## THE TOCAI TWINS

We give illustrations of what are probably the most remarkable human twins that have ever approached maturity. They recently arrived in this country. They are known as the brothers Giovanni and Giacomo Tocci. They were born on July 4, 1875, their mother being nineteen years old. The mother's maiden name was Antonia Mezzano. Their birthplace was Locana Turin (Italy). The same mother has had nine children, all strong and well. The twins are connected frow the sixth rib downward, and have but one pair of legs and a single abdowen. The spinal columns are distinct untii the lumbar region is reached. There they unite at an angle of 130 degrees. The sacrum seems to be a single bone. They have two distinct stomachs, hearts, and pairs of lungs. The arterial and respiratory systems are quite dis. tinct ; the heart beats and breathing differing often in the two individuals. At the age of thirty days they weighed eight pounds, and in the next thirty-one days gained nearly thre pounds.
It was at this period of their lives that they were first subjected to critical examination.
Their lives are distinct. They have regions of common sensibility, and of purely individual sensation. One often sleeps when the other wakes. There is no direct corre spondence of their appe tites. One may be hungry while the other is fast asleep.
In their general appear ance there is nothing repulsive. They have bright, intelligent faces, not of the peculiar cast common to cripples. They are educated and write their names
souvenirs for visitors
They are able to stand
They are able to stand, but have not yet succeeded in walking, as each leg is governed by its own brain. The want of correspondence has proved fatal to any attempts in this direction. They can stand quietly, so that it is not only a question of strength. At their howe they spend much of their time on the floor, using their inner arms for the most part, crawling and tumbling about and thus getting a certain amount of exercise. They can dress and undress themselves
Tbe one on the reader's left as he faces the pictur Giovanni, drinks beer in considerable quantities. The other one Giacomo, not liking beer, drinks mineral water in its place. Giovanni is quite fond of sketching and draws with some spirit. He rests the book or paper on his knee. Sometimes his brother, who is more of a talker and more volatile in disposition, finding some fault with the drawing, will kick the drawing off his knee. All this in good part, for they ive on excellent terms with each other and seem un conscious of any misfortune in their condition
They are disconnected as regards illoess. Quite re-


Figs. 1 and 2.--SPIRIT SLATES.

cently one of them had a cold, while the other was suffering frow a bilious attack.
The Siamese twins Eng and Chang, who died in 1874, within a few hours of each other, at the age of sixty years, were very celebrated. They were far less coul pletely united. A thick fleshy ligament connected the ower ends of their breast bones. They were of a good degree of intelligence, conversed with visitors, and seemed reasonably well contented with their lot. Had the uniting ligament been purely wuscular they could

## EXPERIMENTS IN PRESTIDIGITATION.

Spirit Slates.-Two ordinary wooden frawed slates are presented to the spectators, and examined in sucession by them. A swall piece of chalk is introduced between the two slates, which are then united by a rubber band and held aloft in the prestidigitator's right hand.
Then, in the general silence, is heard the scratching of the chalk, which is writing between the two slates the answer to a question asked by one of the spectathe answer to a question asked by one of the specta-
tors-the name of a card thought of or.the number of spots obtained by throwing two dice. The rubber band having been removed and the slates separated, one of them is seen to be covered with writing.
This prodigy, which at first sight seems to be so mysterious, is very easily realized.
The writing was done in advance; but upon the written side of the slate $A$ there had been placed a thin sheet of black cardboard which hid the characters written with chalk. The two sides of this slate thus appeared absolutely clean
The slate $B$ is first given out for examination, and, after it has been returned to him, the operator says: " Do you want to examine the other one also?" And then, without any haste, he makes a pass analogous to that employed in shufto that erplo being held by the thumb and forefinger of the left hand and the slate $B$ between the fore and middle finger of the right hand (Fig. 1), the two hands are brought together. But at the moment at which the slates are superposed, the thumb and forefinger of the right hand grasp the slate A, while at the same persons. The possibility of doing this was of ten dis time thefore and middle finger of the left hand take the cussed in their life. But on post mortem examination slate $B$. Then the two hands separate anew, and the it was found that a process of peritoneum extended slate that has already been examined, instead of the rom one abdowinal cavity to the other. But one or wo cases are on record of the severing of such a ligament at the time of birth, with survival of even a sin"Huember of the pair. Before the Siamese twins, the obtained wuch celebrity. Their region of connection was the sacrum. The South Carolina negresses, Millie and Christine, exhibited under the misleading title of the two-headed nightingale, were another interesting example of twinning. They were also connected by the lower parts of the back, including the sacrum and probably lower lumbar region. They had four legs, and were really not much more closely connected than the Siamese $t$ wins. They enjoyed excellent health and spirits and used to sing together. They progressed by walkingeither on the rear pair of legs or on all four, in which case they moved sidewise. Waltzing was one of their accomplishments. Unquestionably their intestines were united. While they possessed common sensory nerve systems as regards the legs, both feeling a touch, the motor nerves were so distinet
that one could not move the limbs of the other. They were born about 1851 .
second one, is put into the hands of the spectator. This shifting, done with deliberation, is entirely invisible. During the second examination the slate $\mathbf{A}$ is laid flat upon a table, the written face turned upward and covered with black cardboard. The slate having been sufficiently examined, and been returned to the operator, the latter lays it upon the first, and both are then surrounded by the rubber band
It is then that the operator holdis up the slates with the left hand, of which one sees but the thumb, while upon the posterior face of the second slate the nail of his middle finger makes a sound, resembling that produced by chalk when written with. When the operator judges that this little comedy has lasted quite long enough, he lays the two slates horizontally upon his table, taking care, this time, that the non-prepared slate shall be beneath (Fig. 2). It is upon it that then rests the black cardboard, and the other slate, on be


Fig. 3.- passing a finger, rod, and egg through a hat.


Fig. 4. the endless paper ribbon

