

Radiance curvature will be infinitely, and the fluid included in the frace ZYHQ will move uniformly as if the field body were not there. The motions on the other side of the axis A,C will be the faming and to read only at tend to our half, and we could conclude as its a late of presence.

No body changes either its direction or velocity other wile than by infentible degrees; therefore the particle which moving the axis will not include the vortex A of the body, where it behaved to deficit influence easily at right angles. It will therefore begin to be diselected at fromen F is head of the body; and will de-ferible a curve FM, touching the axis in F, and the bo-ly in M, and then, yielding along the body, will gain it at some point I, defening a tangent curve, which will join the axis again (noching it) in B; and thus there will be a quantity of fragment water FAM because or a-head of the body, and another LGR behind or sitem of it.

Let us be the velocity of a particle of the fluid in any infant, and d' its velocity in the next instant. The velocity may be considered in compounded of d' a". If the particles tended to meet with the velocities d'a" [U+7684], the whole fluid would be in equilibrio (general principle), and the preference of the fluid would be the films as it all were fragment, and each particle were urged by a force d'r, t expelling an indenticity final moment of time. (N. B. jt the proper expedition of the accelerating forces, which, by sliding during the moment r, would generate the velocity d's and d' is lippooled in determining quantities different perhaps for each particle). Now that a he lopped control, or dazd. In this case d'z... That is to fix, no profile whatever will be carried on the fold body until there happen changes in the velocities or directions of the par-ticles.

Let o and d' then be the motions of the particles in two confine infinite. They would be in equilibrio if urged only by the forces d'r. Therefore if y be the point where the particles which define the one: FM begins to change their velocity, the profiles in D would be equal to the profile when the fluid contained in the canal y EMD would exert, if each particle were folicted by its force d'r. The question is therefore reduced to the finding the curvature in the canal y EMD, and the accelerating force d'r in its different parts.

It appears, in the first phase that to preface it by any of the particles along the cause FM : for flipside that the particle a (fig. 10,) defective the indefinitely limit through line ad at in the full nation, and b c in the forced infants; produce d till bd=ab, and joining d's a motion and d'd may be considered as counted at bg, which the particular reality takes in the next instant, and a motion d'e which should be defrayed. Draw d's parallel to d'a and perpendicular to it. It is thin that the particle b, foliated by the forces bg, e/s (equivalent to de) should be in equilibrio. This being obulatively, be mull be = ,q, that is, there will be no accelerating or rounding force at k. For if there

be, draw km (fig. 20) perpendicular to bF, and the Re-

flines parallel eq infinitely mean it. The part bn of the fluid contained in the canal hngm would inflation force prefix. find out towards, or from a recorded. Therefore face the fluid in this figure can cancel should be in equilibrio, them and also le forms sellon, as leaf in one of the part bm, n,e, q or to counterbalance the chin on the past bm. But the fluid is important in the space FAM (in consequence of the law so continuity). Therethere is no force which can add on bm, w, q, qy, and the prefiner in the canal in the direction bn or w is nothing, or the force bm, and the force te is perpendicular to the men, and there is therefore no prefiner in the canal FM, except what proceeds from part y F from the force e/, which hit being perpendicular to the canal, there can be no force exerted on the point M, but what is propagated from the part y P.

The velocity therefore in the canal FM is constant if finite, or individual fault variables: for, in the first calc, the force bc would be absolutely nothing; and in the second cad, i would be an infinitesimal of the order, and may be conducted as nothing in comprantion with the velocity, which is of the first order. We fail too long way that the lab is the real take of the cafe. Therefore the fluid, before it begins to change its distance in N, begun to change its velocity in some point y-haet of Y, and by the time that it reaches F its velocity is as it were annihilated.

Or? it. Therefore the perform in any point D swife from the translation in the part y F, and from the particles which are in the canal MD : as their left move along the surface of the body, the force g, deflyerted in every particle, is composed around of two others, one in the direction of the inferior, and the other spec pedicular to it; call thick p and j. The point D is perfect perpendicular to the surface MD, yth, by all the forces j in the curve MD; z; i, by the theory eding on the fingle point D. This may be neglected in compulsion of the indefinite number of the others therefore taking in the such MAB, an infinitely small portion Nw,=i, the prefine on D, perpendicular to the surface of the body, will be = fjf, and this fluent mail bo fo taken as to be = din the point M. Cox . Therefore, to find the precise on D, we must find the force j on any point N. Let a be the velocity of the particle N, in the direction Nw in any infant, and a q-a its velocity in the following infant:

we mutl have p - Therefore the whole quotient is reduced to finding the velocity a in every point N, in the direction Nw.

And this is the sum of a factor of proportions which its neat follow, in which the author defines the math accurate equation and predict conception of the difficulty and great candidate(y) forces and elegance in his mathematical analysis. He si length plan, but brings out an motion which expedite the practice on the body in the mold, ground and manageable pun-ner. We cannot give an abstract, because the train of reading is already coincide in the extreme: nor can we even exhibit the final equation) for it is conceivable in the