

said hub and connected at its respective ends to the said carrier, spring-catch e^6 , pivoted to the stationary support C^2 , and engaging with the carrier G , to fasten the latter to its support, lug e^7 on the main slide adapted to engage the said spring-catch and release the carrier G , and mechanism for reciprocating the main slide upon its support, substantially as described. 20th. The main slide, in combination with a support arranged diagonally of the frame on which said slide is mounted and free to move lengthwise thereof, a revoluble crossing-needle mounted thereon, gear wheel H^1 , also mounted on said slide and connected by gearing with the said needle-shaft, driving-hub G^1 , fastened to said wheel, carrier G , mounted on a fixed support on which it is free to slide, and provided with depending arms, g , g^1 , at its respective ends, spring-catch e^6 , adapted to connect the carrier G to its support, lugs e^7 and g^2 , on the main slide, F , and mechanism for reciprocating the latter on its support, substantially as described. 21st. The main slide F , in combination with the revoluble needle-shaft mounted thereon, driving-gear H^1 , also mounted on the slide geared to the needle-shaft and provided with hub G^1 , sliding carrier G , mounted on a fixed support on which it is free to slide, spring-catch adapted to secure the carrier G , to its support, lug e^7 , on the main slide adapted to release the catch and move the carrier forward with the main slide, and stationary stop-block e^8 , substantially as described. 22nd. The revoluble crossing-needle, in combination with the gear-wheel H^1 , connected by gearing with the said needle-shaft, driving hub G^1 , secured to said wheel and composed of sectors g^1 , adjustable radially of their axis, and the driving-cable g^2 , applied to said hub, substantially as described. 23rd. The main slide, in combination with a revoluble needle-shaft mounted thereon, needle-chuck I , secured to the shaft and provided with a stud i^2 , at one side thereof, and a stationary stop-plate i^1 , provided with slot i^3 , adapted to receive the chuck-stud i^2 , substantially as described. 24th. In a machine for inserting diagonal strands in cane weaving, a main slide arranged to move diagonally of the mat, in combination with means to move the said carrier diagonally, a revoluble crossing-needle mounted thereon, a sliding standard mounted on a suitable support at the front edge of the mat and in the path of the said main slide, and threading mechanism mounted on said standard and adapted to be operated by the sliding movement thereof as it is carried outward by the main slide, substantially as described. 25th. In a machine for inserting diagonal strands in cane-weaving, a main slide arranged to move diagonally of the mat, in combination with the revoluble crossing-needle, having a bent tip, mounted thereon, mechanism for rotating said needle during its forward thrust through the mat, mechanism for stopping said rotation as the tip of the needle reaches the front edge of the mat, and mechanism adapted to adjust and fix the needle in a position with its bent tip horizontal by the further forward movement thereof, substantially as described. 26th. In a machine for inserting diagonal strands in cane-weaving, a main sliding carrier arranged to move diagonally of the mat, in combination with a revoluble crossing-needle, having a bent tip, mounted thereon, mechanism for rotating said needle during its forward thrust through the mat, mechanism for stopping said rotation as the tip of the needle reaches the front edge of the mat, mechanism adapted to adjust and fix the needle in a position with its bent tip horizontal by the further forward movement thereof, and threading mechanism adapted to thread a strand of cane into the eye of the needle-tip when thus adjusted, substantially as described. 27th. A diagonal main slide, F , in combination with a revoluble crossing-needle J , mounted thereon, and a fixed level plate, C^3 , arranged at the front edge of the mat and adapted to turn the tip of the needle into a horizontal position toward the end of its forward thrust, substantially as described. 28th. A main slide, in combination with a revoluble crossing-needle, J , mounted thereon and having a bent tip, a stationary level plate, C^3 , the needle-guide J^2 , and the upper movable member, D , of the clamp to which said guide is secured, substantially as described. 29th. In a machine for inserting diagonal strands in cane-weaving, a diagonal main slide, F , a revoluble crossing-needle, J , mounted thereon and having a bent tip, a sliding standard K , outside of the front edge of the mat, an arm, k^1 , mounted thereon and provided with a funnel-shaped opening, k^2 , adapted to receive the needle-tip, and a horizontal slot, k^3 , in front thereof, adapted to permit the insertion of the end of a cane strand, substantially as described. 30th. In a machine for inserting diagonal strands in cane-weaving, a crossing-needle provided with a bent tip with an eye therein, in combination with the funnel-shaped receiver k^1 , having a funnel-shaped opening k^2 , adapted to receive the bent eye of the needle, and a short horizontal slot k^3 , in combination with a feeding mechanism adapted to feed the end of a cane strand into said slot and through the eye in the needle-tip, substantially as described. 31st. In a machine for inserting diagonal strands in cane-weaving, a crossing-needle provided with a bent tip with an eye therein, in combination with the funnel-shaped receiver k^1 , having a funnel-shaped opening k^2 , adapted to receive the bent eye of the needle and a short horizontal slot k^3 , in combination with a feeding mechanism adapted to feed the end of a cane-strand into said slot through the eye in the needle-tip, and a device for bending the end of the strip projecting through the eye of the needle at an angle to the main strip, substantially as described. 32nd. A main slide F , in combination with a revoluble crossing-needle mounted thereon and having a bent tip and eye therein, a sliding standard K , adapted to be moved by contact of the main slide therewith, funnel-shaped needle-tip receiver k^1 , having slot k^3 , feed-wheels L and M , mounted on the standard K ,

and adapted to receive a cane-strip between them, and mechanism adapted to be operated by the outward sliding movement of the standard to actuate said wheels to feed the cane-strip into the receiving-funnel and thread it into the eye of the needle, substantially as described. 33rd. The sliding standard K , in combination with strand feeding-wheels L and M , the former mounted on a stationary journal and the latter immediately above on a journal vertically adjustable, and mechanism operated by the sliding of the standard to raise and lower said journal to engage and disengage the feed-wheels, substantially as described. 34th. A sliding standard K , in combination with a feed-wheel M , mounted on a fixed journal, the upper journal-pin M^1 , mounted loosely in its bearing and having an eccentric section m^1 , the upper feed-wheel M , mounted on this eccentric section, both wheels being provided with gear-teeth, the forked-crank M^2 , secured to the journal-pin M^1 , inflexible hook n , pivoted at one end to a fixed support and at the other engaging with one arm of the forked-crank, and a retracting spring n^1 , connected at one end to the opposite arm of the forked-crank and at the other to the sliding standard, substantially as described. 35th. The strip feed-wheel L , provided with gear-teeth l , and flanges l^1 , having a channel l^2 , between them, in combination with a companion feed-wheel M , provided with gear-teeth m , a narrow annular groove m^1 , and outer web m^2 , substantially as described. 36th. The sliding standard K , in combination with means for sliding said standard, a feed wheel L , mounted thereon, ratchet-wheel L^1 , connected to said feed-wheel, upper feed-wheel M , both feed-wheels provided with engaging gear-teeth, and pawl n^1 , mounted on a fixed support and arranged to engage the ratchet-teeth as the standard is moved outward, substantially as described. 37th. The main slide F , in combination with revoluble crossing-needle mounted thereon and provided with a bent eye-tip, the sliding standard K , mounted outside the mat and in the path of the main slide F , a stationary bar provided with threading funnel k^1 , slotted as specified, strip feeding-wheels L and M , mounted on the standard K , oscillating eccentric journal M^1 , on which the upper wheel M is mounted, forked crank M^2 , secured to the eccentric journal pin, inflexible hook n , and spring n^1 connected to the respective arms of said fork, ratchet-wheel L^1 , connected to the feed-wheel L , and pawl n^1 pivoted to a stationary support and arranged to engage the teeth of said ratchet, whereby the standard K is moved outward by contact of the main slide F on its forward travel, thereby actuating the feeding devices to feed the diagonal strand into the threading funnel and eye of the needle lying thereon, substantially as described. 38th. A crossing needle provided with a bent eye-pointed tip, in combination with a stationary bar provided with a threading funnel k^1 slotted as described, feeding mechanism adapted to thrust the diagonal strip into said funnel and thread the needle, star-wheel K^1 just back of said funnel, and mechanism for giving an intermittent rotation to said wheel to bend the projecting end of the cane-strip upon the tip of the needle substantially as described. 39th. A stationary bar provided with the threading-funnel k^1 , in combination with a crossing needle J , having a bent eye tip, feed-wheels L and M adapted to carry the cane-strand into said funnel and thread the needle, star-wheel K^1 , fixed on shaft k^4 , pinion k^6 at the opposite end of said shaft, and pinion L^2 connected with the feed-wheel L , whereby the pinion L^2 is rotated intermittently with the feed-wheel to give a corresponding movement to the star-wheel, substantially as described. 40th. In a machine for inserting diagonal strands in cane-weaving, the main slide F , in combination with a revoluble crossing-needle J mounted thereon and provided with a bent eye-tip, a sliding standard K arranged in the path of said main slide and adapted to be moved outward by contact therewith, cane-feeding and threading mechanism mounted on said standard, mechanism connected with said standard and constructed to be operated by the outward sliding movement thereof to operate the cane feeding and threading mechanism, and a retracting spring k^7 , adapted to return the sliding standard K upon the retreat of the main sliding carrier, substantially as described. 41st. The cutter O , pivoted to the standard K , in combination with mechanism for turning said cutter on its pivot to raise the cutter end and compress an actuating spring, a spring catch adapted to engage the outer arm of the cutter and hold it in its said adjustment, and tripping mechanism on the main-slide arranged to engage and trip said catch near the end of the return movement of said main slide, thereby releasing the cutter to sever the diagonal strip with a quick, sharp blow under the influence of the compressed spring just about as the needle is withdrawn from the rear edge of the mat, substantially as described. 42nd. The pivoted cutter O , in combination with a rod o^2 , passing loosely through the outer end of the cutter-arm, spring-coil o^1 , secured on the rod immediately below the cutter-arm, movable cam B^3 , rocking-lever O^1 , connected at one end to the lower end of the rod o^2 , and at the other end provided with a roller-pin working in the cam-groove b^2 , of the cam B^3 , the spring-catch O^2 , adapted to engage the cutter-arm when depressed, and provided with toe-piece o^4 , and the main slide F , provided with tappet o^5 , adapted to engage the toe of the catch and thereby release the cutter-arm, substantially as described. 43rd. The diagonal sliding carrier F , in combination with a crossing-needle mounted thereon, feeding and threading mechanism at the front edge of the mat whereby the diagonal strand of cane is threaded to the needle on its outward thrust, and a gripping device arranged at the back edge of the mat, and mechanism arranged to operate the grip to seize the diagonal strand just as the needle is withdrawn