Dec. 11, 1962 C. PETERSON 3,067,918

ROLLER FEED DRIVE MECHANISM

Filed Dec. 21, 1959 4 Sheets-Sheet 1

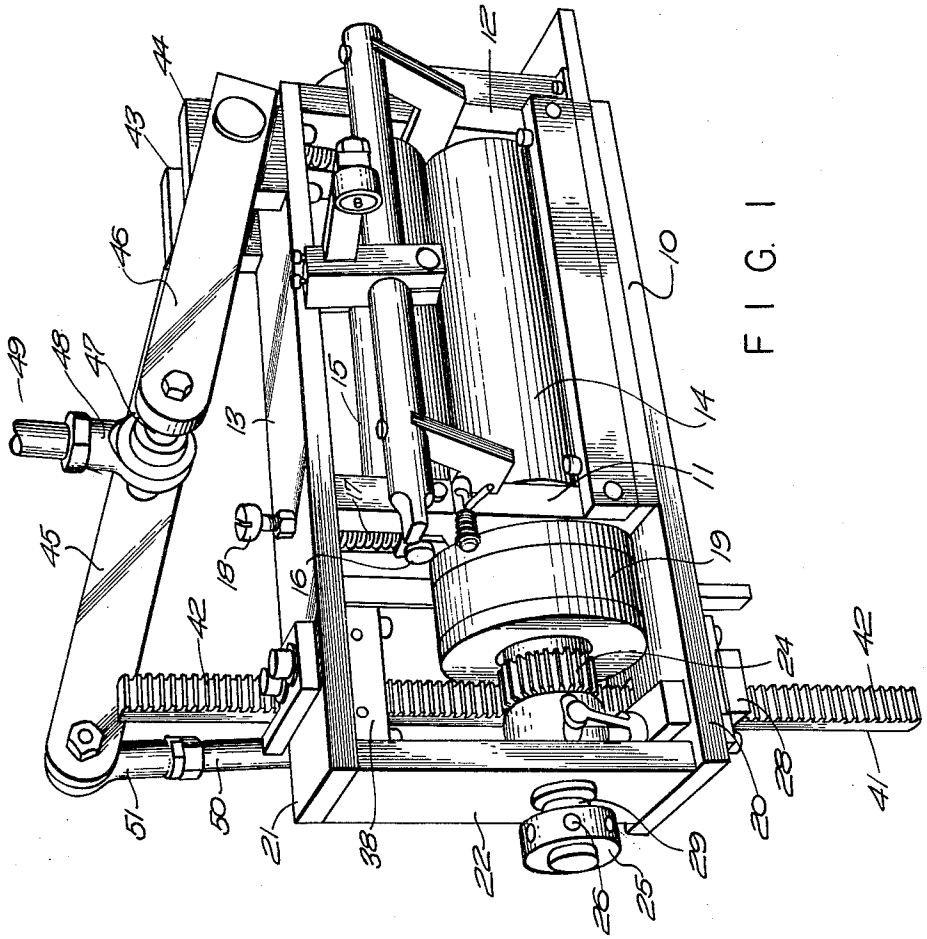


FIG. 1

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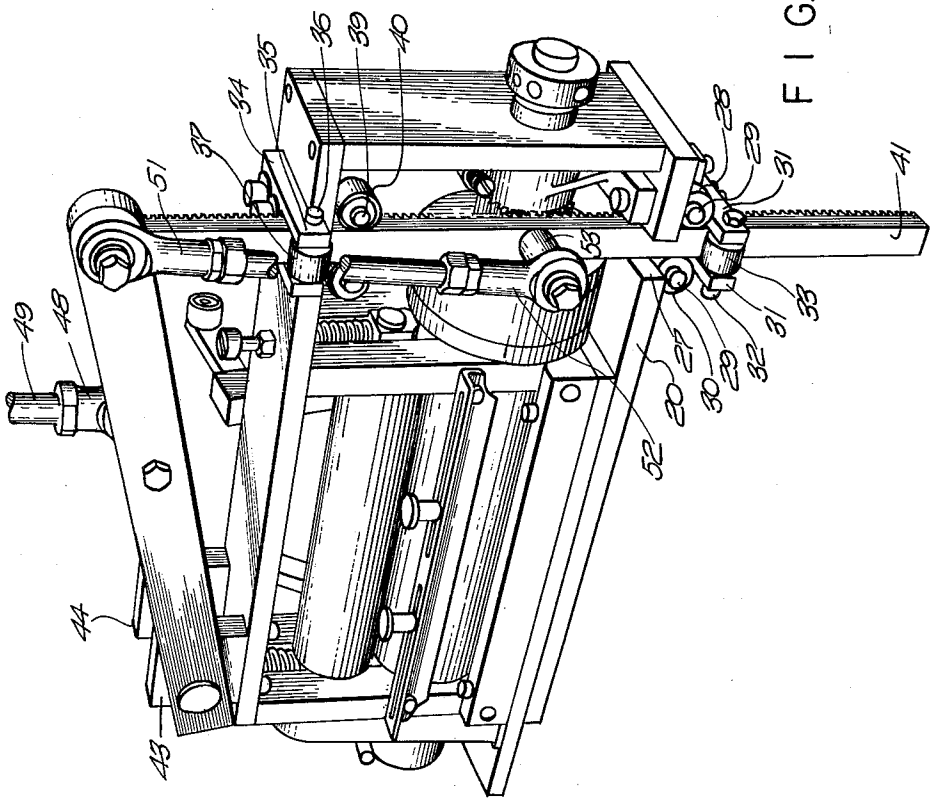
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Dec. 11, 1962 C. PETERSON 3,067,918

ROLLER FEED DRIVE MECHANISM

Filed Dec. 21, 1959 4 Sheets-Sheet 2

FIG. 2



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Dec. 11, 1962 C. PETERSON 3,067,918

ROLLER FEED DRIVE MECHANISM

Filed Dec. 21, 1959 4 Sheets-Sheet 3

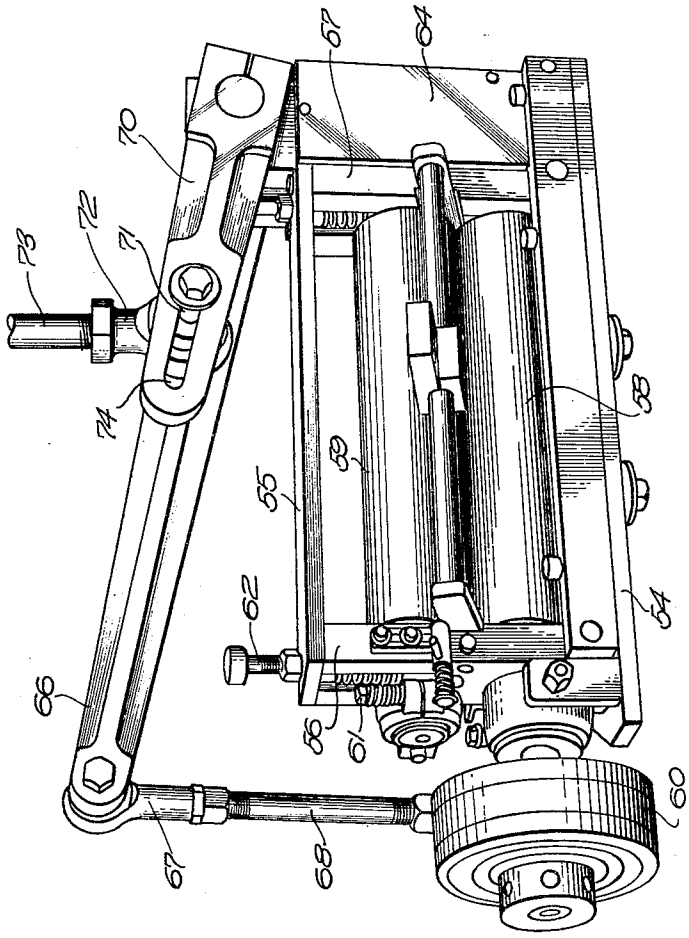


FIG. 3

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Dec. 11, 1962 C. PETERSON 3,067,918

ROLLER FEED DRIVE MECHANISM

Filed Dec. 21, 1959 4 Sheets-Sheet 4

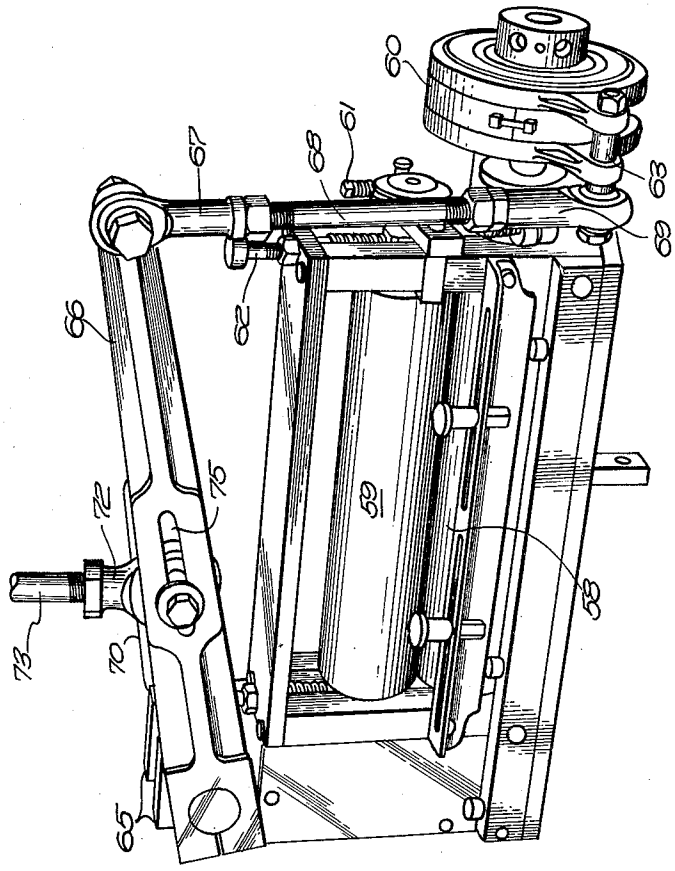


FIG. 4

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3,067,918

ROLLER FEED DRIVE MECHANISM

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Filed Dec. 21, 1959, Ser. No. 860,750
14 Claims. (Cl. 226—156)

My present invention relates to roller feeds and more particularly to a novel drive linkage between the source of motor power and the roller feed clutch drive.

The principal object of the present invention is to provide a drive linkage for a roller feed device which will permit accurate and positive driving of oversize roller feeds.

Another object of the present invention is to provide a drive linkage for a roller feed which permits the feeding of long lengths of stock with conventional clutch mechanisms.

Another object of the present invention is to provide a drive linkage for a roller feed device which will produce a direct line drive regardless of the width of the feed rollers.

Another object of the present invention is to provide a feed linkage for a roller feed which can be attached to any type of roller feed device utilizing any type of clutch mechanism.

A further object of the present invention is to provide a roller feed drive linkage having the above advantages which is simple in construction and easy and economical to manufacture and assemble.

With the above and other objects and advantageous features in view my invention consists of a novel arrangement of parts more fully disclosed in the detailed description following in conjunction with the accompanying drawings and more particularly defined in the appended claims.

In the drawings,

FIG. 1 is a perspective view showing the front end of the device hooked up for feeding long stock.

FIG. 2 is a perspective view showing the rear of the device shown in FIG. 1.

FIG. 3 is a perspective view of the front of a modification of the device hooked up for feeding wide stock.

FIG. 4 is a perspective view showing the rear of the device shown in FIG. 3.

In feeding metal in strip form to power operated tools it is customary to provide a pair of rollers with a clutch mechanism attached to the shaft of one of the rollers. An intermittent drive is provided by attaching a lever to the clutch mechanism which is operable by an arm extending from the end of the lever to an eccentric on the press drive. Such a linkage will provide a feed of fine accuracy depending on the accuracy of the clutch mechanism. However, this hook up has two major disadvantages. Where the stock to be fed is exceptionally wide the rollers must be exceptionally long. The clutch mechanism is therefore positioned far out of alignment with the eccentric drive. The connecting rod must be bent laterally causing the bending action with each stroke of the press which results in breakage of the rod and inaccuracy in the feed. The second disadvantage of the conventional drive linkage is that the length of stock fed by the rollers is limited by the diameter of the rollers and the length of the lever arm on the clutch mechanism. Where the length of stock to be fed is beyond the capacity of these factors other more costly and more complicated arrangements must be used.

The present invention is designed to overcome both of these major disadvantages. By means of the novel drive linkage device disclosed herein the conventional roller and clutch feed can be used for unusually wide strips of

stock or unusual lengths of feed or both without sacrificing the inherent accuracy of the original roller and clutch feed. Referring to the drawings, FIGS. 1 and 2 illustrate the device equipped for exceptionally long feeding. The roller feed conventionally comprises a rectangular frame which includes a base 10, vertical side members 11 and 12 and a top 13. The side members 11 and 12 hold the bearings for the roller shafts. The lower roller 14 is mounted between the members 11 and 12 and is normally slightly larger in diameter than the upper roller 15. The bearings 16 on the upper roller are adjustably compressible downwardly by means of springs 17 and adjustament screws 18 at each end. In the conventional roller feed the shaft for the lower roller 14 extends outwardly beyond the member 11 and a clutch mechanism 19 is mounted thereon. The operating arm normally extends from the press eccentric drive to a lever which operates the clutch mechanism 19. The present invention is designed to substitute a novel linkage in place of the conventional drive.

The clutch mechanism 19 can be any type of device which will provide feeding motion of the lower roller 14 on the up stroke of the press and will disengage on the down stroke of the press. These clutch mechanisms include pawl and ratchets, friction grip arrangements or mechanisms of the type shown in Patent No. 2,591,993 to Sulo Aijala. This is the type illustrated in the present application. To provide applicant's novel drive the base 10 is elongated to the left in FIG. 1 to form an extended base portion 20. Similarly the top 13 is also extended to the left to form an extended top portion 21. A vertical end member 22 extends between the base and top. An auxiliary shaft 23 is journaled with one end in the member 22 and the other end in the drive portion of the clutch 19. Adjacent the clutch 19 a wide gear 24 is fixed to the shaft 23. The outer end of the shaft 23 may be provided with a collar 25 with openings 26 into which a lever can be inserted for manually moving the feed while threading or adjusting.

Referring to FIG. 2, the rear of the extended base portion 20 is provided with a cut out portion 27. Mounted beneath the extended base 20 is a block 28 having spaced parallel shafts 29 extending beneath and on each side of the cutaway slot 27. A roller 30 is mounted on each shaft 29. Beneath the rollers 30 the block 28 is provided with spaced parallel rearwardly extending arms 31 at the end of which is a transverse shaft 32 carrying a roller 33. The roller 33 has an axis of rotation at right angles to the rollers 30 and is positioned so that a vertical tangent to its inner edge passes through a vertical line at the rear edge of the rollers 30. Directly above the cut out portion 27 and in vertical alignment therewith the top portion 21 is also similarly cut out. Mounted on the top 21 is a plate 34 having spaced parallel rearwardly extending arms 35 in which a transverse shaft 36 is mounted. A roller 37 is mounted on the shaft 36 in vertical alignment with the roller 33. Mounted beneath the portion 21 is a block 38 having spaced parallel rearwardly extending shafts 39 with a roller 40 at each shaft in vertical alignment with the rollers 30.

Rotation of the gear 24 is effected by an elongated vertical rack bar 41 having teeth 42 which is positioned in the cut out portions of the top and bottom members 20 and 21 as shown in FIG. 2. The bar 41 rides vertically between the rollers 30 and 33 at the bottom and the rollers 37 and 40 at the top. It will be noted that the rollers 30 and 40 prevent lateral movement of the bar 41 and the rollers 33 and 37 prevent rearward movement. At the front the bar is pressed against the gear 24 with its teeth 42 in engagement therewith. Vertical reciprocation of the bar 41 will therefore result in rotation of the

clutch 19. When the bar 41 moves upwardly the clutch 19 is in feeding engagement and will turn the roller 14. When the bar 41 is moving downwardly the clutch 19 is idling. Since the bar 41 is elongated and can supply a comparatively long stroke, the feed stroke with the clutch 19 engaged is much longer than that possible with a conventional lever which reciprocates through an arc of less than 90 degrees. With the arrangement shown the clutch can be rotated through several revolutions if necessary.

Reciprocation of the rack bar 41 is effected by the lever arrangement mounted at the top of the rectangular frame. At one side of the top 13 are a pair of spaced bearing blocks 43 and 44. A lever bar 45 is pivotally mounted at one end in the block 43 with the other end extending to a point slightly beyond the top of the bar 41 as shown in FIG. 1. A second lever bar 46 is pivotally mounted at one end in the block 44. The lever 46 is much shorter than the lever 45 and is designed to extend to a point approximately beneath the eccentric cam of the power press (not shown). A shaft 47 extends transversely between the end of the lever 46 to an intermediate portion of the lever 45. A universal bearing 48 is mounted on the shaft 47 and is attached to the drive bar 49 which extends to the driving cam of the power press.

A bar 50 is pivotally attached at 51 to the end of the lever arm 45 at one end and at 52 is attached to a short shaft 53 extending rearwardly from the center of the rack bar 41. With the above arrangement the bar 49 is reciprocated by the eccentric cam of the power press causing reciprocation of the lever 45 and bar 50. This results in the vertical reciprocation of the rack bar 41. Where the rollers are extremely narrow it may be possible to bend and connect the drive bar 49 directly to the rack bar 41. However, in most instances there is a considerable lateral displacement between the rack bar 41 and a vertical line from the operating cam. While the bar 49 could conceivably be lengthened and bent laterally the extreme angle causes buckling of the bar and results in breakage and an inaccurate and uneven feed. The lever linkage illustrated permits the use of straight solid unyielding drive forces which maintain the accuracy of the clutch feed 19 and still permit the feeding of long lengths of stock. The length of the lever bar 45 therefore varies with different installations depending on the width of the rollers 14 and 15. The length of the lever arm 46 can be fixed since the position of the drive cam on most power presses can be approximately located. However, if desired, the position of the shaft 47 may be made adjustable in the manner illustrated in FIGS. 3 and 4.

The form shown in FIGS. 1 and 2 illustrates a construction designed for feeding long lengths of stock. The form shown in FIGS. 3 and 4 illustrates a similar construction used for feeding exceptionally wide stock. Small metal stampings such as jewelry, electric terminals and similar small metal parts are normally stamped from sheet stock supplied in coils In the normal stamping operation of this type the stock is two to four inches wide and occasionally runs to six inches. The manufacturer of small stamped parts therefore usually uses a roller feed in which the rollers are six or eight inches wide. The clutch mechanism must be located at the end of the roller shaft and is therefore usually slightly to one side of a perpendicular from the driving cam. The angle of drive is not to severe and no particular problems of linkage are involved. However, where the stock to be fed requires rollers that are 18, 20 or even 36 inches in width it becomes virtually impossible to use a direct linkage from the driving cam of the power press because of the severe angle to which it must be bent in order to reach the clutch mechanism. The construction illustrated in FIGS. 3 and 4 overcomes this difficulty.

Regardless of the extreme length of the rollers, the roller feed mechanism is of conventional design comprising a rectangular frame having a base 54, top 55, and vertical end members 56 and 57. The rollers 58 and 59 are mounted one above the other between the end members 56 and 57. The lower roller 58 may be slightly greater in diameter than the roller 59. The lower roller 58 is mounted on a shaft journaled in the members 56 and 57 but extending outwardly towards the left in FIG. 3 to provide a mounting for the friction clutch mechanism 60. The roller 59 is provided at each end with vertically slidable bearings 61 which are adjustable at 62 for adjusting the pressure between the rollers. The clutch mechanism 60 is again illustrated as of the type hereinabove referred to but it can comprise any type of mechanism wherein the shaft is gripped for turning movement in one direction of the mechanism and released in the opposite direction. Such mechanism are provided with lever connections 63 at the rear which are usually linked directly to the power press cam drive

However, because of the unusual width of the rollers 58 and 59 it will be noted that a vertical line from the cam drive will probably reach close to the extreme right end of the device as shown in FIG. 3. A lever linkage mechanism is therefore provided to transmit the reciprocating motion for operating the clutch 60. The base 54 is extended towards the right in FIG. 3 to support a block 64 having spaced rectangular bearing plates 65 at the upper end. An elongated lever arm 66 is pivotally mounted at one end in the rear bearing block 65. The other end of the lever arm 66 is pivotally attached to a universal joint 67 carrying a rigid connecting bar 68 attached to a second universal joint 69 which is pivotally attached to the lever 63 for driving the clutch 60. Another short lever arm 70 is pivotally attached at one end to the front bearing block 65. A transverse shaft 71 extends from the end of the lever arm 70 to an intermediate portion of the lever arm 66. A universal bearing 72 is attached to the shaft 71 and is connected to the driving bar 73 which extends to the power press cam drive (not shown).

Vertical reciprocation of the bar 73 will cause reciprocation of the lever arm 66, bar 68 and clutch lever 63 so that the vertical movement of the drive bar 73 is transmitted laterally to provide a vertical movement of the bar 58 which acts as an auxiliary drive bar to operate the clutch 60. In different press installations it may be desirable to adjust the position of the shaft 71 to a more nearly vertical position beneath the cam drive. Also, the length of the stroke of the lever arm 66 may be varied by adjusting the position of the shaft 71. This is accomplished by providing the end of the lever arm 70 with a slot 74 and providing the lever arm 66 with a similar slot 75. This permits the shaft 71 to be moved along the slots and to be bolted in any desired location. The above construction thus provides a means of transmitting a vertical drive to an intermittent clutch located at an extreme lateral distance from a vertical line extending from the main drive. No bending of any of the connecting links is necessary thus ensuring long life and accuracy. Note that the form shown in FIGS. 1 and 2 and the form shown in FIGS. 3 and 4 accomplish the same purpose. The addition of the rack and gear drive even on a short roller makes direct linkage impossible and therefore it is necessary to use the illustrated linkage which is the same in both cases. FIGS. 3 and 4 show the conventional roller feed hooked up to handle extremely wide stock. The construction shown in FIGS. 1 and 2 will not only feed in long lengths but will also handle extremely wide stock due to the linkage involved. The installation of applicant's device is simple regardless of the size of the device since all press connections are easily made at the top. Other advantages of the present invention will be readily apparent to a person skilled in the art.

I claim:

1. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch

device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers.

2. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft.

3. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, the pivotal connection between said drive bar and said lever being adjustable longitudinally along said lever.

4. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft, said main and auxiliary lever arms having opposed longitudinal slots, said shaft being adjustably mounted in said slots.

5. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said linking means including an operating arm on said clutch, and a rigid vertical bar pivotally connected at its bottom end to said clutch operating arm and pivotally connected at its upper end to said lever.

6. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft, said linking means including an operating arm on said clutch, and a rigid vertical bar pivotally connected at its bottom end to said clutch operating arm and pivotally connected at its upper end to said lever.

7. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, the pivotal connection between said drive bar and said lever being adjustable longitudinally along said lever, said linking means including an operating arm on said clutch, and a rigid vertical bar pivotally connected at its bottom end to said clutch operating arm and pivotally connected at its upper end to said lever.

8. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending ver-

tically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft, said main and said shortened lever arms having opposed longitudinal slots, said shaft being adjustably mounted in said slots, said linking means including an operating arm on said clutch, and a rigid vertical bar pivotally connected at its bottom end to said clutch operating arm and pivotally connected at its upper end to said lever.

9. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said linkage means including a gear mounted on said clutch, a vertically reciprocable rack bar mounted in engagement with said gear, and a rigid connecting bar having one end pivotally attached to said rack bar and the other end pivotally attached to said lever.

10. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, and a drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft, said linkage means including a gear mounted on said clutch, a vertically reciprocable rack bar mounted in engagement with said gear, and a rigid connecting bar having one end pivotally attached to said rack bar and the other end pivotally attached to said lever.

11. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said linkage means including a gear mounted on said clutch, a vertically reciprocable rack bar mounted in engagement with said gear, and a rigid connecting bar having one end pivotally attached to said rack bar and the other end pivotally attached to said lever, a plurality of rollers mounted on the top of said frame and a plurality of complementary rollers mounted on the bottom of said frame in vertical alignment with said top rollers, said rack bar being vertically mounted between said vertically aligned rollers.

12. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, and a drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft, said linkage means including a gear mounted on said clutch, a vertically reciprocable rack bar mounted in engagement with said gear, and a rigid connecting bar having one end pivotally attached to said rack bar and the other end pivotally attached to said lever, a plurality of rollers mounted on the top of said frame and a plurality of complementary rollers mounted on the bottom of said frame in vertical alignment with said top rollers, said rack bar being vertically mounted between said vertically aligned rollers.

13. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said top, a drive bar pivotally attached to said lever intermediate the ends thereof, said drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said linkage means including a gear mounted on said clutch, a vertically reciprocable rack bar mounted in engagement with said gear, and a rigid connecting bar having one end pivotally attached to said rack bar and the other end pivotally attached to said lever, a plurality of rollers mounted on the top of said frame and a plurality of complementary rollers mounted on the bottom of said frame in vertical alignment with said top rollers, said rack bar being vertically mounted between said vertically aligned rollers, said frame top and bottom having cut out portions at their read edges in vertical alignment between said rollers, said rack bar being vertically reciprocable in said cut out portions.

14. A roller feed for a power press comprising a rectangular frame having a base, vertical sides and a top, a pair of feed rollers mounted in said frame, a clutch device mounted at one side of said frame for intermittently rotating said rollers, said clutch having a pair of clutch members one of which is connected to one of said feed roll shafts, a lever having one end pivotally mounted adjacent one end of the top of said frame, said lever extending at an acute angle toward the other end of said

top, a drive bar pivotally attached to said lever intermediate the ends thereof, and a drive bar extending vertically for connection with the press drive to impart vertical reciprocation to said lever, and means linking the outer end of said lever to the other of said clutch members to impart an intermittent drive to said rollers, said lever comprising a pair of spaced parallel lever arms, one of said lever arms being longer and constituting the main lever, the other lever arm being shorter, a shaft extending between the end of said shorter lever arm and said main lever arm, said drive bar being pivotally attached to said shaft, said linkage means including a gear mounted on said clutch, a vertically reciprocable rack bar mounted in engagement with said gear, and a rigid connecting bar having one end pivotally attached to said rack bar and the other end pivotally attached to said lever, a plurality of rollers mounted on the top of said frame and a plurality of complementary rollers mounted on the bottom of said frame in vertical alignment with said top rollers, said rack bar being vertically mounted between said vertically aligned rollers, said frame top and bottom having cut out portions at their rear edges in vertical alignment between said rollers, said rack bar being vertically reciprocable in said cut out portions.

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