

# Patents Recently Issued to IBM Inventors

August 1969

August and September 1969

3,458,925	Method of Forming Solder Mounds on Substrates.....	<i>J. Napier, R. P. Sopher, P. A. Totta, D. De Witt and C. Karan</i>
3,458,926	Method of Forming a Glass Filled Gap.....	<i>L. I. Maissel and D. L. Wilcox</i>
3,459,609	Cable Fabricating Method and Apparatus.....	<i>B. Z. Hairabedian and R. W. Wasylchak</i>
3,459,918	Welding of Electrical Elements Having Voltage Sensitive Components.....	<i>A. W. Rzant</i>
3,459,926	Graphic Vector Generator.....	<i>M. F. Heilweil, G. A. Maley, G. R. Muhlenbruch and S. Ogden</i>
3,459,927	Apparatus for Checking Logical Connective Circuits.....	<i>A. R. Geller</i>
3,459,944	Photosensitive Insulated Gate Field Effect Transistor.....	<i>S. Triebwasser</i>
3,460,010	Thin Film Decoupling Capacitor Incorporated in an Integrated Circuit Chip, and Processing for Making Same.....	<i>R. J. Domenico and R. H. Lloyd</i>
3,460,069	Directional Coupler Unit Having a Plurality of Stripline Couplers.....	<i>E. C. Uberbacher and M. H. Bolt</i>
3,460,091	Character Recognition Apparatus.....	<i>T. McCarthy, P. F. Meagher and R. J. Norman</i>
3,460,109	Automatic Tester for Evaluating Computer Memory Systems.....	<i>P. J. Veneziano</i>
3,460,111	Thick Film Read-only Memory.....	<i>R. E. Matick</i>
3,460,131	Sequentially Gated Successive Approximation Analog to Digital Converter.....	<i>G. G. Gorbatenko, J. Jursik, M. J. Kimmel, S. Razi and N. D. Wilson</i>
3,460,132	Parallel to Serial Code Converter.....	<i>H. Y. Juliusburger and G. R. Stilwell, Jr.</i>
3,460,243	Maximizing or Controlling the Gain of Sonic Delay Lines.....	<i>J. V. Riley</i>
3,460,245	Method and Apparatus for Wiring Ferrite Core Matrices.....	<i>H. K. Hazel and W. F. Mueller</i>
3,460,469	Print Hammer Actuator.....	<i>E. A. Brown, A. S. Chou and R. H. Darling</i>
3,460,883	Total Internal Reflection Deflector.....	<i>J. Lipp</i>
3,460,884	Electro-optical Devices Utilizing the Stark-shift Phenomenon.....	<i>W. R. Heller</i>
3,460,968	Wear Resistant Magnetic Recording Member.....	<i>J. R. Morrison, G. Bate, J. S. Judge and D. E. Speliotis</i>
3,461,235	Data Transmission System and Printer.....	<i>F. P. Wilcox and N. F. Smith</i>
3,461,300	Automatic Gain Control Circuit for Optical Sensor.....	<i>R. J. Braun</i>
3,461,303	Variable Threshold Amplifier with Input Divider Circuit.....	<i>C. C. Hanson</i>
3,461,312	Signal Storage Circuit Utilizing Charge Storage Characteristics of Field-effect Transistor.....	<i>A. S. Farber and C. E. Ruoff</i>
3,461,318	Monolithically Fabricated Sense Amplifier-threshold Detector.....	<i>R. Ordower</i>
3,461,338	Noninductive Filament Configuration.....	<i>S. F. Vogel</i>
3,461,357	Multilevel Terminal Metallurgy for Semiconductor Devices.....	<i>W. E. Mutter and P. A. Totta</i>
3,461,360	Semiconductor Devices with Cup-shaped Regions.....	<i>F. Barson and H. S. Lehman</i>
3,461,389	Circuit for Initiating a Pulse a Predetermined Time Interval After the Center (or Other Position) of an Incoming Pulse.....	<i>G. W. Whalen</i>
3,461,430	Record Reader with Controls.....	<i>P. R. Blevins, R. S. Heard and L. M. Hornung</i>
3,461,438	Memory Element Having Two Orthogonally Disposed Magnetic Films.....	<i>H. Chang and E. R. Genovese</i>
3,461,441	Ferriresonant Memory System.....	<i>I. G. Akmenkalns, R. L. Gamblin and P. A. Lord</i>
3,461,449	Wheel Positioning Mechanism Using a Closed Coding Ring.....	<i>H. B. Baskin, P. F. Evans and L. E. Rittenhouse</i>
3,461,454	Position Identifying Device.....	<i>R. N. Steckenrider</i>
3,461,841	Apparatus for Coating a Thin, Uniform Thickness Stripe on a Substrate.....	<i>M. A. Marchese and L. G. Taft</i>
3,461,842	Work Holder Rack.....	<i>E. E. Conrad and A. A. Finger</i>
3,462,219	Step and Repeat Devices.....	<i>J. B. Gunn</i>
3,462,411	Data Entry System.....	<i>S. Deskevich and J. B. Newman</i>
3,462,635	Holder for Highly Reactive Cathodes of Rare-earth Borides Such as Lanthanum Hexaboride, the Holder Provided with a Cooling Means Opposite to the Emissive End of the Cathode in Order to Reduce Tendency of Holder Deterioration.....	<i>A. N. Broers</i>
3,462,737	Character Size Measuring and Normalizing for Character Recognition Systems.....	<i>D. L. Malaby</i>
3,462,741	Automatic Control of Peripheral Processors.....	<i>G. H. Bush and K. A. Duke</i>
3,462,743	Path Finding Apparatus for Switching Network.....	<i>A. T. Milewski</i>
3,462,744	Execution Unit with a Common Operand and Resulting Bussing System.....	<i>R. M. Tomasulo, D. W. Anderson and D. M. Powers</i>
3,462,751	High Performance Random Access Memory.....	<i>F. R. Hertrich</i>
3,463,571	Total Internal Reflection Deflector.....	<i>G. O. Boehm, H. S. Hoffman, Jr. and J. H. Williams</i>
3,463,638	Heat-fixable Light Sensitive Compositions and Elements.....	<i>E. P. Damm, Jr.</i>
3,463,697	Reusable Transfer Medium with Print Characteristics Comparable to Filled Ink.....	<i>H. T. Findlay and W. H. Horne</i>

3,463,878	Video Recording Apparatus . . . . .	<i>E. G. Nassimbene</i>
3,463,888	Circuits with Electroluminescent-photoconductive Dynamic Level Control . . . . .	<i>W. R. Yount</i>
3,463,910	Digit Processing Unit . . . . .	<i>R. Keslin</i>
3,463,985	Closed Loop Stepping Motor Control System . . . . .	<i>T. R. Fredriksen</i>
3,463,993	High Speed-high Impedance Electrical Switch . . . . .	<i>J. W. Beck and C. J. Steele</i>
3,464,062	Print Evaluation and Exposure Control System . . . . .	<i>R. A. Jensen</i>
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3,464,265	Card Verifier . . . . .	<i>T. A. Hendrickson and D. C. Croll</i>
3,464,823	Diazotype Materials . . . . .	<i>B. I. Halperin and J. O. Thompson</i>
3,465,132	Circuits for Handling Intentionally Mutated Information with Verification of the Intentional Mutation . . . . .	<i>P. N. Crockett, F. J. Hackl and T. S. Stafford</i>
3,465,136	Analog Time-division Multiplier with Recirculating Storage . . . . .	<i>J. R. Dailey and R. L. Lake</i>
3,465,287	Burst Error Detector . . . . .	<i>J. C. Kennedy and J. H. Sorg, Jr.</i>
3,465,299	Information Translating Data Comparing Systems . . . . .	<i>A. G. Schellenberg</i>
3,465,302	Buffered Teletypewriter Device . . . . .	<i>D. R. Andrews and E. D. James</i>
3,465,311	Thermostriptive Recording . . . . .	<i>B. I. Bertelsen, H. J. Kump and P. T. Chang</i>
3,465,320	Convex-surfaced Vacuum Controlled Air Film . . . . .	<i>J. A. Weidenhammer, E. J. Wroblewski and R. A. Barbeau</i>
3,465,408	Apparatus for Forming and Positioning . . . . .	<i>K. Clark, T. Herrmann, J. C. Lattin and J. Medwid</i>
3,465,435	Method of Forming and Interconnecting Multilayer Circuitry . . . . .	<i>J. J. Steranko</i>
3,465,958	Magnetic Punch System . . . . .	<i>P. E. Gunderson, R. W. Kulterman and N. S. Stockdale</i>
3,466,029	Fluid-controlled Document Transport Drum . . . . .	<i>D. F. Jensen and H. R. Müller</i>
3,466,110	Laser Projector for Phase Modulating Objects . . . . .	<i>R. V. Pole, H. Wieder and R. A. Myers</i>
3,466,172	Method of Using Photographic Vesicular and Diazo Films Having Diazo Antihalation Layers . . . . .	<i>E. R. Skarvinko</i>
3,466,392	Vestigial Sideband Frequency Shift Keying Modem . . . . .	<i>R. W. Calfee, E. Hopner, O. F. Meyer and L. P. West</i>
3,466,394	Voice Verification System . . . . .	<i>W. K. French</i>
3,466,432	Serial Delay Line Buffer-translator . . . . .	<i>L. R. Adams and P. A. Lord</i>
3,466,433	Optical Parallel Adder . . . . .	<i>W. L. Duda, H. Fleisher, W. W. Kulcke and E. Max</i>
3,466,471	Circuit for Sensing Binary Signals from a High Speed Memory Device . . . . .	<i>P. B. Flagg</i>
3,466,514	Method and Apparatus for Positioning Objects in Preselected Orientations . . . . .	<i>R. H. Brunner and E. V. Weber</i>
3,466,516	Noise Suppressor for Servo System . . . . .	<i>F. A. Goplen, J. W. McCullough and R. H. Thomas</i>
3,466,553	Control Circuit for a Sampling System . . . . .	<i>P. E. Stuckert</i>
3,466,603	Scanner Threshold Adjusting Circuit . . . . .	<i>G. L. Shelton, Jr.</i>
3,466,610	Fluid-controlled Data Storage Apparatus . . . . .	<i>C. S. Jackowski, D. F. Jensen, H. R. Müller, M. R. Noll and R. S. Schaffer</i>
3,466,611	Multi-word Multi-directional Random Access Memory System . . . . .	<i>A. Weinberger</i>
3,466,613	Instruction Buffering System . . . . .	<i>H. P. Schlaeppli</i>
3,466,615	Read Only Memory Including First and Second Conductive Layers for Producing Binary Signals . . . . .	<i>E. S. Barrekette and J. A. Duffy</i>
3,466,616	Memory Device and Method Using Dichroic Defects . . . . .	<i>W. E. Bron, R. W. Dreyfus and W. R. Heller</i>
3,466,620	Disc Bulk Memory . . . . .	<i>A. F. Schmeckenbecher</i>
3,466,631	Associative Memory Device . . . . .	<i>C. P. Wang</i>
3,466,632	Associative Memory Device . . . . .	<i>C. P. Wang</i>
3,466,634	Thin Film Microwave Absorption Structure . . . . .	<i>R. L. Gamblin</i>
3,466,635	Magnetic Film Storage Device with Non-destructive Readout . . . . .	<i>S. Middelhoek</i>
3,466,636	Distortionless Array Lines for Memories . . . . .	<i>W. Anacker</i>
3,466,638	Nondestructive Readout Magnetic Memory . . . . .	<i>W. Anacker</i>
3,466,640	Magnetic Film Memories . . . . .	<i>G. E. Keeffe and S. Middelhoek</i>
3,467,777	Data Transmission with Phase Encoding of Binary State Transitions . . . . .	<i>D. H. Rumble</i>
3,469,178	Voltage Level Shift Circuit Controlled by Resistor Ratios . . . . .	<i>P. A. Gardner</i>
3,469,206	Degenerate Laser Device Having Polarization Control of Light . . . . .	<i>W. W. Kulcke, T. J. Harris, K. M. Kosanke and E. Max</i>
3,469,257	Automatic Control Apparatus . . . . .	<i>G. E. Hoernes and E. V. Weber</i>
3,470,020	Process for Making a Magnetic Thin Film . . . . .	<i>L. J. Boudreaux, B. L. Flur and K. B. Scow</i>
3,470,320	Fibre Deflection Means . . . . .	<i>C. A. Pike and N. J. Woodland</i>
3,470,366	Fast Flush Adder . . . . .	<i>A. R. Geller</i>
3,470,399	Linear Motor Velocity Detection Apparatus . . . . .	<i>J. L. Johnson and H. C. Stephens</i>
3,465,322	Transducer Utilizing Electro-optic Effect . . . . .	<i>C. H. Stapper, Jr.</i>
3,465,427	Combined Transistor and Testing Structures and Fabrication Thereof . . . . .	<i>F. Barson and W. E. Mutter</i>