent. **Patented Sept. 13, 1910.**

Application filed May 14, 1908. Serial No. 432,776.

To all whom it may concern:

Be it known that I, HARRY C. GAMMETER, a citizen of the United States, residing at Bratenahl, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Paper-Stripping Devices for Printing-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a very simple and efficient mechanism for stripping the paper from a printing couple.

The invention is particularly well adapted for use in connection with an office printing press of the type known as the "multigraph" or the "Gammeter printer", wherein there is a rotary drum carrying rows of individual type, the paper being fed between such drum and a rotary impression platen. In such machines, I have heretofore provided stationary stripping members which engage the edge of a sheet of paper when of full width, and prevent its clinging to the printing drum, there being a tendency to cling due to the adhesive character of the ink or inky fabric, or to frictional electricity.

In the present invention, I provide a removable stripping device, which may be used when the paper is of less than the maximum width. This device consists of a strip of material so held that it extends over the margin of the paper as it passes between the printing cylinder and the impression platen, the strip thus extending crosswise beyond the ends of the successive lines of type, as they are brought into coöperation with the platen. The strip is carried by a clip which is adjustably seated on the front guard plate of the machine. To prevent marring of the type should the strip be improperly placed and impressed by the type, I form the strip preferably of paper or other comparatively soft material, and I carry it removably by the clip, so that, if it is impressed by type, it is simply thereby drawn out of the clip and fed out of the rearmost side of the machine with the paper. Thus no harm is done by accidental displacement.

The invention comprises broadly a paper stripper of comparatively soft material, as well as any paper stripper removably held so that in case of accident, it may be fed through the machine. The particular embodiment of the stripper shown and hereinafter more fully described is also comprised within my invention.

As shown in the drawings, Figure 1 is a front elevation of a Gammeter printer with my paper stripper applied thereto; Fig. 2 is a portion of a vertical cross section through the same; Fig. 3 is a perspective view of the stripper; Fig. 4 is a detail near the platen end.

As shown in Figs. 1 and 2, the printing machine shown comprises a frame 10, a printing drum 11, having rails 12, between which may be mounted rows of individual type, which coöperate with a suitable soft under-running rotary platen 13. The printing drum is shown as driven by a crank 15, which, through gears 16 and 17, drives the shaft 18 on which the drum is mounted. Mounted in the recess in this drum may be ribbon spools 19 carrying a ribbon adapted to extend around the drum over the type to ink it.

To feed the paper, there may be employed a lower feed roll 20, continuously driven, an upper feed roll 21, mounted on pivoted arms 22 and controlled by a cam 23 on the printing drum. Suitable stop fingers 24 may be depressed whenever the upper roll 21 is drawn out by means of a projection on one of the arms 22 operating an arm on the rock shaft 25, on which the fingers 24 are keyed. This paper feed is substantially the same as that shown in my prior Patent No. 846,992, and operates to feed the paper to the impression line of the drum and platen.

In multigraphs and Gammeter printers made in accordance with the above described construction, there is a front guard plate 30, stationarily carried by the frame of the machine and extending across the printing drum a suitable distance in front thereof, and in front of the paper feed. The lower portion of this guard plate, intermediate of the parts by which it is fastened to the frame, is turned inward, as shown at 31, to form a convenient guide-way for the paper being fed by hand to the feed rollers. I mount my removable paper stripper on this guard plate and adjust it into such position laterally that it may lie over the margin of

the paper being fed, the other margin of the paper being in line with one of the permanent paper strippers carried by the base of the machine at the end of the platen, as shown in my application Serial No. 339,909. These permanent strippers consist of a bent-over piece of metal, as shown at 35, adapted to lie on the upper and lower sides of the sheet.

My removable stripper consists of the strip 40 of paper or similar material, for example, Manila tag, and the metal clip 41 which carries it and which is adapted to seat over the upper edge of the guard plate 30. This metal clip is bent on itself, as shown in Fig. 3, so that it may easily pass over the upper edge of the guard plate and then is bent laterally at 42, and wings 43 on such lateral portion are bent over onto the intermediate part of the lateral portion to frictionally clamp the paper strip between them. The extreme free edge of the clip is turned outwardly at 44 to allow it to be easily passed over the upper edge of the guard plate, and this clip has a spring action by reason of being bent closer together at 45 and 46.

To place my removable paper stripper in position, the strip is simply passed into the space over the guard plate and between the drum and platen, and the clip is shoved down onto the guard plate. The stripper may be located at any point along the guard plate, being so placed as to extend over one margin of the paper, when the other margin is in one of the permanent strippers. By this means, any size of paper may be accurately and positively guided through the machine and is prevented from clinging to the printing drum. If the paper stripper is placed too close to the type form, so that, in rotating, the type impresses the stripper 40, this strip is, by such action drawn out of the clip and fed out of the rear of the machine, and no damage is done, such as would be the result if the stripper were made of metal.

Having thus described my invention, I claim:

1. The combination with a rotary printing couple, of a stripper projecting from its support in the general direction of travel of the couple and so held as to be readily removable by a pull in the direction of its length, and having a free end portion extending between the couple.

2. The combination, with a printing couple, of a stripper comprising a holder and a strip frictionally retained thereby but removable in the direction of its length, said strip projecting from the holder between the members of the couple toward the direction of their common travel.

3. The combination with a printing couple, of a stripper having a spring clip and a strip normally held thereby but adapted to be fed through the machine in case of displacement.

4. The combination, with a printing couple, one member of which is adapted to turn on an axis, and a stripper having a strip adapted to extend between the members of the couple and being so held that if impressed by the members it may be withdrawn from its holding device and fed through the couple.

5. The combination, with a printing couple, one member of which is adapted to turn on an axis, and a stripper having a removable spring clip which holds a soft strip adapted to extend between the members of the couple, said strip being so held that if impressed by the members it may be withdrawn from the clip and fed through the couple.

6. The combination, with a printing member and an impression platen, one of which is mounted to turn on an axis, a stripping strip, and means for frictionally and removably holding the same on the intake side of the couple, while allowing excessive pressure to withdraw the strip in the direction of travel of the paper being printed.

7. The combination, with a printing couple, of a stripper comprising a spring clip adapted to be mounted on the edge of a plate, and a strip frictionally held by said clip.

8. The combination with a printing couple, of a removable stripper having its body separable from its head.

9. The combination with a rotary printing couple, mechanism for feeding paper thereto, a removable stripper having a frictionally held member adapted to extend between the members of a couple and be removed from its holding device if impressed by the couple.

10. The combination, with a rotary printing drum, a rotary under-running impression platen, paper feed rollers, means mounted on the drum for controlling such feed rollers whereby paper may be fed at the proper time between the drum and platen, and an adjustably located stripping device extending over the feed rollers and adapted to pass between the drum and platen adjacent to the type form on the drum.

11. The combination of a rotary printing couple, a guard plate in front thereof, a stripping device adjustably mounted on said guard plate, and a paper feeding device located between the guard plate and printing couple, and beneath the stripping device.

12. The combination with the frame of a machine, of an impression platen and a surmounting rotary type carrying drum, of a guard plate carried by the frame of the

machine substantially in front of the line of coöperation of the drum and platen, paper feed rollers located substantially between the guard plate and the platen, and a stripping device carried by the guard plate and extending across the feed rollers and between the drum and platen.

13. The combination with the frame of a machine, of an impression platen and a surmounting rotary type carrying drum, of a guard plate carried by the frame of the machine substantially in front of the line of coöperation of the drum and platen, and a stripping device carried by the guard plate and extending between the drum and platen, said stripping device comprising a clip adapted to be clamped on the upper edge of the guard plate, and a strip frictionally held to the clip.

14. The combination with an impression platen and a rotary type carrying drum, of a guard plate carried substantially in front of the line of coöperation of the drum and platen, and a stripping device carried by the guard plate and extending between the drum and platen, said stripping device comprising a spring clip adapted to be clamped on the upper edge of the guard plate, and a soft flexible strip frictionally clamped to the clip by means of a portion of the clip being bent onto the strip.

15. As a new article of manufacture, a stripping device comprising a head and a comparatively soft non-metallic strip removably held thereto.

16. As a new article of manufacture, a stripping device comprising a metallic head, and a strip of paper frictionally held thereto by being clamped between members of the head.

17. A stripping device comprising a sheet metal head having wings bent over onto the body of the head, and a flexible non-metallic strip removably clamped by said wings against said body.

18. The combination with a rotary printing couple, of a removable and adjustable stripping device, said stripping device comprising a spring clip, and a strip of non-metallic flexible material frictionally clamped thereto.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

HARRY C. GAMMETER.

Witnesses:
ALBERT H. BATES,
A. J. HUDSON.