

E. F. KUNATH.
STENCILING MACHINE.

APPLICATION FILED AUG. 19, 1907.

934,077.

Patented Sept. 14, 1909.

7 SHEETS—SHEET 1.

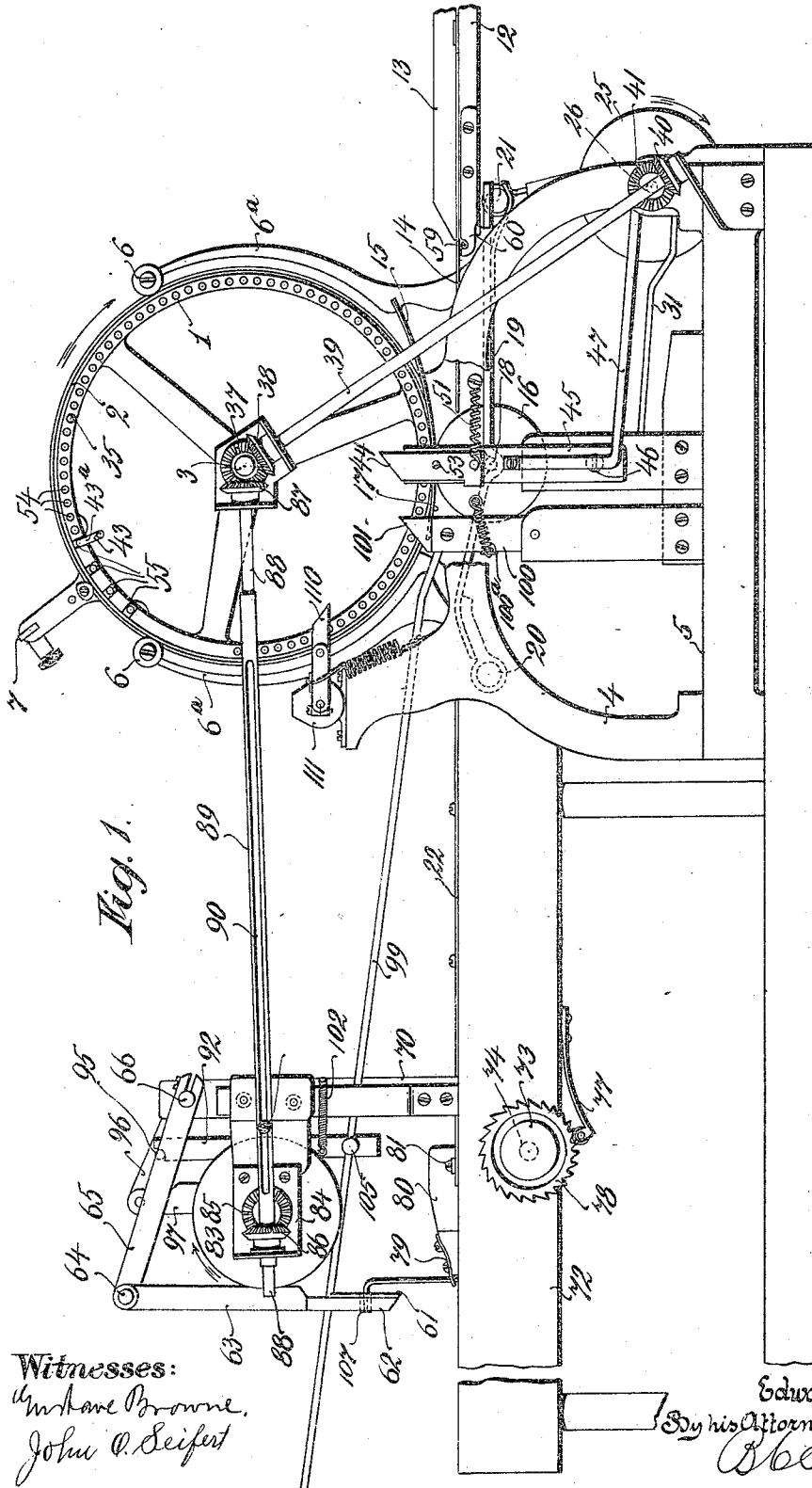


Fig. 1.

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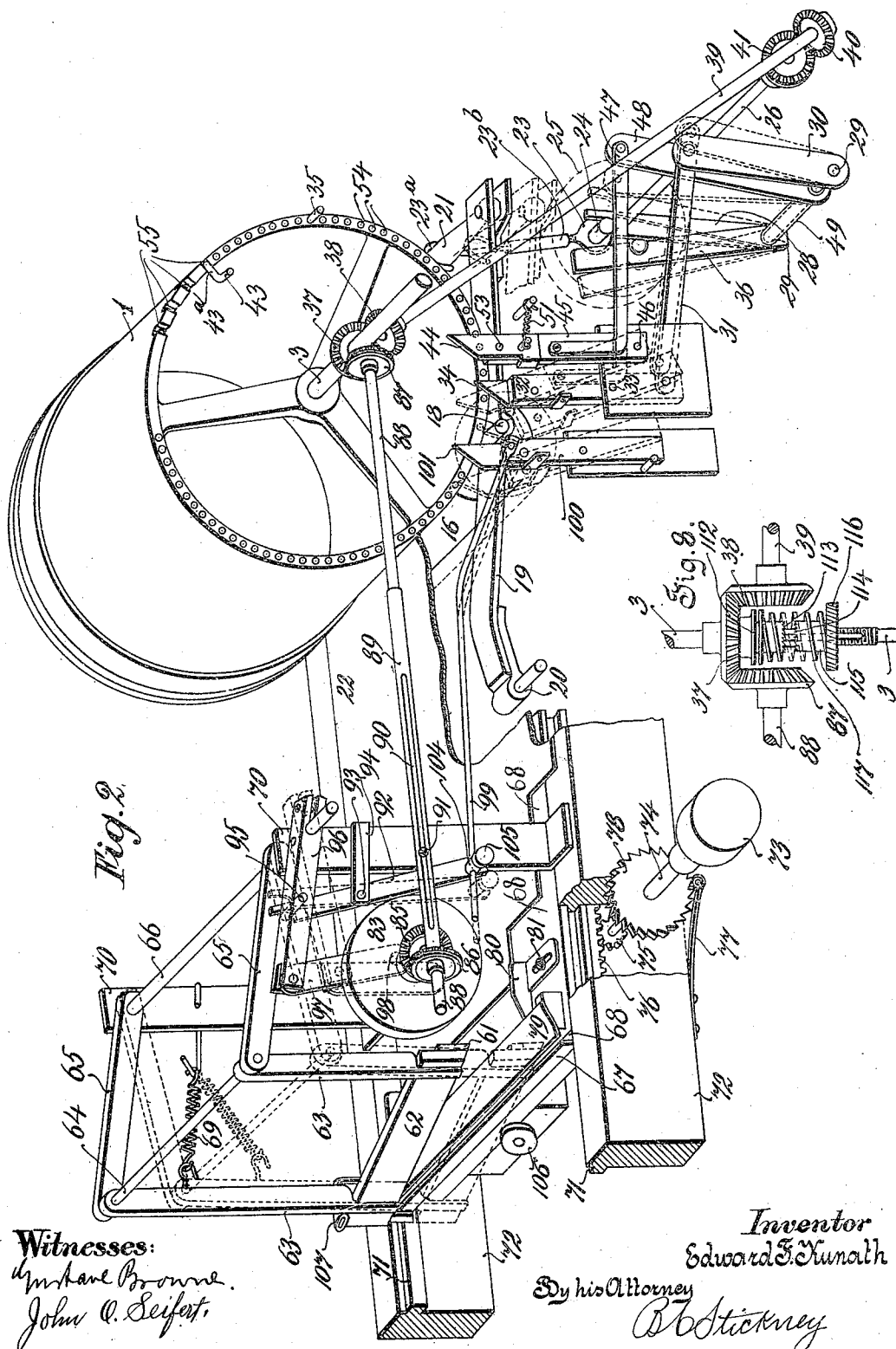
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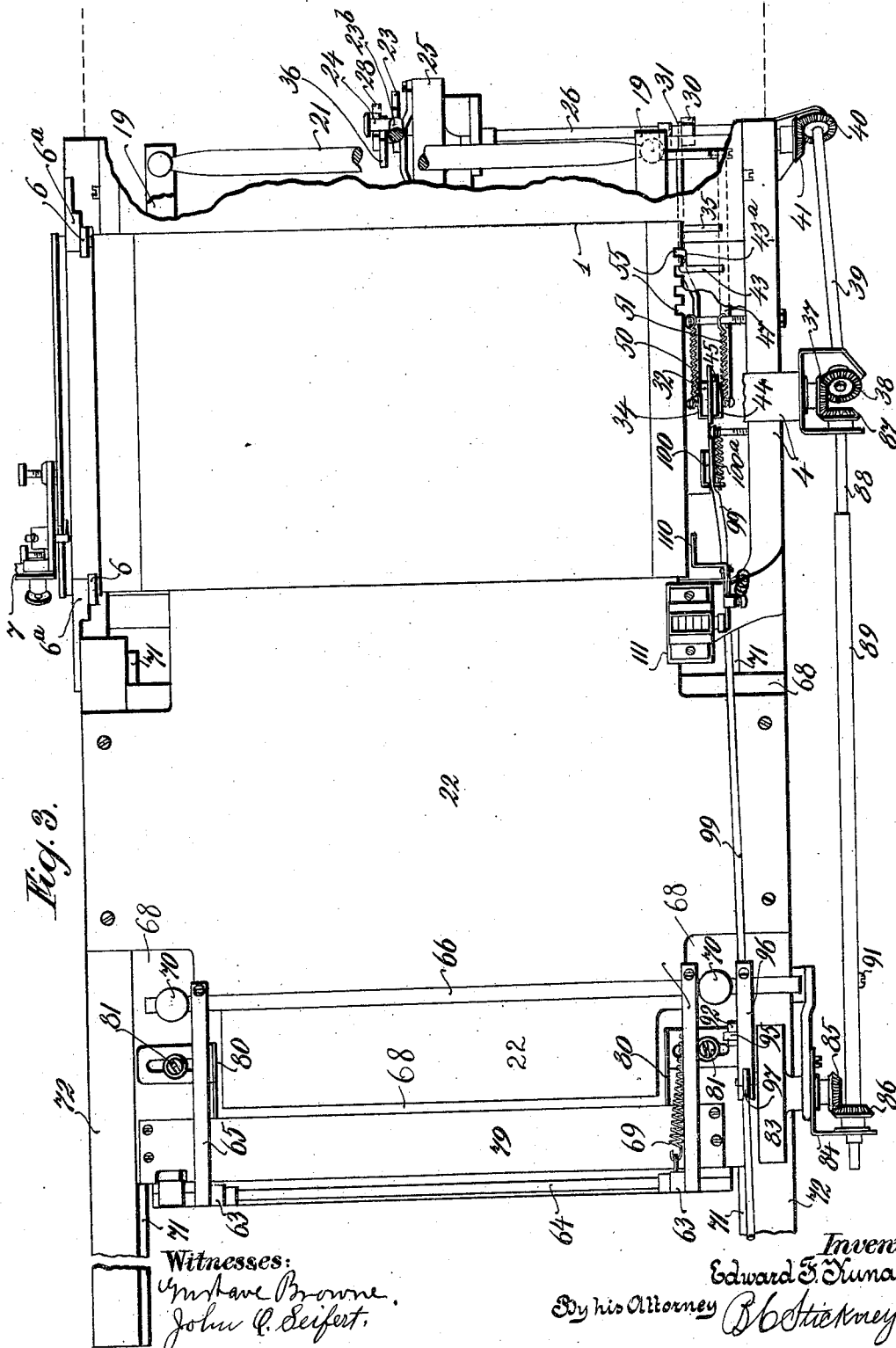
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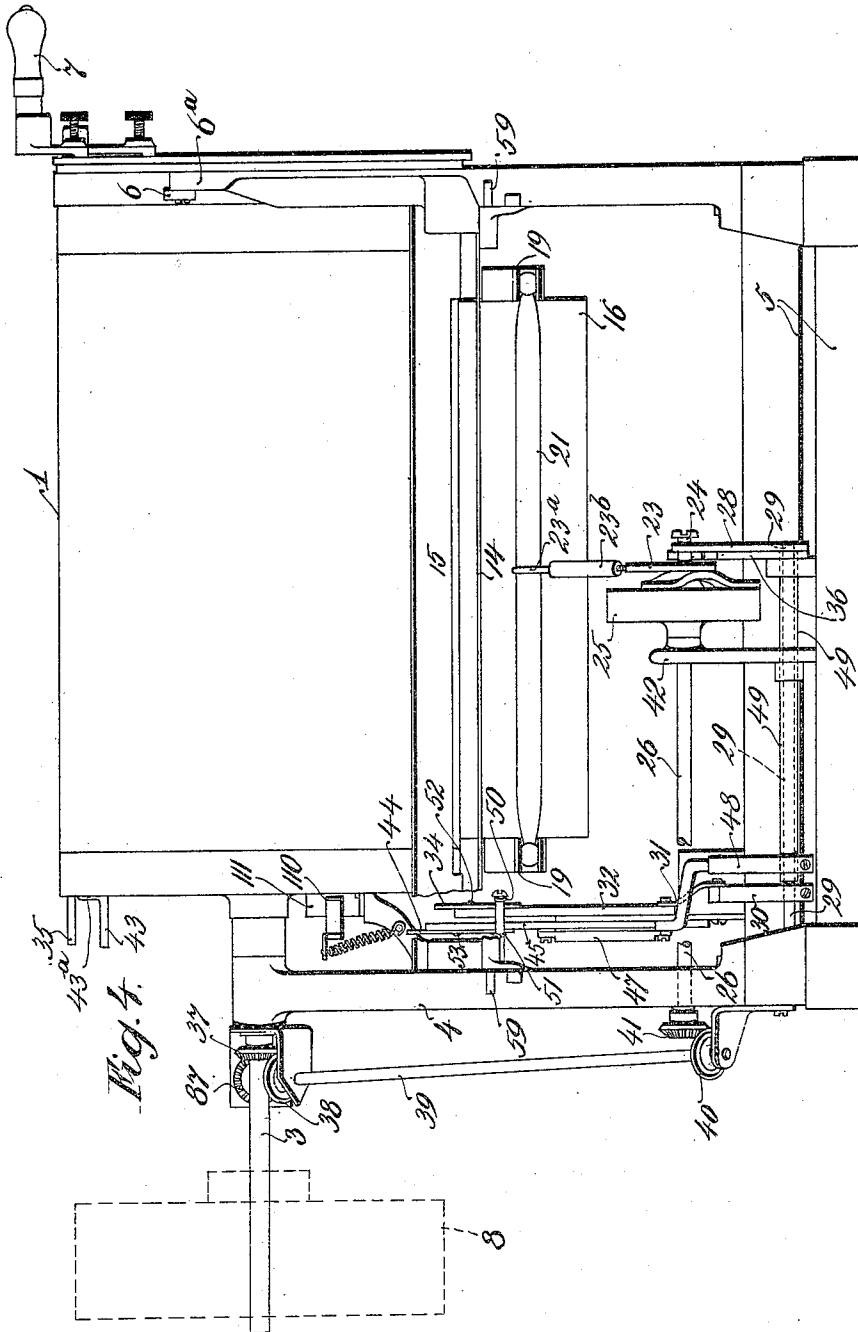


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7 SHEETS—SHEET 4.

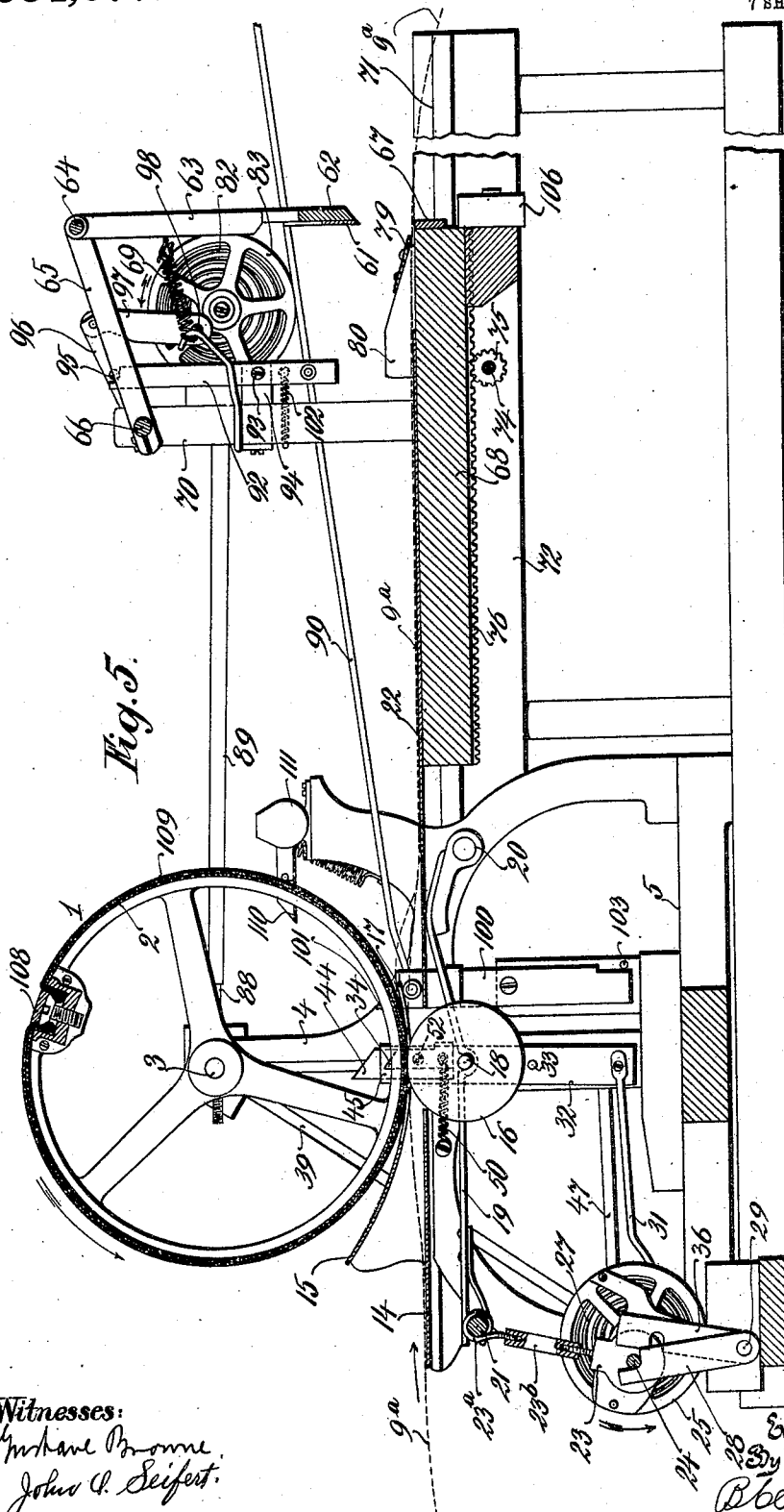


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7 SHEETS—SHEET 6.



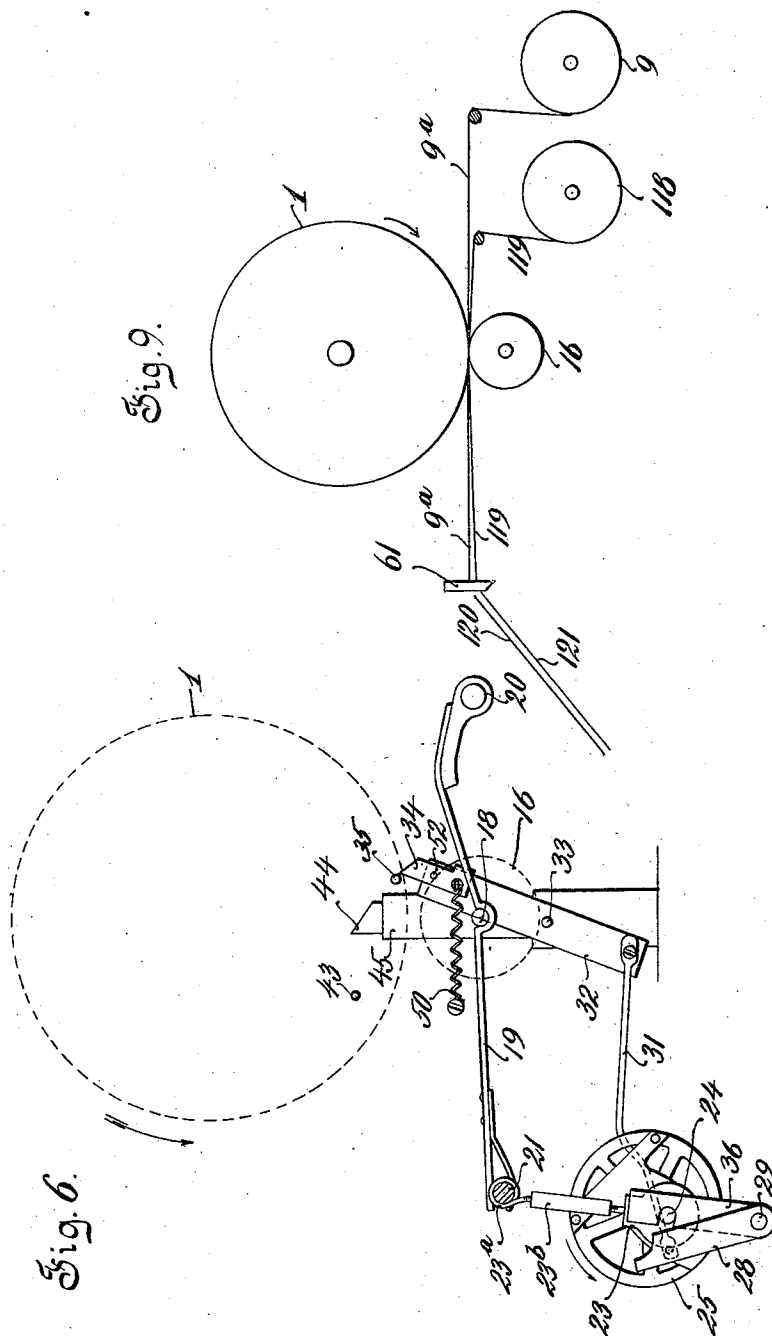
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7 SHEETS—SHEET 6.



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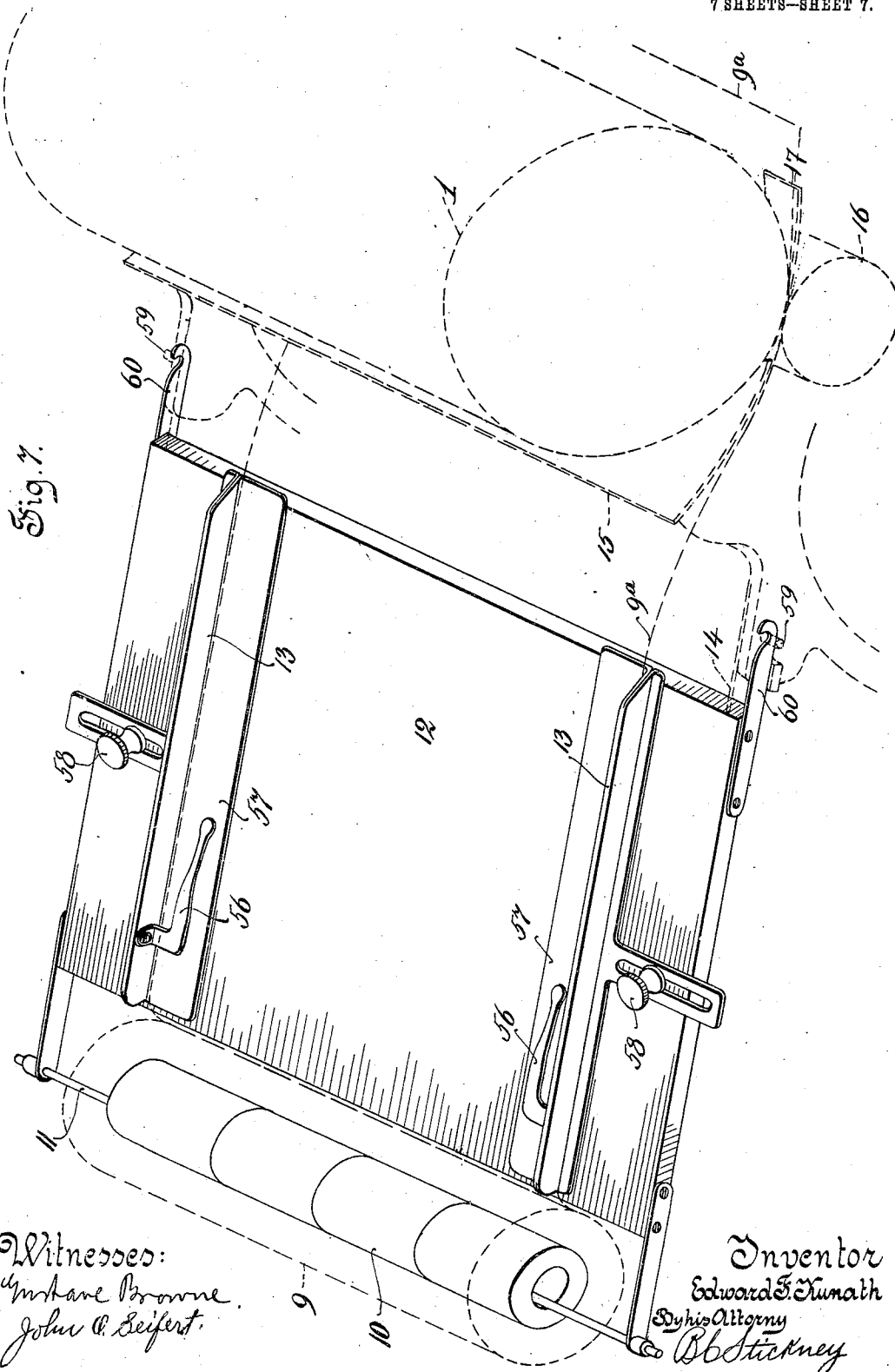
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7 SHEETS—SHEET 7.



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UNITED STATES PATENT OFFICE.

EDWARD FRANK KUNATH, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

STENCILING-MACHINE.

934,077.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed August 19, 1907. Serial No. 389,190.

To all whom it may concern:

Be it known that I, EDWARD FRANK KUNATH, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Stenciling-Machines, of which the following is a specification.

This invention relates to that class of stenciling machines in which a waxed paper typewritten stencil is placed upon a holder, which is made of perforated sheet metal, ink being supplied through the perforations to the stencil, and means being provided to press the paper against the stencil. The stencil-holder is usually in the form of a revolving cylinder, and the pressing device is usually a soft rubber roll, as set forth in Letters Patent No. 824,695, of June 26, 1906. Heretofore it has been the practice to insert paper sheets one at a time in the machine, to be stenciled, but this is found to retard the speed of operation if done by hand, or to add unduly to the complication and expense of the machine if done by automatic means.

The object of my invention is to provide simple, inexpensive and practicable means for producing stenciled sheets of any desired length within the usual limits, and especially to enable the stenciled sheets to be turned out at great speed. To this end, I provide for mounting a roll or web of paper of suitable width upon the stenciling machine, and leading the web between the stencil cylinder and the pressure roll, thus making it practicable to obtain an extraordinary speed of stenciling the paper, and correspondingly to reduce the cost of the stenciled sheets, and also to minimize the delay in obtaining the same, which is often a matter of great importance.

The web is fed forward by the pressure of the roll against the stencil cylinder. To vary the extent of the feed of the web during each revolution of the stencil cylinder, I arrange to cast off or release said roll for a greater or less interval during each revolution of the cylinder, so that the extent to which the web is advanced is considerably less than the circumferential dimension of the cylinder. I also arrange to sever the web once in each cylinder revolution, to produce

a succession of similar stenciled sheets, which may be of greater or less length, according to the adjustment of the mechanism; the length of the severed sheet agreeing with the extent to which the web is advanced at each stenciling operation.

The web feeding and severing mechanisms are preferably operated by springs which are constantly wound during the revolution of the stencil cylinder, thereby distributing the work throughout the revolution of the cylinder, and avoiding undue resistance to its revolution at any point. The actions of the springs are controlled by trips or latches, and are very prompt, so that accuracy of feeding and severing the web is secured. Said latches are preferably operated by means of tappets, which are adjustable around the cylinder to regulate or time their operations as may be desired. The range of adjustment of the web-feeding means may be very great, so that either very short or very long sheets may be severed from the web; and preferably means are provided for adjusting the severing knife or blade bodily toward or away from the cylinder, thereby making it convenient to locate the cut at any desired point with reference to the stenciled matter on the web, whether the severed sheet is long or short.

In the accompanying drawings, Figure 1 is a side elevation of a stenciling machine constructed in accordance with my invention; the stenciling and web-feeding mechanism being shown in working position and the severing-blade as elevated. Fig. 2 is a perspective view of the principal moving parts, showing them in normal positions in full lines, and also showing the operation of the parts by means of dotted lines. Fig. 3 is a plan of the machine. Fig. 4 is an elevation of the end of the machine at which the stencil cylinder is mounted, the web-holder being omitted. Fig. 5 is a sectional elevation taken longitudinally of the machine, and showing the parts in the same position, as at Fig. 1. Fig. 6 shows some of the parts seen at Fig. 5, but showing the pressure roll released from the cylinder. Fig. 7 is a perspective view of the paper-roll end of the machine, illustrating the roll mounted so that it is dragged over the edge of the paper-shelf, to straighten the web. Fig. 8 is a detail of

means to release the web-feeding and severing mechanisms during the revolving of the stencil cylinder for inking, etc. Fig. 9 is a diagram to illustrate a method of interleaving the freshly stenciled sheets with other sheets to prevent offset of ink from one stenciled sheet to another stenciled sheet.

The stencil cylinder 1, which as usual is in the form of a hollow drum whose periphery is formed of a sheet of perforated metal 2, Fig. 5, is mounted at one end by means of a driving-shaft 3 upon a standard 4 erected upon a base 5. At the other end, the drum runs upon rolls, two of which are seen at 6, this end of the drum being open to receive the ink. The rolls are carried upon standards 6^a as usual. The cylinder may be rotated by means of a handle 7, but I prefer to employ a pulley 8 seen on the driving-shaft 3, Fig. 4. The paper or web in the form of a roll 9 is mounted upon a core 10 which is loosely journaled upon an axle 11 detachably secured in the outer end of a shelf 12. The web is passed forwardly between guides 13 for its side edges, and through a throat comprising lower and upper plates, the lower plate 14 being practically a continuation of the shelf 12, and the upper plate 15 curving around the lower portion of the cylinder 1. Through this throat the web passes into the bite of the cylinder 1 and a soft rubber pressure roll 16 which presses the web against the inked stencil or waxed sheet mounted in the usual manner upon the periphery of the cylinder 1.

The usual stripping fingers 17 are illustrated in extending from the plate 15 along-side of the ends of the rolls 16 and backwardly, but these strippers may be omitted in some cases, as also may be the upper throat plate 15. The roll 16 as usual is mounted by an axle 18 in a pair of arms 19 hinged at 20 upon the framework and connected at their forward ends by an equilibrating bar 21 to the middle of which an upward pressure is applied, whereby the roll is caused to press throughout evenly up against the cylinder as set forth in Patent No. 829,531, of August 28, 1906. From the stencil cylinder, the stencil web advances over a table 22 to the web-severing mechanism, as will presently be explained. The bar 21 and the roll 16 are held up by means of a link 23, pivoted at its upper end to said bar midway of the length of the latter, and pivoted at its lower end upon a wrist 24 which projects from a revoluble barrel 25 mounted upon one end of a shaft 26 and carrying a winding spring 27. The barrel 25 is prevented from turning by means of a latch 28, which is supported upon a pivot 29 in the form of a shaft journaled upon the framework. As will be seen at Fig. 5, the latch 28 forms a positive support for the wrist 24, and hence for the link 23, the bar 21, and the

pressure roll 16, so that the latter cannot drop, but is held up to its work of pressing up the web against the stencil carrying cylinder 1. The spring 27, acting through the barrel 25, also tends to carry down the wrist 24 in the direction of the arrow. It will therefore be seen that by moving the latch 28 forwardly or to the left at Fig. 5, the wrist 24 will be released to permit the withdrawal of the roll 16 from the stencil cylinder 1.

The mechanism which releases the latch 28 comprises an arm 30 fixed upon the other end of the shaft 29 from said latch, and a link 31 extending rearwardly from said arm to the lower end of an upright lever 32, which is pivoted between its ends at 33 upon a part of the framework. The upper end of this lever carries a pawl 34 which normally stands in the path of a tappet 35 carried upon the cylinder 1, whereby the lever is moved to the position seen in dotted lines at Fig. 2 and the pawl 28 is moved to the position seen at Fig. 6.

The movement of the roll 16 from the Fig. 5 to the Fig. 6 position is caused partly by the action of the spring 27, and the latter insures the swinging of the wrist 24 into engagement with a latch 36 which restrains the further action of the spring, and insures the continued separation of the roll 16 from the cylinder 1. During such separation the web lies motionless upon the shelf 14 and bed 22, while the cylinder 1 continues to revolve. Before the web again advances the web-severing mechanism operates in a manner presently to be explained. The spring 27 is incessantly wound by means of a gear 37 upon the driving shaft 3, said gear meshing with a bevel gear 38 which is fixed upon one end of a diagonal shaft 39, a bevel gear 40 on the lower end of said shaft meshing with a bevel gear 41 upon the spring shaft 26. Said shaft 26 is journaled at one end in the lower part of the standard 4, and near the other end in an upstanding arm 42 erected upon the base 5, Fig. 4. It will further be understood that when the latch 36 is moved rearwardly or to the right at Fig. 5, the wrist 24 will again be released and the spring 27 permitted to turn the spring-barrel and its said wrist to the Fig. 5 position. Such release of the latch 36 is effected by means of a second tappet 43 which is formed to escape the pawl 34, but to engage a second pawl 44 pivoted upon the top of a lever 45, which is fulcrumed at 46 upon the framework and connected by a link 47 to a rocker arm 48, which is secured upon one end of a tubular shaft 49 through which the rocker shaft 29 extends endwise. Said latch 36 is fixed upon the other end of said tubular shaft 49. After the tappet 35, moving in the direction of the arrow at Fig. 2, has operated the pawl 34 and the latch 28 to release the

roll 16, the second tappet 43 moves the pawl 44 with its lever 45 to the dotted line position at Fig. 2, thereby rocking the latch 46 to the dotted line position at said figure, thereby releasing the wrist 24, which permits the roll-restoring operation of the spring 27 already described.

The link 23 is preferably adjustable as to length, so as to vary the pressure of the roll 16 as may be desired, said link comprising two parts 23 and 23^a connected by a turn-buckle 23^b, the turning of which lengthens or shortens the link, to increase or diminish the upper pressure of roll 16 against the bottom of the stencil cylinder. Springs 50 and 51 restore the levers 32 and 45 to normal positions together with their respective latches 28 and 36. The pawls 34 and 44 are beveled and pivoted on said levers to permit reverse rotation of the cylinder 1, said springs 50 and 51 being connected to said pawls in a manner to restore them as well as the levers to normal positions. The pivots of the pawls are marked 52 and 53.

It will be seen at Figs. 2, 3 and 4 that the lever 45 or its pawl 44 stands alongside of the lever 32 or pawl 34, the tappet 35 being too short to reach the pawl 44. The tappet 43 is in the shape of a crank, seen best at Fig. 3, the same being cranked to avoid the pawl 34, that is, to bring the striking portion of the tappet nearer the axis of the cylinder than is the tip of said pawl 34; while said tappet 43 extends far enough out from the cylinder to strike the pawl 44. Said tappets are insertible in sockets or seats 54 in the form of perforations drilled in the end of the stencil cylinder 1.

The roll releasing tappet 35 may be adjusted to the various points for nearly the entire circumference of the cylinder. The range of adjustment of the roll-restoring tappet 43 may not be so great, and transverse seats or recesses 55 may be formed in the edge of the cylinder to lock the crank portion 43^a of the tappet against accidental revolution; and any usual means may be provided for securing each of said tappets where adjusted around the cylinder. The duration of the feed of the web at each revolution of the cylinder, and consequently the length of the sheet to be cut off, is determined by the distance between the roll-releasing tappet 35 and the roll-restoring tappet 43. It will also be understood that by adjusting said tappets the operation of the feed controlling mechanism may be timed to occur at different portions of the revolution of the cylinder, even though the extent of the advance movement of the web is the same; for instance, if the tappet 43 be placed in the first socket 55 at Fig. 2, and the tappet 35 correspondingly shifted, it will cause the feeding movement to occur at a different portion of the cylinder revolution, but with-

out changing the length of such feeding movement or the length of the sheet to be cut off from the web.

In order to prevent false feeding movement of the web at the release of the feeding roll 16, I provide spring-fingers 56 to bear upon the side edges of the web between the spool and the cylinder 1. These press the paper down upon plates 57 formed upon the guides 13 and resting upon the shelf 12. Each guide with its fingers 56 and plate 57 is adjustable toward and away from the other and may be secured by a thumb screw 58. By means of the friction fingers or brakes 56, the stretch of the web between the spool and the cylinder is instantly checked, when the pull of the roll 16 thereon ceases. This insures accurate spacing of the stencils upon the web, and also accurate cutting of the web into sheets. The shelf 12 is releasably caught upon pins 59 by means of hooks 60, and may be detached from the machine together with the guides 13 and the paper roll, which is mounted upon the front end of said shelf.

The web is severed into sheets by means of a transverse knife blade 61 mounted upon a bar 62, and normally elevated by means of arms 63 which hang from a rod 64 carried upon the rear ends of a pair of rock arms 65, which extend forwardly from a rock shaft 66. It is perceived that when the shaft 66 is caused to rock, the rock arms 65 descend, and force down the knife frame 62, 63 to sever the web 9^a, which is indicated by a dotted line. A cooperating knife-blade 67 is fixed upon the rear end of a bed or table 68, and a spring 69 holds the blade 61 against said blade 67.

The knife operating rockshaft 66 extends across the machine, and is journaled in a pair of posts 70 erected upon the bed 68 one at each side of the fixed plate 22. The bed 68 is mounted upon ways 71 provided upon side bars 72 of the framework. The bed may be conveniently adjusted along said ways by means of a hand wheel 73, shaft 74, and pinion 75, said shaft mounted in the side bars 72, and said pinion meshing with a rack 76 provided upon the under side of the adjustable bed or table 68. By turning the hand wheel 73, said bed 68, together with the posts 70 and the web-severing mechanism, may be adjusted toward or away from the stencil cylinder 1, thereby to adjust the line of cut with reference to the repeated stencils that have been inked upon the web. A spring pin 77 may engage a ratchet wheel 78 fixed upon the shaft 74 to hold the bed where adjusted, although this provision may be omitted in some cases. The plate or shelf 22 immediately overlies the bed 68, and the two taken together form a continuous extensible table for the web to travel over. At the rear end of the bed 68 is provided a plate 79 which coöperates with

the top of the bed to form a throat through which the web passes, said throat being very close to the stationary knife blade 67, so as to prevent buckling of the web where it is severed. At the sides of the table 68 adjacent to said throat are guides 80 for the side edges of the web, said guides adjustable independently of each other across the bed and secured by screws 81. The side guides 80 and 13 permit lateral adjustment of the entire web to accommodate the position of the stenciled matter on the cylinder 1, and also to permit the use of webs of different widths. The web spool may consist of one or several sections, as shown, and may be adjusted along the spool shaft. The bed 68 is preferably given a long range of adjustment, as shown, so as to enable the web to be severed into either short, medium or long sheets, according to the length of the stenciled matter on the web, and according to the portion of the revolution of the cylinder 1, at which the stenciling is done.

The severing blade 61 is operated intermittently by means of a winding spring 82 carried in a barrel 83 journaled upon an arm 84 extending from one of the standards 70. This spring is constantly wound by means of gears, 85, 86, 87 and 37, said gears 86 and 87 being mounted at the ends of a shaft, which is extensible to accommodate the movements of the knife table 68. The gear 87 is fixed on an inner shaft 88, and the gear 86 is fixed upon a tubular outer shaft 89, the latter having a slot 90 through which projects a stud or screw 91 from the inner shaft 88. Normally the spring barrel 83 is restrained by a latch 92, the latter having the form of a lever pivoted at 93 upon an arm 94 of the movable framework, and at its upper end overlying a pin 95 projecting from a rock arm 96, which is secured to the rock shaft 66, and which is also connected by a link 97 to a crank pin 98 upon the spring barrel 83. A rod 99 extends from the lower end of the latch 92 to a lever 100 mounted close to the cylinder 1 and having at its upper end a pawl 101 in rear of the pawl 34 and in the path of the roll-releasing tappet 35, but out of the path of the roll-restoring tappet 43. A spring 102 connected to the lower portion of the latch 92 holds the lever 100 normally against a stop 103, Fig. 5. The rod 99 passes through an eye in a projection 104 on the latch 92, and is secured by a thumb screw 105, which may be loosened to permit the adjustment of the knife carrying table 68, and then tightened again.

Directly after the tappet 35 has struck the pawl 34 and thrown off the pressure roll 16, the same tappet strikes the pawl 101 and vibrates the lever 100, and the latter by means of the rod 99 swings the latch 92 to the releasing position shown at Fig. 2 in

dotted lines. The spring 82 being no longer restrained, effects an entire revolution of the spring barrel 83, and by means of the crank 98 on said barrel, the link 97, and the arm 96, the rocking frame 65, 66 is caused to swing down and up, and the blade 61 to sever the web, the latter being motionless. The spring barrel 83 makes only a single revolution, because the spring 102 snaps the latch 92 beneath the pin 95 during the last part of the revolution of the barrel, whereby the latter is again arrested. As the motion of the heavy knife frame is quite rapid, I preferably employ a rubber cushion 106 to arrest the downward movement of the knife, and a rubber pad 107 to serve as a stop for its upward movement.

The stencil is secured in the usual manner by a bar 108 upon the outside of an ink blanket 109, and the forward end of the web is led forward from the roll, and passes between the cylinder and the roll 16. The tappet 43 is adjusted, as well as the tappet 35, to cause the stenciling to take place at the desired portion of the revolution of the cylinder, and also to regulate the length of the intermittent feed of the web. The tappet 35 also engages a pawl 110 provided upon a revolution counter 111. The cylinder is turned a few times to secure the proper ink- ing of the stencil, and the leading edge of the web is led forwardly between the knife blades. Should the latter not sever the web at the proper point, the knob 73 is turned to vary the point of cutting of the web. The intermittent web-feeding and severing operations then proceed in the manner already described until the desired number of copies has been run off.

At Fig. 8 the main gear 37 is shown formed upon a collar 112 which is loose upon the driving shaft 3, but which is formed at its outer end with teeth 113, to clutch with teeth 114 formed upon a collar 115 which is splined upon said shaft. Upon the end of the shaft outside of said collar 115 is threaded a nut 116, by turning which the collar 115 is moved inwardly to engage the collar 112, and cause the shaft to turn gear 37. Upon loosening said nut, the collars are unclutched by means of a spring 117.

Fig. 9 is a diagram illustrative of a method of inserting paper sheets between the freshly stenciled sheets. This is done by means of an additional roll of paper 118, from which the web 119 passes between the stenciling cylinder and pressure roll. The two webs are severed simultaneously, and the stenciled sheets 120 alternate with the unstenciled sheets 121 in the delivered pile. The blank sheets should be of soft or absorbent material, and are inexpensive. By this means offset of ink from one stenciled sheet to another is avoided.

Many variations may be resorted to within

the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. A web stenciling machine comprising a web-carrying spool, a continuously revolving stencil cylinder, a roll to press thereagainst to stencil and feed the web, and regulatable means to arrest the web intermittently, including adjustable means dependent upon the movement of the cylinder for intermittently releasing said roll from said cylinder.

2. In a web stenciling machine, the combination with a revolving driver, of devices cooperating to feed the web, means controlled by said driver for separating said devices to release the web, and means also controlled by said driver for pressing said devices together to grip and advance the web, means being provided for stenciling the web at intervals corresponding to the length of the intermittent feeding movements of the web.

3. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, a tappet upon said revolving driver, means controlled by said tappet for releasing the web from said feeding means, a second tappet upon said revolving driver, and means operated by said second tappet for restoring the control of said feeding means over said web.

4. In a web stenciling machine, the combination of a revolving stencil cylinder, a roll to press the web against said cylinder, a tappet revolving with said cylinder, means operated by said tappet to withdraw said roll from said cylinder, a second tappet revolving with said cylinder, and means operated by said second tappet for causing said roll to resume cooperative relation with said cylinder.

5. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a trip to release said roll, means revolving with said cylinder to operate said trip, and a spring to press the roll against the cylinder; means being provided to cause said spring to restore the roll after release thereof, said restoring means including a part revolving with said cylinder.

6. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring to press the roll against the cylinder, means revolving with said cylinder to tension said spring, and means inclusive of a part revolving with said cylinder to release said roll from the cylinder.

7. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, and means for causing the advance of

the web to be intermittent; said means including a spring to effect relative movement between the roll and the cylinder, means revolving with the cylinder to put said spring under tension, and means also revolving with the cylinder to control the operation of said spring.

8. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring for putting said roll under pressure, and means revolving with said cylinder to tension said spring, then to cause the spring to press the roll against the cylinder and subsequently to release the roll.

9. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, and spring-actuated mechanism for moving said roll alternately away from and back to the cylinder.

10. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, and spring-actuated mechanism for moving said roll alternately away from and back to the cylinder; said spring-actuated mechanism including devices revolving with the cylinder to control the movements of said pressure roll.

11. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, and spring-actuated mechanism for moving said roll alternately away from and back to the cylinder; said spring-actuated mechanism including devices revolving with the cylinder to control the movements of said pressure roll, and also including spring-tensioning means revolving with said cylinder.

12. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, and spring-actuated means for moving said roll alternately away from and back to the cylinder, said spring-actuating means including spring-tensioning means revolving with the cylinder, and also including a roll-releasing tappet and a roll-restoring tappet both revolving with said cylinder.

13. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring, and means revolving with the cylinder first to tension said spring, then to cause the spring to press the roll against the cylinder, and subsequently to cause the spring to withdraw the roll from the cylinder.

14. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring, and means revolving with the cylinder first to tension said spring, then to cause the spring to press the roll against the

cylinder, then to retension said spring, and then to cause the spring to withdraw the roll from the cylinder.

15. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring, means revolving with the cylinder to tension said spring for pressing the roll against the cylinder, means restraining the said spring, a tappet revolving with the cylinder to release said spring and permit it to press the roll against the cylinder, and roll-releasing means including a second tappet revolving with the cylinder.

16. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring, means revolving with the cylinder to tension said spring, means revolving with the cylinder to cause said spring to press the roll against the cylinder, and means revolving with the cylinder to cause said spring to withdraw said roll from the cylinder.

17. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a spring, means revolving with the cylinder to tension said spring, a device to restrain said spring, a tappet revolving with said cylinder to release said spring from said restraining device and permit the spring to press the roll against the cylinder, a second restraining device for said spring, and a second tappet revolving with the cylinder to release said spring from said second restraining device and permit the spring to withdraw the roll from the cylinder.

18. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with said cylinder to wind said spring constantly, and means operating at intervals in the revolution of said cylinder to cause said spring to alternately press the roll against the cylinder and withdraw the roll from the cylinder.

19. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with said cylinder to wind said spring constantly, means restraining said spring, a device revolving with the cylinder to release said restraining means and permit the spring to press the roll against the cylinder, and means dependent upon the revolution of the cylinder to cause the roll to withdraw from the cylinder.

20. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with said cylinder to wind said spring, a stop connected to said spring and revoluble therewith, a latch to intercept said stop and restrain the

spring, a tappet revolving with said cylinder, means engageable by the tappet to withdraw said latch and permit the spring to expand, means for enabling the spring to press said roll against the cylinder, and means dependent upon the revolution of the cylinder to cause the roll to withdraw from the cylinder.

21. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with said cylinder to wind said spring, and means dependent upon the revolution of the cylinder to enable said spring to effect a movement of the roll relative to the cylinder, thereby to control the feed of the web.

22. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with said cylinder to wind said spring, and means dependent upon the revolution of the cylinder to enable said spring to effect movements of the roll against and away from the cylinder to effect intermittent feed of the web; a latch mechanism, inclusive of tappets revolving with the cylinder, being provided to control the movements of said spring.

23. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with the cylinder to wind said spring, and means dependent upon the revolution of the cylinder to enable said spring to effect movements of the roll against and away from the cylinder to effect intermittent feed of the web.

24. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with the cylinder to wind said spring, a stop connected to said spring and revoluble therewith, a connection between the spring and the roll, a latch to intercept said stop, a tappet revolving with said cylinder to release said latch and permit the spring to force the roll against the cylinder, a second latch to engage said stop and restrain the spring, and a second tappet revolving with said cylinder to release the second latch and permit the spring to revolve, and the roll to withdraw from the platen.

25. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, a barrel therefor, gear connections from said cylinder to said spring barrel, a stop upon said spring barrel, latches engageable alternately with said stop to permit intermittent rotation of said spring barrel, tappets upon said cylinder, 130

latch-controlling devices engageable respectively by said tappets, and connections from said spring barrel to said roll to enable the barrel to reciprocate the roll to and from the stencil cylinder.

26. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, a barrel therefor, gear connections from said cylinder to said spring barrel, a stop upon said spring barrel, latches engageable alternately with said stop to permit intermittent rotation of said spring barrel, tappets upon said cylinder, latch-controlling devices engageable respectively by said tappets, a pressure device connected at its ends to the ends of said roll, and means extending from said spring barrel to the middle of said pressure device to enable the barrel to reciprocate the roll to and from the stencil cylinder and cause the roll to bear evenly against the cylinder.

27. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, a barrel therefor, gear connections from said cylinder to said spring barrel, a stop upon said spring barrel, latches engageable alternately with said stop to permit intermittent rotation of said spring barrel, tappets upon said cylinder, latch-controlling devices engageable respectively by said tappets, a pressure bar connected at its ends to the ends of said roll, and a link adjustable as to length and pivoted at one end to the spring barrel and at the other end to the middle of said pressure bar.

28. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, a barrel therefor, gear connections from said cylinder to said spring barrel, a stop upon said spring barrel, latches engageable alternately with said stop to permit intermittent rotation of said spring barrel, tappets upon said cylinder, latch-controlling devices engageable respectively by said tappets, and means connecting the spring barrel to the pressure roll in a manner to enable the latter to be reciprocated by the barrel and to enable the pressure exerted by the barrel to be distributed evenly between the ends of the roll.

29. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, a barrel therefor, gear connections from said cylinder to said spring barrel, a stop upon said spring barrel, latches engageable alternately with said stop to permit intermittent rotation of said spring barrel, tappets upon said cylinder, latch-controlling devices engageable respectively by said tappets, and means connecting

the spring barrel to the pressure roll in a manner to enable the latter to be reciprocated by the barrel and to enable the pressure exerted by the barrel to be distributed evenly between the ends of the roll; means being provided between the spring barrel and the roll to effect fine adjustments of the pressure of the roll against the stencil cylinder.

30. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, a spring barrel, gear connections from said cylinder to said spring barrel, a stop revolving with said spring barrel, a latch engageable with said stop to permit intermittent rotation of said spring barrel, a tappet upon said cylinder, a latch-controlling device engageable by said tappet, connections from said spring barrel to said roll to enable the barrel to move the roll against the stencil cylinder when released from said latch, and means to separate the roll from the cylinder.

31. In a web stenciling machine, the combination with a revolving stencil cylinder, of a spring barrel connected by gearing to said cylinder, a stop connected to said barrel, a roll to press the web against the platen, a latch to engage said stop to restrain the spring barrel, a pawl connected to said latch, a tappet upon said stencil cylinder to engage said pawl, to release the spring barrel and permit it to press the roll against the stencil cylinder, and means to separate the roll from the cylinder.

32. In a web stenciling machine, the combination with a revolving stencil cylinder, of a spring barrel connected by gearing to said cylinder, a stop connected to said barrel, a roll to press the web against the platen, latches to engage said stop in alternation to restrain the spring barrel, pawls connected to said latches, and tappets upon said stencil cylinder to engage said pawls respectively to operate the latches in alternation.

33. In a web stenciling machine, the combination with a revolving stencil cylinder having a gear, of a shaft connected by gearing to said gear, a spring wound by said shaft, a barrel for said spring, a stop upon said barrel, a roll to press the web against the platen, connections from said barrel to said roll, latches to engage said stop in alternation to restrain the spring barrel, links connected to said latches, levers connected to said links and having pawls on their ends, and tappets upon said stencil cylinder to engage said pawls respectively to operate the latches in alternation.

34. In a web stenciling machine, the combination with a revolving stencil cylinder having a gear, of a shaft connected by gearing to said gear, a spring wound by said shaft, a barrel for said spring, a wrist con-

connected to said barrel, a link pivoted upon said wrist, a bar to the middle of which said link is pivoted, arms engaging the ends of said bar, a roll carried by said arms to press the web against the platen, latches to engage said wrist in alternation to restrain the spring barrel, links connected to said latches, levers connected to said links and having pawls on their ends, and tappets upon said stencil cylinder to engage said pawls respectively to operate the latches in alternation.

35. In a web stenciling machine, the combination with a revolving stencil cylinder having a gear, of a shaft connected by gearing to said gear, a spring wound by said shaft, a barrel for said spring, a wrist connected to said barrel, a link pivoted upon said wrist and adjustable as to length, a bar to the middle of which said link is pivoted, arms engaging the ends of said bar, a roll carried by said arms to press the web against the platen, latches to engage said wrist in alternation to restrain the spring barrel, rock shafts or pivots upon which said latches are mounted, arms upon said rock shafts, links connected to said arms, levers connected to said links and mounted at different elevations and having pawls on their upper ends; and tappets upon said stencil cylinder to engage said pawls respectively; said tappets being mounted at different distances from the axis of said cylinder, and said pawls being correspondingly mounted to enable only the inner tappet to engage only the higher pawl, and said pawls being placed at different distances from the end of the cylinder to enable only the outer tappet to engage the lower pawl.

36. In a web stenciling machine, the combination with a revolving stencil cylinder and a roll to press the web against the cylinder, of means to effect intermittent feeding of the web, said feeding means comprising two tappets mounted upon said cylinder at different distances from its axis, the outer tappet being shorter than the inner one, pawls mounted upon the framework at corresponding distances from the axis of said cylinder and at different distances from the end of said cylinder, so that the short tappet can engage only the nearer pawl and the long tappet only the other pawl, and means controlled by said pawls for effecting alternate web-releasing and web-gripping movements between said roll and cylinder.

37. A web stenciling machine comprising a revolving stencil cylinder, web-feeding means, and adjustable means for causing the revolution of said cylinder to be idle to a regulatable extent.

38. A web stenciling machine comprising a continuously revolving stencil cylinder, a roll to press the web against the cylinder, and means for effecting at different prede-

termined points in the revolution of the cylinder, separation between the roll and the cylinder to stop the feeding of the web while the cylinder continues to revolve.

39. A web stenciling machine comprising in combination a web-holder, a stencil cylinder, means for effecting pressure of the web against the cylinder, and means for causing the web to be advanced intermittently during the action of the cylinder and at different predetermined points in the operation of said cylinder.

40. A web stenciling machine comprising a moving stencil holding member, a roll to press the web against said stencil holding member; and means to release the roll to permit relative movement of the web and the stencil holding member at different points in the movement of the latter.

41. A web stenciling machine comprising a stencil cylinder, a roll to press the web against the cylinder, and regulatable means for releasing the roll at predetermined intervals between stenciling operations.

42. A web stenciling machine comprising a revolving stencil cylinder, a roll to cooperate therewith to stencil the web, and adjustable means dependent upon the movement of the cylinder for pressing said roll against the cylinder at different predetermined points in the revolution of the latter; and for releasing the roll once in every revolution of the cylinder.

43. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, a tappet upon said revolving driver, and means controlled by said tappet for releasing the web from said feeding means; said tappet being adjustable to different points around said driver to vary the moment of release of the web.

44. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, a tappet upon said revolving driver, means controlled by said tappet for releasing the web from said feeding means, a second tappet upon said revolving driver, and means operated by said second tappet for restoring the control of said feeding means over said web, both of said tappets being adjustable around said driver to enable them to act at different predetermined portions of the revolution of said driver.

45. In a web stenciling machine, the combination of a revolving stencil cylinder, a roll to press the web against said cylinder, a tappet revolving with and independently adjustable around said cylinder, and means operated by said tappet to withdraw said roll from said cylinder at different points in the revolution of the latter according to the adjustment of said tappet.

46. In a web stenciling machine, the com-

5 bination of a revolving stencil cylinder, a
roll to press the web against said cylinder, a
tappet revolving with said cylinder, means
operated by said tappet to withdraw said
10 roll from said cylinder, a second tappet re-
volving with said cylinder, and means op-
erated by said second tappet for causing
said roll to resume coöperative relation with
said cylinder; one of said tappets being ad-
15 justable to enable it to act at different pre-
determined points in the revolution of said
cylinder.

47. In a web stenciling machine, the com-
bination of a revolving driver, a stencil cyl-
15 inder revolving with said driver, a roll to
press the web against said cylinder, a tappet
revolving with said driver, and means con-
trolled by said tappet for effecting separa-
tion between said roll and said cylinder at
20 different predetermined points in each revo-
lution of said cylinder, and means operating
once in each revolution of said cylinder to
cause the latter to resume coöperative rela-
tion with said roll.

25 48. In a web stenciling machine, the com-
bination with a revolving stencil cylinder, of
a roll to press the web against the cylinder,
and regulatable means to cause the roll to
withdraw from and then press against the
30 cylinder once in each stenciling operation of
said cylinder at different predetermined por-
tions of the revolution thereof.

49. In a web stenciling machine, the com-
bination with a revolving driver and a stencil
35 cylinder revolving therewith, of a roll to
press the web against the cylinder, means
holding said roll against the cylinder, a trip
to release said holding means, and a trip-
operator adjustable to different positions on
40 said driver to predetermine the point at
which the roll is released.

50. In a web stenciling machine, the com-
bination with a revolving stencil cylinder, of
a roll to press the web against the cylinder,
45 a spring to press the roll against the cylin-
der, means revolving with said cylinder to
tension said spring, and means inclusive of
a part revolving with said cylinder and ad-
justable relatively thereto to release said roll
50 from the cylinder at different predetermined
points in the revolution of the latter.

51. In a web stenciling machine, the com-
bination with a revolving stencil cylinder, of
a roll to press the web against the cylinder,
55 and means for causing the advance of the
web to be intermittent; said means including
a spring to effect relative movement between
the roll and the cylinder, means revolving
with the cylinder to wind said spring con-
60 stantly, and means also revolving with the
cylinder and adjustable relatively thereto to
control the operation of said spring.

52. In a web stenciling machine, the com-
bination with a revolving stencil cylinder, of
65 a roll to press the web against the cylinder,

and regulatable spring-actuated mechanism
for moving said roll alternately away from
and back to the cylinder at different points
in the revolution of the latter as may be
selected.

53. In a web stenciling machine, the com-
bination with a revolving stencil cylinder, of
a roll to press the web against the cylinder,
a spring, means revolving with the cylinder
75 to tension said spring, regulatable means re-
volving with the cylinder at different points
in the revolution thereof and regulatable to
cause said spring to press the roll against
the cylinder, and means revolving with the
80 cylinder to cause said spring to withdraw
said roll from the cylinder at different
points in the revolution thereof.

54. In a web stenciling machine, the com-
bination with a revolving stencil cylinder, of
a roll to press the web against the cylinder,
85 a winding spring, means revolving with said
cylinder to wind said spring constantly, and
regulatable means operating at intervals at
different predetermined portions of the
revolution of said cylinder to cause said
90 spring to alternately press the roll against
the cylinder and withdraw the roll from
the cylinder.

55. In a web stenciling machine, the com-
bination with a revolving stencil cylinder 95
and a roll to press the web against the cylin-
der, a circular series of sockets being pro-
vided in the end of said cylinder, of a tap-
pet pin insertible in any of said sockets, and
mechanism controlled by said tappet pin for
100 acting upon said roll to control the feed of
the web.

56. A web stenciling machine comprising
a continuously revolving stencil cylinder, a
roll to press the web against the cylinder,
105 and regulatable means for effecting separa-
tion between the roll and the cylinder during
intervals of different lengths as may be pre-
determined to stop the feeding of the web
while the cylinder continues to revolve. 110

57. A web stenciling machine comprising
a revolving stencil cylinder, a roll to co-
operate therewith to stencil the web, and
means dependent upon the movement of the
cylinder for alternately pressing said roll
115 against and releasing it from said cylinder;
regulatable means being provided for vary-
ing at will the interval between the roll
pressing and roll releasing operations.

58. In a web stenciling machine, the com-
bination with a revolving driver, of devices
120 coöperating to feed the web, regulatable
means controlled by said driver for separat-
ing said devices to release the web, and inde-
pendently regulatable means also controlled
125 by said driver for pressing said devices to-
gether to grip and advance the web.

59. In a web stenciling machine, the com-
bination of a revolving driver, means for
stenciling and feeding the web, an adjust- 130

able tappet upon said revolving driver, means controlled by said tappet for releasing the web from said feeding means, a second tappet upon said revolving driver, and means operated by said second tappet for restoring the control of said feeding means over said web.

60. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, an adjustable tappet upon said revolving driver, means controlled by said tappet for releasing the web from said feeding means, a second tappet upon said revolving driver adjustable independently of the first tappet, and means operated by said second tappet for restoring the control of said feeding means over said web.

61. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with the cylinder to wind said spring constantly, means restraining said spring, a tappet revolving with the cylinder and adjustable thereon to release said spring at different predetermined points in the revolution of the cylinder, means enabling said spring when released to press the roll against the cylinder, and roll releasing means including a second tappet also revolving with the cylinder.

62. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with the cylinder to wind said spring constantly, means restraining said spring, a tappet revolving with the cylinder and adjustable thereon to release said spring at different predetermined points in the revolution of the cylinder, means enabling said spring when released to press the roll against the cylinder, and roll releasing means including a second tappet also revolving with the cylinder, the second tappet being adjustable independently of the first tappet to vary the point at which the roll is released.

63. In a web stenciling machine, the combination with a revolving stencil cylinder, and a roll to press the web against the cylinder, of means adjustable relatively to the cylinder for releasing the roll at a variable predetermined point relatively to the movement of the cylinder, and means for severing the web while the roll is released.

64. In a web stenciling machine, the combination with a revolving stencil cylinder, and a roll to press the web against the cylinder, of means adjustable relatively to the cylinder for both releasing the roll and severing the stationary web at variable predetermined points relatively to the movement of the cylinder.

65. In a web stenciling machine, the combination of a revolving driver, means for

stenciling and feeding the web, a tappet upon said revolving driver, and means controlled by said tappet for releasing the web from said feeding means and severing the web.

66. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, a tappet upon said revolving driver, means controlled by said tappet for releasing the web from said feeding means and severing the web, a second tappet upon said revolving driver, and means operated by said second tappet for restoring the control of said feeding means over said web.

67. In a web stenciling machine, the combination of a revolving stencil cylinder, a roll to press the web against said cylinder, a tappet revolving with said cylinder, means operated by said tappet to withdraw said roll from said cylinder and sever the web, a second tappet revolving with said cylinder, and means operated by said second tappet for causing said roll to resume cooperative relation with said cylinder.

68. In a web stenciling machine, the combination with a revolving stencil cylinder and a roll to press the web against the cylinder, of a tappet adjustable around the cylinder, and means operated by said tappet first to release the roll and then to sever the web.

69. In a web stenciling machine, the combination with a revolving stencil cylinder and a roll to press the web against the cylinder, of a tappet adjustable around the cylinder, means operated by said tappet first to release the roll and then to sever the web, a second tappet upon said cylinder, and means for enabling the second tappet to restore cooperation between the roll and the cylinder.

70. A web stenciling machine comprising a revolving stencil cylinder, a roll to press the web against the cylinder, and means for effecting at different predetermined points in the revolution of the cylinder, both separation between the roll and the cylinder to stop the feeding of the web while the cylinder continues to revolve and severing of the web.

71. A web stenciling machine comprising in combination a web-holder, a stencil-cylinder, means for effecting pressure of the web against the cylinder, and means for causing the web to be advanced intermittently during the action of the cylinder and at different predetermined points in the operation of said cylinder and for severing the web between its advance movement.

72. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, a tappet upon said revolving driver, and means controlled by said tappet for both releasing the web from said feeding means and severing

the web; said tappet being adjustable to different points around said driver to vary the points of release and cutting of the web.

73. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a latch to hold the roll against the cylinder, a spring-operated web-severing blade, a latch restraining said blade, and a member revolving with said cylinder and adjustable relatively thereto to release first the roll-latch and then the blade-latch.

74. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, winding springs, means revolving with the cylinder to wind said springs constantly, and means dependent upon the revolution of the cylinder to cause one of said springs to operate said roll, and the other of said springs to operate a web-severing blade.

75. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, and regulatable spring-actuated mechanism for both severing said web into sheets and moving said roll alternately away from and back to the cylinder at different points in the revolution of the latter as may be selected.

76. A web stenciling machine comprising a revolving stencil cylinder, a roll to press the web against the cylinder, regulatable means for effecting separation between the roll and the cylinder during intervals of different lengths as may be predetermined to stop the feeding of the web while the cylinder continues to revolve, and means for severing the web after each feeding movement thereof.

77. A web stenciling machine comprising a revolving stencil cylinder, a roll to cooperate therewith to stencil the web, and means dependent upon the movement of the cylinder for alternately pressing said roll against and releasing it from said cylinder; regulatable means being provided for varying at will the interval between the roll pressing and roll releasing operations, and means for severing the web immediately after the release of said roll.

78. In a web stenciling machine, the combination of a revolving driver, means for stenciling and feeding the web, an adjustable tappet upon said revolving driver, means controlled by said tappet for releasing the web from said feeding means, a second tappet upon said revolving driver, means operated by said second tappet for restoring the control of said feeding means over said web, and means for enabling the first tappet to operate the web and severing device before the operation of said second tappet.

79. In a web stenciling machine, the com-

bination with a revolving driver, and a stencil cylinder revolving therewith, of means for stenciling and intermittently feeding the web and web-severing device, a spring to operate said web-severing device, means restraining said spring, and a trip operable by said driver to release said restraining means.

80. In a web stenciling machine, the combination with a revolving driver, and means for stenciling and intermittently advancing the web, of a spring, means revolving with said driver to tension said spring, means restraining said spring, a part revolving with said driver to release said spring, and a web-severing device operable by the release of said spring.

81. In a web stenciling machine, the combination with a revolving driver, and means for stenciling and intermittently advancing the web, of a spring, means revolving with said driver to tension said spring, means restraining said spring, a part revolving with said driver to release said spring, and a web-severing device operable by the release of said spring; said severing device inclusive of a reciprocating blade, and said spring having means to reciprocate said blade.

82. In a web stenciling machine, the combination with a revolving driver and web-advancing and stenciling means, of a winding spring, means revolving with said driver to wind said spring, a reciprocating severing-web, and means operating intermittently in the revolution of said driver to cause said spring to reciprocate said blade.

83. In a web stenciling machine, the combination with a revolving driver and web stenciling and feeding means, of a winding spring, means revolving with said driver to wind said spring, a latch to restrain said spring, a tappet revolving with said driver, means engageable by the tappet to withdraw said latch and permit the spring to expand, and a blade operable by said spring to sever the web.

84. In a web stenciling machine, the combination with a revolving stencil cylinder, of a roll to press the web against the cylinder, a winding spring, means revolving with the cylinder to wind said spring, and means dependent upon the revolution of the cylinder to enable said spring to effect movements of the roll against and away from the cylinder to effect intermittent feed of the web; a second winding spring, means revolving with the cylinder to wind said second spring, a web-severing blade, and means dependent upon the revolution of the cylinder to enable said second spring to operate said blade.

85. In a web stenciling machine, the combination with a revolving stencil cylinder, of a winding spring, a barrel therefor, gear connections from said cylinder to said spring-barrel, a stop connected to said

spring-barrel, a latch engageable with said stop, a tappet upon said cylinder, a latch-releasing device engageable by said tappet, and a web-severing blade operable by said
5 spring-barrel.

86. In a web stenciling machine, the combination with a revolving stencil cylinder, of a winding spring, a barrel therefor, gear connections from said cylinder to said
10 spring-barrel, a stop connected to said spring-barrel, a latch engageable with said stop, a tappet upon said cylinder, a latch-releasing device engageable by said tappet, and a web-severing blade operable by said
15 spring-barrel; said severing device comprising a reciprocating blade, a rocker upon which said blade is mounted, and a link connecting said rocker to said spring-barrel to enable the latter by a single revolution to
20 reciprocate said rocker and blade.

87. In a web stenciling machine, the combination with a revolving stencil cylinder, of a winding spring, a barrel therefor, gear connections from said cylinder to said
25 spring-barrel, a stop connected to said spring-barrel, a latch engageable with said stop, a tappet upon said cylinder, a latch-releasing device engageable by said tappet, and a web-severing blade operable by said
30 spring-barrel; connections extending from said barrel to said plate to enable one revolution of the barrel to effect a reciprocation of said blade.

88. In a web stenciling machine, the combination with a revolving driver, of a spring-barrel connected by gearing to said driver, a link pivoted to said spring barrel, a rock-arm pivoted to said link and having a stop, a latch to engage said stop, a tappet revolving with said driver, means for enabling the
40 tappet to release said latch, a rock shaft upon which said stop-arm is mounted, arms extending from said rock shaft, and a web-severing knife frame pendent from said
45 arms.

89. In a web stenciling machine, the combination with a revolving driver, of a spring-barrel connected by gearing to said driver, a link pivoted to said spring barrel, a rock-arm pivoted to said link and having a stop, a latch to engage said stop, a tappet revolving with said driver, means for enabling the
50 tappet to release said latch, a rock shaft upon which said stop-arm is mounted, arms extending from said rock shaft, and a web-severing knife frame pendent from said
55 arms; a stationary knife, and a spring to press the knife against the stationary knife.

90. In a web stenciling machine, the combination with a stencil cylinder, of a reciprocatory web-severing blade, a winding
60 spring to operate said blade, gear connections from said winding spring to said stencil cylinder, said connections including an extensible shaft means for adjusting the sever-

ing-blade toward and away from the stencil cylinder, and means dependent upon the revolution of the cylinder for enabling the spring to reciprocate the blade.

91. In a web stenciling machine, the combination of a stencil cylinder, a roll to press the web against the cylinder, a tappet adjustable around said cylinder, means operable by the tappet to release said roll, a web-severing mechanism controlled by said
70 tappet, and means for effecting adjustment of the web-severing mechanism toward and away from the stencil cylinder.

92. In a web stenciling machine, the combination of a stenciling cylinder, a pressure
80 roll, a table, a web-severing blade mounted on said table and operatively connected to said cylinder, a support whereon said table and blade are adjustable toward and away from said cylinder, and an apron extending
85 from said cylinder and overlying said table, to support the web, as it passes from the cylinder to the blade.

93. In a web stenciling machine, the combination with stenciling mechanism including a stenciling cylinder, of a web-severing
90 blade, blade-reciprocating mechanism including a spring wound by said cylinder through an extensible connection, and also including a spring-controlling latch, a
95 tappet adjustable around said cylinder, a lever or part operated by said tappet, and an extensible connection between said lever and said latch.

94. In a web stenciling machine, the combination with stenciling mechanism including a stencil cylinder, of a table, ways along which said table is adjustable toward and
100 away from said cylinder, rack-and-pinion mechanism for adjusting said table, and a
105 web-severing mechanism mounted on said table and operatively connected to said cylinder.

95. In a web stenciling machine, the combination with a stenciling cylinder and a roll
110 therefor, of a table leading from the cylinder, a severing blade mounted at the end of said table, mechanism for reciprocating said blade, a throat at the edge of said table
115 adjoining said blade, through which the web passes to the blade, and guides adjacent to said throat for the side edges of the web.

96. In a web stenciling machine, the combination with a stenciling cylinder and a roll
120 therefor, of a severing blade, a table between the cylinder and the severing blade, mechanism connected to the cylinder for reciprocating said blade, and a throat at the end of the table next to said blade, through which the
125 web is led to the blade.

97. In a web stenciling machine, the combination with a revolving stenciling cylinder, and a pressure roll therefor, of means, inclusive of a winding spring wound by said
130 cylinder, for causing the roll to move away

from and back to the cylinder, and means for silencing the spring-winding mechanism.

98. In a web stenciling machine, the combination with a revolving stenciling cylinder, of a pressure roll therefor, roll-releasing and restoring means inclusive of a spring tensioned by the revolution of said cylinder, and means for silencing said releasing and restoring means to permit continued revolution of the cylinder while the roll is released therefrom.

99. In a web stenciling machine, the combination with a revolving cylinder, a pressure roll, and means controlled by the revolution of the cylinder for alternately releasing and restoring said roll, of means for silencing the roll-releasing and restoring means.

100. In a web stenciling machine, the combination with a revolving cylinder and means for feeding the web, said feeding means being regulatable to vary the extent of advance of the web for each stenciling operation, and means for silencing the feeding means during continuous revolution of the cylinder.

101. In a web stenciling machine, the combination with a revolving stenciling cylinder and means connected thereto for feeding the web intermittently, of means for silencing the intermittent web-feeding means.

102. In a web stenciling machine, the combination with a revolving stenciling cylinder and means connected thereto for feeding the web intermittently and severing the web into sheets, of means for silencing the web-feeding and severing means.

103. In a web stenciling machine, the combination with a revolving cylinder, a pressure roll, and means controlled by the cylinder for alternately releasing and restoring said roll, of web-severing mechanism connected to said cylinder, and means for silencing both the web-severing mechanism and the roll-releasing and restoring means.

104. In a web stenciling machine, the combination with a revolving cylinder, of a gear clutched thereto, means for releasing the gear clutch, and springs wound by said gear and operating respectively a web-severing mechanism and a web-feeding mechanism.

105. In a web stenciling machine, the com-

bination with a revolving cylinder, of web-severing and intermittent web-feeding springs tensioned by said cylinder, and means for simultaneously disconnecting said springs from said cylinder.

106. In a web stenciling machine, the combination with a revolving stencil cylinder, of web-severing mechanism operated by said cylinder, intermittent web-feeding mechanism also operated by said cylinder, and means for simultaneously silencing both the severing mechanism and the intermittent feeding mechanism.

107. A web stenciling machine comprising a table, a reciprocatory web-severing blade at one end of said table, a stencil-cylinder and a roll at the other end of said table, the cylinder over the roll, a web-holder, and means dependent upon the revolution of the cylinder for releasing the roll and operating the blade; whereby the upper side of the paper is stenciled and the inked web is passed along the table and severed without contact of the inked area of the upper side of the web with any portion of the machine.

108. A web-stenciling machine comprising a stenciling cylinder, a roll to press the web against the cylinder, means connected to the cylinder for releasing the roll intermittently, a web-holder, and means to brake the web in advance of its entry into the bite of the cylinder and roll.

109. A web-stenciling machine comprising a stenciling cylinder, a roll to press the web against the cylinder, means connected to the cylinder for releasing the roll intermittently, a web-holder, and a friction device to bear upon the stretch of web between said cylinder and said web-holder.

110. A web-stenciling machine comprising a stenciling cylinder, a roll to press the web against the cylinder, means connected to the cylinder for releasing the roll intermittently, a web-holder, and friction fingers to press lightly on both side edges of the web between the web holder and the stencil cylinder.

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Witnesses:

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