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United States Patent
Young**9,739,130**
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Fluid end with protected flow passages

Abstract

Fluid end for high pressure reciprocating pump, in particular for hydraulic fracturing pumps, comprising: a body having a first bore (18) for receiving a reciprocating plunger (31), a second bore (19) for accommodating a suction valve (41), and a third bore (21) for accommodating a discharge valve (43), the second bore (19) and the third bore (21) being perpendicular to the first bore (18); at least a tubular sleeve (30) in said first bore (18); at least a tubular cartridge (30) in the second bore and/or third bore; and a fluid tight seal between contacting surfaces of said sleeve (30) and said cartridge (30).

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