

INDEX.

- Fluid, characteristic properties, 169
 Force, nature of, 23; measure of, 29; gravitation units of, 30; absolute units of, 30; representation of a, 62; resultant and component forces, 64; relation between gravitation and absolute units of, 44.
 Forces, equilibrium of, 65; parallelogram of, 65; resolution of, 76; resolved part of, 76; triangle of, 89; triangle of, converse, 93; polygon of, 93; parallel, 100.
 Friction, 155; direction and magnitude of, 155; limiting, 157; laws of limiting, 158; coefficient of, 160; limiting angle of, 162.
 Gas, characteristic properties of, 170.
 Gravitation, law of, 28.
 Gravity, defined, 28; centre of, 132.
 Horse-power, definition of, 60.
 Hydrostatic, press, 175; paradox, 175.
 Joule, definition of, 53.
 Liquid, characteristic properties of, 170.
 Mariotte's law, 218.
 Mass, defined, 28; measure of, 29; unit of, 29.
 Moment, of a force, defined, 109; geometrical representation of, 111.
 Momenta, principle of, 112; generalized theorem of, 115.
 Motion, defined, 2; relative, 2.
 Pascal's theory, 174.
 Polygon of forces, 93.
 Position, designation of, 1.
 Poundal, definition of, 34.
 Power, definition of, 59.
 Press, Bramah's, 230.
 Pressure, defined, 28; fluid, at a point; measure of, 171; at a point within a fluid mass, 173; fluid, laws of, 173; whole, 189; resultant vertical, 199; atmospheric, 209; due to expansive force of a gas, 211.
 Pump, air, 222; common, 225; force, 227; common, tension of piston-rod of, 228; force, tension of piston-rod of, 228.
 Resultant, force, 64; of two forces acting at a point, to find, 63; of any number of forces acting at a point in given directions lying in one plane, to find, 79; of two parallel forces acting upon a rigid body, to find, 100; of a number of parallel forces, to find, 106.
 Siphon, 231.
 Solid, characteristic properties of, 169.
 Surface of liquid at rest under gravity, 184.
 Tension, defined, 28.
 Triangle of forces, 89; converse of, 93.
 Velocity, 3; defined, 3; uniform, 4; measure of, 4; unit of, 4; representation of, 5; at an instant, 7; average, 7; variable, measure of, 8.
 Watt, definition of, 59.
 Weight, defined, 28.
 Whole pressure, 189.
 Work, nature of, 23; absolute units of, 54.