June 28, 1955 C. F. ROOT 2,711,692

CURVED PLATEN PRESS

Filed Sept. 28, 1951 4 Sheets-Sheet 1

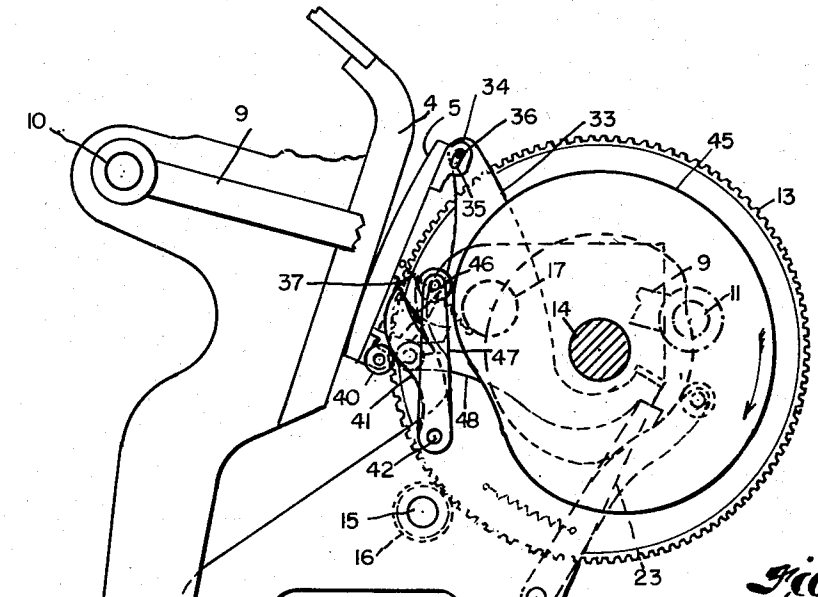


Fig. 1

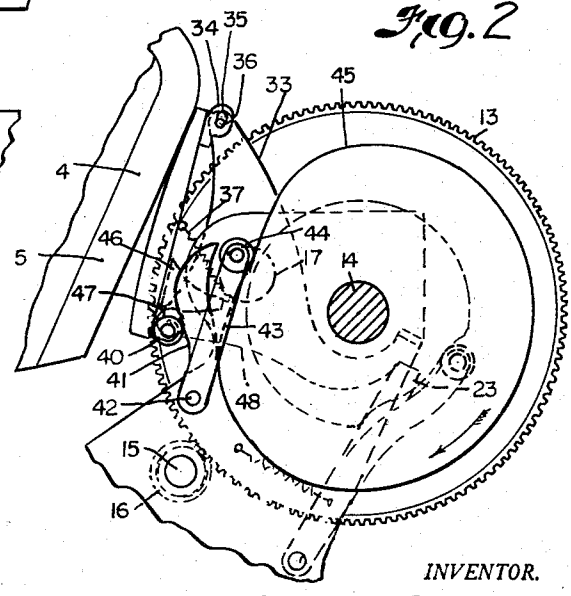


Fig. 2

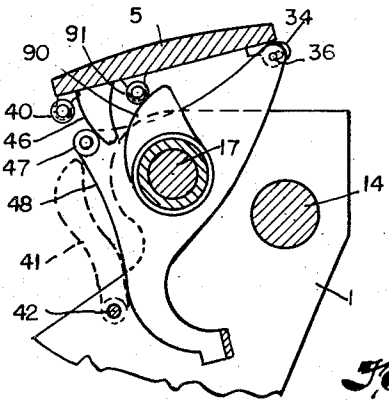


Fig. 10

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June 28, 1955 C. F. ROOT 2,711,692

CURVED PLATEN PRESS

Filed Sept. 28, 1951 4 Sheets-Sheet 2

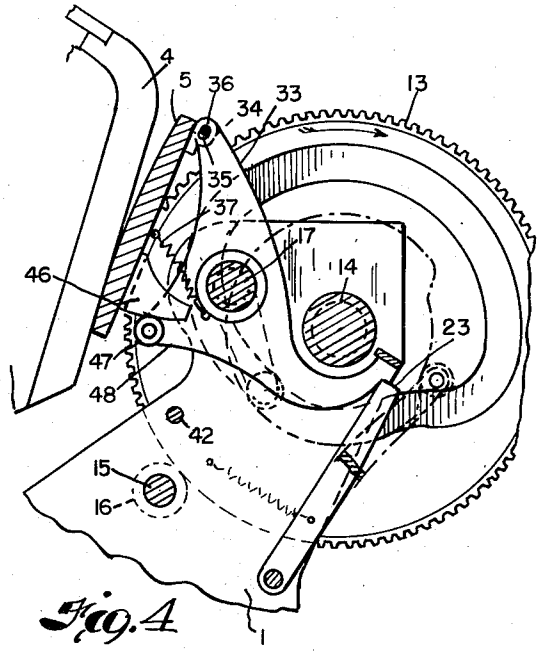


Fig. 4

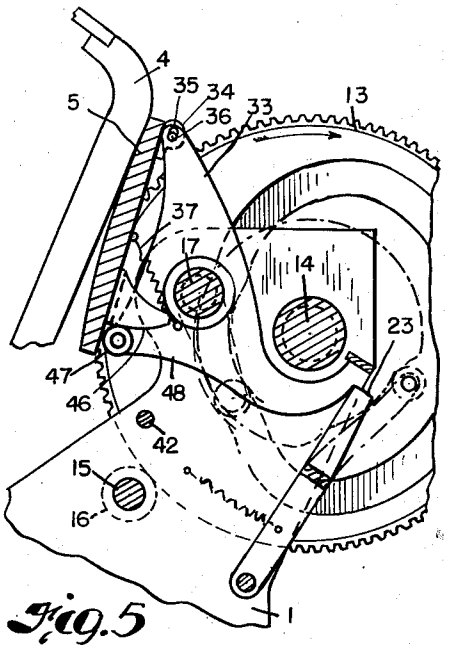


Fig. 5

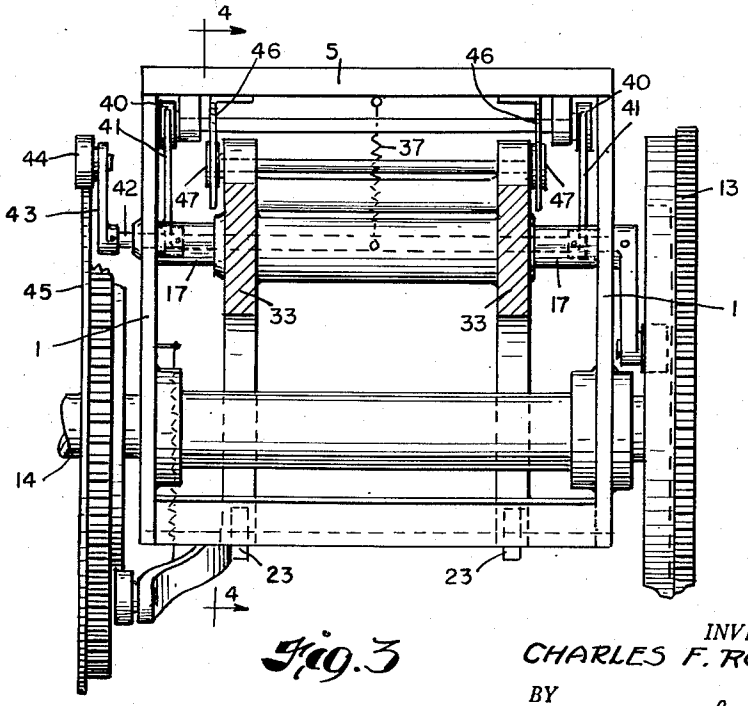


Fig. 3

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June 28, 1955 C. F. ROOT 2,711,692

CURVED PLATEN PRESS

Filed Sept. 28, 1951 4 Sheets-Sheet 3

Fig. 6

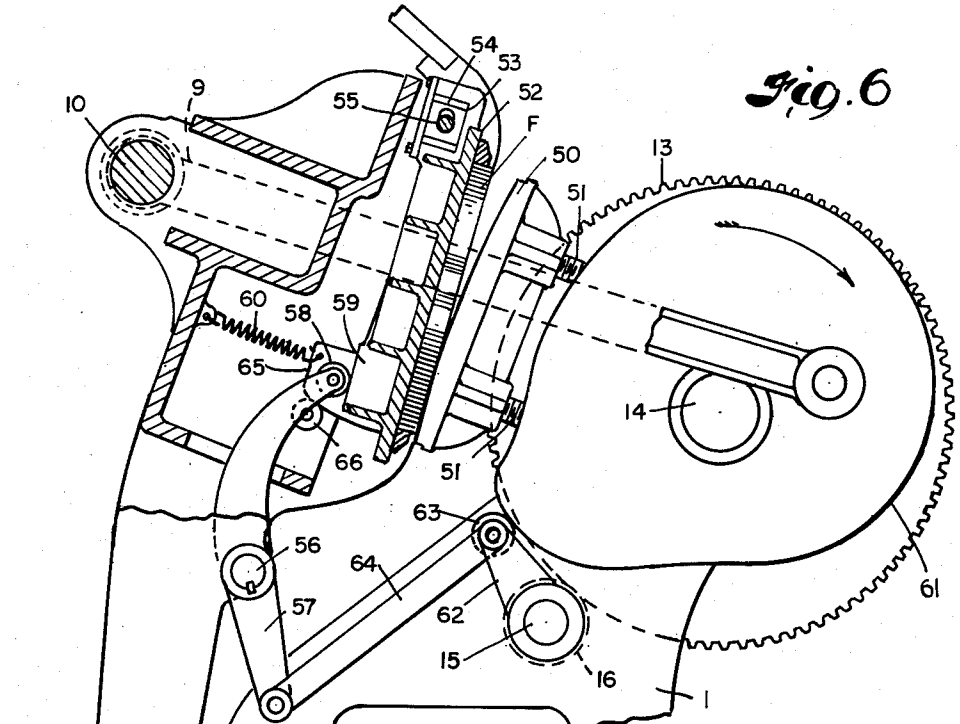
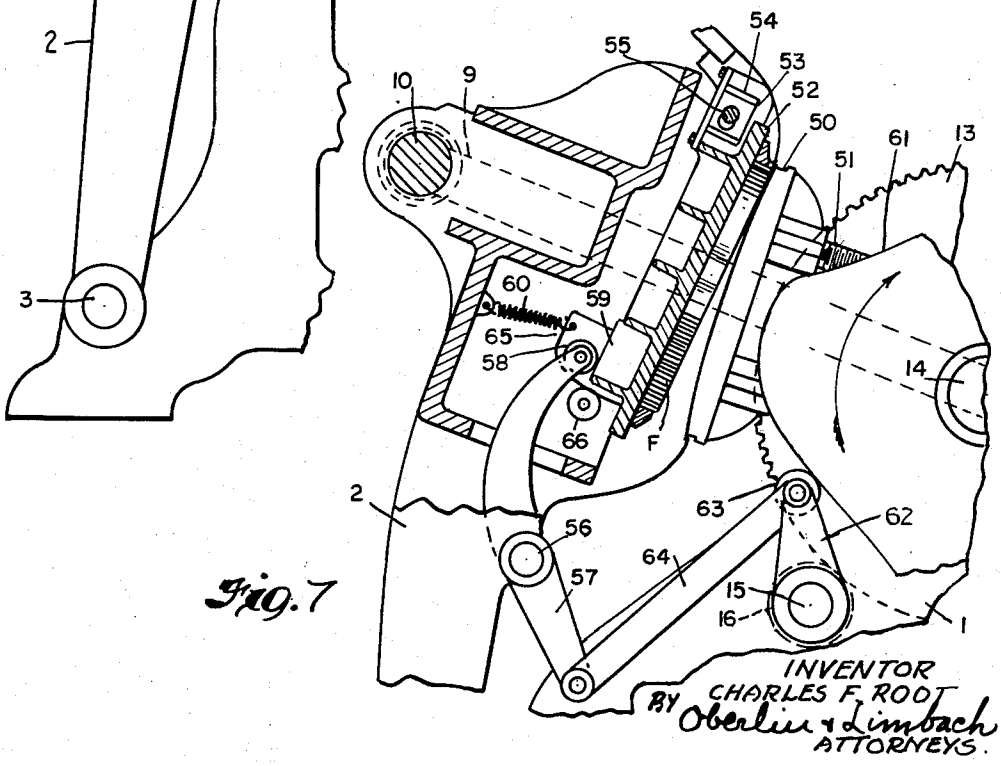


Fig. 7



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June 28, 1955 C. F. ROOT 2,711,692

CURVED PLATEN PRESS

Filed Sept. 28, 1951 4 Sheets-Sheet 4

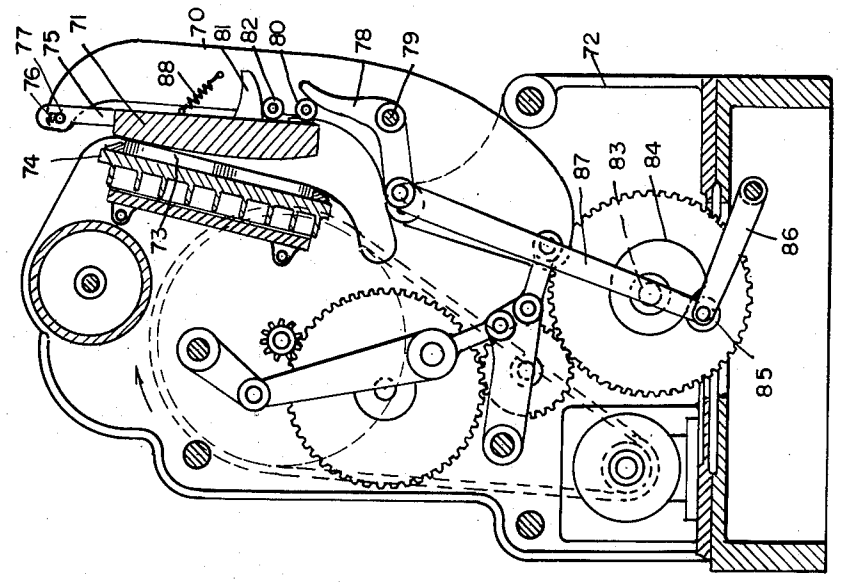


Fig. 9

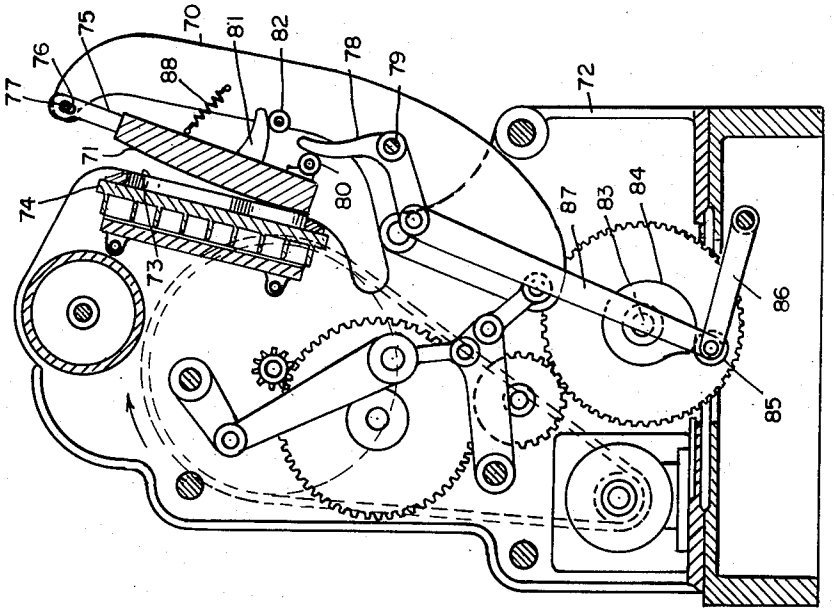


Fig. 8

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United States Patent Office 2,711,692 Patented June 28, 1955

2,711,692

CURVED PLATEN PRESS

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Application September 28, 1951, Serial No. 248,720

6 Claims. (Cl. 101—297)

The present improvements, relating as indicated to platen presses, have more particular regard to platen presses wherein the face of one member of the printing couple, ordinarily the platen member, is convexly curved on an arc of comparatively large radius about an axis transverse to the direction of relative movement between said member and the bed member of the press. While platen presses of this construction are of primary use in the printing field, they may also be advantageously employed in performing analogous operations on sheet material such as scoring or creasing, and even cutting. while in a platen press designed for printing the bed and platen which constitute the actively cooperating members are conveniently termed the printing couple, it will be understood that in using this term hereinafter it is not intended to limit the present improved press to such specific use.

In a platen press where one member of the printing couple is curved as and for the purpose described, further means are desirably provided whereby, as said members are brought together, contact is progressively made therebetween. In other words, the members should have line-for-line, i. e. non-slipping, rolling contact one with the other.

In U. S. Patents Nos. 2,497,800 and 2,497,801, heretofore issued to me under date of February 14, 1950, I have disclosed certain means for obtaining such line-for-line, rolling contact between a flat bed member and a curved platen, together with means adapted to retain one of said members in final printing position for a predetermined period of time after completion of the printing operation in order to prevent double impression. In each such previously patented construction the means for thus obtaining continuing rolling contact between the members of the printing couple include provision whereby one member or the other is mounted so as to be capable of conjoint oscillatory and bodily reciprocable movement, as a result of which non-slipping contact is obtained between the surfaces of the two members as they are brought together.

One principal object of the present invention is to provide an improved and simpler form of mechanism for imparting such conjoint movement either to the bed or the platen of a press of the type in question. A further object, in effect a result of such improved actuating mechanism, is to permit the press to be operated at a high rate of speed such as is demanded by present day printing shop requirements.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, several of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:

Fig. 1 is a side elevation, with certain parts broken away and others shown in section, of a platen printing press of the so-called Gordon type embodying the present improvements;

Fig. 2 is a similar view of the printing couple which forms the principal part of such press, with the members of said couple in a different operating position;

Fig. 3 is an end elevation of the press illustrated in Figs. 1 and 2 as viewed from the right of said figures;

Fig. 4 is a transverse sectional view of the same taken on the plane indicated by the line 4—4 Fig. 3, the position of parts shown in such sectional view being the same as that shown in Fig. 1;

Fig. 5 is a view similar to that of Fig. 4 but showing the parts in the same position as in Fig. 2;

Fig. 6 is a view similar to Fig. 1 but showing a modification in construction in that the bed member of the printing couple instead of the platen member is mounted for conjoint oscillatory and bodily reciprocable movement;

Fig. 7 is a view corresponding with Fig. 6 but showing the members of the printing couple in a different operating position;

Fig. 8 is a view similar to Fig. 1 but showing the invention as incorporated in a different type of platen printing press, viz. the so-called Golding type embodying the present improvements;

Fig. 9 is a view corresponding with Fig. 8 but showing the members of the printing couple in a different operating position; and

Fig. 10 is a view similar to that of Figs. 3 and 4, but illustrating a further modification of the present invention as applied to a Gordon type press.

As indicated in the general description of the figures, the press to which the present improvements are shown as applied in Figs. 1 to 5 inclusive is a printing press of the so-called Gordon type. As is well known, such type of press comprises a stationary main frame **1** and a second relatively movable frame **2** that is mounted for oscillation about a shaft **3** located near the base of said main frame. Such movable or oscillatory frame carries a type bed **4** wherein a type form, not separately shown, may be secured in familiar fashion. Said frame **2** will also carry suitable inking mechanism (not shown), whereby the form may be inked at the proper time. Such form is adapted to be oscillated toward and away from a platen **5**, the mounting and construction of which will be more fully described later herein.

Oscillation of frame **2** is accomplished by means of side arms or links **9**, one on each side of the machine, each of which is connected to the frame at one end by a pivot **10**, while the other end of one such side arm is connected to a pivot **11** on what is known as the small head **12** in such Gordon type press and the corresponding end of the other arm to a large gear **13**. The latter is driven from a main shaft **15** through a pinion **16** thereon.

Platen **5** is mounted so as to be rotatable in a clockwise direction about a rock shaft **17** from the printing position in which it is shown in each of the several figures in question to an approximately horizontal sheet receiving position (illustrated in Fig. 10). The means for thus oscillating the platen need not be described except to note that when in the printing position shown it is effectively locked in place by means of a suitably actuated latch **23** that engages the rearward extension on platen carrier **33** which supports the platen for oscillatory movement on rock shaft **17**. For a more detailed description of the foregoing conventional parts of the press and of the means for actuating said parts, reference is made to my above-cited Patent No. 2,497,800.

The bed **4** may carry a conventional type form or other printing surface, or where the press is employed

for creasing or cutting sheets instead of for printing, such bed may be provided with means specially adapted to this end which will coact with complementary means on the platen. The distinctive feature presented by the present improved press over a standard Gordon type press is that the platen **5** is curved on an arc of relatively large radius about an axis substantially transverse of the direction of relative movement of the bed and platen during the printing operation, and special means are provided to insure non-slipping or line-for-line rolling contact between such bed and platen. To this end the platen is attached to the carrier **33**, which, as previously indicated, is locked in stationary position during the printing operation, so as to be oscillatory relatively to such carrier and also capable of limited reciprocable movement in a direction at right angles to its axis of curvature, or in other words, at right angles to the axis about which the bed and platen are relatively oscillatory. At the same time means are provided to retain the platen for a predetermined period of time after completion of such rolling contact with the bed so that the latter may be moved away from the platen without reverse rolling contact therewith.

As clearly shown in Figs. 1 to 5 inclusive, the platen **5** is provided adjacent its upper end with ears or lugs **34** that are formed with elongated slots **35** which receive pins **36** on the supporting carrier **33**. Accordingly, said platen is capable of both oscillatory and limited sliding movement about the axis defined by said pins. Normally the platen is drawn downwardly and toward the carrier by means of one or more tension springs **37** so that the pins **36** will lie in the upper portion of the corresponding slots **35**. Adjacent its lower end the platen is provided with two rollers **40** (see Figs. 1 and 2), one on each side, which are adapted to coact with curved faces of corresponding arms **41** which are fixedly mounted on a rock shaft **42** journalled in the upper portion of main frame **1** of the press. Fixed to the same shaft is an actuating lever **43** which is fitted at its outer end with a roller **44** disposed for engagement with a disk cam **45** carried by shaft **14**. It will thus be seen that oscillation of lever **43** will effect corresponding oscillation of arm **41**.

This shaft, with the cam thus carried thereby, is shown in two different positions in its cycle of rotation in Figs. 1 and 2 respectively. In Fig. 1 the portion of the cam that engages the roller **44** is shaped to rock shaft **42** and thus arms **41** in counterclockwise direction whereby such levers, through their contact with rollers **40**, are caused to swing the lower end of platen **5** outwardly relatively to the supporting carrier **33**. In the second figure a segment of cam **45** of lesser diameter than such previous portion engages the roller **44**, with the result that arms **41** are permitted to swing in a clockwise direction and the lower end of the platen to be swung towards its supporting carrier under the tension of springs **37**.

Platen **5** is also provided adjacent its lower end with two transversely spaced rearwardly projecting ears **46**, the lower edges of which are inclined, as best shown in Figs. 4 and 5, and so disposed as to engage with corresponding rollers **47** on adjacent extensions **48** on the platen supporting carrier **33**. As will be obvious from an inspection of such last mentioned figures, when the platen is swung, in the manner just described above, from the position shown in Fig. 1 and corresponding Fig. 4 to that shown in Fig. 2 and corresponding Fig. 5, the roller engaging edges of ears **46** will bodily reciprocate or shift the platen in a direction transverse of its pivotal axis, as defined by pins **36**. The amount of such shifting movement required is very slight and will of course lie within the limits of the elongated slots **35**.

The operation of the press will require little further description. While the platen with its supporting carrier is rockable about shaft **17** into sheet receiving position, the operation of the parts with which we are here concerned occurs entirely during the period such platen and carrier are locked in what may be called their printing position, i. e. during that portion of the press cycle when the bed-carrying frame **2** is swung by side arms or links **9** toward the platen in its locked position. The same shaft **14** which serves thus to oscillate the bed-carrying frame **2** serves simultaneously through the action of cam **45** on roller **44** to oscillate the platen, and through engagement of the ears **46** with rollers **47** to reciprocate the platen, such oscillatory and reciprocatory movement of the platen being so coordinated that as the bed **4** is pressed thereagainst the surfaces of the two parts will have non-slipping or line-for-line rolling contact, such contact being initiated with the parts in the position shown in Figs. 1 and 4 and being completed with the parts in the position shown in Figs. 2 and 5. It will furthermore be noted that when the swinging movement of the bed carrying frame is reversed from such last mentioned position, outward swinging movement of the lower end of the platen is retarded, i. e. due to the conformation of the edge of cam **45** the arms **41** will not be swung forwardly immediately, but only after a sufficient interval has elapsed to permit the bed **4** to be withdrawn completely out of range of contact with the platen.

The modified construction illustrated in Figs. 6 and 7 again shows the present improvements applied to a Gordon type press. Any further description of the latter is deemed superfluous, it being noted that so far as similar parts of the press are shown in Figs. 6 and 7 they bear the same reference numerals as in the previously described figures. However the curved platen **50**, while of the same general conformation as platen **5**, is not oscillatorily supported on its carrier (not shown), but attached thereto in the usual manner through adjusting screws **51**. Instead the bed **52** is oscillatorily and also reciprocably or slidably supported in bed frame **2**. To this end said bed **52** is provided adjacent its upper end with elongated slots **53**, one at each side of the bed, in which are fitted somewhat shorter blocks **54** pivotally attached to adjacent upper portions of frame **2** by means of pins **55**. It will thus be seen that the bed is capable of limited sliding or reciprocable movement transversely of the axis defined by said pins at the same time that it is free to swing or oscillate thereabout.

Oscillatorily mounted on a pivot **56** located in frame **2** below the lower end of the bed **52** is a double arm lever **57**. While only one such lever is shown, two will preferably be utilized, one on either side of the frame. The upper end of each such lever **57** is provided with a roller **58** disposed to contact with a bearing face **59** suitably located for the purpose on the back of bed **52** adjacent its lower end. Normally such lower end of the bed is withdrawn from the platen through the action of a tension spring **60**. However there is mounted on shaft **14** a disk cam **61** corresponding in function with previously described disk cam **45** which, through suitable connections, is adapted to oscillate lever **57**. As shown, such connections take the form of a lever **62** which is oscillatorily mounted on shaft **15** of the press and carries a roller **63** disposed to engage the edge of said cam, such lever end being positively connected by means of a link **64** with the lower end of lever **57**.

Adjacent each bearing face **59** on the back face of bed **52** the latter is provided with a rearwardly projecting ear **65** that has its lower edge inclined and disposed to engage a roller **66** mounted at an appropriate point in the upper portion of press frame **2**. As will now be explained, these ears and associated rollers function in the same manner as the ears **46** on the back side of platen **5** and the associated rollers **47** do in the previously described construction.

With the platen supporting carrier in its locked position, this being the position shown in both Figs. 6 and 7, when

the bed-carrying frame 2 of the press is swung toward said platen, the portion of cam 61 of largest diameter will be in engagement with the roller 63 and thus actuate lever 57 to swing the lower end of the platen forwardly about its pivotal axis adjacent its upper end. Thus, as shown in Fig. 6, the lower portion of the printing form F with which the bed is there illustratively equipped will initally contact the lower end of the curved platen. However, as frame 2 is swung further to complete the closing movement of the press, the corresponding further rotation of cam 61 will permit the lever 57 to swing in the opposite direction and thus permit corresponding swinging movement of the lower end of the bed. Simultaneously with such swinging movement of the bed it will be bodily reciprocated or shifted transversely of its axis of oscillation by engagement of rollers 66 with the inclined edges of the corresponding ears 65. It will be understood that the conformation of cam 61 is such that the foregoing combined oscillatory and shifting movement of the bed will insure non-slipping rolling contact of form F with the surface of the platen, despite the incidental shifting of the pivot 56 as frame 22 approaches fully closed press position.

In the two remaining figures, viz. 8 and 9, my present improvements are shown as applied to a Golding type press, in contradistinction to a Gordon type press. The particular design of the press here illustrated is substantially the same as that described in detail in my Patent No. 2,497,798, to which particular reference is made for a detailed description of the mechanism whereby frame 70 which carries the platen 71 is oscillatorily mounted on the main frame 72 so that said platen may be brought into contact with a form 73 or its equivalent supported by bed 74. In other words, in such Golding type press the bed is relatively stationary and the platen is brought into operative contact therewith by oscillatory movement of its supporting frame instead of the reverse arrangement that characterizes the Gordon type press.

However the manner in which the platen 71 is supported on frame 70 is substantially the same as that in which platen 5 is supported in carrier 33. In other words, said platen 71 has two extensions 75 at its upper end, one on each side, only one of which appears in the figures, which extensions are formed with slots 76 to receive pivot pins 77 on adjacent portions of oscillatory frame 70. Likewise, as in the first described form, a rock arm 78, oscillatorily mounted on a pivot 79 on frame 70, is disposed to engage a roller 80 adjacent the lower end of the platen. Preferably, as before, a pair of such arms and rollers will be provided, although only one appears in Figs. 8 and 9. Also projecting rearwardly from the platen, adjacent said rollers 80, is an ear 81 (or ears) having its lower edge inclined to engage a roller 82 on an adjacent portion of the oscillatory frame 70. Mounted on the same shaft 83, which through suitable gears and linkage is utilized to oscillate frame 70 to bring platen 71 into contact with the bed and then move said platen into open position, is a disk cam 84 which functions in a manner similar to cam 45 in the first described construction, through engagement with a roller 85 on the end of a lever 86 which in turn is connected through a link 87 with lever 78 to oscillate the same. Such oscillation is timed so that when frame 70 swings the platen toward bed 74 the lower end of the platen will be advanced, as illustrated in Fig. 8; whereas upon completion of such swinging movement of the frame to fully closed position such lower platen end will be retracted as shown in Fig. 9. As before, a tension spring 88 may be used to insure such retraction of the platen and at the same time insure engagement of the ears 81 with the rollers 82 so that as the platen is swung in the manner described it will be simultaneously shifted slightly transversely of its pivotal axis defined by pin 77.

From the foregoing description of the several modifications of my invention whereby it is adapted for use with different types of platen-bed presses, it will be seen that positive operating connections are provided for imparting to the curved platen the desired conjoint oscillatory and sliding or translatory movement relatively to its supporting frame. As previously explained, in the case of the Gordon type press the oscillatory platen carrier, which is a feature of such press, actually constitutes such supporting frame for this member of the printing couple and since such carrier is locked in printing position during the stage of operation with which we are here concerned, said carrier may be considered, as in the claims which follow, a part of the stationary frame of the press. The advantages of the present improved construction of means for thus oscillating and reciprocating the platen will be particularly evident in the case of the first described construction where such means are associated wholly with the curved platen and its support. It is accordingly rendered possible to incorporate such a curved platen in a Gordon type press with a minimum amount of change; indeed no change whatever will be required in the movable or swinging frame which carries the bed and associated inking mechanism. Furthermore, there is no interference with the normal operation of the platen carrier whereby the platen is swung into approximately horizontal sheet receiving position. Accordingly the press may be used without change in connection with presently available automatic sheet feeding devices.

As previously noted, in the operation of a Gordon type press while the rocker which carries the platen is disposed in the position illustrated in Figs. 1 to 5 inclusive during the printing operation, it is oscillatory about shaft 17 to an approxmately horizontal sheet-receiving position. Likewise the printed sheet is removed from the platen while in the same horizontal position. Nowadays most presses of this type, as well as of other types, are provided with automatic sheet feeding and delivery mechanism, and in order that such mechanism may be used without change, both with the standard flat platen and the present improved curved platen, it is necessary that the latter should occupy a precise angular position about its pivotal axis on the rocker.

Accordingly, I may provide means independent of those previously described whereby the platen is oscillated during the printing operation, such further means being designed to swing the platen about the axis in question when it is brought into such sheet-receiving position. These means comprise simply two cams 90, each in the form of a curved disc (see Fig. 10, in which one such cam only appears), that are non-rotatably mounted relatively to shaft 17, and so disposed as to engage corresponding roller 91 on the rear face of the platen 5, when the rocker is moved to carry the platen into such sheet-receiving position. By properly contouring such cams 90 it will be obvious that the platen may be brought to occupy precisely the angular position required in order that a sheet may be laid thereon or removed therefrom as the case may be without any change in the suction fingers regularly employed in automatic sheet feed and delivery attachments.

In this modified form of the invention as applied to a Gordon type press, the arms 40 will be of such form, and so disposed when the rocker is swung from the printing position shown in Figs. 4 and 5 to the sheet-receiving position shown in Fig. 10, that roller 91 will be picked up by cam 90, just as roller 40 passes beyond the upper end of arm 41. The reverse will of course be the case when the platen is returned again to printing position. Thus the oscillatory movement of the platen about its pivotal connection with the rocker will at all times be smooth and uninterrupted. It will furthermore be evident that by properly contouring the cam 90, the platen may be held at exactly the proper

angle required for use with a standard sheet feeding and delivery mechanism.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. In a platen-bed press, the combination of two frames pivotally mounted for relative swinging movement toward and away from each other about a fixed axis, means for thus swinging one of said frames, a platen member and a bed member respectively supported by said frames, the operative face of one of said members being convexly curved on an arc of comparatively large radius about an axis parallel with such first named axis, means pivotally mounting one end of said convexly curved member on its supporting frame for oscillation about a fixed axis on the latter lying parallel with said first named axis, said member also having translatory movement relative to the other member in a direction transverse to said first named axis, and means for simultaneously oscillating said member and effecting such translatory movement thereof as said members are brought together upon closing movement of said last-named frames, said means comprising a spring normally retaining said oscillatory member in retracted position, a lever pivotally mounted on said frame bearing said oscillatory member and having a free end disposed to bear against and swing said member in opposition to said spring, a cam rotatably driven in timed relation to the movement of said frames, a second lever pivotally mounted for oscillatory actuation by said cam, connecting means between said levers for actuating said first lever in response to such oscillation of said second lever, and an inclined projection and co-acting roller on said oscillatory member and the frame carrying same, respectively, adapted to shift said oscillating member whereby translatory movement of said member is effected as it is oscillated by said first lever.

2. In a platen-bed press, the combination of two frames pivotally mounted for relative swinging movement toward and away from each other about a fixed axis, means for thus swinging one of said frames, a platen member and a bed member respectively supported by said frames, the operative face of said platen member being convexly curved on an arc of comparatively large radius about an axis parallel with such first named axis, means mounting one end of said platen member on its supporting frame for sliding, pivotal movement about a fixed axis on the latter lying parallel with such first named axis, and means for simultaneously oscillating said member and effecting translatory movement thereof about such last-named axis as said members are brought together upon closing movement of said frames, said last-named means comprising a spring engaging and normally retaining said platen member in retracted position, a lever pivotally mounted on said main frame having a free end disposed to bear against and swing said platen in opposition to said spring, a cam rotatably driven in timed relation to the movement of said frames, a second lever pivotally mounted for actuation by said cam and positively operatively connected with said first lever to rock the latter therewith, and an inclined projection and co-acting roller on said platen and frame carrying same adapted to engage to shift said platen whereby sliding movement of said platen about its axis on said frame is effected as said platen is oscillated by said first lever.

3. In a platen-bed press, the combination of a main frame, a second frame pivotally mounted for swinging movement about a fixed axis on said main frame, means for thus swinging said second frame, a platen member and a bed member supported by said main and second frames, respectively, the operative face of said platen being convexly curved on an arc of comparatively large radius about an axis parallel with such first named axis, mounting one end of said platen on its supporting frame for sliding pivotal movement about a fixed axis on the latter lying parallel with such first named axis, and means for simultaneously oscillating said platen member and effecting such translatory movement thereof about such last named axis as said members are brought together upon closing movement of said second frame, said last-named means comprising a spring normally retaining said platen in retracted position, a lever pivotally mounted on said main frame having a free end disposed to bear against and swing said platen in opposition to said spring, a cam rotatably driven in timed relation to swinging movement of said second frame and operatively connected with said lever to rock the same, and an inclined projection and co-acting roller on said platen and second frame, respectively adapted to shift said platen, whereby translatory movement of said platen is effected as it is oscillated by said lever.

4. In a platen-bed press of the Gordon type, the combination of a main frame, a second frame pivotaly mounted for swinging movement about a fixed axis on said main frame, means for thus swinging said second frame, a platen member and a bed member supported by said main and second frames, respectively, the operative face of said platen being convexly curved on an arc of comparatively large radius about an axis parallel with such first named axis, means mounting one end of said platen member on its supporting frame for sliding pivotal movement about a fixed axis on the latter lying parallel with such first named axis, and means for simultaneously oscillating said platen member and effecting translatory movement thereof about such last named axis as said members are brought together upon closing movement of said second frame, said last-named means comprising a spring normally retaining said platen in retracted position, a lever pivotally mounted on said main frame having a free end disposed to bear against and swing said platen in opposition to said spring, a cam rotatably driven in timed relation to the swinging movement of said second frame and operatively connected with said lever to rock the latter, and an inclined projection and co-acting roller on said platen and second frame, respectively adapted to shift said platen, whereby translatory movement of said platen is effected as it is oscillated by said lever.

5. In a platen-bed press of the Gordon type, the combination of a main frame, a second frame pivotally mounted for swinging movement about a fixed axis on said main frame, means for thus swinging said second frame, a platen member and a bed member supported by said main and second frames, respectively, a rocker on said main frame for thus supporting said platen, said rocker being oscillatory to present said platen in sheet-receiving and printing positions as required, the operative face of said platen being convexly curved on an arc of comparatively large radius about an axis parallel with such first named axis, means mounting one end of said platen member on said rocker for sliding pivotal movement about a fixed axis on the latter lying parallel with such first named axis, and means for simultaneously oscillating said platen member and effecting translatory movement thereof about such last named axis as said members are brought together upon closing movement of said second frame with said platen in printing position, and means on said press engaging said platen when said press is moved to fully open position effective to ensure return of said platen to the same sheet-receiving position at the completion of each cycle.

6. In a platen-bed press of the Gordon type, the combination of a main frame, a second frame pivotally mounted for swinging movement about a fixed axis on said main frame, means for thus swinging said second frame, a platen member and a bed member supported

by said main and second frames, respectively, a rocker on said main frame for thus supporting said platen, said rocker being oscillatory to present said platen in sheet-receiving and printing positions as required, the operative face of said platen being convexly curved on an arc of comparatively large radius about an axis parallel with such first named axis, means mounting one end of said platen member on said rocker for sliding pivotal movement about a fixed axis on the latter lying parallel with such first named axis, and means for simultaneously oscillating said platen member and effecting translatory movement thereof about such last named axis as said members are brought together upon closing movement of said second frame with said platen in printing position, and other means on said press engaging said platen when said press moves to open position effective to ensure return oscillation of said platen to the same sheet-receiving position at the completion of each cycle, said oscillating and translatory means comprising a spring normally retaining said platen in retracted position, a lever pivotally mounted on said main frame having a free end disposed to bear against and swing said platen in opposition to

said spring, a cam rotatably driven in timed relation to the swinging movement of said second frame and operatively connected with said lever, and an inclined projection and co-acting roller on said platen and second frame, respectively, whereby translatory movement of said platen is effected as it is oscillated by said lever, and said other means comprising a second cam likewise rotating in timed relation to the swinging movement of said second frame and disposed to engage said platen in such stated position thereof.

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