CLAIMS

1. Temporary bridge including bridge elements intended to be superimposed when said bridge is in a first position so-called a non-deployed position, characterized in that

- each bridge element comprises at least at one of its ends a coupling face ready to cooperate with the coupling face of another bridge element so as to assemble said bridge elements when they are placed end to end,

- these bridge elements are articulated the ones relative to the others by being connected one with the other by at least a pair of connection arms parallel and laterally assembled to said bridge elements, the arms ends being movable in rotation,

- the bridge comprises displacement members for each bridge element superimposed on another bridge element in said first position, between this first position and a second position, so-called a deployed one, where the coupling faces of this bridge element and of said another bridge element are placed facing one another and are coupled to form the bridge, and

- the temporary bridge comprises an added or not rolling track.

2. Bridge according to claim 1, characterized in that said bridge elements are connected, in a detachable way, the ones to the others to make it possible to vary the length of this bridge.

3. Bridge according to the claim 1 or 2, characterized in that the bridge element intended to constitute the lower end of the stacking formed by said superimposed bridge elements comprises means for the anchoring on the ground.

4. Bridge according to any one of claims 1 to 3, characterized in that said coupling arms are assembled on both sides of said bridge elements.

5. Bridge according to any one of claims 1 to 3, characterized in that said coupling arms are assembled on a same edge of said bridge elements.

6. Bridge according to any one of claims 1 to 5, characterized in that each bridge element comprises at least a stop placed on at least one of its side edges to block the displacement of said coupling arm when the coupling face of said bridge element is placed facing one another with the coupling face of another bridge element.

7. Bridge according to any one of claims 1 to 6, characterized in that said coupling faces are inclined faces, the slope of the coupling faces of a same bridge element being different so that said bridge elements being deployed and coupled form an arch.

8. Bridge according to any one of claims 1 to 7, characterized in that said temporary bridge including an added rolling track, said track is a flexible rolling track and said bridge comprises fasteners to secure this flexible track to said bridge elements.

9. Bridge according to claim 8, characterized in that said rolling track comprises several track sections, each of these sections being integral with a bridge element.

10. Bridge according to claim 8, characterized in that said rolling track is in one piece and detachable.

11. Bridge according to any one of claims 8 to 10, characterized in that said rolling track presents a longitudinal dimension higher than the length of the bridge once deployed so as to cover a ground zone adjacent to said bridge.

12. Bridge according to any one of claims 8 to 11, characterized in that said rolling track comprises at least a woven structure.

13. Bridge according to claim 12, characterized in that said woven structure is formed of warp threads disposed along a single layer and of weft threads also disposed along a single layer, the weave of said woven structure being such that each warp thread is interlaced with the following weft threads preferably and very approximately along the half of the intersections of the rows and columns of the weave, the warp thread being left in the remaining intersections, in order, for each warp thread, to obtain at least one tight single weave zone followed by a loose thread zone, the alternation of said various zones provoking retightenings of the weft threads creating a large relief of the thus carried out fabric.

14. Bridge according to claim 13, characterized in that said weft threads have advantageously a diameter of about 50 to 200 hundredths of mm and the warp threads have preferably a diameter lower than that of the weft threads.

15. Bridge according to any one of claims 8 to 10 and 14, characterized in that each bridge element comprises, on at least one of its side edges, a guiding rail element, these rail elements cooperating ones with the others to define a guiding rail when the bridge elements are placed in an end to end relation

enabling to guide the displacement of said track along said bridge.

16. Bridge according to claim 15, characterized in that each bridge element comprises beams assembled in parallel while being spaced from each other, the interval between these beams defines a piping element likely to receive a traction element of the rolling track and in that each bridge element comprises at one end, at least a return member likely to receive said traction element.

17. Bridge according to any one of claims 1 to 16, characterized in that said displacement members comprise at least an actuator assembled in a swiveling way, the end of this actuator being connected to one of said coupling arms so as to move a bridge element relative to another between a first position called a non deployed one, where said bridge elements are superimposed and a second position called a deployed one where the coupling faces of said bridge elements are placed one facing the other for their coupling.

18. Bridge according to claim 17, characterized in that said actuator is a hydraulic, electromagnetic or electric actuating jack.

19. Bridge according to claim 18, characterized in that said actuator being an electric jack, said bridge comprises an autonomous power supply to supply these electric actuators.

20. Bridge according to claim 18, characterized in that said actuator being a hydraulic actuating jack, said bridge comprises a fluid tank and a fluid distribution circuit, said hydraulic actuating jack being connected to said circuit.

21. Bridge according to any one of claims 17 to 20, characterized in that said bridge comprises a checking and control unit to individually control the displacement of said bridge elements, said control unit including a transmitter-receiver to receive remote control commands.

22. Bridge according to claim 21, characterized in that said control unit comprises electronic means to delay the displacement of each one of said elements so that said bridge elements are deployed and successively placed in an end to end relation.

23. Bridge according to any one of claims 1 to 22, characterized in that at least one of said bridge elements comprises at least a projection, said projection being placed ahead from said bridge element below its coupling face and being intended to support the bridge element placed in an end to end relation with said bridge element.

24. Bridge according to any one of claims 1 to 23, characterized in that the first and the last of said bridge elements making the bridge in a deployed position comprise at their free end an access ramp to said bridge.

25. Bridge according to any one of claims 1 to 24, characterized in that said bridge elements being identical or not, they have a longitudinal dimension ranging between approximately 2 m and 6 m and a width ranging between approximately 1.5 and 3 m.

26. Bridge according to any one of claims 1 to 25, characterized in that said bridge comprises a post-nozzle comprising at its end an element for anchoring it on the ground, said post-nozzle being mounted on the bridge element located at the higher end of the stacking formed by the temporary bridge in its non deployed position, said bridge element comprising a housing to receive said post-nozzle, said post-nozzle being adapted to move between a first rest position where said post-nozzle is received in its housing and a working position where it is partially out of its housing to form a projection at the front of the temporary bridge.

27. Temporary bridge with several rolling track, characterized in that said bridge comprises at least two temporary bridges according to any one of claims 1 to 26, these bridges being placed in parallel and joined the one to the other.

CLAIMS

[Claim 1]

Temporary bridge, characterized in that it comprises bridge elements designed to be placed one over another when said bridge is in a first position, namely a non-deployed position,

- each bridge element comprises, on at least at one of its ends, a connecting face which can cooperate with the connecting face of another bridge element so that said bridge elements are assembled when connected and placed end to end,
- the bridge elements are linked to one another by being connected by at least one pair of linking arms,which are attached parallel to said bridge elements in the lengthwise direction thereof, the ends of the arms being mobile in rotation, the movement of one bridge element relative to the bridge element immediately below in the stack of bridge elements in the non-deployed position involves a circular movement of said bridge element with respect to the bridge element immediately below in the stack,
- the bridge comprises movement members for moving each bridge element, placed over another bridge element in the first position, between this first position and a second, deployed position, in which the connecting face of this bridge element and the connecting face of the other bridge element are placed facing one another and are linked to form the bridge, and
- the temporary bridge comprises an added or non-added travel lane.

[Claim 2]

Temporary bridge according to Claim 1, characterized in that said bridge elements are linked to one another using a detachable method such that the length of the temporary bridge can be varied.

[Claim 3]

Temporary bridge according to Claim 1 or 2, characterized in that the bridge element constituting the lower end of the stack formed by the bridge elements placed one over the other comprises means for anchoring to the ground.

[Claim 4]
Temporary bridge according to any one of Claims 1 to 3, characterized in that said linking arms are attached to the same ends of said bridge elements.

[Claim 5]
Temporary bridge according to any one of Claims 1 to 4, characterized in that each bridge element comprises at least one stop placed on at least one of the side ends thereof in such a way that the linking arms do not move when the connecting face of said bridge element is placed opposite the connecting face of another bridge element.

[Claim 6]
Temporary bridge according to any one of Claims 1 to 5, characterized in that the connecting faces are inclined faces, the slope of the connecting faces of one and the same bridge element being different so that said deployed and connected bridge elements form an arch.

[Claim 7]
Temporary bridge according to any one of Claims 1 to 6, characterized in that said temporary bridge includes an added travel lane, said lane is a flexible travel lane, and said bridge comprises fasteners to secure the flexible lane to said bridge elements.

[Claim 8]
Temporary bridge according to Claim 7, characterized in that the travel lane comprises several lane sections, each of the lane sections being integral with a bridge element.

[Claim 9]
Temporary bridge according to Claim 7 or 8, characterized in that the travel lane presents a lengthwise dimension which is greater than the length of the temporary bridge so that once deployed, the ground region adjacent to the bridge is covered.

[Claim 10]
Temporary bridge according to any one of Claims 7 to 9, characterized in that the travel lane comprises at least a woven structure.

[Claim 11]
Temporary bridge according to Claim 10, characterized in that said woven structure is formed of warp threads arranged in a single layer and weft threads arranged in a single layer, the weave of said woven structure being such that the warp threads are interlaced with the weft threads preferably over approximately half of the intersections of rows and columns of the weave, the warp threads not being interlaced at the remaining intersections, in such a way as to obtain, for each warp thread, at least one tight single weave zone followed by a loose thread zone, the change in the various zones causing retightening of the weft threads and producing a large relief in the fabric formed.

[Claim 12]
Temporary bridge according to any one of Claims 7 and 9 to 11, characterized in that the bridge elements comprise, on at least one side end thereof, a guide rail element, the guide rail element cooperating with another guide rail element to define a guiding rail when the bridge elements are connected and arranged end to end, such that movement of the lane along said bridge can be guided.

[Claim 13]

Temporary bridge according to Claim 12, characterized in that each bridge element comprises beams attached in parallel with a gap therebetween, the interval between the beams defines a pipe element that can receive a traction element of the travel lane, and each bridge element comprises, at least at one end, a return member configured that can receive said traction element.

[Claim 14]
Temporary bridge according to any one of Claims 1 to 13, characterized in that said movement members comprise at least one rotatably attached actuator, an end of this actuator being connected to one of said linking arms in order to move each bridge element relative to another bridge element between the first, non-deployed, position where said bridge elements are placed one over another and the second, deployed, position where the connecting faces of said bridge elements are placed facing one another in order to connect, and in that said bridge comprises a checking and control unit to individually control the movement of said bridge elements, said control unit including a transmitter-receiver to receive remote control commands.

[Claim 15]
Temporary bridge according to Claim 14, characterized in that said control unit comprises electronic means to delay the movement of each one of said bridge elements so that said bridge elements are deployed and successively arranged connected end to end.

[Claim 16]
Temporary bridge according to any one of Claims 1 to 15, characterized in that at least one of said bridge elements comprises at least one projection, said projection being positioned in front of said bridge element below the connecting face thereof and

supporting the bridge element arranged connected end to end with said bridge element.

[Claim 17]

Temporary bridge according to any one of Claims 1 to 16, characterized in that said bridge comprises a post-nozzle having at its end an element for anchoring said post-nozzle to the ground, said post-nozzle being mounted on the bridge element located at the upper end of the stack formed by the temporary bridge in its non-deployed state, said bridge element comprising a housing to hold said post-nozzle, said post-nozzle being adapted to move between a first rest position where said post-nozzle is held inside the housing and a working position where it is partially outside the housing to form a projection in front of the temporary bridge.

[Claim 18]

Temporary bridge comprising several travel lanes, characterized in that it includes at least two temporary bridges according to any one of Claims 1 to 17, the temporary bridges being placed in parallel and joined to one another.