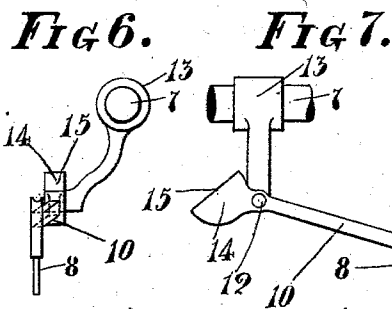
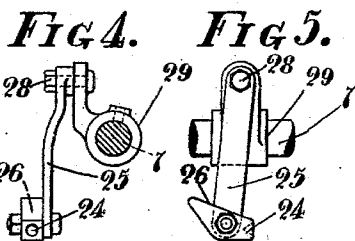
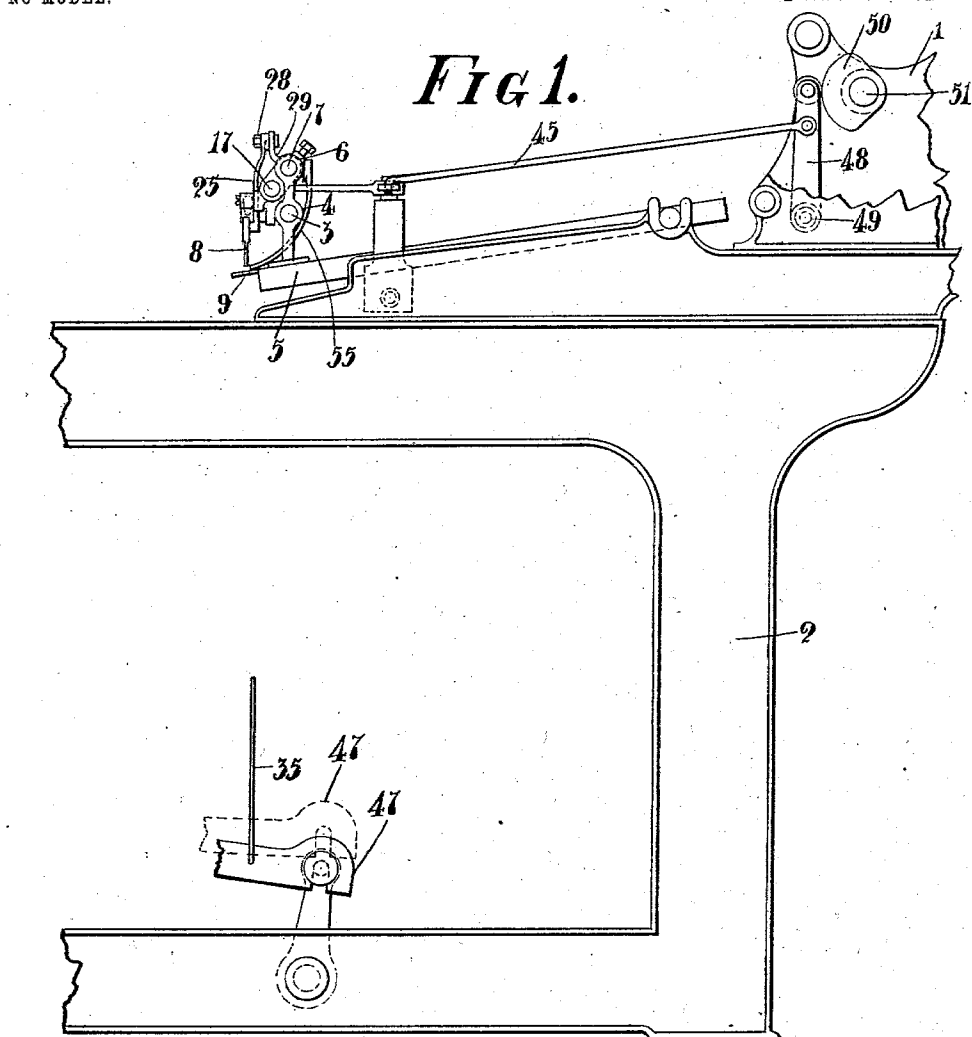


J. BOYLAN.
FEEDING MECHANISM.

APPLICATION FILED AUG. 30, 1900. RENEWED OCT. 10, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Attest
Isabella Waldron

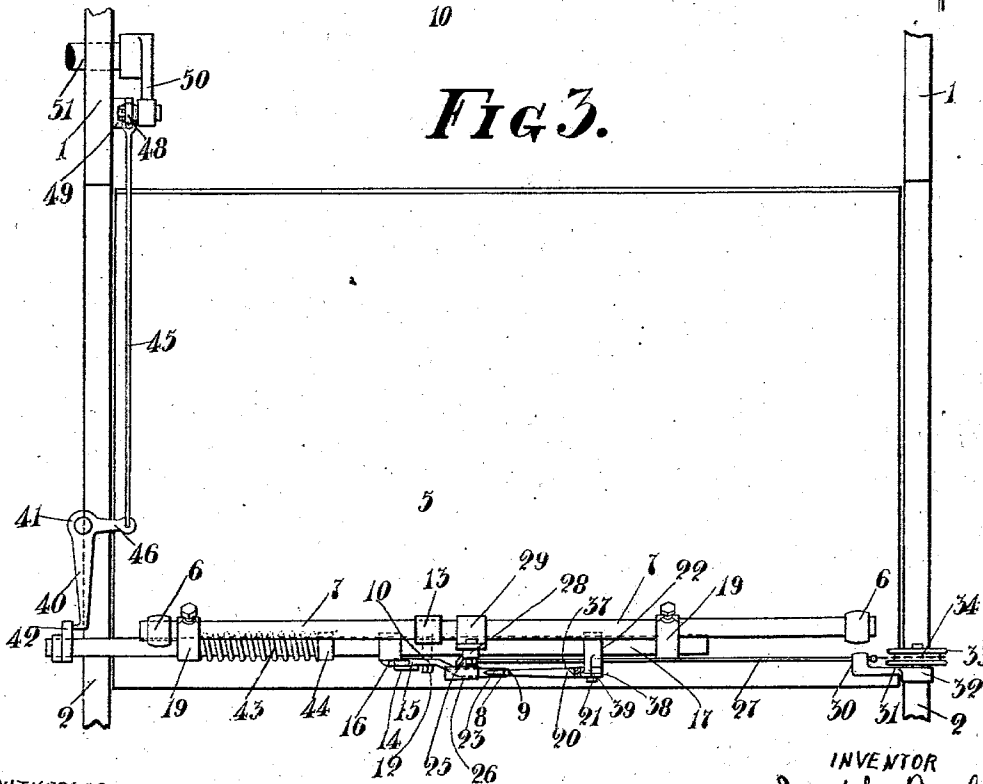
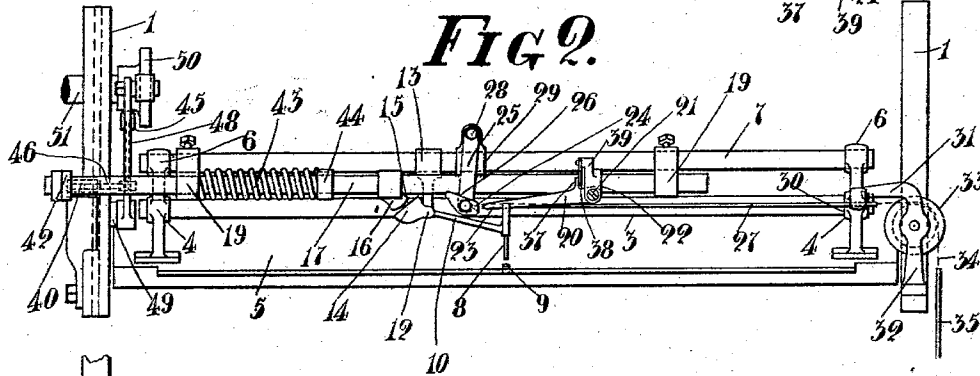
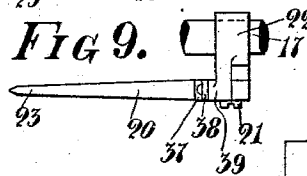
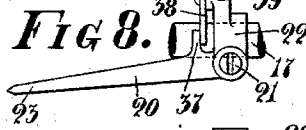
INVENTOR
Joseph Boylan.
BY *Richards & Co.*
ATTORNEYS

J. BOYLAN.
FEEDING MECHANISM.

APPLICATION FILED AUG. 30, 1900. RENEWED OCT. 10, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES:

Ottomun
Isabella Waldron

INVENTOR
By Joseph Boylan
Richards & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH BOYLAN, OF BRADFORD, ENGLAND.

FEEDING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 730,602, dated June 9, 1903.

Application filed August 30, 1900. Renewed October 10, 1902. Serial No. 126,801. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BOYLAN, a subject of the Queen of England, residing at 98 Rupert street, Bradford, England, have invented certain new and useful Improvements in or Appertaining to Feeding Mechanism, of which the following is a specification.

This invention relates to improvements in or appertaining to the feeding of printing and similar machines, and particularly applicable to automatically-fed cylinder printing-machines; and its object is to provide means for automatically "checking" or stopping the cylinder in case the automatic feed fails to supply a sheet and to keep it "checked" until a sheet is again automatically fed.

In the accompanying drawings, Figure 1 represents a side elevation of such parts of a printing-machine as are necessary to illustrate the application of the invention. Fig. 2 is a cross view of the same looking toward the lower end of the feed-table. In this view the lower portion of the side frames and the parts beneath the feed-table are omitted. Fig. 3 is a plan view. Figs. 4 to 9 are views of certain of the parts shown separately on a larger scale.

A portion of the side frames 1 of an automatic feeder is shown fixed on the ends of the side frames 2 of an ordinary cylinder printing-machine. The bottom lay-rod 3 is supported in standards 4, secured to the feed-table 5 and having upward extensions 6, rigidly supporting the stay-rod 7.

The stop-rod mechanism consists of a feeler or pin 8, located over a hole 9 in the feed-table 5. The feeler is fixed on the end of the arm 10, pivoted by the stud 12 to the pendent bracket 13, rigidly fixed to the stay-rod 7. The end of the arm is provided with a balance-weight 14, slightly heavier than the arm 10 and pin 8, which weight is inclined on its upper face 15, and a projection 16 on the longitudinally-sliding shaft 17 above engages the face 15 and raises the feeler out of the hole in the feed-table each time a sheet should be fed and allows the sheet to pass beneath the feeler. When the incline 15 is disengaged on the return stroke of the shaft 17, the feeler falls down again and rests upon the sheet.

If, however, a sheet has not happened to be fed, the feeler falls back into the hole 9.

An approximately horizontal finger 20 is pivoted on the stud 21, fixed in the bracket 22 on the sliding shaft 17, mounted in bearing-pieces 19, rigidly secured to the stay-rod 7. The finger 20 has a pointed end 23, supported on the top of the feeler. When the feeler is resting upon a sheet, the finger is supported above the hole 24 on the lower end of the pendent arm 25, and consequently when it reciprocates with the shaft 17 it slides up the inclined face 26 on such arm and releases the weight of the feeler on the sheet, leaving the latter free to be "registered." In case, however, the feeler-arm falls to its lowest point, owing to a sheet not having been fed, the path of the point of the finger 20 is sufficiently lowered to allow it to engage the hole 24 and by its further movement to swing said arm on its pivot-stud 28 in the collar 29 on the stay-rod 7. A rod 27 is connected to the pendent arm 25, and the outer end of this rod rests in the eye 30 in the arm 31 of the standard 32. This standard carries a pulley 33, around which the chain 34, connected to the rod 27, passes, and the outer end of this chain is coupled, by the rod 35, to the check-lever 47, Fig. 1, one form or another of which is used in this class of printing-machine to temporarily stop the impression. The standard 32, pulley 33, and the rod 27 are omitted in Fig. 1, so as to show the parts behind in full.

It will be seen that each time a sheet fails to be fed the lever 47 is lifted, as shown by the broken lines, and the machine is checked, exactly as if it were done by an attendant, and that as soon as a sheet is supplied the check is removed—that is to say, put out of action—and the lever 47 reengages the stud it is intended to actuate and the pendent arm 25 is drawn back again to the position shown.

A light spring 38, fixed to the projection 39 on the bracket 22, is preferably provided to bear against the pin 37 in the finger and tends to depress such finger, as well as the arm 10.

The sliding shaft 17 is moved outward by the arm 40 on the bell-crank lever 41 engaging the projection 42 on such shaft, and the

spring 43, compressed between one of the bearing-pieces 19 and the collar 44 on the shaft, moves the shaft in the reverse direction.

- 5 The lever 41 is actuated by the rod 45 coupling its arm 46 to the lever 48, pivoted upon the stud 49 and vibrated by the cam 50 on the driving-shaft 51 of the automatic feed.

- 10 The curved guide-finger 55, (shown only in Fig. 1,) fixed to the stay-rod 7, is provided to guide the edge of the sheet under the feeler 8 in case the edge of the sheet should be curled or raised up high enough to catch the side of the feeler.

- 15 Figs. 4 and 5 are two views, at right angles to each other, of the pendent arm 25 and the collar 29.

Figs. 6 and 7 are two views, at right angles to each other, of the feeler-arm 10 and the pendent bracket 13. 20

Figs. 8 and 9 are a front view and a plan view of the finger 20 and bracket 22.

I claim—

The combination with the feeler 8, of the finger 20 carried by the reciprocating shaft 17 25 and the pendent arm 25 connected to the cheek device, all arranged and operating substantially as herein shown and described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOSEPH BOYLAN.

Witnesses:

SAMUEL A. DRACUP,
CECIL A. S. BAXTER.