

F. R. FULLER.
CLICKING PRESS.
APPLICATION FILED JAN. 13, 1909.

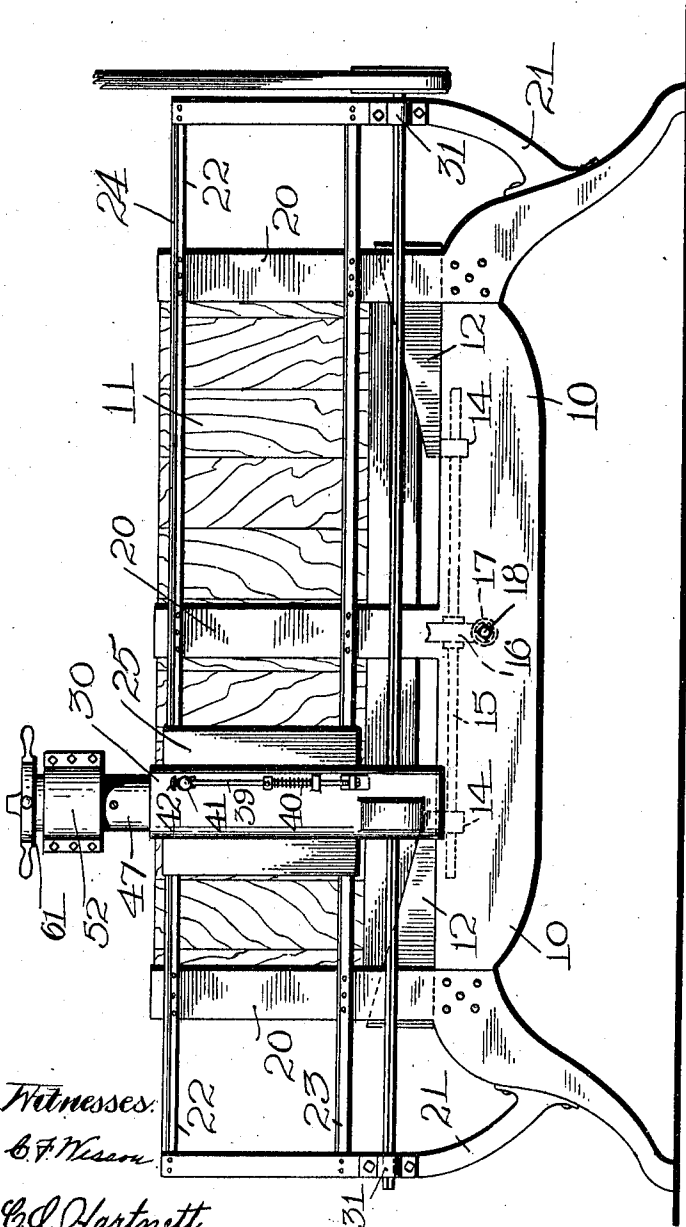
974,373.

Patented Nov. 1, 1910.

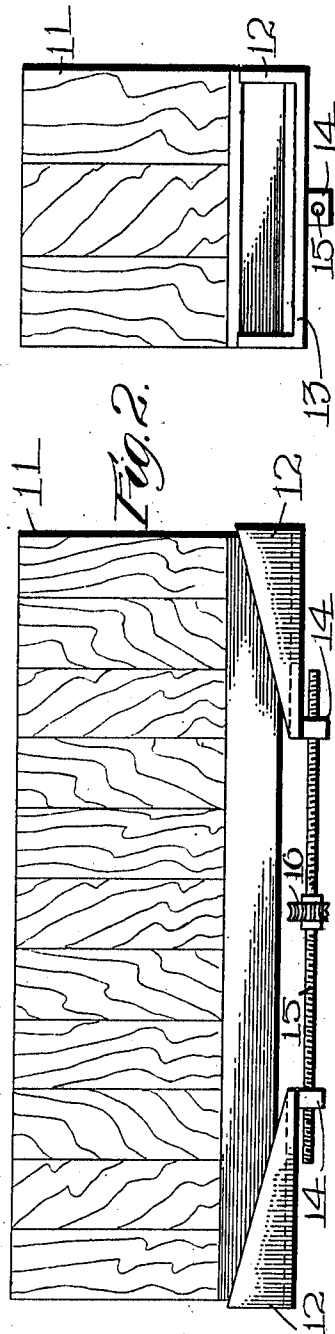
2 SHEETS-SHEET 1.

Fig. 1.

Fig. 3.



Witnesses:
C. F. Mason
C. D. Hartnett

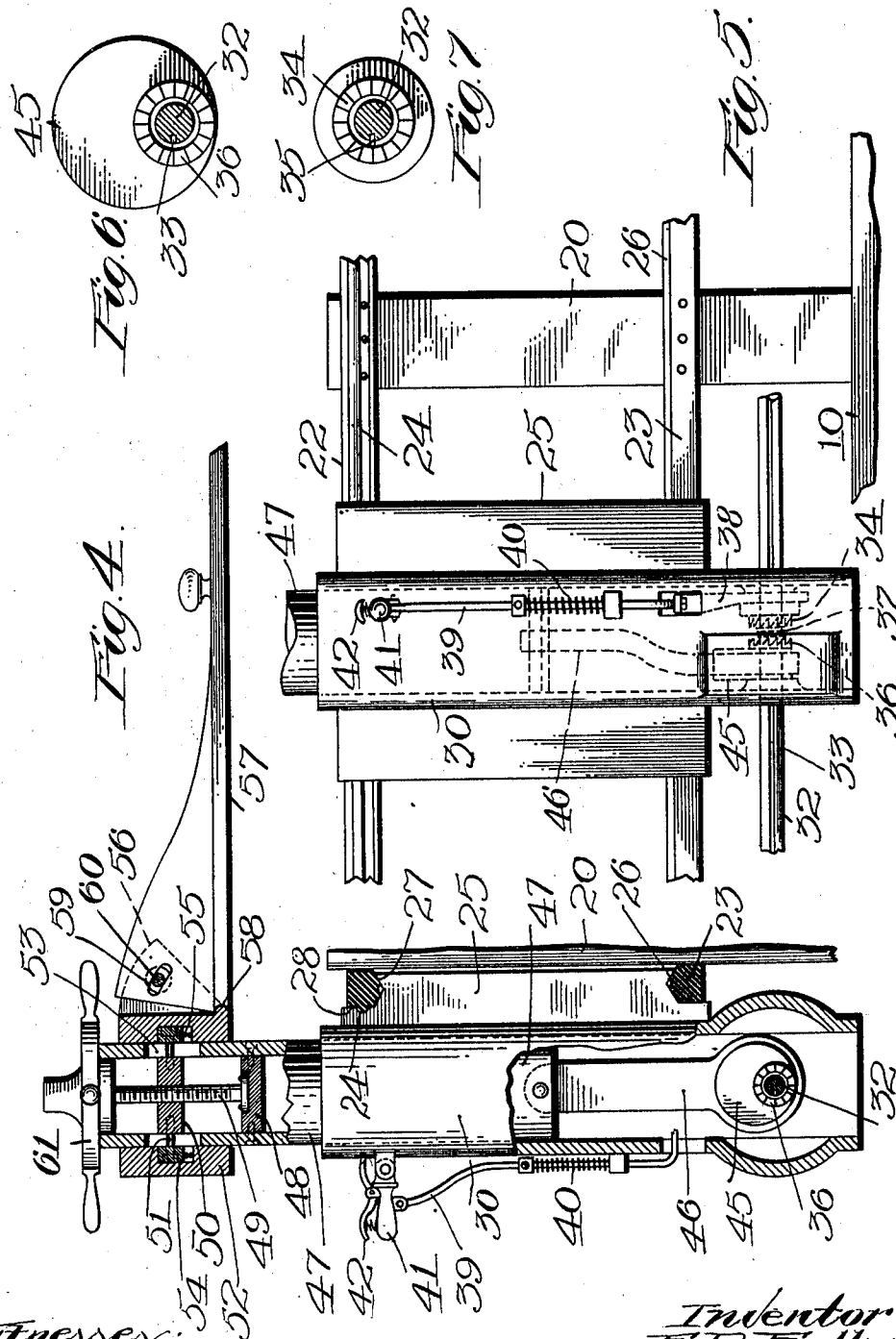


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UNITED STATES PATENT OFFICE.

FREDERICK R. FULLER, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CLICKING-PRESS.

974,373.

Specification of Letters Patent.

Patented Nov. 1, 1910.

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To all whom it may concern:

Be it known that I, FREDERICK R. FULLER, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Clicking-Press, of which the following is a specification.

This invention relates to presses and particularly to a so-called "clicking" press, that is, a press adapted to operate with dies for cutting upper leather and similar sheet material.

The principal objects of the invention are to provide a construction of clicking press which can be set up directly in a front of a window, without interfering with its operation, which constitutes a great advantage over those forms of clicking presses which must be set up at the side of a window, where the light is bad at certain times of the day; to provide means whereby the column supporting the press arm may be adjusted along the block or table, even beyond the ends thereof; to provide improved means for holding the arm and for adjusting its height; to provide means whereby the angle of the press arm may be adjusted; to provide convenient and efficient means for adjusting the height of the table or block without impairing the rigidity of its support; and generally to improve the construction of machines of this character.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which,

Figure 1 is a front view of a practicable embodiment of the invention, Fig. 2 is a similar view slightly enlarged, showing a part of the means for adjusting the height of the table, Fig. 3 is an end view of the same. Fig. 4 is a transverse sectional view of a part of the table and guiding means thereon, showing the press arm and column partly in section and partly in elevation. Fig. 5 is a front elevation on an enlarged scale, showing the column for the press arm and connected parts, Fig. 6 is an end view of the operating eccentric and clutch member, and Fig. 7 is an end view of the other member of the clutch.

The invention is illustrated in the drawings in a form in which a frame 10 supports the table or block 11 which preferably is made up as usual of pieces of wood glued

together so as to make a solid block having a flat top. This table as shown is not supported directly on the frame, but is carried by a series of sets of wedges 12. As shown in Fig. 3 there are two wedges on each end connected by a plate 13. The wedges on each side of the block are supplied with a nut 14 and engaging the two nuts is a right and left hand screw 15 on which is shown a worm wheel 16. The wheel is shown as operated by a worm 17 on a shaft 18 to which a wrench or handle can be applied for turning it. As the wedges are mounted with their acute angles or sharp edges extending inwardly, it will be seen that the turning of the screw 15 will either draw them together or force them apart, resulting in a corresponding rise or fall of the table.

It will be observed that the frame 10 is provided with uprights 20 at the front of the table, and that beyond the ends of the table there are projections 21 extending outwardly from the ends of the frame. Supported by these uprights and projections are longitudinal horizontal guides 22 and 23. The guide 23 at the bottom is provided with a V-shaped upper surface and the guide 22 at the top with a V-shaped lower surface. The top guide 22 also is provided with a longitudinal bead 24 on its front side. Adapted to slide along these guides is a support 25 having ways or grooves 26, 27 and 28, fitting respectively the two V-shaped surfaces and the bead. This support carries a column 30, which is mounted in vertical position and can be adjusted along the guides, even to positions beyond either end of the frame and table.

The projections 21 are provided with bearings 31 for a shaft 32 which is the operating shaft of the machine and which is provided with a longitudinal key way 33. This shaft passes through the column 30, in which is located the clutch member 34 having a key 35 fixed thereto extending into the key way 33 irrespective of the position of the column. This clutch member is mounted opposite another clutch member 36 and a spring 37 normally forces them apart. Clutch member 34 however, is operated by a wedge 38 which is operated by a rod 39 and is normally held up at one end by spring 40. The rod 39 has a pivoted operating handle 41 on the outside of the column, provided with a spring pressed thumb lever 42 adapt-

ed to enter a notch in the column under normal conditions so that the rod is held up by this spring and by the thumb lever unless both are pressed. When this is done however, the springs 37 and 40 are both compressed and the clutch member 34 moved into contact with the clutch member 36. It will be understood of course, that the clutch member 34 constantly rotates with the shaft in all positions of the column and that when pressed against the clutch member 36 the latter also is caused to rotate, this results in rotating an eccentric 45 which is fixed to the clutch member 36. This eccentric moves an eccentric strap 46 which is connected with a plunger 47 to reciprocate it vertically. This plunger projects up out of the top of the column and is provided with a partition 48 into which the lower end of a screw 49 projects, so that this screw can rotate on the partition. On the screw is a nut 50 which is fixed by means of bolts 51 to a collar 52 surrounding the plunger. This collar is shown as consisting of two parts bolted together. The bolts 51 project through elongated openings 53 and are directly connected with the collar by a ring 54. This ring is mounted in an annular recess inside of the collar and is supported therein by a spring 55. The collar is provided with two projections 56 having a space between them into which projects the press arm 57. This press arm is pivoted on a curved projection 58 on the collar and is provided with a curved slot 59 concentric therewith through which projects a bolt 60 by which the angle of the press arm is adjusted. On top of the plunger is a hand nut 61 fitting the screw 49 for adjusting the collar and press arm as a whole vertically, independently of the plunger. The spring 55 yields as the arm comes down and allows the cam to swing over the dead center. It will be seen that by such a construction, the block can be set up directly in front of a window and that an electric light can be used to advantage, as the press arm can be moved to any point necessary to secure the best light on the work. On certain classes of work this adds more than an hour per day to the effective working time of the machine. Another advantage is that the eccentric cannot operate twice for one operation of the operating handle 41, because when the operator lets go of the handle the spring 40 moves it back so that the lever 42 enters its notch and the wedge 38 is withdrawn. This prevents accident by a second operation of the press arm.

While I have illustrated and described a preferred embodiment of this invention, I am aware that many modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. There-

fore I do not wish to be limited to all the details of construction shown, but

What I do claim is:—

1. In a clicking press, the combination of a block or table, a column, a press arm mounted on the column and projecting over the block or table, means for moving the press arm up and down and means for supporting said column in adjusted positions along one side of said block or table.

2. In a clicking press, the combination of a block or table, a press arm above it, a column for supporting the arm adjustable along the edge of the table, and means for moving the press arm transversely to the direction of adjustment of the column.

3. In a clicking press, the combination of a block or table, a press arm above it, a column for supporting the arm adjustable along the edge of the table, and means whereby the arm can be raised and lowered on the column in all positions thereof.

4. In a clicking press, the combination with a press arm and a block or table over which the press arm is arranged to project, of a support for the press arm freely adjustable along the edge of the block or table, and means for moving the press arm toward and away from the block or table in any position of adjustment.

5. In a clicking press, the combination with a press arm and a block or table over which the press arm is arranged to project, of a support for the press arm arranged for free manual adjustment along the edge of the block or table, mechanism for moving said press arm toward and away from the block or table, a normally rotated shaft and means for effecting an operative connection between said mechanism and said shaft in every position of adjustment of the support.

6. In a clicking press, the combination with a press arm and a block or table over which the press arm is arranged to project and with which it coöperates to effect a pressing operation, of a support for said press arm constructed to provide for angular movement of the press arm about a vertical axis at one side of the block or table, said support being arranged for free manual adjustment along one edge of the table, and mechanism for moving said press arm toward and away from the table in any position of adjustment.

7. In a clicking press, the combination of a frame, a block or table supported thereby, a longitudinal shaft, means on the frame for supporting the ends of said shaft, longitudinal guides supported by said means, and a press arm movable along said guides and connected with said shaft.

8. In a clicking press, the combination of a frame, a block or table supported thereby, projections extending outwardly from the end of said frame, longitudinal guides sup-

ported by said projections and extending beyond the ends of the block or table, and a column for a press arm mounted to move along said guides.

5 9. In a clicking press, the combination of a block or table, guides along one side thereof, consisting of upper and lower horizontal bars, the lower bar having a V-shaped upper surface, and the upper bar having a V-shaped lower surface and provided with a guiding bead along its front side, and a column or support for a press arm having a projection fitting said guides whereby it is supported thereby.

15 10. In a clicking press, the combination of a block or table, a longitudinal shaft having a key-way, a column movable along said shaft, a vertically movable plunger on the column, a cam on the shaft connected with said plunger for moving it, and a clutch movable with the column for connecting said cam with the shaft whereby the shaft will operate the cam.

25 11. In a clicking press the combination with a block or table, of a shaft extending along the same, a column movable along the shaft, a plunger in the column, a press arm supported by the plunger, means carried by the column for raising and lowering the plunger, and means carried by the column for connecting said raising and lowering means with the shaft.

35 12. In a clicking press, the combination of a block or table, with a plunger adjustable along the side thereof, an arm mounted on said plunger, and means whereby the outer end of said arm can be adjusted to different heights with respect to the inner end thereof.

40 13. In a clicking press, the combination with a block or table, of a plunger arranged in bearings at one side of the block or table to reciprocate vertically, means for reciprocating said plunger, an arm mounted on said plunger and arranged to project over the block or table, and means whereby the outer end of said arm can be adjusted to different heights with respect to the inner end thereof.

50 14. In a clicking press, the combination with a block or table, of a plunger arranged in bearings at one side of the block or table to reciprocate vertically, means for reciprocating said plunger and an arm mounted on said plunger and arranged to project over the block or table, provision being made for varying the vertical angular relation of said arm and said plunger.

60 15. In a clicking press, the combination with a block or table, of a plunger arranged in bearings at one side of the block or table to reciprocate vertically, an arm connected at one end to said plunger and arranged to project over the block or table, means for

reciprocating said plunger to move said arm 65 toward and away from the block or table, and provisions whereby said arm may be adjusted to bring the opposed faces of the arm and table into different angular relations to each other. 70

16. In a clicking press, the combination of a block or table, a shaft extending along the same, a column movable along said shaft, a plunger supported by the column, and means connected with said shaft and plunger in all positions of the column for moving the plunger up and down. 75

17. In a clicking press, the combination of a block or table, a column movable along the block or table, means extending along the block or table and projecting beyond the end thereof for supporting the column in adjusted positions, whereby said column can be adjusted beyond the end of the block or table, and a press arm supported by said column and adapted to project over the block or table in all positions of the column. 80

18. In a clicking press, the combination of a block or table, a vertically movable plunger, a screw mounted to rotate without longitudinal motion in said plunger, a nut threaded on said screw, a collar secured to the nut and reciprocable on said plunger, and a press arm on the collar extending over the block or table. 85

19. In a clicking press, the combination of a block or table, a column supported thereby and movable along the block or table, a press arm movably mounted on the column and capable of vertical adjustment, and means for adjusting the height of the block or table. 90

20. In a clicking press, the combination of a block or table, a reciprocable press arm over the same, a set of wedges for supporting the block or table, having their acute angles extending inwardly, a right and left hand screw connected with said wedges, and means for turning said screw to simultaneously move the wedges inwardly or outwardly. 100

21. In a clicking press, the combination of a block or table, a vertically adjustable press arm over the same, a set of wedges for supporting the block or table having their acute angles extending inwardly, a right and left hand screw connected with said wedges, a worm on said screw, and a worm wheel for turning the worm to simultaneously move the wedges inwardly or outwardly. 110

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FREDERICK R. FULLER.

Witnesses:

ALBERT E. FAY,
C. FORREST WESSON.