What is claimed is:

1. A mechanical latching relay comprising a rated voltage magnetic coil for pulling an armature and sliding one of a track and a slider including an indentation path for guiding a springy lock pin movements for actuating a pole into one of alternating state from a latch to a release and from said release to said latch by a feed of the rated voltage pulse to said magnetic coil, wherein the one of said track and said slider is supported by one of said slider and said track respectively extended between one of a base and a body of said relay and said pole;

said pole maintains one of engaging and disengaging state of a first contact with a single throw pole contact and one of engaging dual throw pole contact with said first contact and alternately engaging a second contact by each fresh feed of said rated voltage pulse and each slid of said slider by guiding said movement of said springy lock pin into one of said latch and release state respectively;

said springy lock pin is a bending pin for self exerting a minute guiding push force onto the indentation path and said pole is at least one springy pole for reversely

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propelling said one of track and slider when said rated voltage pulse is cut and guides the springy lock pin into one of a latch state via a partial release movement and into a full release state, enabling said engaging at least one first contact and alternately engaging said at least one second contact by a magnetic pull force commensurate with said magnetic pull generated by the fresh feed of said rated voltage pulse.

2. The relay according to claim 1, wherein said relay is selected from a group comprising SPST (single pole single throw), SPDT (single pole dual throw), DPST (dual poles single throw), DPDT (dual poles dual throw), reversing DPDT, MPST (three and more (multi) poles single throw) and MPDT (multi poles dual throw); and

said state of said one of relay is selected from a group comprising switch on, switch over, switch off, switch from cross to straight and switch from straight to cross by one of engaging said at least one springy pole contact with said first contact and alternately at least one second contact including no contact respectively.

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3. The relay according to claim 2, wherein the partial release and the full release movement of said pole forces micro movement between the contacts of said at least one springy pole and said one of first contact and second contact for wiping said contacts from electrical blemishes.

4. The relay according to claim 2, wherein said relay is structured to maintain said engagement through and after said latching with said one of first contact and second contact by a springy element selected from a group comprising springy structured pole, a micro switch pole, an elongated pole, a spring driven pole, a springy structured one of first contact and second contact, a spring driven said one of first contact and second contact and combinations thereof.

5. The relay according to claim 2 wherein said relay further including a plunger for enabling said engagement of said at least one pole by one of said pull and a push by said plunger.

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6. The relay according to claim 2, wherein said relay is enclosed in a casing with connection terminals and pins selected from a group comprising at least one of plug in pins and terminals into receptacle sockets, at least one of plug in terminals, pins and sockets for mating with reciprocal sockets, pins and terminals, solder terminals, wire terminal for wire attachment selected from a group comprising screw terminals, wire push terminals, wrapping terminals and combinations thereof.

7. The relay according to claim 2 wherein when said at least one springy pole and said contacts are structured for handling higher electrical current for said engagement by an increase in said pull force wherein said rated voltage pulse is increased to increase the magnetic pull force generated by said magnetic coil; and

wherein an associated electrical circuit for feeding said magnetic coil with said rated voltage pulse is augmented with at least one electrical feed source with higher voltage for charging a capacitor for augmenting said rated voltage pulse by timely injecting discharged higher voltage into said pulse thereby generating a combination pulse comprising an initial feed at the rated voltage

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followed by said higher voltage that is exponentially declining in a discharge pattern of higher voltage and current commensurate with the armature accelerated movement by closing the trailing magnetic gap at higher speed forcing the armature all the way to engage the magnetic core timed with the discharged voltage feed decline, down to one of the rated voltage and below.

8. The relay according to claim 7 wherein said combination pulse is further augmented by at least one median discharged voltage to widen the exponential curve thereby lengthen the feed time of the discharged voltage to commensurate with the accelerated speed and trailing distance for the armature to fully engage the magnetic core.

9. The relay according to claim 8 wherein said discharged voltage declining all the way down to the rated voltage is augmented by a trailer of said rated voltage for stabilizing said latching and said engaging.

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10. An hybrid switch comprising a pole, a manual push key for actuating a plunger and a rated voltage magnetic coil for pulling an armature for sliding a slider with an indentation path by one of said plunger actuated by said key and by said armature pulled by a pulse feed of said rated voltage to said magnetic coil, wherein the slid slider actuates said pole and said indentation path guides a springy lock pin movements into one of alternating state from latch to release and from release to latch by each said slid, wherein said slider is supported by a track included in one of a base and a body of said hybrid switch, extending between said pole and one of said base and a body;

said pole maintains one of engaging and disengaging state of a first contact with a single throw pole contact and one of engaging dual throw pole contact with said first contact and alternately engaging a second contact by each said slid and by each movement of said springy lock pin into one of said latch and release state respectively;

said springy lock pin exerts minute guiding force onto said indentation path and said pole is at least one springy pole for reversely propelling said slider when

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said one of feed and actuate is cut and guides the springy lock pin into one of a latch state via a partial release movement and into a full release state, enabling said engaging of said pole contact with at least one of said first contact and with at least one of said second contact by one of said manual push and magnetic pull commensurate with said rated voltage pulse needed to pull said armature, said sliding, said actuating at least one springy pole and said minute guiding force by said springy lock pin onto said indentation path;

11. The hybrid switch according to claim 10, wherein said hybrid switch is selected from a group comprising SPST, SPDT, DPST, DPDT, reversing DPDT, MPST and MPDT; and

said state of said hybrid switch is selected from a group comprising switch on, switch over, switch off, switch from cross to straight and switch from straight to cross by engaging said at least one springy pole contact with said at least one said first contact and at least one second contact including no contact respectively.

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12. The hybrid switch according to claim 11, wherein the partial release and the full release movement of said pole forces micro movement between the contacts of said at least one springy pole and said one of first contact and said second contact for wiping said contacts from electrical blemishes.

13. The hybrid switch according to claim 11, wherein said hybrid switch is structured to maintain said engagement through and after said latching with said one of first contact and second contact by a springy element selected from a group comprising a springy structured pole, a micro switch pole, an elongated pole, a spring driven pole, a springy structured said first contact, a springy structured said second contact, a spring driven said first contact, a spring driven said second contact and combinations thereof.

14. The hybrid switch according to claim 11, wherein said hybrid switch further including a key and a tactile structured spring for one of pushing said plunger direct and via a tactile action for enabling said engagement of

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said at least one springy pole by one of said pull and a push by said key.

15. The hybrid switch according to claim 11, wherein said hybrid switch is enclosed in a casing with connection terminals and pins selected from a group comprising at least one of plug in pins and terminals into receptacle sockets, at least one of plug in terminals, pins and sockets for mating with reciprocal sockets, pins and terminals, solder terminals, wire terminal for wire attachment selected from a group comprising screw terminals, wire push terminals, wrapping terminals and combinations thereof.

16. The hybrid switch according to claim 11 wherein said at least one springy pole and said contacts are structured for handling higher electrical current for said engagement by an increase in said pull force, and wherein said rated voltage pulse is increased to increase the magnetic pull force generated by said magnetic coil; and

wherein an associated electrical circuit for feeding said magnetic coil with said rated voltage pulse is augmented

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with at least one electrical feed source with higher voltage for charging a capacitor for augmenting said rated voltage pulse by timely injecting discharged higher voltage into said rated voltage pulse thereby generating a combination pulse comprising an initial feed at the rated voltage followed by said higher voltage that is exponentially declining in a discharge pattern of higher voltage and current commensurate with the armature accelerated movement by closing the trailing magnetic gap at higher speed forcing the armature all the way to engage the magnetic core timed with the discharged voltage feed decline, down to one of the rated voltage and below.

17. The hybrid switch according to claim 16 wherein said combination pulse is further augmented by at least one median discharged voltage to widen the exponential curve thereby lengthen the feed time of the discharged voltage to commensurate with the accelerated speed and trailing distance for the armature to fully engage the magnetic core.

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18. The hybrid switch according to claim 17 wherein said discharged voltage declining all the way down to the rated voltage is augmented by a trailer of said rated voltage for stabilizing said latching and said engaging.

19. A method for latching at least one of a single throw and dual throw pole contact of at least one springy pole included in one of a relay and an hybrid switch for maintaining one of engaging and disengaging state of at least one of a first contact and a second contact with said springy pole contact, said springy pole is actuated by a slider with an indentation path for guiding a springy lock pin movements from one of a release state and a partial release state to a maximum slid by a short push of said slider and reversing the movements by the springy pressure of said at least one springy pole from said maximum slid to one of said partial release state and full release state when said push is stopped;

said short push via one of a plunger and an armature attracted by a magnetic coil fed with a short duration rated voltage pulse for exerting a pull force commensurate with applied forces needed to push said slider to said maximum slid via a track extended to one

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of a base and a body of said one of a relay and hybrid switch, said method comprising the steps of:

a. pushing said slider by exerting a push force through one of a manual push of said plunger and a feed of said short duration rated voltage pulse to said coil for generating a pull force commensurate with said forces for said attracted armature for sliding said slider to said maximum slid with said lock pin passing a latch state;

b. stopping said push for enabling the springy pole to propel the slider in reverse direction of a partial release movement for guiding the springy lock pin into said latch state of said slider and maintain said at least one of said engage and disengage of at least one first contact with said at least one springy pole contact throughout all movements between said latch state and said maximum slid;

c. re-pushing said slider by exerting a push force through one of said feed and said manual push by one of a finger and a mechanical element respectively for sliding said slider to said maximum slid state directing said lock pin to a release area guided by

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structured ridges included in the indentation path; and

d. stopping said push for reversing the state of and said engagement by said springy pole contact and propel the slider in reverse direction all the way guiding the lock pin into full release area, awaiting a fresh said pushing.

20. The method according to claim 19, wherein said relay and said hybrid switch are selected from a group comprising SPST, SPDT, DPST, DPDT, reversing DPDT, MPST and MPDT; and

said state of said at lease on pole of said one of relay and an hybrid switch is selected from a group comprising switch on, switch over, switch off, switch from cross to straight and switch from straight to cross by engaging with said at least one said first contact and at least one second contact including no contact respectively.

21. The method according to claim 20, wherein the partial release and the full release movement of said pole forces micro movement between the contacts of said at least one

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springy pole and said one of first contact and second contact for wiping said contacts from electrical blemishes.

22. The method according to claim 20, wherein said one of relay and hybrid switch is structured to maintain said engagement through and after said latching with said one of said first contact and said second contact by a springy element selected from a group comprising springy structured pole, a micro switch pole, an elongated pole, a spring driven pole, a springy structured said one of first contact and second contact, a spring driven said one of said first contact and second contact and combinations thereof.

23. The method according to claim 20, wherein said hybrid switch further including a key and a tactile structured spring for one of pushing said plunger direct and via a tactile action for enabling said engagement of said at least one springy pole by one of said pull of said armature and a push by said key.

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24. The method according to claim 20, wherein said one of relay and hybrid switch is enclosed in a casing with connection terminals and pins selected from a group comprising at least one of plug in pins and terminals into receptacle sockets, at least one of plug in terminals, pins and sockets for mating with reciprocal sockets, pins and terminals, solder terminals, wire terminal for wire attachment selected from a group comprising screw terminals, wire push terminals, wrapping terminals and combinations thereof.

25. The method according to claim 20 wherein said at least one springy pole and said contacts are structured for handling higher electrical current by an increase of said engagement force and an increase in said armature attracting force, and wherein said rated voltage pulse is increased to increase the magnetic pull force generated by said magnetic coil; and

wherein an associated electrical circuit for feeding said magnetic coil with said rated voltage pulse is augmented with at least one electrical feed source with higher voltage for charging a capacitor for augmenting said rated voltage pulse by timely injecting discharged higher

voltage into said pulse thereby generating a combination pulse comprising an initial feed at the rated voltage followed by said higher voltage that is exponentially declining in a discharge pattern of higher voltage and current commensurate with the armature accelerated movement by closing the trailing magnetic gap at higher speed forcing the armature all the way to engage the magnetic core timed with the discharged voltage feed decline, down to one of the rated voltage and below.

26. The method according to claim 25 wherein said combination pulse is further augmented by at least one median discharged voltage to widen the exponential curve thereby lengthen the feed time of the discharged voltage to commensurate with the accelerated speed and trailing distance for the armature to fully engage the magnetic core.

27. The method according to claim 26 wherein said discharged voltage declining all the way down to the rated voltage is augmented by a trailer of said rated voltage for stabilizing said latching and said engaging.

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