CLAIMS

1. A crane, comprising a lattice structure boom (3) and a box-type telescopic boom (4), wherein the box-type telescopic boom (4) serves as a mast; a winch system of the crane comprises a first hoisting winch (6), a luffing winch (7), and a second hoisting winch (8), and after coming out from the first hoisting winch (6), a steel wire rope runs toward a top of the lattice structure boom (3) and is wound around a primary hook (10) to serve as a primary lifting system; and after coming out from the second hoisting winch (8), a steel wire rope runs toward a top of the box-type telescopic boom (4) and is wound around an auxiliary hook (11) to serve as an auxiliary lifting system.

2. The crane according to claim 1, wherein the box-type telescopic boom (4) comprises a base (41), a base section (42) and telescopic sections (43), the box-type telescopic boom (4) is connected to a turntable (2) through the base (41), and the telescopic sections (43) are telescopic relative to the base section (42).

3. The crane according to claim 2, wherein a luffing pulley block (44) and a lifting pulley block (45) are arranged below an upper part of the telescopic sections (43); and after coming out from the luffing winch (7), a luffing steel wire rope passes through the luffing pulley block (44) and is wound around a primary luffing pulley block (9), and an angle of the box-type telescopic boom (4) is adjusted by retracting and releasing the luffing steel wire rope.

4. The crane according to claim 3, wherein after coming out from the second hoisting winch (8), the steel wire rope passes over a guiding pulley (46) above a head section of the box-type telescopic boom (4) and is wound between the lifting pulley block (45) and the auxiliary hook (11) to serve as the auxiliary lifting system.

5. The crane according to claim 4, wherein one end of a luffing cylinder (47) is connected to the base (41), the other end of the luffing cylinder (47) is connected to the base section (42), and the angle of the box-type telescopic boom (4) is also adjusted by retracting the luffing cylinder (47).

6. The crane according to claim 2, wherein the turntable (2) is located above a chassis (1) of the crane.

7. The crane according to claim 1, wherein the second hoisting winch (8) adopts an original tower jib luffing winch of the crane.

8. The crane according to any one of claims 2-6, wherein an angle between a triangle formed by the box-type telescopic boom (4), a primary luffing steel wire rope, and the turntable (2) and a triangle formed by the box-type telescopic boom (4), a pendant (5) and the lattice structure boom (3) is adjusted by steplessly adjusting a length of the box-type telescopic boom (4).