

No. 776,205.

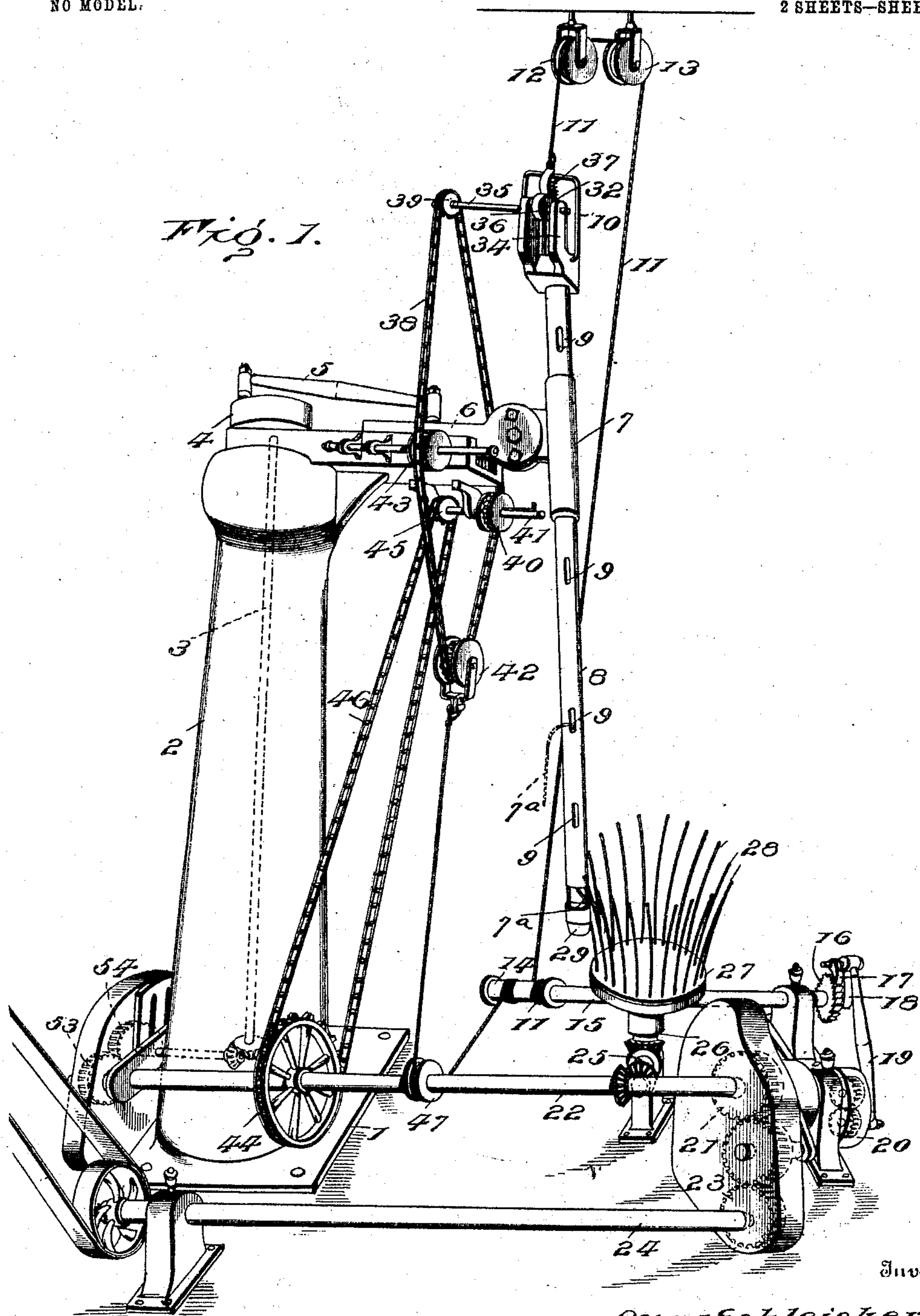
PATENTED NOV. 29, 1904.

O. SCHLEICHER.
MACHINE FOR MAKING BASKETS.

APPLICATION FILED OCT. 9, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Inventor

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Witnesses

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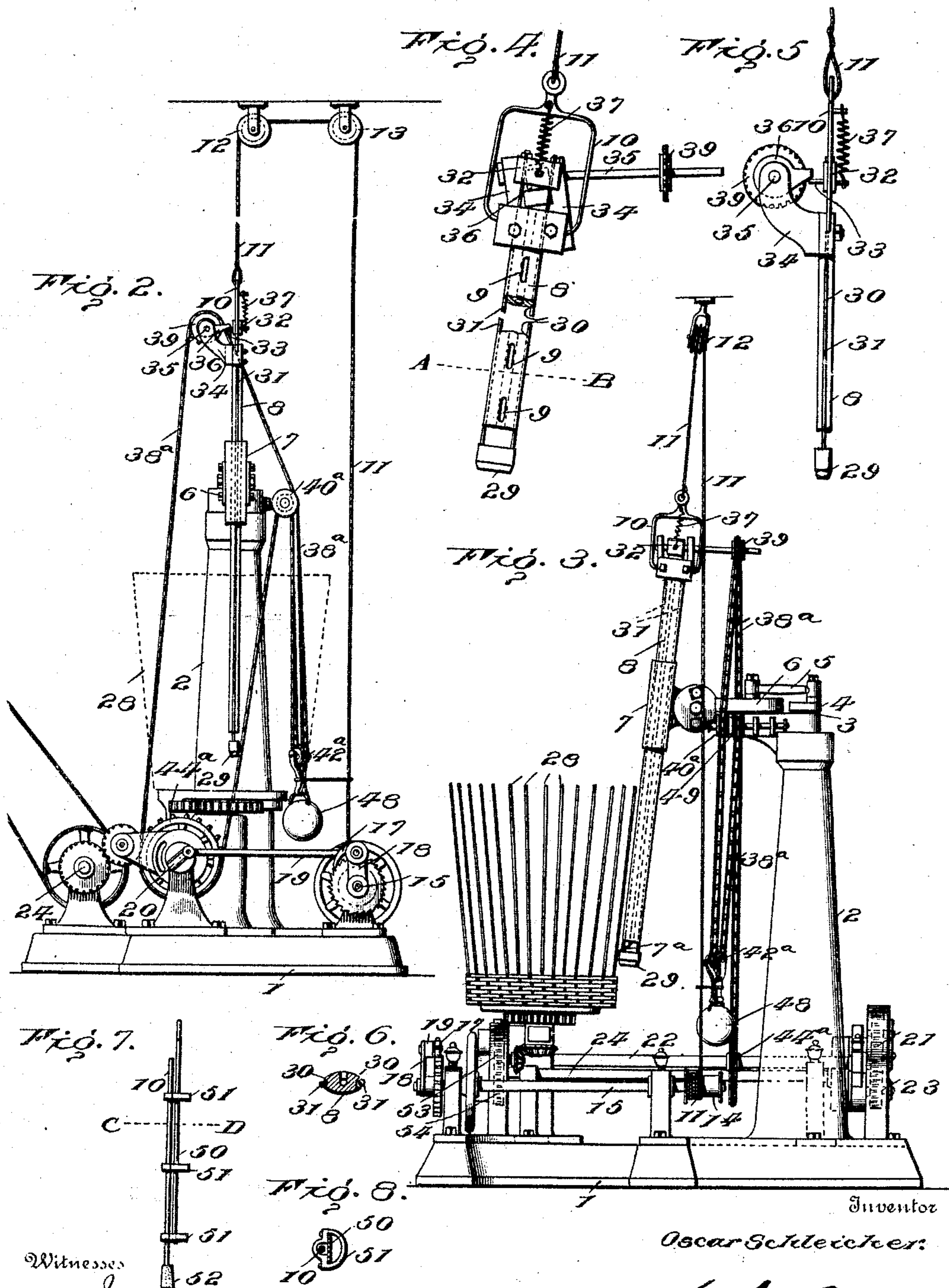
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

OSCAR SCHLEICHER, OF HEINSBERG, GERMANY, ASSIGNOR TO WILLIAMS MANUFACTURING CO., OF NORTHAMPTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

MACHINE FOR MAKING BASKETS.

SPECIFICATION forming part of Letters Patent No. 776,205, dated November 29, 1904.

Application filed October 9, 1903. Serial No. 176,415. (No model.)

To all whom it may concern:

Be it known that I, OSCAR SCHLEICHER, manufacturer, a subject of the King of Prussia, Emperor of Germany, residing at Heinsberg, Rhineland, in the Kingdom of Prussia, Empire of Germany, have invented certain new and useful Improvements in Machines for Making Baskets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines for making baskets and the like; and it relates more particularly to that class shown in my former patent, No. 693,911, dated February 25, 1902.

One of the objects of the present invention is to provide an improved batting mechanism—that is, the mechanism that bats or delivers blows on the woven material to provide a close weave.

A further object is to provide an improved means for feeding the strand of material.

With these and other objects in view the invention consists of the parts and combination of parts set forth in the specification and claims.

In the drawings, Figure 1 is a perspective view of one form of my invention. Fig. 2 is a front elevation of another form. Fig. 3 is a side elevation of the form shown in Fig. 2. Fig. 4 is a view of the feeding and the batting means. Fig. 5 is another view of the feeding and the batting means. Fig. 6 is a sectional view on the line A B, Fig. 4. Fig. 7 is a view of a modification of the feeding and the batting means. Fig. 8 is a sectional view on the line C D, Fig. 7.

Referring more particularly to the drawings, 1 designates the base; 2, an upright through which extends a shaft 3, having an eccentric disk 4 at its upper end, which disk is connected to one end of a link 5, which is connected at its other end to a reciprocating slide 6, mounted on the upright 2.

The slide 6 carries a guide 7, on which the

feeding device is adapted to be raised and lowered. This feeding device in Figs. 1 to 6 comprises a tube 8, having a cross-section wider in the direction of movement of the slide 6, preferably oval, which tube is provided throughout its length with a plurality of elongated openings 9, into which the strand 7^a of weaving material is inserted and from which it passes through said tube and out of the lower end of the same. These openings are provided for different sizes of baskets and provide a means when weaving small baskets to enable the weft-strand to enter the feeding device much closer to the point of weaving, thereby lessening the friction in the feeding device and also the chances for the formation of knots within said device. The tube 8 is raised by means of a link 10, connected to the upper end of said tube, so as to swing thereon. Secured to this link 10 is a cable 11, which passes upwardly over two pulleys 12 13, mounted upon any support above the tube, and thence downwardly around a drum 14 on a shaft 15, which is intermittently driven by means of a toothed wheel 16 thereon and a pawl 17, carried by one end of a link 18, which at its other end is journaled on the shaft 15. Also connected at one end to the link 18 is a rod 19, its other end being connected to an eccentric disk 20, which is by gearing 21 connected with a shaft 22, parallel with the shaft 15, the shaft 22 being connected by gearing 23 with power-shaft 24. The shaft 22 is geared to a shaft 25 at an angle thereto, which communicates motion to a spindle 26 of a rotary table 27, upon which the basket is supported while being made.

The form of basket manufactured by the construction shown in this application employs upright warp-splints 28, which are held in position in any suitable manner and are rotated with the table, each one passing transverse to the line of movement of the feeding device, which moves in a straight line owing to its being carried by the slide 6. In this way the weft-strand 7^a is carried from one side of the upright splints 28 to the other,

and owing to the successive movement of the splints 28 past the line of movement of the feeding device the weft-strand is wrapped around one side of one splint and around the other side of the next splint. As the height of the completed weft-strands increases the feeding device moves upwardly, being advanced the distance of a strand after every revolution of the basket by means of the cable 11, which is connected with the shaft 15, which, as before stated, is intermittingly rotated.

The batting device is carried with the feeding device and strikes the top weft-strand in the passage of the device between the upright warp-splints. In the construction shown in Figs. 1 to 6 the batting device comprises an impact-head 29, disposed in a line with and below the end of the tube 8, said tube being provided with longitudinal grooves 30 on opposite sides, in which grooves fit two rods 31, which are connected at their upper ends above the tube by a plate 32, provided with a projection 33. Two supports 34 are offset from the tube 8 adjacent to the projection 33 and have journaled therein a shaft 35, on which between the supports 34 is keyed a cam-disk 36, adapted at every rotation to engage with the projection 33, and consequently force the impact-head 29 against the weft-strand 7^a. A spring 37, connected to the link 10 and the plate 32, raises the impact-head 29 after every blow. The shaft 35 and cam 36 are rotated by a chain 38, which passes over a sprocket 39, keyed to the shaft 35. In Fig. 1 this chain 38 passes downwardly around a sprocket 40, keyed to a shaft 41, suitably mounted on one side of the upright 2, to a pulley 42, thence upwardly on the other side of the upright over a pulley 43, the shaft 41 being rotated by means of a sprocket 44 on the shaft 22, a sprocket 45 on the shaft 41, and a chain 46, connecting both sprockets. The pulley 42 is movable, so as to compensate for the bodily movement of the chain 38, due to the raising and lowering of the feeding device and batting means. In this form the relation between the downward movement of the pulley 42 and the upward movement of the batting device is made positive, owing to the pulley 42 passing over a loose pulley 47 on the shaft 22 and being wrapped around the shaft 15.

In Figs. 2 and 3 the chain 38^a passes downwardly over a pulley 40^a on one side of the upright to a movable pulley 42^a, which carries a counterweight 48, thence upwardly to a pulley 49 on the same side of the upright, again downwardly around the sprocket 44^a on the shaft 22, and finally to the sprocket 39 on the shaft 35.

In Figs. 7 and 8 instead of the feeding device heretofore described I employ a flat strip 50 for the tube 8, having at several points in its length guides 51, which on one side guide

the batting device 52 and on the other side the weft-strand 28. Otherwise the feeding device and the batting means operate the same as those shown in the other figures.

The operation of the invention is as follows: A basket form having the upright warp-splints 28 is placed upon the rotary table 27 and power applied to rotate the shaft 24, whereby through the medium of shaft 22, shaft 25, and spindle 26 the table begins to rotate. At the same time through the medium of gearing 53, shaft 54, and shaft 3 the eccentric disk 4 is rotated, which moves the feeding device and the batting device in a straight line. The weft-strand is passed through one of the opening-intakes 10 or one or more of guide-intakes 51, depending upon the height of the basket—in a small basket the lower opening or guide and in the largest basket the top opening or all of the guides. When the shaft 22 rotates, it communicates motion, through the gearing 21, eccentric disk 20, rod 19, link 18, pawl 17, and toothed wheel 16, to the shaft 15 to intermittingly rotate it, and consequently intermittingly raise the feeding and the batting devices. Motion is also communicated by the shaft 22 to the batting device through chain 38 or 38^a, the movable pulley 42 of the said chain being in Fig. 1 intermittingly lowered as the batting device is raised, owing to the connection of the shaft 15.

I desire it to be understood that I may make various changes in form, proportion, &c., without departing from the spirit of my invention.

Having thus described my invention, the following is what I claim as new:

1. In a basket-making machine, the combination of the device for feeding the weft-strand, means for moving the basket warp-splints and the feeding device in lines transverse to one another so that the feeding device passes between the splints, and mechanism positively operated to intermittingly move the splints and the feeding device relatively longitudinally of the splints after the laying of every weft-strand so that the parts are separated for the laying of another weft-strand.

2. In a basket-making machine, the combination with the rotary basket-support for holding the warp-splints in an upright position, of a device for feeding the weft-strand in a line transverse of the line of movement of the warp-splints, and mechanism positively operated to intermittingly raise the feeding device.

3. In a basket-making machine, the combination of the basket-support carrying the warp-splints, means for moving the same, weft-feeding means and means for moving the weft-feeding means longitudinally of the splints after the laying of a weft-strand, connected to and operated by the basket-moving means.

4. In a basket-making machine, the combination of the basket-support carrying the warp-splints, means for moving the same, weft-feeding means, and an intermittent-grip device between the basket-moving means and the weft-feeding means for moving the weft-feeding device and the basket-support relatively longitudinally of the splints as the weaving progresses.

5. In a basket-making machine, the combination with the rotary basket-support for holding the warp-splints in an upright position, of a device for feeding the weft-strand in a line transverse of the line of movement of the warp-splints, a pulley and means for intermittently raising the feeding device, and comprising a cable secured at one end to the feeding device, passed upwardly over the pulley, thence downwardly, a shaft around which said cable is wound, a toothed wheel keyed to the shaft, a link journaled at one end on the shaft, a pawl carried by the link, a second shaft, an eccentric disk carried by the second shaft, and a rod connecting the eccentric disk and the link.

6. In a basket-making machine, the combination of a web-feeding device, the batting device, means for moving the warp-splints in one line, and means for moving the batting device from one side of the line of warp-splints to the other side and striking the laid weft in its passage between the warp.

7. In a weaving-machine, the combination of means for moving the weft from one side of the warp to the other, and a batting means carried by the weft-feeding means and movable transversely of the weft to strike the weft in its passage between the warp.

8. In a weaving-machine, the combination with the weft-feeding device, of means carried by the said weft-feeding device to periodically bat the weft.

9. In a basket-machine, the combination with the weft-feeding device movable as the weaving progresses, of a batting-head carried by the said device and movable with the same, and means for operating the batting-head.

10. In a basket-machine, the combination with the weft-feeding device movable as the weaving progresses, of a batting-head carried by said device and movable with the same, a projection carried by the batting-head, a spring connected to the weft-feeding device and to the batting-head, a cam journaled on the weft-feeding device, and means for moving the cam.

11. In a basket-weaving machine, the combination with a fixed shaft, of a weft-feeding device, a batting device movable as the weaving progresses, a chain connecting the batting

device with the fixed shaft and permitting the batting device to move relatively to said shaft, and means intermittently operated to tighten or slacken the chain to compensate for the different distances between the batting device and the fixed shaft.

12. In a basket-weaving machine, the combination of the reciprocal guide, a weft-feeding device and a batting device movable on the guide, and a basket-support adapted to move the warp in a line transverse to the movement of the guide.

13. In a basket-weaving machine, the combination with the reciprocal guide, of a batting device and a weft-feeding device movable up and down upon the guide, and a rotary basket-support adapted to move the warp in a line transverse to the movement of the guide.

14. In a weaving-machine, the combination with a weft-feeding device, and a batting device movable as the weaving progresses, of a shaft, a chain connecting the shaft and the batting device, to operate the batting device, and means for tightening or slackening the chain to compensate for the different distances between the shaft and the batting device.

15. In a weaving-machine, the combination with a weft-feeding device, a batting device, and an intermittently-operated shaft, of means connecting the batting device and the shaft to move the device as the weaving progresses.

16. In a weaving-machine, the combination with a weft-feeding device, a batting device, and an intermittently-operated shaft, of means connecting the batting device and the shaft to move the device as the weaving progresses; a second shaft, a chain connecting the second shaft and the batting device to operate said device, and means connected to the intermittently-operated shaft for tightening or slackening the chain to compensate for the different distances between the second shaft and the batting device.

17. In a weaving-machine, the combination with a weft-feeding device, the guide, and a batting device movable on the guide and comprising the impact-head, a projection movable with the impact-head, a shaft, and a cam on the shaft; of a second shaft, a chain connecting the second shaft and the shaft on the batting device, and means for tightening or slackening the chain to compensate for the different distances between the second shaft and the batting device.

OSCAR SCHLEICHER.

In presence of—

HENRY QUADFLIEG,
L. DAVIDSON.