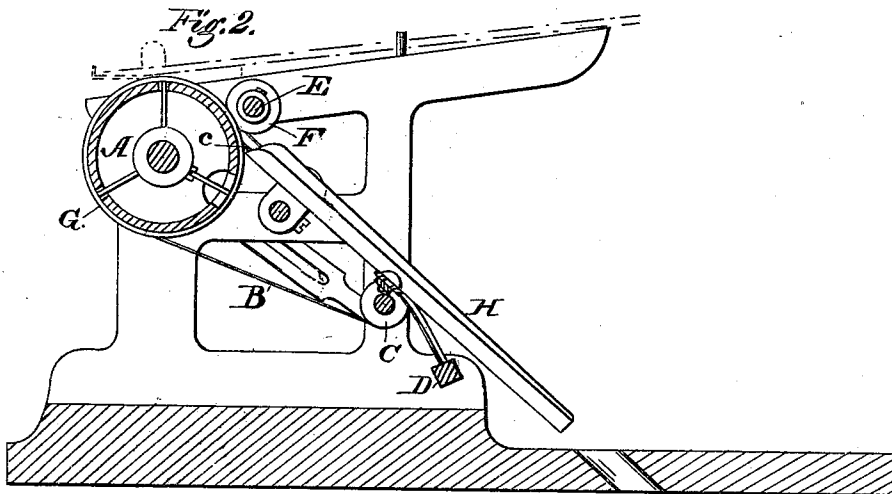
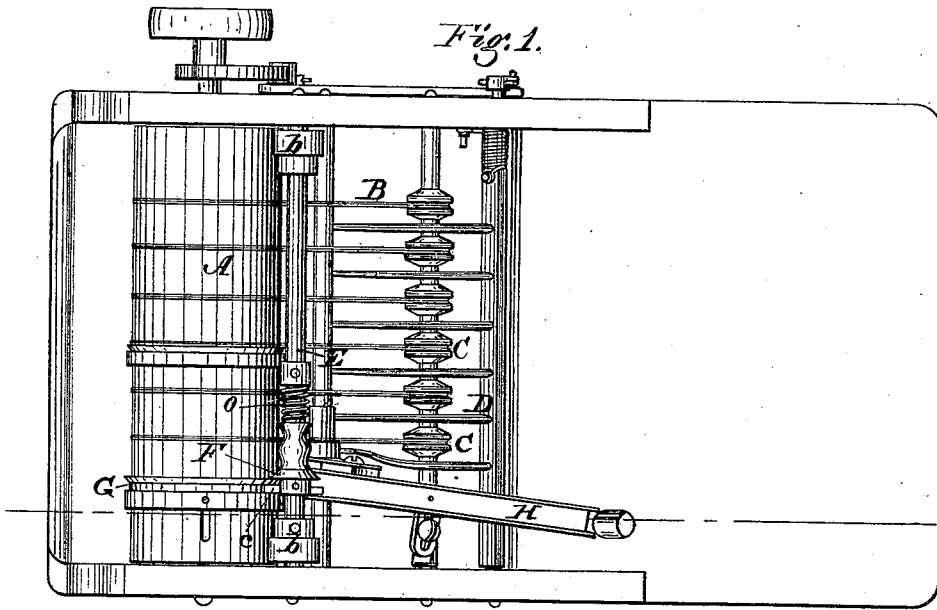


W. H. H. CLAGUE.

TRIMMING MECHANISM FOR PRINTING PRESSES

No. 178,597.

Patented June 13, 1876.



WITNESSES:

Will H. Dodge.
Orrin Twitchell.

INVENTOR:

W. H. H. Clague.
By his attys.
Dodge & Son.

UNITED STATES PATENT OFFICE.

WILLIAM H. H. CLAGUE, OF ROCHESTER, N. Y., ASSIGNOR OF TWO-THIRDS
HIS RIGHT TO ROBERT B. RANDALL AND EZRA R. ANDREWS.

IMPROVEMENT IN TRIMMING MECHANISMS FOR PRINTING-PRESSES.

Specification forming part of Letters Patent No. **178,597**, dated June 13, 1876; application filed
November 11, 1875.

To all whom it may concern:

Be it known that I, WILLIAM H. H. CLAGUE, of Rochester, in the county of Monroe and State of New York, have invented certain Improvements in Trimming Mechanism for Printing-Presses, of which the following is a specification:

My invention consists in combining, with the delivery-cylinder or its equivalent of a power-press, a cutter for trimming the edge of the printed sheet, and a chute or other device for carrying the trimmings away and preventing their return into the press.

The object of my invention is to provide a press in which the printed sheet will at the first impression be automatically and accurately trimmed in line with the edge of the printed matter, so that at the second impression it may be fed from a guide accurately into the press without the employment of the usual register-points, and trimmed on the remaining edge with the same accuracy as on the first.

The advantages arising from these operations are very important: First, the sheets are given a finish and neatness of appearance superior to that of the ordinary untrimmed sheets; second, the trimmings are of sufficient value to pay the hire of one of the attendant feed-boys; third, the trimming of the sheets enables a single attendant to feed them for the second impression, so that one of the usual attendants may be dispensed with; and, fourth, the sheets, leaving the press in the accurately-trimmed condition, may be fed to a folding-machine with great ease, accuracy, and rapidity.

In carrying out my invention the devices may be modified somewhat in construction and arrangement; but I prefer to employ a rotary knife working against the edge of a band placed around the delivery drum or cylinder, and to arrange an inclined trough or chute below said knife, to catch the trimmings and conduct them to a receptacle provided for the purpose.

Figure 1 represents a top-plan view of the delivery drum or cylinder and delivery-bands of a power-press with my devices applied there-

to. Fig. 2 represents a vertical transverse section of the same.

A represents the delivery drum or cylinder; B, the bands or tapes passing around the same, and C the pulleys by which the lower ends of the bands are carried, the said parts being constructed and arranged as usual in a press of any ordinary construction, so that the sheets coming from the impression-cylinder will be seized by the delivery-cylinder and passed down upon the tapes, from which they are removed by the fly D, in the ordinary manner.

In applying my improvements, I secure around one end of the cylinder A, in such position as to come under the outer edge of the printed sheet, a band of metal, G, and also secure by the side of the cylinder, parallel therewith, a shaft, E, carrying a circular bevel-edged cutter, F, the edge of which works closely by the side of the band G, as shown in Figs. 1 and 2, so that as the sheets pass from the cylinder upon the tapes the knife will trim off the edge with accuracy and evenness, and all at precisely the same distance from the margin of the printing. In order to insure a proper action of the knife, it is arranged to slide sidewise on the shaft, and has a spiral spring, *a*, arranged behind it, to hold it up in contact with the side of the band G.

The shaft which carries the cutter is, in the present instance, provided with and driven by friction-pulleys *b*, secured upon its ends, and bearing upon the ends of the cylinder, as shown; but any other suitable driving mechanism may be employed, if preferred.

In order to catch the trimmings, and prevent their possible return into the press, I arrange an inclined trough or chute, H, in the position shown, with its upper end immediately below the rotary cutter, so that as the trimming is severed it slides down within the trough, the lower end of which will be arranged to direct them through a hole in the bank, or into a receptacle placed in any suitable position. For the purpose of insuring the entry of the trimmings into the trough, and to prevent all danger of their binding or crimping, I provide the upper end of the

trough with a lip or finger, *c*, extending upward, and resting in a groove in the band *G*, so that it rests under the edge of the sheet before it is separated by the cutter.

In order to adapt the press for sheets of different widths, the band *G*, the knife, and the trough are all secured in such manner that they may be moved laterally.

Instead of arranging the cutter in the precise manner shown, it may be modified as circumstances may require; and instead of employing the trough to carry off the trimmings, an endless band or tape, or suitable gripping-fingers, may be employed.

It will also be understood that, in presses using a reel or series of wheels instead of a drum to carry the bands, the edge against which the knife acts may be on one of the pulleys.

Having thus described my invention, what I claim is—

1. In combination with the delivery drum or cylinder of a printing-press, a band, *G*, or its equivalent, applied thereto, and a rotary cutter, *F*, operating in connection therewith, as

shown and described, for the purpose of trimming the edges of the printed sheets accurately in line with the printing.

2. In a printing-press, the combination of a delivery drum or reel, a rotary cutter arranged to trim the edge of the sheet as delivered, and a trough or equivalent device to receive the trimmings and conduct them away.

3. The combination of the drum *A*, band *G*, cutter *F*, and trough *H*, as shown.

4. The combination of the drum *A*, having the band *G*, and the shaft *E*, provided with the cutter *F* and pulleys *b*, substantially as shown.

5. The combination of the cylinder *A*, the band *G*, knife *F*, and trough *H*, all made adjustable laterally.

6. In combination with the cylinder *A*, knife *F*, and trough *H*, the lip *c*, as and for the purpose set forth.

WILLIAM H. H. CLAGUE.

Witnesses:

P. T. DODGE,
W. C. DODGE.