L. F. HOWARD.

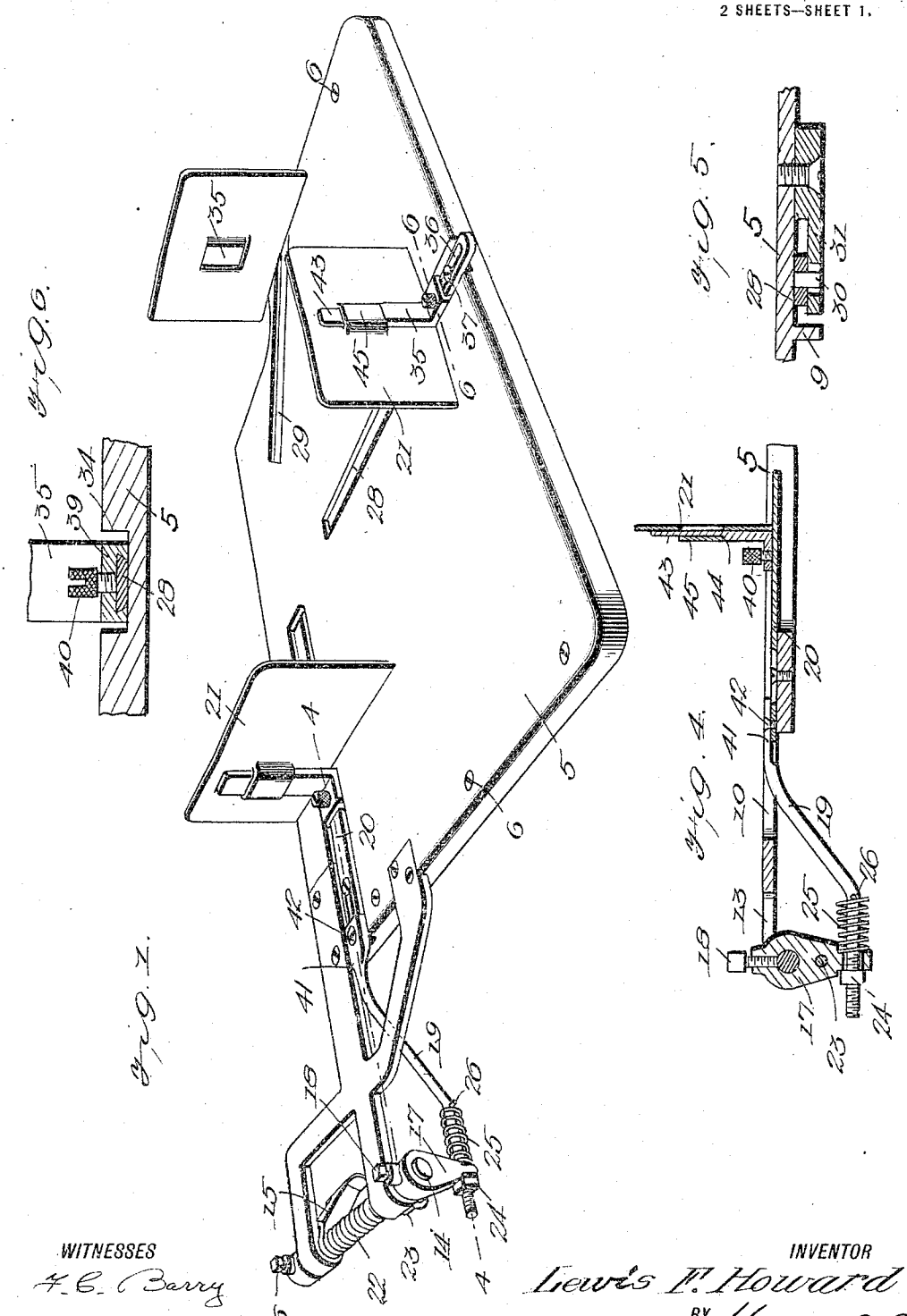
JOGGER ATTACHMENT FOR PLATEN PRINTING PRESSES.

APPLICATION FILED APR. 3, 1917.

1,235,477.

Patented July 31, 1917.

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

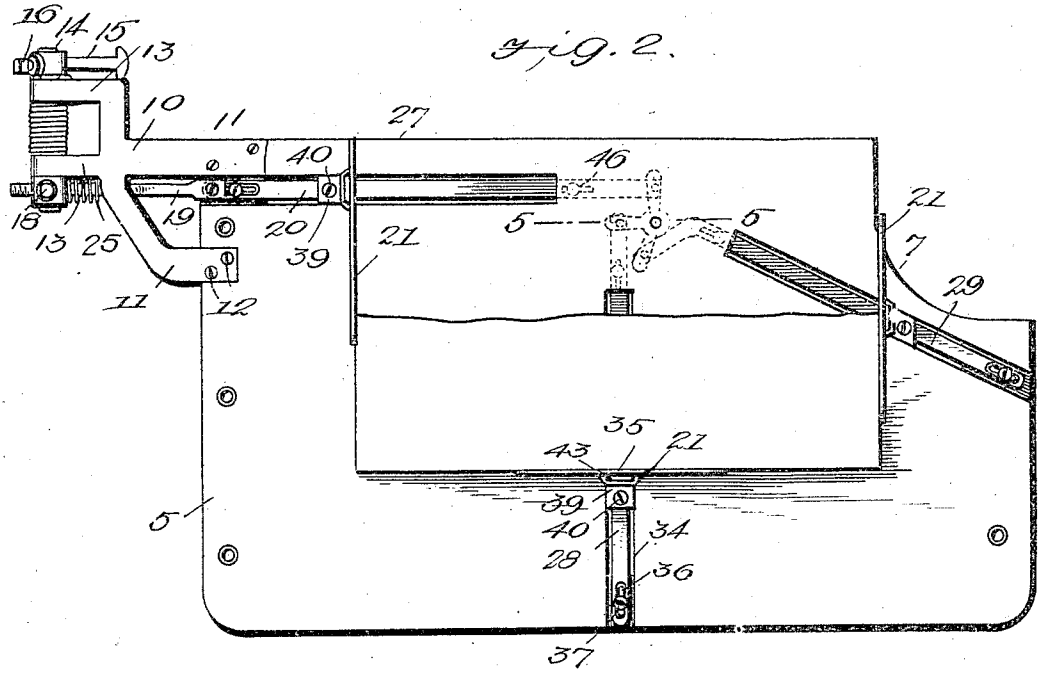
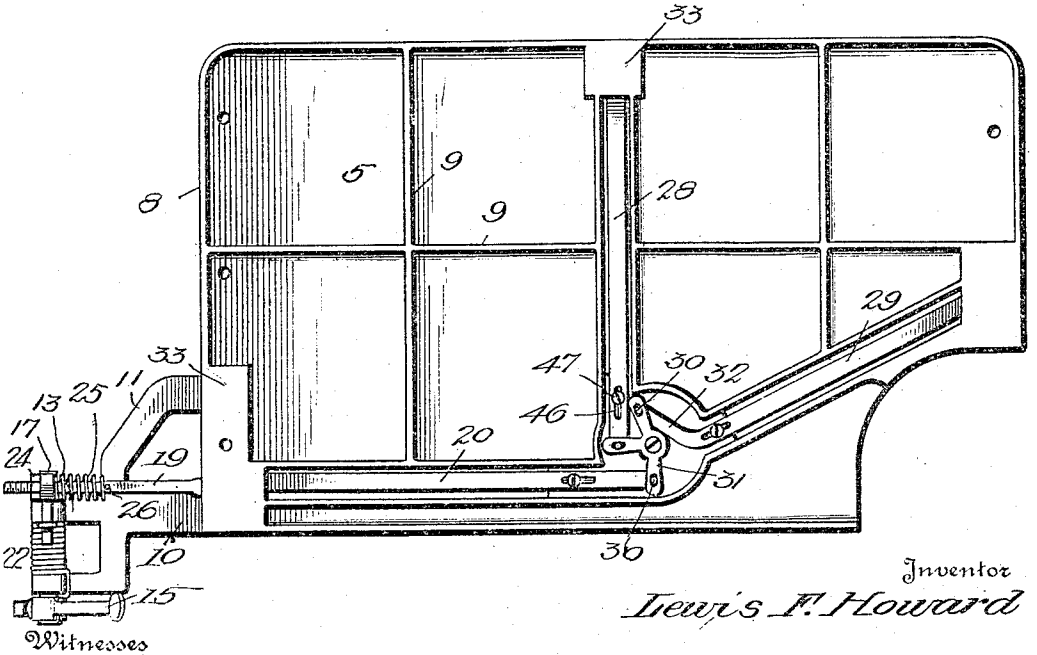


Fig. 3



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JOGGER ATTACHMENT FOR PLATEN PRINTING-PRESSES.

1,235,477. Specification of Letters Patent. Patented July 31, 1917.

Application filed April 3, 1917. Serial No. 159,433.

To all whom it may concern:

Be it known that I, LEWIS F. HOWARD, a citizen of the United States, and a resident of West, in the county of McLennan and State of Texas, have invented a certain new and useful Improvement in Jogging Attachments for Platen Printing-Presses, of which the following is a specification.

One of the principal objects of my invention is to provide an automatic jogging attachment for platen presses, designed especially for use in connection with and on Chandler and Price's Gordon and New Series presses, of such construction as to be readily mounted directly upon the regular receiving board of the press and without the necessity of altering the press in the least.

Another object of the invention is to provide a jogger having improved means for compactly and uniformly stacking the printed sheets, the jogging means being readily adjustable to accommodate sheets of various dimensions and being easily removable, whereby when it is not desired to use the jogger, a flat unobstructed surface for receiving the sheets will be presented.

Another object of the invention is to provide an improved jogging device which will be characterized by advantages of simplicity, durability, efficiency in operation, and economy in manufacture and maintenance.

With these and other objects in view which will become apparent as the description proceeds, the invention resides in the construction, combination, and arrangement of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which like characters of reference indicate like parts throughout the several figures, of which—

Figure 1 represents a view in perspective of a jogging attachment constructed according to my invention;

Fig. 2 represents a top plan view thereof;

Fig. 3 represents a bottom plan view thereof;

Fig. 4 represents a view in section taken longitudinally on the plane indicated by the line 4—4 of Fig. 1;

Fig. 5 represents a view in section taken on the plane indicated by the line 5—5 of Fig. 2;

Fig. 6 represents a view in section taken on the plane indicated by the line 6—6 of Fig. 1.

In carrying my invention into practice, I provide a base plate 5, which is substantially rectangular in configuration, and which is adapted to be secured directly upon the receiving board of the printing press (not shown), through the medium of wood screws or other suitable connecting means, indicated at 6. One corner of the plate, as at 7, is cut away to accommodate a portion of the press. The under side of the base plate is formed with a marginal depending flange 8 braced by intersecting flanges or webs 9, as clearly shown in Fig. 3.

At what may be termed one of the rear corners of the plate is secured a bracket 10 including leg portions 11 countersunk at their inner ends into the base plate, and secured in position through the medium of screws or other suitable fastenings 12. The bracket is equipped with spaced parallel arms 13, one of which is offset beyond the adjacent edge of the base plate, and these arms rotatably support an oscillatory rock shaft 14. The outer end of shaft 14, beyond the adjacent arm 13, carries a trip arm 15 extending at right angles to the rock shaft, and adjustable thereon through the medium of a set screw 16. On the other end of the rock shaft is arranged a depending arm 17, secured in position by means of a set screw 18, and through the lower end of the arm 17 the outer end of a link 19 extends. This link connects the arm 17 with one of the guide rods 20, on which the jogging plates 21 are mounted. A spring 22 is coiled upon the rock shaft 14 intermediate the arms 13, and at one end engages a pin 23 carried by the arm 17, whereby to normally maintain this arm in such position that the guide rods 20 are at the outer extremities of their path of movement.

On the outer threaded end of the link 19 is mounted a nut 24 which screws into engagement with the lower end of arm 17, on one side thereof, and against the opposite side of the arm bears a spring 25 which is anchored against a transverse pin 26 carried by th link 19 as clearly shown in Fig. 1.

The guide rod 20 to which the link 19 is connected, is arranged in parallel relation with the rear edge 27 of the base plate. A second guide rod 28 is arranged at right angles to the rod 20, and is positioned centrally of the base plate. A third rod 29 is arranged at an inclination to the rods 20 and 28 in the position indicated in Fig. 2. These rods converge toward each other, and at their adjacent ends are coupled through the medium of pin and slot connections 30, each with one of the arms 31 of a three-arm lever which is pivoted on the under side of the base plate adjacent the rear edge thereof. The rod 29 has its inner end offset as at 32, whereby to properly connect with one of the lever arms 31. These guide rods are virtually arranged below the base plate and they lie with their upper surfaces substantially flush with the under surface of the base plate. The outer ends of the guide rods rest upon the enlarged portions 33 of the flange 8, as indicated in Fig. 3.

The plate immediately above each of the guide rods is formed with a slot 34 whereby to allow adjustment of the fingers 35, on which the jogger plates 21 are carried, longitudinally of the guide rods. Each of the guide rods is formed adjacent its outer end with a slot 36 which travels over a screw or other similar device 37 secured to the enlargement 3, whereby to limit the movements of the guide rods, and whereby to properly confine these rods to their predetermined path of movement.

The rods are so connected together through the medium of the three-armed lever, that when the rod 20 is moved outwardly, the rods 28 and 29 will also be moved outwardly in synchronism with the rod 20, and to a distance equal to the distance to which the rod 20 is moved. Similarly when the rod 20 is moved inwardly, the rods 28 and 29 are simultaneously drawn inwardly.

Thus, the three guide rods work in unison and move outwardly and inwardly together.

One of the fingers 35 is slidably mounted on each of the guide rods, and these fingers each include a foot portion 39 having a groove provided with inclined walls which coöperate with the beveled edges of the guide rod in preventing lateral displacement of the finger from the guide rod. The base portion of each finger is provided with a set screw 40 which may be turned into engagement with the guide rod in securing the finger in adjusted position longitudinally of said rod. By loosening the set screw 40 the finger may be slid longitudinally of the rod to take the desired position, and if found desirable, the fingers may, at any time, be removed by simply loosening the set screws and moving the fingers longitudinally of the rods until they are drawn off of the outer ends thereof. In this connection, it may be here noted that the body portion of the link 19 is less in width than the guide rod 20 with which the link is connected, so that the finger 35 mounted on the guide rod 20 may be readily removed from said rod without disconnecting the link 19. This link, it will be noted, has a flattened end portion 41, countersunk in the outer end of the guide rod 20, and connected thereto by means of a screw 42.

Each of the fingers 35 has a reduced upper portion 43, and the jogger plates 21 at about their central portions are provided with straps 45 which are stamped out from the jogger plates and which slip upon the reduced portion 43 of the fingers. When the jogger plates are in position their lower edges rest against the upper surface of the base plate. It will be noted that the finger 35 with which the guide rod 29 is equipped, has its body portion twisted at an angle with the guide rod 29, so as to lie in parallel relation with the finger on the rod 20 and at right angles with the finger on the rod 28, so that the jogger plate mounted on the twisted finger will lie in parallel and right angular relation respectively with the jogger plates connected with the rods 20 and 28, as clearly shown.

These jogger plates are preferably made of a slightly resilient material, and have their end portions curved or bent inwardly slightly, as indicated in Fig. 1, in order that the ends of the jogger plates will first come in contact with the stack of printed sheets, so that a slight spring pressure will be exerted against this stack. The guide rods are provided adjacent their inner ends with slots 46 which ride over screws or pins 47 secured to the under surface of the base plate 5, whereby to coöperate with the pin and slot connections at the outer ends of the rods in properly guiding these rods and in limiting their movements.

When the jogging device is secured in place on a press, the rear edge 27 of the base plate is brought against the gage board, not shown, which occurs at the press end of the receiving table of the press, and the screws or similar elements 6 are then passed through the proper openings in the base plate and are screwed into the receiving board of the press. The trip arm 15 will thus be in position to be engaged and periodically raised by the knuckle of the arm which is pivoted on the large wheel forming a part of the printing press, and which occurs to the left of the jogging device when the latter is attached to the press. These parts of the press are not shown in the drawings, since the construction of platen presses is a matter of common knowledge in the art. The knuckle will be at its highest point when

it strikes the trip arm, and hence the latter will be raised about half an inch and then released. Proper adjustment of the trip arm for bringing it into the correct position to be engaged by the knuckle may be had by loosening the set screw 16 and turning the arm into the desired position.

When the arm is raised, motion will be transmitted through the link 19 to the guide rod 20, and from this rod through the medium of the three-arm lever to the guide rods 28 and 29, whereby to effect the simultaneous movement of the guide rods inwardly whereby to bring the jogging plates into engagement with the stack of paper sheets. As soon as the trip arm is released by the knuckle, the spring 22, acting against the arm 17, will move the latter outwardly, thus causing a simultaneous shifting movement of the guide rods outwardly, and hence moving the jogging plates out of engagement with the stack of paper. The arm 17 will transmit its motion to the link 19 through the medium of the spring 25, and hence the trip arm 15 may be adjusted so that the throw of the arm 17 will be relatively great, so that a relatively long pressure against the spring will be effected. This relatively long pressure will cause the jogging plates to more effectually perform their functions, by engaging with the stacked sheets of paper a relatively longer time. At the same time, there will be no danger of the plate cutting or crimping the edges of stacked sheets. During the greater portion of the time the jogging plates are out of contact with the stack of paper, thereby facilitating the operation of laying the sheets, one upon the other, as they are taken from the platen of the press, it being borne in mind that, at some point in the time occurring between the delivery of successive sheets, the jogging device is actuated by the press for tightening on the sheets of paper and making them settle into their proper position.

One of the material advantages of my invention is the fact that it may readily be applied to a platen press without in the least mutilating the latter or altering or disarranging any of its parts. When the jogging plates are not to be used, they can be instantly removed, so that a substantially flat unobstructed surface will be presented on which the sheets can be piled in the usual way. If the operator so desires, he may, when the jogging plates are removed, shift the trip arm into such position as to be out of the path of the moving knuckle, so that the guide rods will not be operated by the press.

Although I have described the preferred embodiment of my invention, I may desire to make such changes in the construction, combination, and arrangement of parts thereof, as do not depart from the spirit of the invention and the scope of the appended claims.

I claim:

1. A jogger for platen presses, comprising a base plate adapted to be secured on the receiving board of a press, guide rods arranged on the base plate and radiating from a common center, said plate being provided with slots in which the rods lie, a three-armed lever pivoted on the base plate, pin and slot connections between the arms of the levers and the inner ends of the guide rods, upstanding fingers slidably mounted on the guide rods, means whereby the fingers may be secured in adjusted position upon the guide rods, jogging plates detachably mounted upon the fingers, a bracket secured to the base plate, a rock shaft pivoted on the bracket, a trip arm adjustable on the rock shaft and adapted to be engaged by a moving part of the press whereby to be periodically lifted, a second arm mounted on the rock shaft and adjustable thereon, a spring mounted on the rock shaft and engaging the second arm for exerting a tension against the second arm in one direction, a link connected with one of the guide rods and having a lost motion connection with the second arm, a spring arranged on the link, and bearing against the second arm, against which spring the said second arm is adapted to move when the trip arm is lifted, first said spring tending to move the second said arm in a direction opposed to the direction in which the second arm is moved when the trip arm is raised.

2. A jogger for platen presses, comprising a base plate adapted to be secured to the receiving board of a press, a plurality of guide rods slidably mounted on the base plate, said base plate being provided with slots in which the guide rods lie, a lever pivoted on the plate and coupling the guide rods together for effecting a coördination of movement between the guide rods, jogging plates, means adjustable on the guide rods on which the plates are mounted, a bracket secured to the base plate, a rock shaft pivoted on the bracket, a trip arm adjustably mounted on the rock shaft, and adapted to be periodically moved in one direction by a moving part of the press, a link connected to one of the guide rods, means mounted on the rock shaft for actuating the link, and resilient means for returning the trip arm to normal position.

3. In a jogging device, a base plate, a plurality of rods slidably mounted on the base plate and radiating from a common center, a lever pivoted on the base plate and having a plurality of arms each connected with one of the rods, whereby to effect a movement of the rods in synchronism, a link connected to one of said rods and extending

beyond one side of the base plate, a bracket secured to and extending beyond the base plate, a rock shaft journaled in the bracket having a controlling spring and an arm at one end of which the link is operatively connected, and a trip arm at the opposite end of the shaft.

4. In a jogging device, a base plate, a plurality of rods slidably mounted on the base plate and radiating from a common center, a lever pivoted on the base plate and having a plurality of arms each connected with one of the rods, whereby to effect a movement of the rods in synchronism, a link connected to one of said rods and extending beyond one side of the base plate, a bracket secured to and extending beyond the base plate, a rock shaft journaled in the bracket having a controlling spring and an arm at one end to which the link is operatively connected, a trip arm at the opposite end of the shaft, said link arm and said trip arm being arranged at opposite sides of the bracket, and said spring being arranged intermediate spaced portions of the bracket.

5. In a jogging device, a slotted base plate having depending ribs on its lower face terminating in the same plane, whereby to adapt the plate to rest flatwise upon the receiving board of a printing press, certain of said ribs forming channels along the slots of the base plate, guide rods in said slots and channels, a bracket secured to and extending beyond the base plate, a spring controlled rock shaft journaled in said bracket and having connection with one of said guide rods, jogger plates carried by the guide rods, and a trip arm carried by the said rock shaft.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."