municate any additional facts, which are either unknown to, or have been omitted by, the author of these scanty notes?

Philadelphia, April 28th, 1845.

[NOTE.—The prices and admeasurements, which are quoted in the foregoing article, were reduced to the United States and English currencies and measures, from the Russian, as furnished by the Engineer Kovanko; who, in like manner, converted them into the Russian from the Chinese standards. In consequence of this triple conversion of standards, additional care has been taken to avoid error in these calculations.]

Description of an Artificial Hand. By SIR GEORGE CAYLEY, BART.

Sir,—About eight years ago, George Douseland, a son of a tenant of mine, had the misfortune to lose his right hand, when I proposed to make him an artificial one, in the hope of rendering his loss rather less severe. The greater portion of this instrument was made, and the whole of it planned, at that time; but the stump was found to be so tender that it could not then be made use of, if completed; and the young man having gone to reside elsewhere, the thing was lost sight of, and was not renewed till about two months ago, when the remaining portion was executed; and he has found it of considerable use to him in his various daily occupations. I send you a sketch and description of this instrument, which is so simple as scarcely to deserve the name of an invention, but trusting that it may be found as useful to others under a similar misfortune, I wish to give it to the mechanical public through your valuable pages.

The instrument can be executed in many ways, though the means of deriving its firm and forcible grasp from the stump must remain much the same in all. Flexible tendons were adopted in the first sketch I made of this instrument, but I shall describe that which is now in use, and subsequently some very essential improvements; and I hope by thus publishing it, to prevent its being pirated and *patented*, as it is quite misfortune enough to lose a hand without being obliged to forego the use of even so humble a substitute, for want of means to purchase it, or otherwise to procure it at an exorbitant price.

I am, sir,

Your obliged and obedient servant,

March 5, 1845.

GEORGE CAYLEY.

Method of making an Artificial Hand, that will forcibly grasp substances of various sizes, and release them at will, so as considerably to supply the place of the natural hand, when that member is lost.

The movements of this instrument, are derived from the stump, by fixing the hand to the upper portion of the arm above the elbow joint, by light frame-work, within which the stump has its movements at full liberty; and by placing a shank or lever, connected with the ma-