

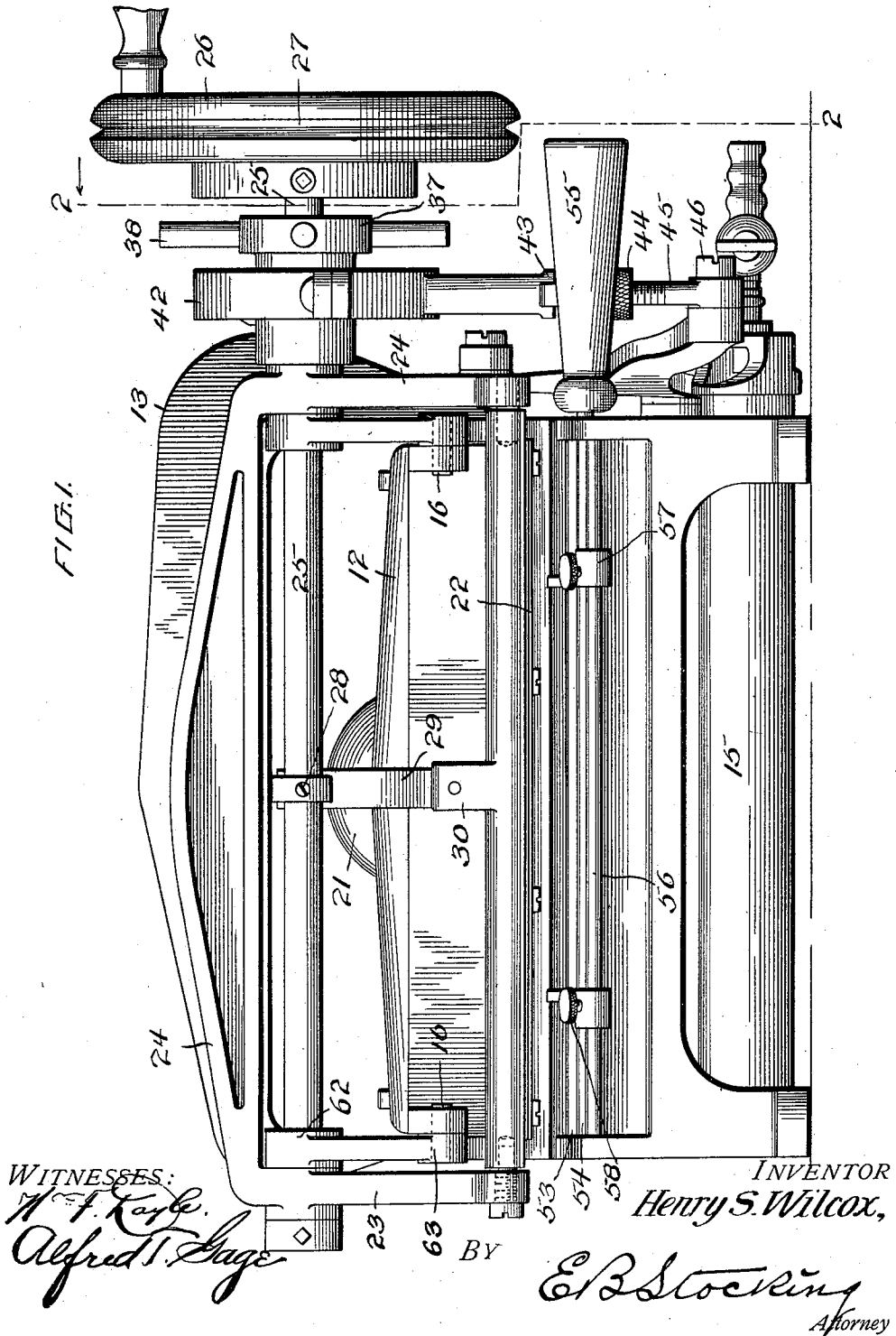
H. S. WILCOX.
PLAITING MACHINE.

APPLICATION FILED NOV. 7, 1910.

Patented Aug. 15, 1911.

6 SHEETS—SHEET 1.

1,000,703.

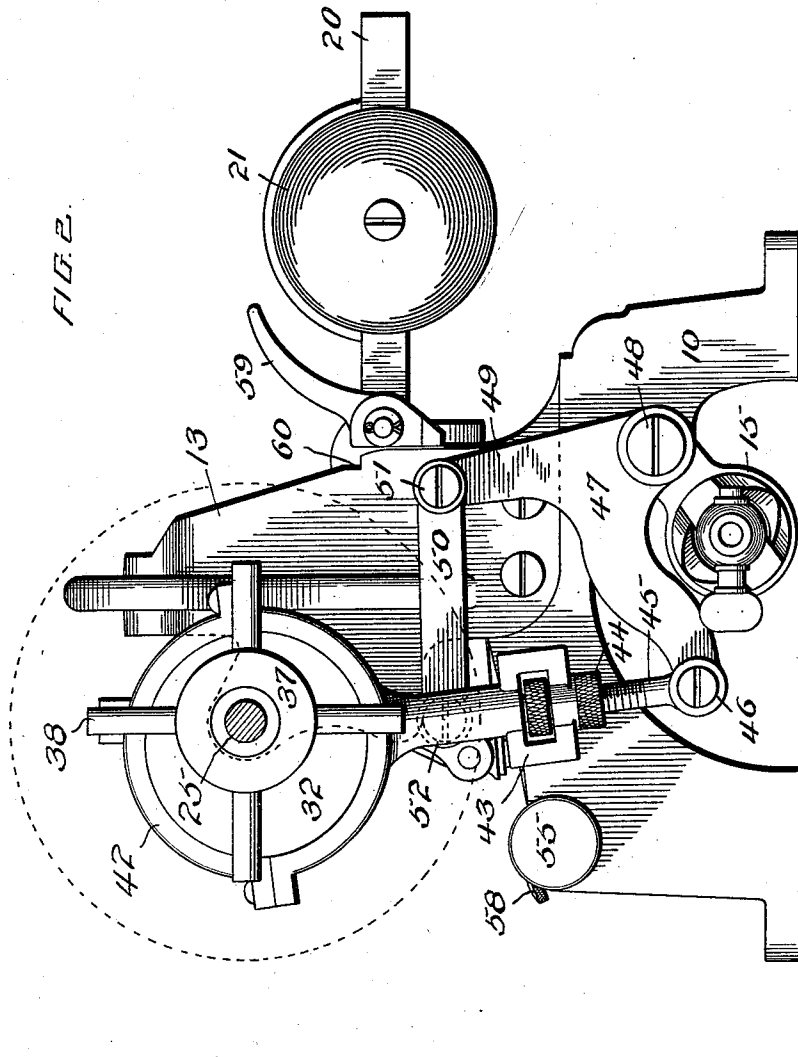


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6 SHEETS-SHEET 2.



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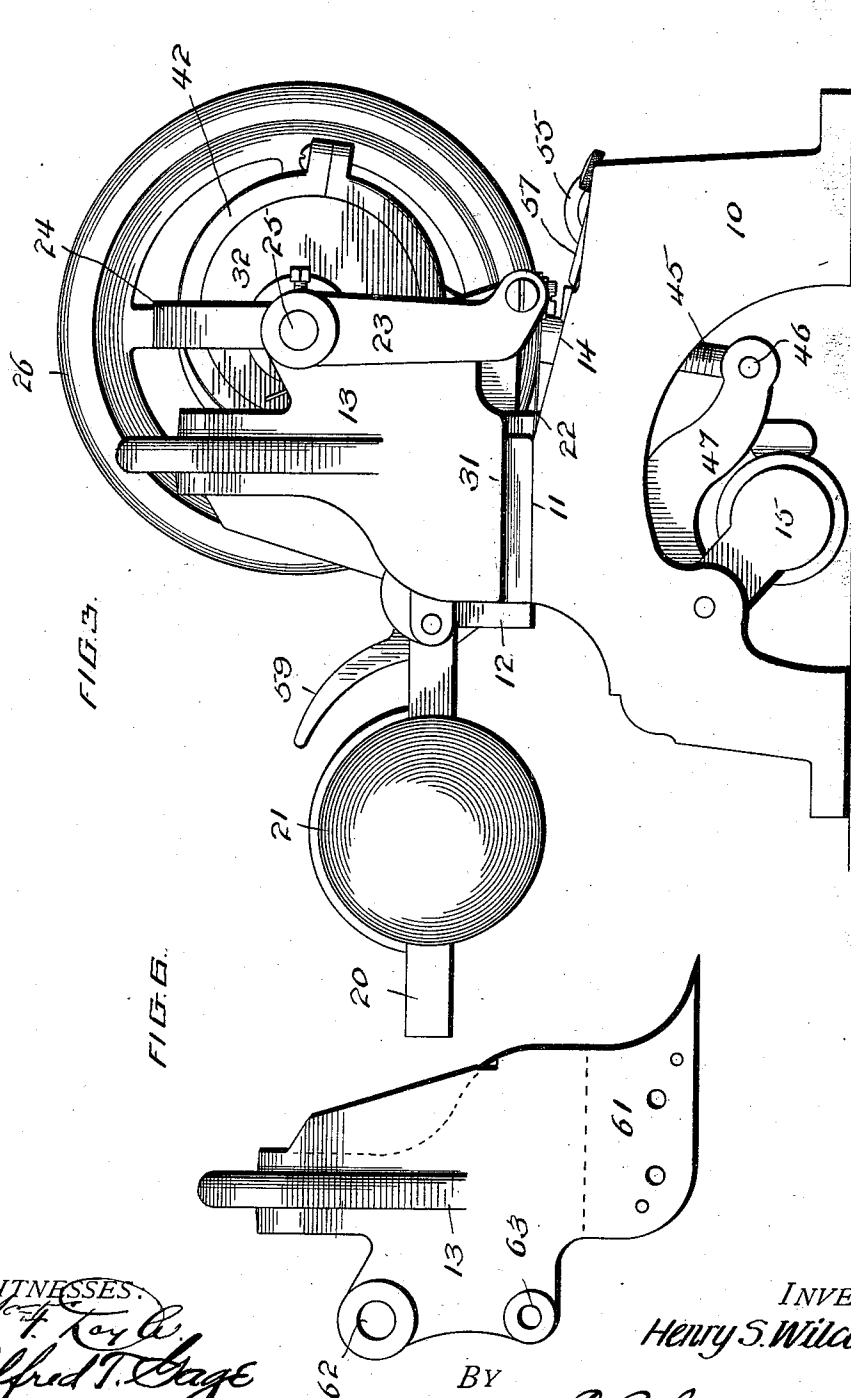
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6 SHEETS—SHEET 3.



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6 SHEETS—SHEET 4.



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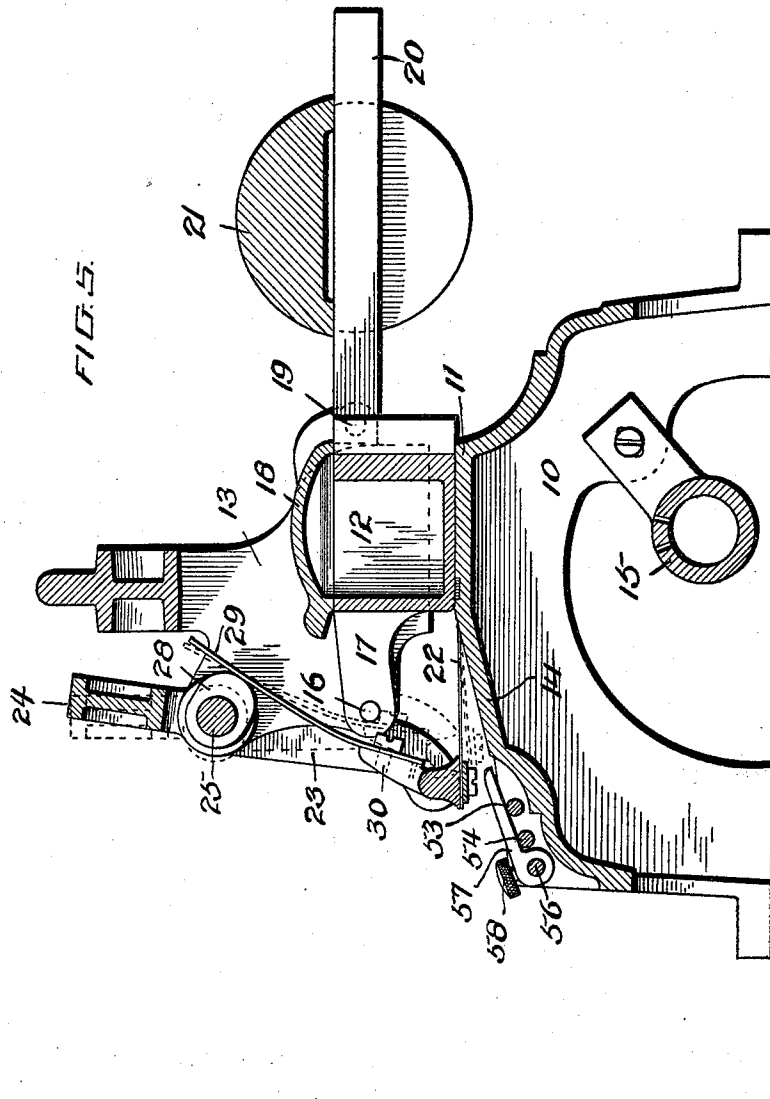
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6 SHEETS—SHEET 5.



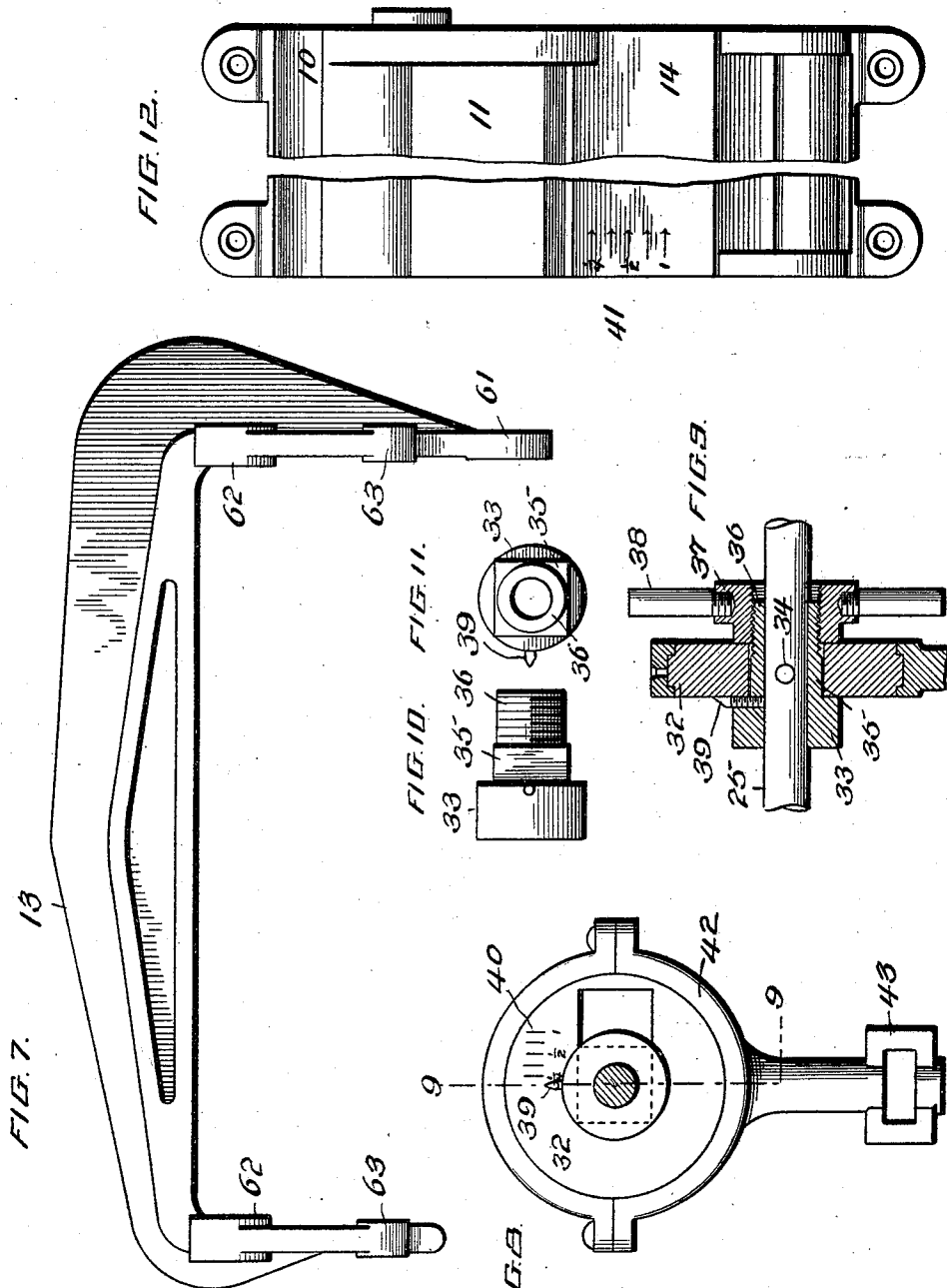
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Patented Aug. 15, 1911.
6 SHEETS—SHEET 6.



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UNITED STATES PATENT OFFICE.

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PLAITING-MACHINE.

1,000,703.

Specification of Letters Patent.

Patented Aug. 15, 1911.

Application filed November 7, 1910. Serial No. 591,171.

To all whom it may concern:

Be it known that I, HENRY S. WILCOX, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Plaiting-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a plaiting machine and particularly to a structure in which the material to be plaited is laid in folds between a base and a cooperating pressure member.

The invention has for an object to provide a novel and improved construction comprising a supporting surface and a cooperating pressure device resting thereon together with a blade movable between said support and pressure device, the extent of its movement being adjustable to determine the width of the plait to be formed.

A further object of the invention is to provide means for yieldingly holding the blade in contact with the feeding face of the base and also for adjusting the pressure upon the contacting device cooperating with said base.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings—Figure 1 is a front elevation of the machine; Fig. 2 is a vertical section on line 2—2 of Fig. 1; Fig. 3 is an end elevation from the left of Fig. 1; Fig. 4 is a plan of the machine; Fig. 5 is a central vertical section; Fig. 6 is an end elevation of the supporting frame; Fig. 7 is a front elevation thereof; Fig. 8 is an end view of the adjustable cam for the blade; Fig. 9 is a section on line 9—9 of Fig. 8; Fig. 10 is a detail plan of the adjusting bolt; Fig. 11 is an end elevation thereof; and Fig. 12 is a plan of the base.

Like numerals of reference refer to like parts in the several figures of the drawings.

The numeral 10 indicates the base of the machine which may be of any desired construction or configuration and is provided with a pressing face 11 which cooperates with a pressure device 12 mounted upon the support 13 carried by said base. At the front of the base, a feeding face 14 is formed and beneath the base a heating device 15 is provided which may be of any desired char-

acter, for instance a gas heater as shown. The pressure device 12 is pivotally mounted at 16 by means of the lug 17 extending from the opposite ends thereof and may be heated in any desired manner. It is also formed with a cover member 18 pivoted at 19 and with an extended arm 20 upon which a weight 21 is slidably mounted to adjust the pressure required as needed.

Cooperating with the base and pressure device, is a plaiting blade 22 pivotally mounted at the lower end of the arms 23 carried by the rocking frame 24 upon the shaft 25. This shaft may be driven in any desired manner, for instance by means of a hand wheel 26 shown in Fig. 1 which is provided with a groove 27 adapted to receive a driving belt. The shaft 25 carries a cam 28 disposed to engage a spring 29 secured to the lever arm 30 extending from the blade 22. When the cam 28 is in the position shown in Fig. 5, the pressure upon the spring 29 forces the blade downward into contact with the feeding face 14 of the base. The support 13 is spaced at its end 31 from the pressing surface 11 in order to permit the introduction of goods of a greater width than the machine in order to allow the goods being acted upon to be only plaited for a portion of its width which enables the machine to plait dress skirts.

The oscillation of the blade 22 is determined and regulated by the cam 32 which is adjustably mounted upon a bolt 33 secured to the shaft 25 as shown at 34. This bolt is provided with a squared portion 35 fitting a similar aperture within the cam and with a threaded portion 36 upon which the locking nut 37 is threaded. This nut is formed with hand-holes 38 and the bolt 33 is provided with an indicating point 39 adapted to cooperate with indications upon the cam 42. The feeding face 14 of the base is also provided with a series of indications 41 by which the extent of travel of the folding blade may be determined. Motion is transmitted from the cam by means of the sleeve 42 mounted thereon which is provided at its lower end with the yoke 43 in which an adjustable nut 44 is mounted and threaded upon the connecting rod 45 which is pivoted at 46 to the crank lever 47 pivotally mounted at 48 upon the base 10. The arm 49 of this crank lever is connected by a link 50 with the blade frame

24. It is pivoted to the crank arm at 51 and to the frame at 52.

At the front of the machine, tension rods 53 and 54 are mounted, the latter being provided with a handle 55 by which it may be withdrawn for the purpose of introducing the material to be plaited in the usual manner. Beyond these rods, a supporting rod 56 is provided upon which the guide fingers 10 57 are adjustably supported and may be secured in their adjusted position, relative to the width of the material to be fed, by the set-screws 58.

Pivotaly mounted upon the pressure device, is a trip lever 59 which is adapted to engage a seat 60 upon the frame 13 and retain the device in raised position when desired. As shown in Figs. 6 and 7, the frame 13 is provided with a securing portion 61 20 mounted upon the base, the opposite end of the frame being disposed above the feeding and pressing faces of the base to permit the introduction of goods endwise into the machine. This frame is provided with bearings 25 62 for the shaft 25 and bearings 63 for the pivots 16 of the pressure device.

In the operation of the machine, the goods to be plaited are fed over the tension rods in the usual manner and folds formed therein 30 by the oscillation of the blade which forces the material over the feeding face and beneath the pressure device which, being heated, retains the plait or fold. During this action, the cam acting upon the spring arm from the blade, causes the blade to engage the feeding face under tension during a portion of its movement and relieves this pressure during the remainder of the movement. The length of travel and consequently the width of plait to be formed is 40 determined by the adjustment of the cam by which the blade is actuated and this adjustment can be conveniently regulated by means of the indications upon the feeding face 14 of the base. The blade may be 45 brought into alinement with any of these indications and the cam then adjusted and locked to secure the proper length of travel.

The invention presents a simple, efficient and economical construction of plaiting machine in which the pressure for holding goods may be varied relative to the weight thereof and the width of plait readily adjusted. 50

Having described my invention and set forth its merits what I claim and desire to secure by Letters Patent is— 55

1. In a plaiting machine, a base, a pressure device coöperating therewith, a blade adapted to coöperate with said base and pressure device, a driving shaft to actuate said blade, means mounted upon said shaft for supporting a cam, a cam mounted upon said means and provided with a slot for adjustment thereof laterally of said shaft, 60 a rod extending from said cam and provided with a yoke at its lower end, an adjusting nut mounted in said yoke, a crank lever connected with said blade, and a threaded shaft extended from said lever to said nut. 65 70

2. In a plaiting machine, a base, a pressure device coöperating therewith, a reciprocating blade disposed to traverse said base, a frame mounted above said base and 75 open at one end to permit the insertion of material of a greater width than the machine, and means mounted in said frame for reciprocating said blade.

3. In a plaiting machine, the combination with a base, of a substantially inverted U-shaped frame having legs of different lengths arranged above said base, the leg of the greatest length being secured to said base and the shortest leg being held above 85 said base to form an open side, a reciprocating blade supporting frame, a pressing device mounted in said frame, and means mounted in said frame for reciprocating and depressing said blade. 90

In testimony whereof I affix my signature in presence of two witnesses.

HENRY S. WILCOX.

Witnesses:

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C. S. BELKNAP.