

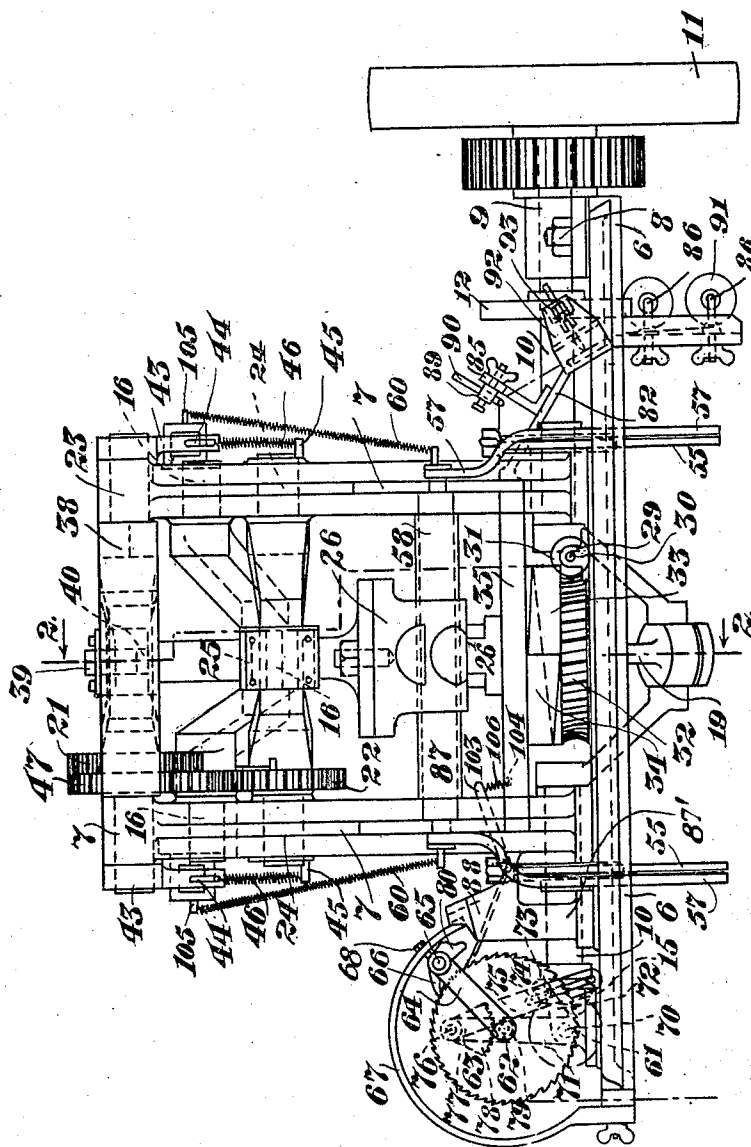
A. BROOKE.
MECHANISM FOR LAYING METALLIC LEAF.
APPLICATION FILED OCT. 24, 1914.

1,162,448.

Patented Nov. 30, 1915.

5 SHEETS—SHEET 1.

Fig. 1.



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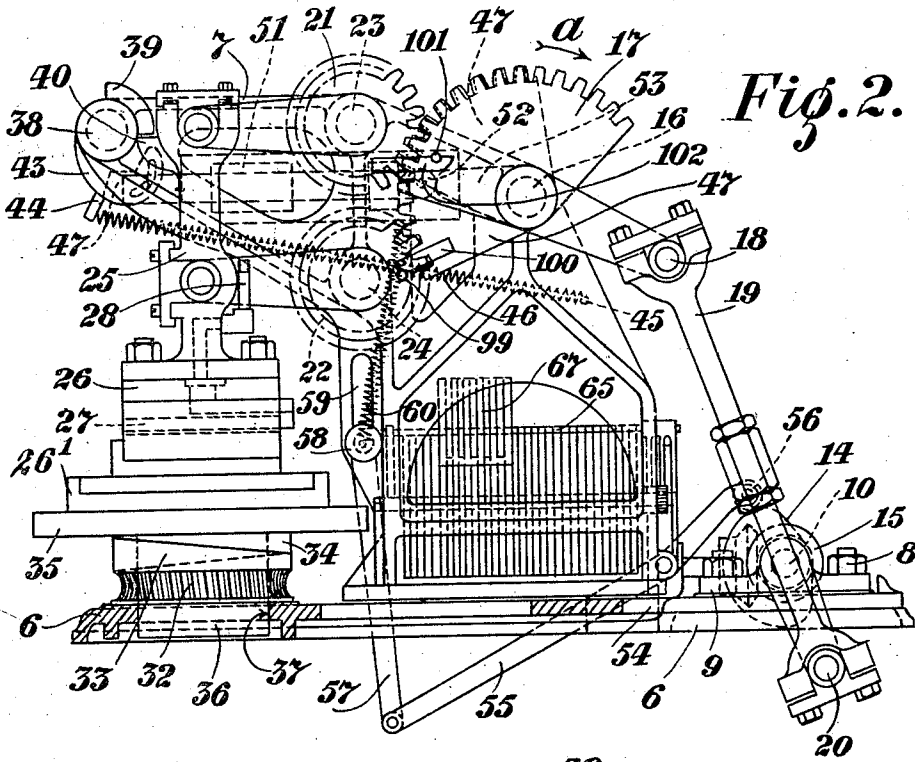


Fig. 2.

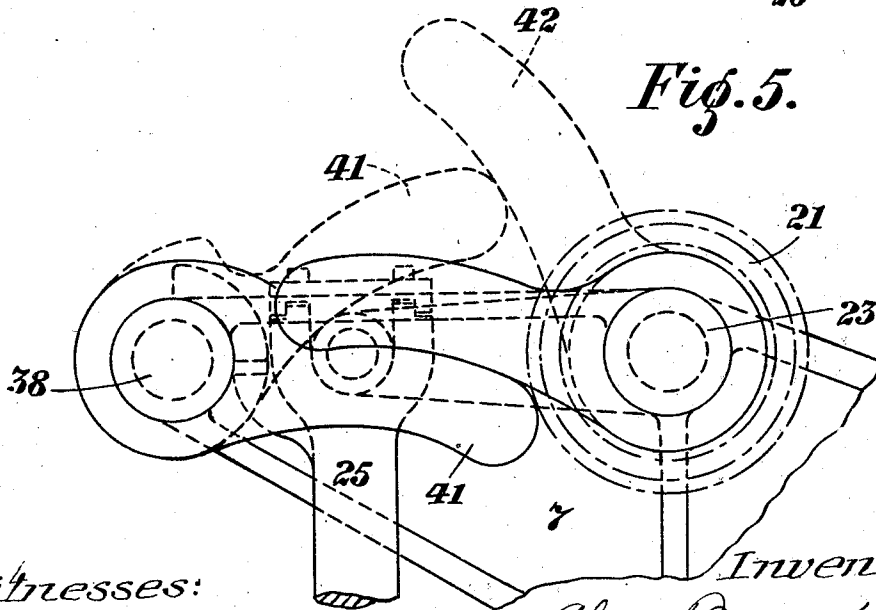


Fig. 5.

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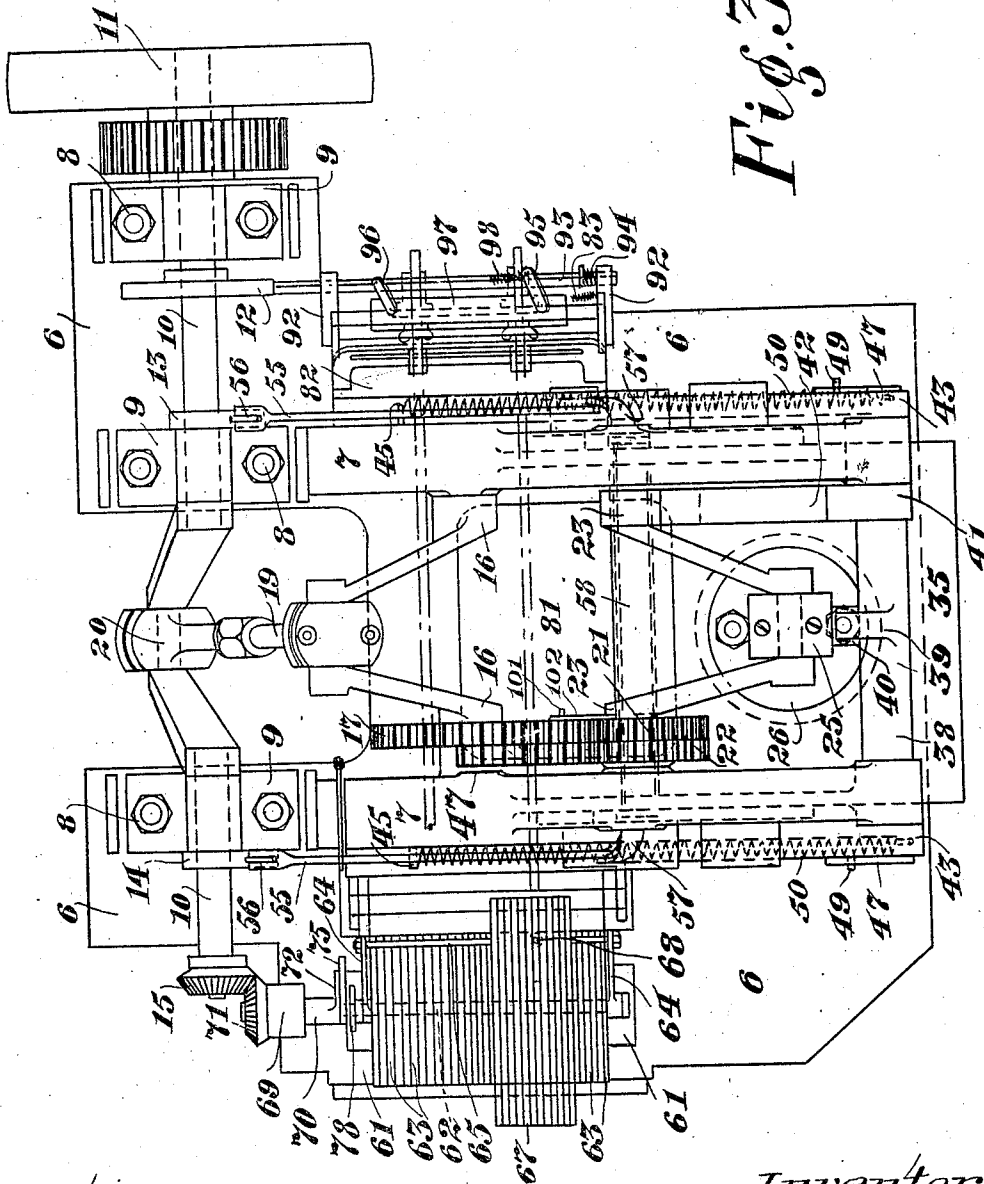
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5 SHEETS—SHEET 3.

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Fig. 3



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5 SHEETS—SHEET 4.

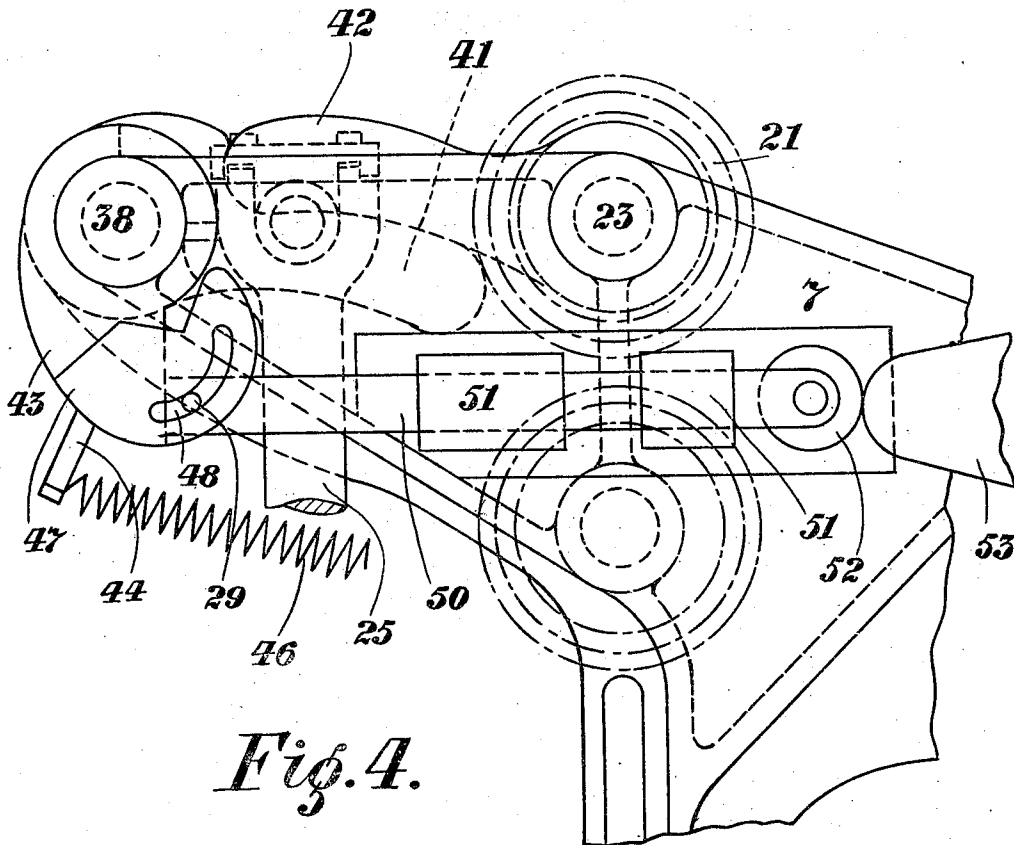


Fig. 4.

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5 SHEETS—SHEET 5.

Fig. 6.

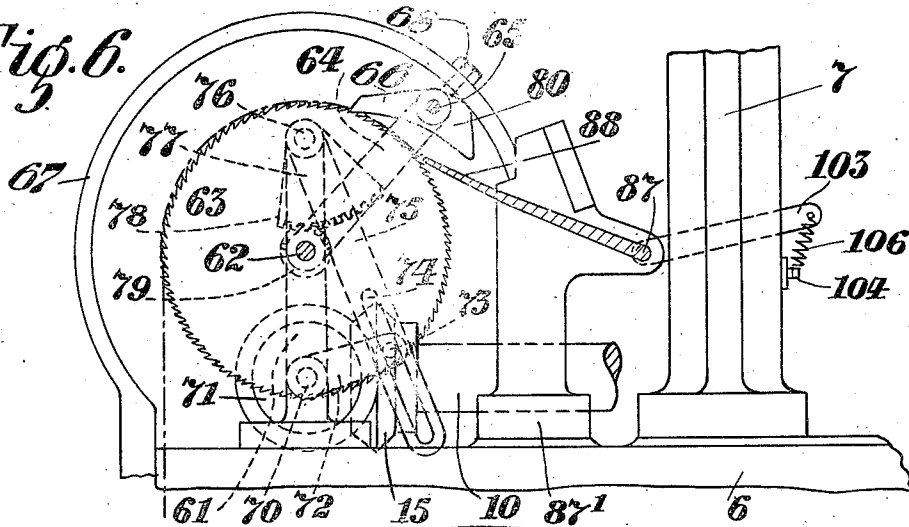


Fig. 7.

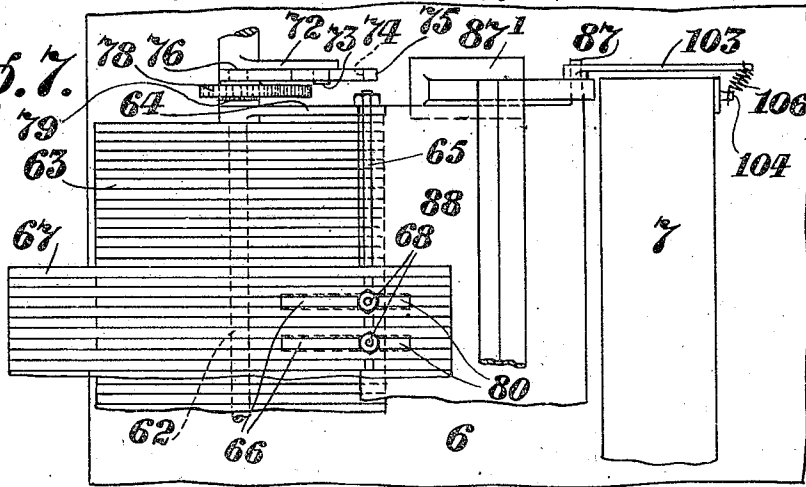
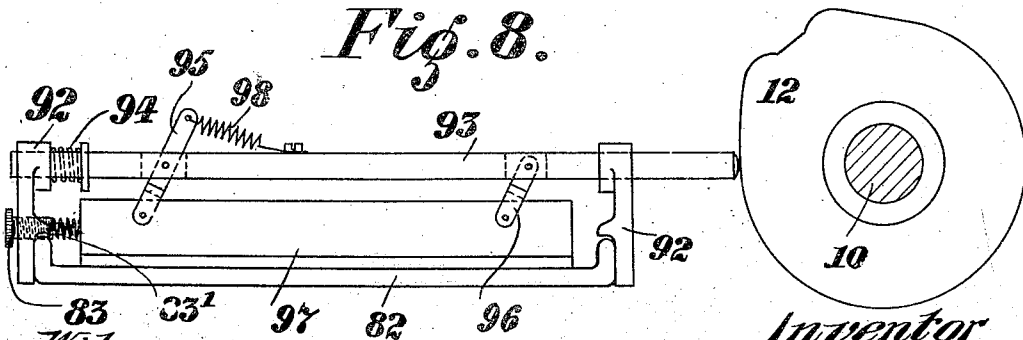


Fig. 8.



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UNITED STATES PATENT OFFICE.

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MECHANISM FOR LAYING METALLIC LEAF.

1,162,448.

Specification of Letters Patent.

Patented Nov. 30, 1915.

Application filed October 24, 1914. Serial No. 868,462.

To all whom it may concern:

Be it known that I, ALEC BROOKE, a subject of the King of Great Britain, residing at Glasgow, Scotland, have invented certain new and useful Improvements in and Relating to Mechanism for Laying Metallic Leaf, of which the following is a specification.

This invention relates to mechanism for applying gold or other metallic leaf for ornamentation or other purposes.

It has heretofore been proposed to feed the metallic leaf by hand operated mechanism to the article and press the same by an impressing die or stamp, suitable means being provided for greasing the die to insure that the leaf will adhere thereto when being lifted. Non-automatic means has also been proposed by which the leaf can be divided into the desired lengths.

Under this invention the metallic leaf is automatically fed into the machine, and is then lifted by automatically acting mechanism which transfers it to the surface to which it is to be applied, and presses it. The leaf is also cut to the dimensions required for each operation by means of mechanism automatically operated. The feeding mechanism, the cutting mechanism, and also the lifting and transferring mechanism are driven from a single source of power, the several mechanisms being operated in their proper sequence.

The die or stamp may be heated in any well known or suitable manner and greased at intervals to insure that the leaf will adhere thereto when being lifted. The leaf, which is preferably in the form of a strip, or strips, and which may be fed laterally or longitudinally of the machine, is cut into portions of the desired shape and dimensions by an automatically and intermittently acting knife or knives. In cases where one long impression, or a number of similar impressions or repeats have to be made, as in ornamenting book cases or covers, or the like, or in ornamentation in general, one long die adapted to make the whole impression or number of impressions may be employed, or alternatively, a small die may be employed and means provided for moving the material intermittently in a straight or other path so that the die contacts with a different

part thereof at each oscillation or reciprocation. If desired a plurality of dies may be employed and operated simultaneously or otherwise.

The invention may be carried into effect or practice in many ways and a form or embodiment thereof is shown, merely by way of illustration or example, on the drawings appended hereto and forming part of this specification, and whereon:—

Figure 1 is a front elevation. Fig. 2 is a section on the line 2—2, Fig. 1. Fig. 3 is a plan, and Figs. 4, 5, 6, 7 and 8 details to an enlarged scale.

The mechanism illustrated on the appended drawings comprises a base plate 6, which may be mounted on suitable brackets, legs, or equivalent, having side frames 7 mounted thereon. Secured to the base plate 6, by bolts 8, are a number of bearing brackets 9 in which is journaled a crank shaft 10 having a belt pulley or equivalent, 11, cams 12, 13, and 14 and a bevel-pinion 15 secured thereon. Journaled in the side frames 7 is a crank shaft 16 having toothed sectors 17 and 47 secured thereon and the pin 18 thereof connected, by a connecting rod 19, with the crank pin 20 of the shaft 10. The toothed sectors 17 and 47 engage spur wheels 21 and 22 securely mounted on crank shafts 23 and 24, respectively, journaled in the side frames 7 and having the pins thereof journaled in bearings in a rod 25 on which is mounted a die plate or socket 26 carrying a blocking die 26' and adapted to be heated by a burner 27 having a union 28 adapted to be connected with a gas supply by suitable flexible piping. A pin 99 is mounted on the spur wheel 22 and is adapted to engage a finger 100 mounted on the sector 47 while a pin 101 is mounted on the sector 17 and is adapted to engage a finger 102 mounted on the spur wheel 21. Mounted in bearings 29 on the base plate 6 is a spindle 30 adapted to be rotated by a handle or hand wheel and carrying a worm 31 engaging a worm wheel 32 formed integral with a circular wedge or inclined plane 33 rotatably mounted on a spindle or journal 36 slidably mounted in an opening or socket 37 in the base plate 6 and projecting downwardly and centrally from an oppositely formed circular wedge or in-

clined plane 34 which is secured to the underside of a table 35 and engages the circular wedge 33.

Journalled in the side frames 7 is a shaft 38 carrying a wiper 39 adapted to engage a snug or projection 40 on the dipper rod 25 and having securely mounted thereon a curved arm 41 (see particularly Figs. 4 and 5) adapted to engage with a similarly curved arm 42 secured on the crank shaft 23 and arms or tappets 43 having pins or projections 44 thereon between which, and suitably located pins 45 on the side frames 7, springs 46 are tensioned. Secured to the arms or tappets 43 are plates 47 having slots 48 therein with which engage pins 49 on bolts 50 slidably mounted in guides 51 on the side frames 7 and carrying rollers 52 adapted to co-act with cams or wipers 53 on the crank shaft 16.

Fulcrumed at 54 to the side brackets 7 are levers 55 having, at one end thereof, rollers 56 engaging the cams 13 and 14 and pivotally connected, at the other ends thereof, with links 57 connected to a greasing roller 58 rotatably and slidably mounted in slots 59 in the side brackets 7. Springs 60 are tensioned between the roller 58 and pins 105 on the side frames and tend normally to constrain said roller to the upper ends of the slots 59.

Rotatably mounted in brackets 61 on the base plate 6 is a spindle 62 having a plurality of ratchet wheels 63 rotatably mounted thereon and a pair of arms 64 secured thereto and united by a rod 65 upon which a number of pawls 66 are adjustably mounted, these pawls, which have extensions or counter-weights 80 thereon, are adapted to engage the teeth of the ratchet wheels 63. Adjustably secured to the base plate 6 is a slotted guard 67 encircling a number of the ratchet wheels 63 and having stops or projections 68 adjustably mounted in the slots thereof, the number of stops or projections corresponding with the number of pawls 66. Pivoted, at 87, (see particularly Figs. 6 and 7) in brackets 87' secured in any suitable manner to the base plate 6 is a plate 88 having arms 103 projecting therefrom between which and pins 104 (on the frame 7) springs 106 are inserted. Mounted in a bearing bracket 69, on the base plate 6, is a shaft or spindle 70 having a bevel pinion 71 and an arm 72 secured thereon. The bevel pinion 71 engages the bevel pinion 15 on the shaft 10 while the arm 72 has a pin 73 thereon engaging a slot 74 on an arm 75 pivoted, at 76, to an extension 77 of one of the brackets 61. Pivoted about the center 76 and secured to the arm 75 is a toothed sector 78 engaging a pinion 79 securely mounted on the spindle 62. Mounted between the said frames 7 is a table 81 and adjacent one side of said table is a bracket or plate 82 upon

which are adjustably mounted brackets 85 and 86. The brackets 85 carry sockets 89 in which are adjustably mounted supports 90 while the brackets 86 are adapted to receive spools 91 of metallic leaf backed with paper or other suitable material.

Secured to the bracket 82 are a pair of brackets 92 (see Figs. 1, 3 and 8) carrying a rod 93 which is slidably mounted therein and has one end thereof pressed into contact with the cam 12 by a spring 94. A screw or stop 83 is located in one of the brackets 92 so as to project inwardly therefrom and arranged on said screw or stop intermediate of the bracket 92 and an edge of a knife 97 is a spring 83'. The knife 97 is pivotally secured to arms 95 and 96 which in turn are pivoted on the rod 93. The arms 95 and 96 are normally constrained to an angular position by a spring 98 tensioned between the arm 95 and the rod 93.

The *modus operandi* is as follows: The article to be impressed or ornamented is placed upon the table 35 and a spool of metallic leaf, backed with paper or other suitable material, is inserted into one or each of the brackets 86 and the end thereof passed beneath the knife 97, over a support 90 and the table 81 and between one of the ratchet wheels 63 and a pawl 66. The machine is then set in operation by rotating the crank shaft 10 by means of a belt or other suitable drive to the belt pulley 11, thereby causing the crank pin 20 to trace out a circular path and transmit a rocking movement to the crank shaft 16 through the medium of the connecting rod 19. This rocking movement of the crank shaft 16 is transmitted to the toothed sectors 17 and 47 which engage the spur wheels 21 and 22 and cause the latter to oscillate backward and forward through angles of approximately 180°, thereby swinging the crank shafts 23 and 24 through like angles and moving the rod 25 so as to cause the die 26', carried by the die plate 26, to contact alternatively with the tables 35 and 81. The bracket, or brackets, 86 is, or are, so adjusted on the bracket 82 that the metallic leaf from the spool, or spools, 91 is positioned on the table 81 so that, each time the die is swung into contact with said table, it contacts with the metallic leaf thereon while the bevel wheels 15 and 71 are so proportioned that, at each revolution of the shaft 10, the shaft or spindle 70 also makes one complete revolution, thereby causing the arm 72 to rock the arm 75 and toothed sector 77 through one complete oscillation, which movement is transmitted to the arms 64 by the toothed sector 77 and pinion 79, thereby causing each pawl 66 to over-ride and advance the ratchet wheel 63, with which it is in engagement, a predetermined number of teeth and so feed the metallic leaf a predetermined distance across the table 81.

At the end of each non-working stroke, or each stroke during which the pawls 66 over-ride the ratchet wheels 63, the extensions or counter-weights 80 of the pawls 66 contact with the plate 88, and swing same against the action of the spring 106 and thereby force the pawls into engagement with the teeth of the ratchet wheels 63 ready for the next working stroke. The feed of the metallic leaf may be regulated to any desired extent by adjusting the position of the stops or projections 68 which, as the pawls 66 move under same, engage and depress the extensions or counter-weights 80 and so lift said pawls out of engagement with the teeth of the ratchet wheel, the extensions or counter-weights overcoming the weight of the pawls thereby maintaining same in their raised positions during the remainder of the working stroke. This mechanism is so arranged that the pawls over-ride the teeth of the ratchet wheels while the die is in contact with the metallic leaf and advance said leaf during a portion of the remainder of the oscillation of said die. As the toothed sectors move in the direction of the arrow *a* the crank shafts 23 and 24 move the dipper rod 25 so that at the extremity of their movement in this direction, the die 26' contacts with the article on the table 35. The toothed sectors 17 and 47 are so arranged as to move out of mesh with the spur wheels 21 and 22 when the die contacts with the article under operation and the cams or wipers 53 are so arranged that, when the sectors 17 and 47 move out of mesh with the spur wheels 21 and 22, they coast with the rollers 52 and force the bolts 50 against the arms or tappets 43 and thereby transmit an angular movement to the shaft 38 against the action of the springs 46 and cause the wiper 39 to bear upon a snug or projection 40 on the dipper rod 25 and force the die into contact with the material with the desired degree of pressure. As the crank shaft 16 reverses its movement and the sectors 17 and 47 move in the opposite direction to that indicated by the arrow *a* the cams or wipers 53 move out of contact with the rollers 52 and thereby allow the springs 46 to turn the shaft 38 sufficiently to swing the tappet 39 out of the path of the snug or projection 40 on the rod 25, the extent of said movement being limited by the pins 49 and slots 48. The pin 101 on the toothed sector 17 and the finger 100 on the toothed sector 47 then engage the finger 102 on the spur wheel 21 and the pin 99 on the spur wheel 22, respectively, and move said sectors and spur wheels into engagement and the dipper rod 25 is moved so as to bring the die again into contact with the table 81. As the die swings toward the table 81 the portions of the cams 13 and 14 of least radii move under the rollers 56 and allow the springs 60 to raise

the greasing roller into contact with the die, said roller being drawn out of the path of the die before the return of said latter by the action of the cams 13 and 14.

As the springs 46 turn the shaft 38 70 through a partial revolution each time the cams or wipers 53 move out of engagement with the rollers 52 they raise the curved arm 41 into the position indicated in dotted lines at Fig. 5 and as the dipper rod moves 75 downward so as to bring the die into contact with the material on the table 35 the arm 42 on the shaft 23 moves into contact with the arm 41 and depresses same against the action of the springs 46 until, when the 80 die is actually in contact with the material on the table, the arms assume the position shown in full lines in Fig. 5. This cooperation of the arms 41 and 42 serves to prevent the weight of the rod 25, die plate and the 85 webs of the crank shafts 23 and 24 bringing the die into contact with the material with too violent an impact. At each revolution of the shaft 10 the rod 93 is caused, by the joint action of the cam 12 and spring 94, to 90 make one or more reciprocations in the brackets 92, thereby moving the knife 97 against the stop 83 and spring 83' which forces same, against the action of the spring 98, to contact with the bracket 82 and thereby 95 sever a suitable length of metallic leaf, the stop 83 having been previously set, as will be apparent from Fig. 8, so as to limit the stroke of the knife to sever the leaf only and not the backing. This depression (or de- 100 pressions) of the knife is (or are) arranged to take place while the pawl 66 is over-riding the teeth of the ratchet wheel 63.

The height of the table 35 may be adjusted by turning the spindle 30 so as to 105 cause the worm 31 to rotate the worm wheel 32 and thereby cause the curved wedge 33 to raise or lower the oppositely inclined wedge 34 attached to the table 35. The material under operation may be fed intermittently 110 across the table 35 in any desired path or direction, by any well known and suitable mechanism, so as to enable a number of repeats of the impressions to be formed by the die. When the feed of the metallic leaf is 115 adjusted by adjusting the position of the stop or projection 68 it may happen that the severed portions of leaf carried by the backing paper or equivalent may not come to rest on the table 81 directly under the die. In 120 order to provide for this and to admit of the adjustment of the severed portions of the leaf on the table 81 the supports 90 are raised or lowered as the case may be so as to adjust the length of the strip between 125 the die and knife 97.

It will be clearly understood that while I have particularly described one form or embodiment of my invention I do not limit myself thereto as modifications or altera- 130

tions thereof can obviously be made without departing from the invention as defined by the succeeding claims.

Having now fully described my invention what I claim and desire to secure by Letters Patent is:—

1. A machine for applying metallic leaf having, in combination, means for feeding the leaf into the machine, means for lifting the leaf and transferring it to the surface to which it is to be applied, and means cooperating with the said lifting and transferring means for pressing and blocking the leaf upon its application to the said surface, the aforesaid means being all operated automatically.

2. A machine for applying metallic leaf having, in combination, means for feeding the leaf into the machine, said means also removing the backing material for the leaf, means for cutting the leaf to the dimensions desired, means for transferring the cut leaf to the surface to which it is to be applied and means cooperating with the said lifting and transferring means for pressing and blocking the leaf upon its application to the said surface the several means being all operated mechanically and automatically.

3. A machine for applying metallic leaf, comprising, in combination, means for feeding the leaf into the machine, means for cutting the leaf to the dimensions required, means for lifting each cut portion and transferring it to the surface to which it is to be applied and then pressing it, the several means being operated automatically.

4. A machine for applying metallic leaf, comprising, in combination, means for feeding the leaf into the machine, means for cutting the leaf to the dimensions required, means for lifting each cut portion and transferring it to the surface to which it is to be applied and then pressing it, the several means being operated automatically and from one source of power.

5. A machine for applying metallic leaf having, in combination, means for feeding the leaf into the machine, means for cutting the leaf to the dimensions desired and means for transferring the leaf to and pressing it on the surface to which it is to be applied, these several means being all operated automatically, the feeding and cutting means being adjustable so that the exact quantity of leaf can be fed without waste.

6. A machine for applying metallic leaf having, in combination, automatically acting means for feeding the leaf from a strip into the machine, automatic means for cutting the leaf to the dimensions required and an automatically acting impressing device for lifting the cut portions and bringing them into contact with the surface to which they are to be applied.

7. A machine for applying metallic leaf,

having in combination, automatically acting mechanism for feeding the leaf in the form of a strip into the machine, mechanism for cutting the leaf, and an impressing die for lifting each cut portion and transferring it to the surface to which it is to be applied and pressing it thereon, the feeding mechanism and the impressing die being operated from the same source of power.

8. A machine for applying metallic leaf having, in combination, a spool of metallic leaf, means for carrying same, a table, means for feeding the leaf on to said table, a second table for supporting the article to be operated on, a die, and means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table.

9. A machine for applying metallic leaf having, in combination, a spool of metallic leaf, means for carrying same, a table, means for feeding the leaf on to said table, an adjustable table for supporting the article to be operated on, a die, and means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table.

10. A machine for applying metallic leaf, having, in combination, a spool of metallic leaf, means for carrying same, a table, means for feeding the leaf on to said table, a second table for supporting the article to be operated on, a die, means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table and means for heating said die.

11. A machine for applying metallic leaf, having, in combination, a spool of metallic leaf, means for carrying same, a table, means for feeding the leaf on to said table, a second table for supporting the article to be operated on, a die, means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table, means for heating said die and means for greasing said die at intervals.

12. A machine for applying metallic leaf having, in combination, a spool of metallic leaf, means for carrying same, a table, means for feeding the leaf on to said table, means for cutting the leaf to the dimensions desired, a second table for supporting the article to be operated on, a die and means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table.

13. A machine for applying metallic leaf having, in combination, a spool of metallic leaf, means for carrying same, a table, automatically acting means for feeding the leaf on to said table, automatically acting means for cutting the leaf to the dimensions de-

sized, a table for supporting the article to be operated on, a die, and means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table.

14. A machine for applying metallic leaf having, in combination, a spool of metallic leaf, means for carrying same, a table, automatically acting means for feeding the leaf on to said table, automatically acting means for cutting the leaf to the dimensions desired, a table for supporting the article to be operated on, a die, means for swinging said die between and into contact with the article on the first mentioned table and the article on the second mentioned table, automatically acting means for greasing said die, and means for heating said die.

15. A machine for applying metallic leaf having, in combination, a spool of metallic leaf with backing material, means for carrying same, a rod, ratchet wheels rotatably mounted on said rod and adapted to receive one end of the backing material, arms secured to said rod, a second rod connecting said arms, pawls on said second rod adapted to engage the ratchet wheels and grip said backing material, automatically acting means for advancing said pawls while in engagement with said ratchet wheels to feed the leaf into the machine in variable portions and automatically acting means for lifting and transferring said leaf to the surface to which it is to be applied.

16. A machine for applying metallic leaf having, in combination, a spool of metallic leaf with backing material, means for carrying same, a rod, ratchet wheels rotatably mounted on said rod and adapted to receive one end of the backing material, arms secured to said rod, a second rod connecting said arms, pawls on said second rod adapted to engage the ratchet wheels and grip said backing material, automatically acting means for advancing said pawls while in engagement with said ratchet wheels to feed the leaf into the machine in variable steps, automatically acting means for cutting the leaf to the dimensions desired and automatically acting means for lifting and transferring said leaf to the surface to which it is to be applied.

17. A machine for applying metallic leaf having, in combination, a spool of metallic leaf with backing material, means for carrying same, a rotatably mounted rod, ratchet wheels rotatably mounted on said rod and adapted to receive one end of the backing material, a pinion secured to said rod, arms secured to said rod, a second rod connecting said arms, pawls on said second rod adapted to engage the teeth of said ratchet wheels and grip said backing material, an extension on one of said arms, a toothed sector pivoted to said extension and

engaging said pinion, an arm with slot therein pivoted to said extension and secured to said sector, a spindle, bearings for said spindle, a crank arm secured to said spindle, a projection on said crank arm engaging the slot in said slotted arm, means for rotating said spindle to advance and retard said pawls to feed the leaf into the machine, automatically acting means for cutting said leaf to the dimensions desired, and automatically acting means for lifting and transferring said leaf to the surface to which it is to be applied.

18. A machine for applying metallic leaf having, in combination, a spool of metallic leaf with backing material, means for carrying same, a table, a rotatably mounted rod, ratchet wheels rotatably mounted on said rod and adapted to receive one end of the backing material passed over said table, a pinion secured to said rod, arms secured to said rod, a second rod connecting said arms, pawls on said second rod adapted to engage the teeth of the ratchet wheels and grip said backing material, an extension on one of said arms, a toothed sector pivoted to said extension and engaging said pinion, a slotted arm pivoted to said extension and secured to said sector, a spindle, bearings for said spindle, a crank arm secured to said spindle, a projection on said crank arm engaging the slot in said slotted arm, a bevel wheel on said spindle, side frames, a crank shaft journaled therein, a bevel wheel on said crank shaft engaging the bevel wheel on said spindle, an adjustable table for supporting the article to be operated on, a die, means connecting said die with the pin of said crank shaft and means for rotating said crank shaft to feed the leaf on to said table and to swing said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table.

19. A machine for applying metallic leaf having, in combination, a spool of metallic leaf with backing material, means for carrying same, a table, a rotatably mounted rod, ratchet wheels rotatably mounted on said rod and adapted to receive one end of the backing material passed over said table, a pinion secured to said rod, arms secured to said rod, a second rod connecting said arms, pawls on said second rod adapted to engage the teeth of the ratchet wheels and grip said backing material, and extension on one of said arms, a toothed sector pivoted to said extension and engaging said pinion, a slotted arm pivoted to said extension and secured to said sector, a spindle, bearings for said spindle, a crank arm secured to said spindle, a projection on said crank arm engaging the slot in said slotted arm, a bevel wheel on said spindle, a crank shaft, bearings for said shaft, a bevel wheel

on said crank shaft engaging the bevel wheel on said spindle, an adjustable table for supporting the article to be operated on, side frames, a second crank shaft journaled in said frames, a rod connecting said crank shafts, two toothed sectors secured on said second crank shaft, a third crank shaft journaled in said side frames, a toothed wheel secured thereon and engaging one of said sectors, a fourth crank shaft journaled in said side frames, a toothed wheel secured thereon and engaging the other sector, a rod connected with the pins of the third and fourth crank shafts, a die attached to said rod, and means for rotating said crank shafts.

20. A machine for applying metallic leaf having, in combination, means for feeding the leaf into the machine, a die, a crank shaft, bearings for said shaft, means for operatively connecting said die with said crank shaft, cams on said shaft, levers pivoted to said side frames, rollers pivoted to said levers and engaging said cams, links connected with said levers, slides in said side frames, a greasing roller rotatably and slidably mounted in said slots, springs tensioned between said rollers and said side frames, and means for rotating said crank shaft.

21. A machine for applying metallic leaf having, in combination, means for feeding the leaf into the machine, a die, means for heating said die, a crank shaft, bearings for said shaft, means for operatively connecting said die with said crank shaft, cams on said shaft, levers pivoted to said side frames, rollers pivoted to said levers and engaging said cams, links connected with said levers, slots in said side frames, a greasing roller rotatably and slidably mounted in said slots, springs tensioned between said rollers and said side frames, and means for rotating said crank shaft.

22. A machine for applying metallic leaf having, in combination, a spool of metallic leaf, means for carrying same, a table, means for feeding the leaf on to said table, a second table for supporting the article to be operated on, a crank shaft, bearings for said shaft, side frames, a die supported between said side frames and operatively connected with said crank shaft, a cam on said shaft, a plate, brackets in said plate, a rod slidably mounted therein, a spring for pressing said rod into contact with said cam, a spring pressed stop projecting from one of said brackets, arms pivoted to said rod, a spring tensioned between one of said arms and said rod, a knife pivoted to said arms and means for rotating said crank shaft.

23. A machine for applying metallic leaf having, in combination, a base plate, a table,

means for feeding metallic leaf on to said table, a second table adapted to receive the article to be operated on, crank shafts journaled in said frames, a rod mounted on the pins of said crank shafts, a die attached to said rod, means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table and means for pressing said die on the article.

24. A machine for applying metallic leaf having, in combination, spools of metallic leaf, means for carrying same, a table, means for feeding the leaf from said spools on to said table, means for cutting the leaf to the dimensions desired, a second table for supporting the article to be operated on, a die and means for swinging said die between and into contact with the leaf on the first mentioned table and the article on the second mentioned table.

25. A machine for applying metallic leaf having, in combination, mechanically operated means for feeding the leaf into the machine, mechanically operated means for lifting the leaf and transferring it to the surface to which it is to be applied and means co-acting with said lifting and transferring means to cause the same to press and block the leaf upon the said surface.

26. A machine for applying metallic leaf having, in combination, mechanically operated means for feeding the leaf into the machine, a blocking die adapted to lift the leaf and transfer it to the surface to which it is to be applied, means for operating said blocking die, and means co-acting with said blocking die to cause the same to press and block the leaf upon the said surface.

27. A machine for applying metallic leaf having, in combination, mechanically operated means for feeding the leaf into the machine, an oscillatable die for lifting the leaf and transferring it to the surface to which it is to be applied, means for oscillating the die, and means co-acting with said die to cause the same to press and block the leaf upon the said surface.

28. A machine for applying metallic leaf having, in combination, means for feeding the leaf into the machine, a die, means for causing the die to lift the leaf and transfer it to the surface to which it is to be applied, a wiper for causing the die to press and block the leaf upon the said surface and means for operating said wiper.

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

ALEC BROOKE.

Witnesses:

LEROI AUSTIN,
FRED MIDDLETON.