26. A magnetoresistive-effect device according to claim 23, wherein the angle made between the surface of said protective layer or the surface of said multilayer film with said protective layer removed therefrom and the end face of said electrode layer extending over said insensitive region of said multilayer film is 60 degrees or greater.

27. A magnetoresistive-effect device according to claim 23, wherein the angle made between the surface of said protective layer or the surface of said multilayer film with said protective layer removed therefrom and the end face of said electrode layer extending over said insensitive region of said multilayer film is 90 degrees or greater.

28. A magnetoresistive-effect device according to claim 27, wherein the width dimension of a portion of each electrode layer extending over said multilayer film is equal to the width dimension of said insensitive region of said multilayer film.

29. A magnetoresistive-effect device according to claim 1, wherein an intermediate layer, made of at least one of a high-resistivity material having a resistance higher than that of said electrode layer and an insulating material, is interposed between said hard bias layer and said electrode layer.

30. A magnetoresistive-effect device according to claim 29, wherein said high-resistivity material, which fabricates said intermediate layer interposed between said hard bias layer and said electrode layer, is at least one material selected from the group consisting of $TaSiO_2$, TaSi, $CrSiO_2$, CrSi, WSi, $WSiO_1$, TiN, and TaN.

31. A magnetoresistive-effect device according to claim 29, wherein said high-resistivity material, which fabricates said intermediate layer interposed between said hard bias layer and said electrode layer, is at least one material selected from the group consisting of Al_2O_3, SiO_2, Ti_2O_3, TiO, WO, AlN, Si_3N_4, B_4C, SiC, and SiAlON.

32. A magnetoresistive-effect device comprising a multilayer film comprising a free magnetic layer, nonmagnetic electrically conductive layers respectively lying over and under said free magnetic layer, pinned magnetic layers respectively lying over said one nonmagnetic electrically conductive layer and under said other nonmagnetic electrically conductive layer, each having a pinned magnetization direction, and antiferromagnetic layers respectively lying over said one pinned magnetic layer and under said other pinned magnetic layer, and a pair of hard bias layers, deposited on both sides of said multilayer film, for orienting the magnetization direction of said free magnetic layer perpendicular to the magnetization direction of said pinned magnetic layer, and a pair of electrode layers respectively deposited on said hard bias layers, wherein said electrode layers extend over said multilayer film.

33. A magnetoresistive-effect device according to claim 32, wherein said multilayer film is fabricated by successively laminating said antiferromagnetic layer, said pinned magnetic layer, said nonmagnetic electrically conductive layer, and said free magnetic layer in that order from below, said antiferromagnetic layer laterally extends from the layers laminated thereon, and a pair of hard bias layer, a pair of intermediate layers, and a pair of electrode layers are respectively laminated on a pair of metallic layers respectively deposited on said antiferromagnetic layers in said laterally extending regions thereof.

34. A magnetoresistive-effect device according to claim 32, wherein said electrode layer feeds a sense current to each of said pinned magnetic layer, said nonmagnetic electrically conductive layer, and said free magnetic layer.

35. A magnetoresistive-effect device according to claim 32, wherein said free magnetic layer comprises a plurality of soft magnetic thin films having different magnetic moments and nonmagnetic material layers, which are alternately laminated with one soft magnetic thin film separated from another by one nonmagnetic material layer, and said free magnetic layer is in a ferrimagnetic state in which the magnetization directions of two adjacent soft magnetic thin films, separated by the nonmagnetic material layer, are aligned antiparallel to each other.

36. A magnetoresistive-effect device according to claim 35, wherein the magnetic coupling junction between said multilayer film and said bias layer is fabricated of an interface with the end face of only one of the plurality of the soft magnetic thin films forming said free magnetic layer.

37. A magnetoresistive-effect device according to claim 32, wherein said pinned magnetic layer comprises a plurality of soft magnetic thin films having different magnetic moments and nonmagnetic material layers, which are alternately laminated with one soft magnetic thin film separated from another by one nonmagnetic material layer, and said pinned magnetic layer is in a ferrimagnetic state in which the magnetization directions of adjacent soft magnetic thin films, separated by the nonmagnetic material layer, are aligned antiparallel to each other.

38. A magnetoresistive-effect device according to claim 32, wherein said nonmagnetic material layer is made of a material selected from the group consisting of Ru, Rh, Ir, Cr, Re, Cu, and alloys thereof.

39. A magnetoresistive-effect device according to claim 32, wherein said antiferromagnetic layer is made of a PtMn alloy.

40. A magnetoresistive-effect device according to claim 32, wherein said antiferromagnetic layer is made of an X—Mn alloy where X is a material selected from the group consisting of Pd, Ir, Rh, Ru, and alloys thereof.

41. A magnetoresistive-effect device according to claim 32, wherein said antiferromagnetic material is made of a Pt—Mn—X' alloy where X' is a material selected from the group consisting of Pd, Ir, Rh, Ru, Au, Ag, and alloys thereof.

42. A magnetoresistive-effect device according to claim 32, wherein the position of at least one of the top edge and the bottom edge of the magnetic coupling junction between said multilayer film and said bias layer in the direction of the movement of a medium is at the same level as the position of at least one of the top surface and the bottom surface of said free magnetic layer in the direction of the movement of the medium.

43. A magnetoresistive-effect device according to claim 32, wherein a protective layer is deposited, as a top layer, on top of said multilayer film.

44. A magnetoresistive-effect device according to claim 43, wherein said protective layer is deposited where there is no junction between said multilayer film and said electrode layer.

45. A magnetoresistive-effect device according to claim 32, wherein the width dimension of a portion of each electrode layer extending over said multilayer film is within a range from 0 μm to 0.08 μm.