PRINT TRANSFERRING MACHINE

Hinsdale Smith, Jr., Suffield, Conn., assignor to Interna
tional Business Machines Corporation, New York,
N.Y., a corporation of New York

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This invention relates to a transfer machine and more
particularly to a machine for posting ledger sheets by the
process of preparing a negative record on the back of an
original record, and applying heat and pressure to the
front of the original record with the back thereof against
the face of the ledger sheet. This application is a con-
tinuation-in-part of Hinsdale Smith, Jr. application Serial
No. 663,256, filed June 3, 1957, now forfeited.

This invention pertains to several improvements with
respect to print transferring machines and particularly to
those of the class described in Albert W. Mills Patent No.
2,282,737, issued May 12, 1942. In these types of ma-
chines and particularly in the machine described in the
aforesaid patent, the data on the original paper from
which the copy is to be taken is printed in a conventional
manner on a computer, tabulator, typewriter or other
suitable medium and is backed with suitable carbon paper
while being printed so that a carbon negative impression of
the data is deposited on the back of the original paper.
The original paper may take the form of single sheets,
fanfold or continuous roll.

The transfer of data from the original to the copy sheet
in these machines heretofore has been accomplished by
interposing a ribbon or similar medium moistened with
a suitable solvent above the area to be transferred and
then engage the ribbon to bring the ribbon, the original
and the ledger sheet or receiving paper together under
pressure. The solvent dissolves a portion of the carbon
from the original and deposits it on the ledger sheet.
While this manner of transfer results in a satisfactory copy
of the original, the present invention has several advan-
tages thereover.

Some of the more obvious or apparent advantages of
the present invention are that the use of a heating ele-
ment eliminates the unhandiness of the solvent, and the
unpleasant odors attendant therewith. Further, the presen-
t invention does not require facilities such as solvent
storage compartments and handling equipment which add
to the cost of operation.

Also, the odor of the solvent may have a deleterious
effect in the efficiency of operation, since most of these
machines require that an operator be present to run the
machine and in many instances the speed of the ma-
chine is directly controlled by the operator. Hence, it
is possible that the odor of the solvent would affect an
operator in a manner that would reduce the efficiency of
the operation.

The latent or less obvious advantages of the instant
invention resides in the fact that the original paper is
not soiled, as when used as a solvent, and therefore it
may be kept as an original document for record pur-
purposes. Moreover, generally speaking, in order to effect
a transfer of data from the original to a copy sheet by
ments of a solvent, it has been found that the best results
are obtained when using a rather porous paper for the
original. This type of paper material is relatively weak in
mechanical properties and hence, is not too reliable for
high speed mechanical printing devices. Whereas, in
the present invention, data may be transferred from paper
which has the requisite properties permitting its use in
high speed mechanical printers.

In the present invention, a pressure bar is provided for
reciprocation which is characterized by heat applying
means disposed along a pressure applying longitudinal
dge thereof. The heat and pressure applying surface
of the bar is adapted to engage the original paper to press
the same into intimate contact with the copy or ledger
sheet whereby the heat and pressure applied to the
original paper cause a portion of the carbon from the
original to deposit onto the copy sheet. Although the
heat for effecting the transfer is within a safe operating
temperature, greater safety to the machine operator is
provided by restricting the heat to the pressure applying
dge of the pressure bar. In the machine, it is virtual-
ly impossible for the machine operator to come into
contact with the pressure applying edge.

In order to effect a good transfer and to provide uni-
formity in resolution of the data upon the copy sheet, it
is necessary to have uniform heat along the heating ele-
ment and to provide for intimate contact of the heating
element with the original sheet. To achieve these re-
quirements, the heating element has been mounted with
respect to the pressure bar to be taut along the length
thereof and yieldable in a vertical plane thereto.

The taut condition of the heating element results in uniform
heat along its length, while being yieldable in a vertical
plane permits intimate contact with the original sheet.
Furthermore, the density of printing may be controlled
by means of temperature as well as pressure.

Accordingly, the principal object of the invention is
to provide for an improved machine for posting ledger
or copy sheets from an original sheet which utilizes the
combination of heat and pressure to effect the transfer.

Another object of the invention is to provide for an
improved machine for posting ledger or copy sheets from
an original sheet which permits the use of a type of paper
for the original sheet adapted to be fed through high
speed mechanical printers.

Still another object of the invention is to provide for an
improved machine for posting ledger or copy sheets from
an original sheet utilizing heat and pressure to effect the
transfer which tends to eliminate any objectionable
heat transfer from the heat applying means to other ele-
ments of the machine and thereby increase the safety
of the machine with respect to the machine operator.

Still a further object of the invention is to provide for an
improved machine for posting ledger or copy sheets from
an original sheet utilizing heat and pressure to effect the
transfer which permits good visibility for moni-
toring the transfer operation.

An additional object of the invention is to provide for an
improved machine for posting ledger or copy sheets
utilizing heat and pressure to effect the transfer of data
which selectively controls the appearance density of the
transferred data by the amount of heat applied.

Another additional object of the invention is to provide
for an improved machine for posting ledger or copy sheets
utilizing heat and pressure to effect the transfer of data
which employs a heating element mounted in a manner
to maintain an even temperature along its length and to
be yieldable to permit intimate contact with the original
sheet.

Other objects of the invention will be pointed out in the
following description and claims and illustrated in the
accompanying drawings, which disclose, by way of ex-
amples, the principle of the invention and the best mode, which has been contemplated, of applying that principle.

In the drawings:
Fig. 1 is a perspective view showing the improved pressure bar assembly and drive therefor together with associated apparatus.

Fig. 2 is a longitudinal, vertical detail sectional view to illustrate the carriage, the improved pressure bar assembly and the original sheet feeding mechanism.

Fig. 3 is a perspective view showing the cam shaft assembly for the improved pressure bar assembly and associated apparatus.

Fig. 4 is a plan view showing the aligning devices for the copy sheet.

Fig. 5 is a detail view of the carriage mechanism.

Fig. 6 is a side elevational view of the pressure bar and a schematic representation of the electric circuit for providing current to the heating element.

Fig. 7 is a sectional view on the line 7-7 of Fig. 6.

Figs. 8 and 9 are enlarged side elevational views of opposite end portions of the pressure bar.

Fig. 10 is a perspective view of one of the terminals for the heating element; and

Fig. 11 is a perspective view illustrating the arrangement for connecting the linkage to the pressure bar.

An arrangement for moving an original sheet 41 along a paper path one line at a time so that a selected line of data thereon will overlie a selected line position on a ledger or copy sheet 20 which is first aligned at a home position and then moved to the transfer position and for operating the pressure bar in synchronization therewith may be substantially the same as that described in the above mentioned A. W. Mills Patent 2,282,737; hence, for purposes of this invention, only a general description will be given of the elements in this connection since reference may be had to said patent for more specific details of construction and operation.

With the foregoing in mind, reference is made to the drawings and particularly to Figs. 1 and 2 where the invention is shown by way of example with the copy sheet 20 suitably supported upon a table or plate member 21 fixed between side frame members 22 and 23. The frame members 22 and 23 are rigidly joined by a lower pressure bar 25. The copy sheet 20 is placed upon the table 21 with the first line, in the case of a new sheet, or the next blank line on which a copy is to be made, beneath a transparent line finder 26, adjustably mounted on a bar 27 which is supported between the frame members 22 and 23.

This line finder 26 has parallel lines 28 scribed thereon, as shown in Fig. 1, to assist the operator in the proper positioning of the copy sheet 20. The bar 27 which supports the line finder 26 is adjustably supported in the frame members 22 and 23 by means of slots 29 which permit adjustment of said bar and the line finder 26 forward and away from the position where the transfer of data from the original sheet to the copy sheet actually takes place. The purpose of this adjustment is to vary the line spacing on the copy sheet. As it will be seen later herein, the mechanism for carrying the copy sheet to the transfer position has an invariable movement. Obviously, if the line finder is adjusted closer to the transfer position, the spacing of the lines transferred to the copy sheet will be increased; and, if the line finder is adjusted further from the transfer position, the line spaces on the copy sheet will be decreased.

The line position on the copy sheet for receiving data from the original sheet is first located within the limits or space between the scribed lines 28 on the line finder 26 which is remote from the position where the transfer data actually occurs. With the proper line position on the copy sheet having been registered with respect to the line finder 26, the copy sheet is advanced to the transfer position.

Movement of the copy sheet may be facilitated by a"
copy sheet 20 is effected by a pressure bar 52, Figs. 1, 2 and 6, having a heating element 53 disposed in a pressure face thereof, in a manner to be described hereinafter. The pressure bar 52 slidably mounted in vertical grooves 56 and 57 provided in the side frames 22 and 23 respectively, Figs. 1 and 2, is caused to be reciprocated and angularly mounting the links 61 and 62. The bifurcated arms 66 have a pair of oppositely disposed outwardly opening grooves 68 which are adapted to engage the walls 69 of notches formed in the pressure bar 52 near each end. A bore 71 extending from the edge 72 of each notch to the upper face 73 of the bar 52 receives the threaded portion of the adjusting screws which extends beyond the upper face 73 of the bar 52. A spring 74 is disposed to surround the shank of each adjusting screw to engage a shoulder 75 of the bifurcated arm 66 and the edge of the notch in the bar 52. Pressure adjusting knobs 76 and 77 are secured with the threaded portions of the screws 63 and 64, respectively, which extend above the upper face of the bar and may be rotated for longitudinal or axial displacement of the bifurcated arms 66. The adjusting knobs 76 and 77 may be detented in position by members 78 and 79 respectively. By this arrangement, the pressure applied by the pressure bar 52 may be adjusted by merely turning the knobs 76 and 77. The links 61 and 62, Figs. 1 and 3, are connected at their lower ends to rocker arms 81 and 82 secured on a shaft 83 with said arms being disposed near each end of said shaft. An arm 84 fixed on the shaft 83 adjacent to the arm 84 is shown in connection with a link 85 pivotedly mounted on a shaft 88. A pair of cams 91 and 92 on a cam shaft 93 are connected with antifriction washers 94 and 95 on the bell crank 97 to rock it first clockwise and then counterclockwise. The clockwise movement of the bell crank 87 through the linkage lowers the pressure bar 52 to engage the reverse transfer position and the counterclockwise movement of the bell crank through the same linkage raises the pressure bar 52 to its normal position away from the transfer position.

The cam shaft 93 is driven from a power source, not shown, through a clutch arrangement controllable by the machine operator. The cams of the cam and linkage arrangements 38 and 39 for causing operation of the carriage sheet 30 and the mechanism or the clamps 37 are also carried by the cam shaft 93. Furthermore, the cams for causing operation of the copy sheet carriage 30 are also effective to operate the original sheet feeding mechanism, not shown, to drive the feed roll 42, Fig. 2, which operates with the pressure feed roll 43 to move the original sheet 41 ahead one space for each posting operation. The continuous form feed assembly 44 is driven through a gear train, not shown, meshed with a gear, also not shown, on the shaft for the feed roll 43.

The structural details of the mechanism for operating the copy sheet carriage 30, the clamps 37 and the feeding mechanism for the original sheet 41, as well as the apparatus for rocking the index fingers 46 through the link 96, Figs. 2, out of the way of the pressure bar 52, as it is reciprocated, are contained in the above mentioned Patent No. 2,282,737.

The pressure bar 52 is of rectangular shape with shoulder end-opening recesses 97 and 98 at each end as shown in Fig. 6. A longitudinal face 99 of the bar extending from shoulder to shoulder of the recesses 97 and 98 is grooved and provides a manner opposite sides 101 and 102 formed thereby are undercut as shown in Fig. 7.

This groove is adapted to receive an elongated pad member 103 which facilitates intimate contact of the heating element 53 with the original sheet 41. The pad member 103 which facilitates intimate contact of the fer from the heating element 53 to the body of the pressure bar 52. In the example given, the pad member 103 is recessed along its entire length on both sides and centrally grooved so as to form a projection 105 which is interposed complementary to the upwardly diverging opposite sides 101 and 102 respectively. The projections 104 and 106 are positioned to intimately contact the complementary sides 101 and 102 so that the central groove in the pad member forms a cavity 107 with the groove in the face 99 of bar 52.

The pad member 103 may be preformed from plastic material such as tetrafluoroethylene or the like. The projections 104 and 106 can be formed in such a manner that they tend to spread outwardly to intimately contact the undercut opposite sides 101 and 102 to hold the pad member 103 firmly with respect to the pressure bar 52.

The outer face of the pad member 103 may also be grooved longitudinally to provide a support for the heating element 53. The heating element 53 then may reside within the groove or rest upon the projections formed in the groove as shown in Fig. 7. In each case, the outwardly facing the heating element 53 should protrude a sufficient amount from the pad member 103 so that only the heating element 53 will contact the original sheet 41 during the transfer operation.

The heating element 53 is upturned at its ends, Figs. 8 and 9, to facilitate attachment to the pressure bar 52 at the shoulders of the recesses 97 and 98. A U-shaped terminal member 108 is received by the shoulder of the recess 97 with the back or bottom 109 of the U-shaped terminal 108 out of contact with the pressure bar. The sides of the U-shaped terminal 108 are insulated from the pressure bar by insulating material 111 interposed between the bar 52 and the terminal 108. The terminal 108 is held rigidly to the pressure bar by means of screws 112 passing through the terminal 108 without contact and in threaded engagement with the bar 52. Insulating washers 113 insulate the heads of the screws 112 from the terminal 108. The upturned end of the heating element 53 is attached to the back portion 109 of the U-shaped terminal 108 by means of a plate 114 and rivets 116 or the like. One side of the U-shaped terminal 108 is formed outwardly away from the pressure bar 52 and carries a screw 117 with nuts 118 or the like into the attachment of a connecting wire 119 of an electrical circuit for supplying power from a power source 120 to the heating element 53, as shown in Fig. 6.

The other end of the heating element 53 is supported in a manner to be movable with respect to the pressure bar 52 and is secured by a plate 122 and rivets 121 or the like to a depending transverse portion of a terminal 124, Fig. 8. The terminal 124 as shown in Figs. 8 and 10 has relatively spaced opposite side portions 126 to overlie and swing relative to opposite sides of the pressure bar 52. A hollow bushing 127 is loosely disposed within an opening or bore in the pressure bar 52 to permit passage of a screw 128 which extends through holes 129 in the side portions 126 of the terminal 124 and the bushing 127. One end of the screw 128 extends through one of the side portions 126 of the terminal 124 to the terminal 124 in each event, the attachment with nuts 131 for receiving the connecting wire 119 from the other side of the power source 120. The parts are so arranged that the terminal 124 may swing freely to exert increased or decreased pressure upon the heating element 53. The terminal 124 is biased to exert tension upon the heating element 53 by means of a compression spring 132 disposed within a bore or socket 133 in the pressure bar 52 to bear against the transverse portion 123 of the terminal 124. The spring 132 urges the terminal 124 outwardly from the shoulder of the recess 98 so that the heating element 53 is main-
tained in a taut condition and at all times, compensate for any elongation or contraction of the heating element 53 which may occur. In order to effect uniform transfer of data from the original sheet to the copy sheet, it is necessary that the heating element 53 be uniformly heated and it has been found that this condition will exist when the heating element 53 is maintained under tension. Also to facilitate a proper transfer of data, the heating element 53 is supported by the pad member 103 which because of its resiliency permits intimate and uniform contact of the heating element 53 throughout its length with the original sheet 41.

The source of A.C. or D.C. voltage 120 is connected by means of connecting wires 119 to the terminals 108 and 124, and the voltage applied to the heating element 53 is controlled throughout a rheostat 134 so that the heating element 53 will be heated to the desired temperature. Satisfactory results have been obtained with the heating element 53 heated to a temperature between 250° and 450° F. at low voltage. It has been found that the density and resolution of the data transferred may be controlled by the temperature of the heating element; hence, this provides an additional way for controlling the quality of the transfer data. Of course, the density and resolution of the transferred data may still be affected by the pressure applied to the heating element 53 which acts as both a heat and pressure element.

In operation of the machine to effect a transfer of data from the original sheet to the copy sheet, a line position on the copy sheet 20 to receive the data would be located between the scribed lines 26 on the line finder 26. The index fingers 46 are set so that the data will appear in the proper column of the copy sheet 20. The original sheet would be properly positioned by manually operating the feeding mechanism so that the line of data to be transferred will be at the transfer position.

Of course, the voltage would be set by means of the rheostat 134 so that the heating element attains the proper temperature. With all the necessary adjustments made, the machine operator causes the clutch to engage. Upon engagement of the clutch, the cam shaft 93 rotates and through the various cam and linkage arrangements the copy sheet 20 is gripped by the copy sheet carriage 30 and operates to advance the proper line on the copy sheet from the home position under the line finder 26 into transfer position or to underline the data on the original sheet 41. With the receiving line of the copy sheet in the transfer position, the pressure bar 52 is reciprocated downward in the grooves 56 and 57 so that the heating element 53 intimately and uniformly engages the original sheet 41 and presses it into contact with the copy sheet 20 against the oppositely disposed bar 24. Heat and pressure is applied by the heating element 53 to cause a portion of the carbon on the back of the original sheet 41 to transfer onto the copy sheet 20. The pressure bar 52 engages the original sheet 41 only for a sufficient time to permit the transfer of data and then is returned to its position away from the original sheet 41 by the cam and linkage arrangement 88.

After the transfer of data has taken place from the original sheet 41 to the copy sheet 20, the original sheet 41 is advanced either by the feed rolls 42 and 43 or the continuous form feed assembly 44 one line of data and the copy sheet carriage 30 returns the copy sheet 20 to the home position. The clamps 27 released their grip and the pressure bar 52 is returned to the original line between the scribed lines on the line finder or a new copy sheet may be placed upon the table for the next transfer which takes place in a similar or like manner as just described. The particular details in connection with the advancement of the original sheet 41 one line space after the transfer bar 52 is returned to the home position are described in the referenced patent.

From the above it is seen that an improved machine has been provided for transferring data from an original sheet to a copy sheet by means of an element for bringing the original sheet into contact with the copy sheet and applying heat and pressure to the original sheet. The application of heat and pressure causes a portion of the carbon from the original sheet to deposit onto the copy sheet.

A transfer of data accomplished in this manner eliminates the handling problems attendant with the use of solvents which have been heretofore used in transfer machines. Further, it has been shown that a single element may apply the necessary heat and pressure to effect the transfer of data with great advantage.

This element is mounted in a manner to be uniformly heated along its length and to permit intimate contact of the element with the original sheet. Also, the element is insulated to prevent objectionable transfer of heat to other elements of the machine.

While there have been shown and described and pointed out the fundamental novel features of the invention as applied to a preferred embodiment, it will be understood that various omissions and substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art, without departing from the spirit of the invention.

It is the intention, therefore, to be limited only as indicated by the scope of the following claims.

What is claimed is:

1. In a machine of the class described for posting data from an original sheet to an underlying ledger or copy sheet wherein the original sheet is moved along a predetermined path one line at a time that a selected line of data thereon overlies a selected line position on said copy sheet comprising a pressure bar disposed for reciprocation toward and away from said original sheet, a support for said copy sheet, means for reciprocating said pressure bar toward and away from said original sheet to press a line of data thereon into intimate contact with said copy sheet, a heating element disposed along the length of said pressure bar and insulated therefrom for applying heat and pressure against a line of data on said original sheet as the pressure bar is reciprocated to effect transfer of data from the original sheet to the copy sheet, and means for passing current through the heating element for engaging said original sheet.

2. In a machine of the class described for posting data from an original sheet to an underlying ledger or copy sheet wherein the original sheet is moved along a predetermined path one line at a time that a selected line of data on said original sheet overlies a selected line position on said copy sheet comprising an elongated body disposed for reciprocation toward and away from said original sheet and having a longitudinally extending edge provided with a longitudinally extending groove with opposite sides, an elongated pad member having a longitudinal inner portion provided with inner opposite side portions contacting the opposite sides of said groove and having a longitudinal outer portion extending along and outside said edge of the body provided with a longitudinal outer face, a longitudinally extending strip of metal having current resisting characteristics disposed on the outer longitudinal outer face of said pad member, means insulating one end of said strip from and securing said one end to an end portion of said body, mounting means movably connecting an opposite end of said strip to an opposite end portion of said body, resilient means acting on said mounting means to maintain said strip under tension and against said pad member, means for reciprocating said elongated body so that said strip engages a line of data on said original sheet and exerts heat and pressure upon the same to effect a data transfer thereof to said copy sheet, and means for applying current to said strip to cause heating thereof.

3. In a machine as set forth in claim 2 wherein the outer face of said pad member is provided with a longi-
tudinal groove providing transversely spaced ledges adapted to support said strip.

4. In a machine as set forth in claim 3 wherein opposite sides of the groove of said body relatively diverge inwardly and the opposite side portions of the pad member are formed complementary to the sides of the groove.

5. In a machine as set forth in claim 4 wherein opposite sides of the groove of the body relatively diverge inwardly and the opposite side portions of the pad member are transversely spaced and are formed complementary to the sides of the groove.

6. In a machine of the class described for posting data from an original sheet to an underlying ledger or copy sheet wherein the original sheet is moved along a predetermined path one line at a time so that a selected line of data on said original sheet overlies a selected line position on said copy sheet comprising an elongated body having a longitudinally extending edge provided with a longitudinally extending groove having inwardly extending relatively diverging opposite sides, an elongated pad member having a longitudinally extending outer body portion provided with a longitudinally extending outer face, said pad member provided with inner transversely spaced portions having outer faces complementary to the opposite sides of the groove having inwardly extending relatively diverging opposite sides, and means for reciprocating said elongated body and said strip to engage a line of data on said original sheet and exert heat and pressure thereon to effect a data transfer to said copy sheet, and means for applying current to said strip to cause heating thereof.

7. A machine as set forth in claim 6 wherein said strip supporting portions are formed by a groove extending longitudinally of said outer face of the pad member.

8. In a machine of the class described for posting data from an original sheet to an underlying ledger or copy sheet wherein the original sheet is moved along a predetermined path one line at a time so that a selected line of data on said original sheet overlies a selected line position on said copy sheet comprising a pressure bar provided with a pressure face and disposed for reciprocation toward and away from said original sheet, a support for said copy sheet, means for reciprocating said pressure bar toward and away from said original sheet to press a line of data on the same into intimate contact with said copy sheet, a heating element disposed along the length of the pressure face of said pressure bar in a manner to be insulated therefrom and to apply heat and pressure against a line of data on said original sheet to effect transfer thereof to said copy sheet as the pressure bar is reciprocated, means for passing current through said heating element whereby the same attains a predetermined temperature, and means for causing said heating element to maintain an even temperature along the length thereof.

9. In a machine as in claim 8 wherein said means for causing the heating element to maintain an even temperature along the length thereof comprises means for biasing said heating element under tension, and yieldable means secured to said heating element to permit intimate contact of the heating element with the original sheet.

10. In a machine as in claim 9 wherein said heating element has two ends, and further characterized by means for anchoring one end of said heating element with respect to said pressure bar, means attached to the other end of said heating element and to said pressure bar for maintaining said heating element under tension along the length of said pressure bar, and means disposed intermediate said pressure face of said pressure bar and said heating element to permit yielding thereof for intimate contact with said original sheet.

11. A machine as in claim 10 further comprising a compression spring or resiliency element upon said other end of the heating element to bear against said pressure bar in a manner to maintain said heating element taut along the length of said pressure bar.

12. A device of the class described comprising in combination, an elongated body having a longitudinally extending edge provided with a longitudinally extending groove having opposite sides, an elongated pad member having a longitudinal inner portion provided with inner opposite side portions contacting the opposite sides of said groove and having a longitudinal outer portion extending along and outside said edge of said body provided with a longitudinal outer face, a longitudinally extending strip of metal having current resisting characteristics disposed on the outer longitudinal outer face of said pad member, means insulating one end of said strip from and securing said one end to an end portion of said body, mounting means movably connecting an opposite end of said strip to an opposite end portion of said body, and resilient means acting on said mounting means to maintain said strip in taut condition.

13. A device set forth in claim 12 wherein the outer face of said pad member is provided with a longitudinal groove providing transversely spaced ledges adapted to support said strip.

14. A device set forth in claim 12 wherein opposite sides of the groove of said body relatively diverge inwardly and the opposite side portions of the pad member are formed complementary to the sides of the groove.

15. A device set forth in claim 12 wherein opposite sides of the groove of body relatively diverge inwardly and the opposite side portions of the pad member are transversely spaced and are formed complementary to the sides of the groove.

16. A device of the class described comprising in combination, an elongated body having a longitudinally extending edge provided with a longitudinally extending groove having inwardly extending relatively diverging opposite sides, an elongated pad member having a longitudinally extending outer body portion provided with a longitudinally extending opposite sides, and means for reciprocating said elongated metal strip having one end fixed to and insulated from one end portion of said body, terminal means fixed to an opposite end of said strip, mounting means movably connecting said terminal means to an opposite end portion of said body arranged for movement of the terminal means longitudinally of the strip, means acting on said terminal means to maintain said strip under tension, the outer face of said pad member having a longitudinally extending strip supporting portions, means for reciprocating said elongated body and said strip to engage a line of data on said original sheet and exert heat and pressure thereon to effect a data transfer to said copy sheet, and means for applying current to said strip to cause heating thereof.

17. A device set forth in claim 16 wherein said strip supporting portions are formed by a groove extending longitudinally of said face intermediate transverse side portions thereof.

18. A presser and heating bar of the class described for a posting machine comprising in combination, an elongated rigid body having a longitudinal edge provided with a longitudinally extending groove having inwardly extending relatively diverging opposite sides, an elongated pad member having a longitudinally extending outer body portion provided with an outer face and with longitudinally extending inner portions in said groove of the body having portions complementary to the opposite sides
of said groove, an elongated metal heating strip having one end secured to and insulated from one end portion of said body, terminal means adjustably connecting the opposite end of the strip to an opposite end portion of said body, said outer face of the pad member provided with a longitudinally extending groove receiving said heating strip.

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UNITED STATES PATENT OFFICE
CERTIFICATION OF CORRECTION

Patent No. 2,967,478

January 10, 1961

Hinsdale Smith, Jr.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 6, lines 2 and 3, strike out "which facilitates intimate contact of the fer" and insert instead --- also serves to eliminate or reduce heat transfer ---.

Signed and sealed this 5th day of September 1961.

(SEAL)

Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents