



## THE BLACK BOX TREASURES (#22)

There is an interesting term called the “black box theory”. It speaks about an object which can be analyzed in terms of its input and output, but there is no knowledge of its internal workings. Many of us probably don’t know that in our Archives here in Rome we have more than 200 black boxes. Some of those treasures have seen the light of day in many publications, but there are still others waiting to be seen...

### (I feel it’s my destiny! #22)

In the Archives in Rome we have 64 letters of Br. Casimir Zeglen, C.R. written between 1890-1913. The major part of this correspondence was directed to the Generals: to Fr. Przewłocki and after his death, to Fr. Paul Smolikowski. In the previous newsletters, I showed you some of his letters in which he

speaks about his difficulties and struggles while being a sacristan and ministering at St. Stanislaus Kostka Church. However, in early 1897 the tone of his correspondences changes radically... There is no place in his letters for complaining but rather they are full of passion, enthusiasm and excitement. On July 14, 1897 he noted “All my hope I put in God. I feel it’s my destiny! I know what I was, I know how I lived and I know where God has led me” (ACRR 38769). After many years of the continual improvement of his invention, Zeglen’s bullet proof vest was finally ready to show to the public. The first public test took place probably in early April of 1897. “The tests were conducted on the wild Rogers Park shore of the lake in the presence of three policemen. The bullet proof cloth was placed against an old pole and, after marking off a distance of 150 yards a police sergeant began firing” (The Topeka Journal, *It Stops the Bullets*, April 17, 1897). A few weeks later Zeglen conducted few more tests. This time as a target he used a corpse of a woman and a dog. All those tests went successfully. Finally, he reported to the General ... “on July, 10 I put the bullet-proof vest on myself and they shot me several times. The bullets didn’t do any harm to me” (ACCR 38769).

Today I would like to show you a scan of the article from “Lewiston Teller” which talks about one of the tests (September 10, 1897). However, the text typed below is from another newspaper which reported the final test conducted by Zeglen’s himself in a very detailed way (The Caldwell Tribune, *At Human Target*, September 25, 1897). Enjoy!

# TRICK BIKE RIDING.

## TWO CLEVER AMERICANS PERFORMING IN LONDON.

### Sliding through the Front Wheel Off-Balancing through the Diamond Frame—Vaulting from One Pedal to Another—Result of Patient Practice.

Masterly over the wheel. There are many men and women who give exhibitions of "fancy" bicycle riding, but the palm belongs to Mr. and Mrs. Valdaire, whose performances have never been rivalled, either in this country or abroad.



The machines they use are of average weight, and similar in appearance to thousands of the Mr. Valdaire American bikes, commenced his cycling career in 1888 on an old-fashioned high machine. He was then 14 years old, and used to ride through the streets of Denver, Col., from his home to school on one wheel, his legs dispensed with the other as superfluous.

The manager of some traveling circus noticed the boy and persuaded him to join his troupe. On the old high machine, however, trick-riding was comparatively easy. It was only when the Valdaire saw his opportunity of venturing on an absolutely new field. The



A RIDE ON THE BACK WHEEL.

difficulties are so much greater than on an ordinary that no comparison can be made. Both the Valdaire practice two or three hours a day to keep their bodies in their work. But in spite of everything they can never be sure that all their tricks will be successful.

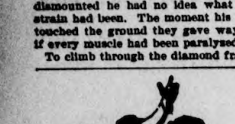
An is nearly always the case with performances such as the Valdaire give, a comparatively easy trick is quite as likely to appeal to the public as one to which they have devoted week after week of practice to accomplish. The most difficult performance that Valdaire takes part in is riding his machine with the front wheel taken off altogether. He does this standing on the pedal, stooping slightly to hold the steering-head in both hands, the body thrown forward at an angle of at least 10 degrees in front of an imaginary line drawn from the axle upwards. In this position lies the secret which it took the best part of a year to discover and appreciate.

There is literally no position which is impossible to the Valdaire on their machine. They climb over them and through them and round them until you begin to think some supernatural agency is preventing the bicycles from falling.

The trick which entails the greatest strain physically is that in which Valdaire draws the front wheel by sheer strength from the ground and rides along gaily with his machine pawing the air, like a rearing horse.

Once in Cincinnati he rode one-third of a mile in this extraordinary position in 1 minute 17.5 seconds. Until he dismounted he had no idea what the strain had been. The moment his feet touched the ground they gave way as if every muscle had been paralyzed.

To climb through the diamond frame



TWELVE MILES AN HOUR ON ONE WHEEL.

brim of the wheel, lowers the machine till it rests on the right pedal. From this posture, and without even touching the ground herself, she throws the machine to an upright position and starts off as if there had been no interruption whatever.

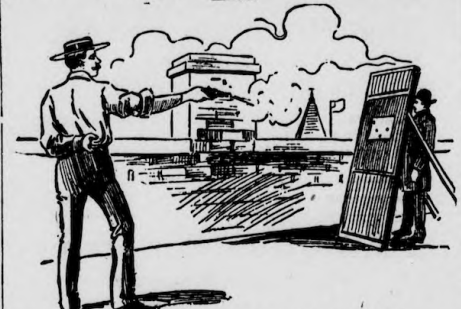
When riding at full speed she will now and then spin her front wheel round like a teetotum, without waver, an act which she performs with ease.

More showy even than this, however, is the way in which she rides the other, keeping both legs always on the same side of the machine; or another trick, in which she and her husband swing round and round each other, changing from one side of the machine to the other, while, as if by magic, it continues to run diligently about the stage.

A DIFFICULT MOUNT.

of his machine is another amusement in which Valdaire indulges. It can be done by any one who cares to imitate

# INVENTOR OF BULLET-PROOF CLOTH FACES LEADEN MISSILES.



THIS bullet-proof cloth invented by Brother Casimir Zeglen of the Catholic Order of the Resurrectionists was successfully tested in Chicago the other afternoon on the roof of a building at West Twelfth street and Ogden avenue. Brother Zeglen stood behind a framework of wood, iron and armor plate, with an opening in it big enough to expose his chest. He placed the bullet-proof cloth over his chest, and then Lieut. Sarneck of the Austrian army fired several shots from a revolver from a distance of ten paces. The bullet-proof cloth did the work. The bullets barely entered the cloth, and could be picked out easily. On the other side of the cloth there was only a small mark to show for the shot. One shot was fired from a 50-caliber revolver. Zeglen's chest was free from any abrasion. There was a corps of physicians present to see the test. After several shots had been fired at the inventor's protected chest, Dr. F. S. Westerman put on the armor and had the lieutenant fire at him. He said when the bullet struck it felt as if he had been gently patted by a child. All those present declared the test a complete success.

his movements, provided they possess the Heaven-sent gift of patience.

Yaldare commenced by standing on the left pedal with the left foot, and swinging the right leg to the same side, he thrusts it through the frame, sinking down till head and shoulders are even with the front wheel, the left side. Then, with both hands grasping the tire of the front wheel, which is turned at right angles, he swings the head and body back on a level with the chute put on the armor and had the lieutenant fire at him. He said when the bullet struck it felt as if he had been gently patted by a child. All those present declared the test a complete success.

Perhaps the best illustration of the principle involved in this vessel is furnished by the paddle wheel of an ordinary side wheel steamer. Imagine the paddle wheel to be 110 feet in width and 20 feet in diameter. The stationary paddles on the outside cylinder of this vessel will correspond to the paddles on a paddle wheel. In the center of this huge paddle wheel imagine a cylinder 12 feet in diameter, with a shaft in the center of this 12-foot cylinder, and connected with a vessel one would have an ordinary paddle wheel in shape and principle. But in the vessel now under construction in place of the shaft there is a third cylinder, which, as before stated, is joined to the outside of the revolving paddle wheel by ball bearings.

According to the following anecdote, from the Sacred Heart Review, people who do right, as well as those who do wrong, sometimes resolve never to do it again.



THE NEW BOAT.

back turned to the handle-bars and sides it thus round and round, sometimes steering with one hand, sometimes folding both arms before her.

In another, keeping her left foot on the pedal the whole time, she swings her right leg over, and placing it on the

A gentleman heard that a young girl—whose mother was in poor circumstances—was convalescing from a dangerous sickness. Forthwith he went to the fruiterer's and secured some choice bunches of Hamburg grapes at \$1, or thereabouts, a pound.

He carried them, not without some self-satisfaction, to the house of the invalid, and left them with her mother, who received them in a dubious kind of manner that did not evince, as he thought, much gratitude.

"How did your daughter like the grapes?" he said to the grim and undemonstrative matron.

"Oh, pretty well," was the reluctant answer.

"Did she eat them all?" was the next query.

"Yes, she got away with them," was the reply. "But she is a good deal like me; she likes something nice and tasty—like canned corn."

For Indigestion. Among the many remedies for indigestion is the agreeable one of the rocking chair. An excellent medical authority declares that the slow, rocking motion after meals stimulates the digestive functions and gives marked relief. The patient ought to be placed in an almost horizontal position.

# WHEN THE REGIMENT PASSED.

There was din in the street, there was rushing of feet. At the hum and the thrum of a far-away drum. Every eye in the town watched a road winding down. By meadows of ripening, yellowing wheat. Every leg was filled with the beat that had thrilled. And whirled as it stirred like the wings of a dream. Through the sunny air, growing near and more near. Till all other sound in creation was stilled: Like the dew. Then swift came the gleam of a mountain-side stream. Which quivered and grew like the stars. Like the sun's darting glance where little waves dance. Like a glittering river that wound from a dream.

O it broadened and spread till a vibrating trend. In unison beat through the dust to our feet! O it drew every hue, from the heavens' calm blue. To the poppies' red blood through the wheat field ahead!

Then a plume floated white, and they broke on our sight. With a single note clear, they drew near. Burst from us; then dumb at the roll of the drum. As they glittered us and touched us, and dumb with delight. We drew nigh, we pressed nigh, our hearts throbbing nigh. (O the tumult of joy the heart of a boy!) Women crowded about, and a flag floated. And we uttered a shout that rang up to the sky!

(Ay, it rings for me yet! Can I ever forget That thrill and that joy in the heart of a boy? Then, a barefooted throng, we marched proudly along. Knowing naught of farewells or eyes. Hearing only the beat of the drum and the feet. Treading onward to war, growing faint, growing far. Seeing only the track, dust enclouded, whence back. Looked never a man to that village street!

Now we lingered around, listening low. Till the drum the drum was a clover-leaf hum! How we marched a retreat through the dust. And followed the footprints which covered the ground!

And when weary at last, how we happily cast Ourselves down in the wheat, talking of the milkman, and of a cavalry stampee and turn the leaders. Horses soon learn all the trumpet calls. "Stable call!" in the afternoon is the favorite one, I imagine, as it means "dinner."

A trumpeter's horse in a certain troop at a Western post was condemned for disability, and sold to a milkman. One day, when the milkman was driving the drill-ground where the troupe was drilling, his horse, at the sounding of the "charge" by the trumpet, bolted for the troop. Of course the funny sight of a milk cart charging with a troop of cavalry caused great merriment to all, except the milkman.

During the Geronimo campaign some years ago in Arizona, a remarkable illustration of how great an affection can exist between a soldier and his horse occurred in a troop in which I was serving. An old Irish sergeant had a splendid brown horse called "Dandy" to which he was so strongly attached that the care and caresses he bestowed on it would have satisfied the most exacting sweetheart. The beautiful and intelligent animal seemed to be to him almost a child, and he appreciated the affection of his master.

Now it happened that during a long march the sergeant became very tipsy by drinking some derry Mexican "mead." Heeling the saddle to and fro he jerked the horse's sensitive mouth with the cruel curb till it bled profusely, and every little while his sharp cry of "Dandy's flunk!" was heard. Suffering all this pain, the horse calmly walked in ranks without showing any resentment, and apparently knowing that his master was out of his senses.

Shortly after the sergeant was fired upon from ambush. The sergeant, who was in the lead, was shot dead in the saddle while riding along the brink of one of those steep canyons which are so characteristic of Arizona. His pitched head foremost out of his saddle down hundreds of feet into the canyon-bed.

During the next few days Dandy ate little, and appeared dull and listless. All the men being mounted, he was led and a pack-saddle put on him. About a week later, as we were riding along the brink of another canyon, very similar to that in which Dandy's master had found a grave, the command was halted for a rest, and the men, dismounting, let their horses graze on the few bunches of dry grass in the vicinity.

Presently we saw Dandy walk to the edge of the cliff and look down into the black canyon depths. There was something in the horse's manner that attracted attention, and we were silently watching him, when he crouched on his haunches, gave a quick spring far out into the air over the edge of the cliff, and went tumbling and twisting down 500 feet to be dashed to death on the bowlders in the canyon-bed.

"As clear a case of suicide as I have ever seen," our captain said. Poor Dandy—his heart was broken!

Can it be that the horse is passing away from us? Let us hope not. If he is, we are losing a noble friend.—A Cavalry Soldier, in Youth's Companion.

Not Up in Spelling. A French confectioner, proud of his English, and wishing to let his patrons know that their wants would be attended to at once without any delay, put out the notice, "Short weights here."

There is no woman so well off as a widow who has realized on her husband's life insurance.

# OSTRICH HUNTING.

Profitable Sport that is Making the "Birds Scarce." An ostrich chase is very attractive sport, or, rather, the sale of its trophy is so great as to attract hunters. The Arabs give themselves to it with a passion. Mounted on their fine line horses they try as much as possible to fatigue the ostrich, for as it is light of foot and has very strong legs it possesses a quickness of movement which the best horse cannot attain. It has great endurance. Overtaken by its feet and wings, but more often it still strives to escape by flitting, uttering a plaintive cry. In fact, the ostrich is deprived of the power of flight by reason of its great size. The muscular force with which nature has endowed it is not equal to lifting its own weight. Its peculiar organization has made it the courier of the desert, where it is able to quickly traverse the almost limitless expanse. The Arab knows very well that it is the habit of the ostrich to make great detours about its nest in a circle. He chases it then without caring until it is almost there, when, worn out, it succumbs, concealing its head in the sand, and he does not see its enemy, or, instead, hoping to escape a danger which it cannot see any more. This chase requires eight or ten hours, but it offers large rewards. The plumes are worth a considerable sum, the skin makes good leather and the Arabs are very fond of the flesh. Besides, in spite of the fact that it reproduces its species rapidly, the ostrich is all the time becoming rare, and it is hunted for export and domestication in other countries. It is one of Africa's great resources and may become a new source of property to Algerians if they are willing to make the effort. The truth of the popular saying, "the stomach of an ostrich," has been confirmed recently by an autopsy on one, the following words were found in its stomach: A parrot handle, two keys, two great pieces of coal, a glove, a handkerchief, a pair of eyeglasses, a ring, a comb, three large rocks, the necks of two beer bottles, the sole of a shoe, a bell and a little harmonica.—Paris Univers Illustr.

on the part of the herd guards is required to head off a cavalry stampee and turn the leaders. Horses soon learn all the trumpet calls. "Stable call!" in the afternoon is the favorite one, I imagine, as it means "dinner."



POOR DANDY.

Young Californian Who is Master of the Billiard Cue.

Perhaps no billiard expert of the present day has devoted so much studious attention to the game as William A. Spinks, the young Californian expert, who is now the playing partner of Jacob Schaefer, the ex-champion. Frank C. Ives had opportunities to per-

fect himself such as were offered to no other player of his time, and quickly developed into a champion. With Spinks, as in the case of dozens of others, few opportunities were offered, excepting that the Western man had the good fortune to fall in with Schaefer, his chances of steady improvement were few. But the association with the wonderful little "wizard" was improved by Spinks to the utmost, and to-day he stands out prominently as the leader of the shortstop class, having only two, or possibly three, rivals in all America. In the match game with Thomas J. Gallagher in Chicago last year Spinks defeated the silver-haired veteran, but the result was never satisfactory to the latter. At a recent meeting of the pair would be one of the most attractive events that could be arranged. Recently Spinks defeated Edward McLaughlin, of Philadelphia, in New York.

In Japan. Ignorance of Oriental etiquette sometimes leads to awkward situations in fashionable quarters. Lately an English lady received a morning call from a Japanese gentleman, who, instead of making his first visit very brief, as was expected, stayed to luncheon. While the lady grew extremely weary of her visitor, and every minute expected him to leave. Dinner came, and the Japanese was still a fixture, and the host took his departure, with most abrupt and elaborate apologies for quitting his hostess. Next day he confided to a friend that he had never passed through such an ordeal.

According to Japanese etiquette, the host gives the signal for his departure, so he thought she would never let him go, and finally he had to leave without her permission.

Embarrassments. "Here, take my seat, lady," said the little boy on the car, as he sprang from his father's knee and doffed his hat. The lady looked like a bluish rose. The woman giggled, the father signalled the conductor to stop, and half a dozen men stood up while urging the lady to sit down.—Detroit Free Press.

# GOVERNMENT.

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**(The Caldwell Tribune, At Human Target, September 25, 1897)**

### **AT A HUMAN TARGET - TEST OF THE NEW BULLET-PROOF CLOTH**

Inventor Safely Faces the Lead - Bullets Fired at Ten Paces Flatten Against the Impregnable Fabric -  
"Like a Poke in the Ribs" (Special Letter)

AT CHICAGO, the other day, Brother Casimir Zeglen covered his breast with a piece of his own bullet-proof cloth and set himself up as a target for the lead bullets fired from a big pistol. He was not hurt. Then Dr. F. H. Westerchulte emulated the example of Brother Casimir. He said the sensation of being hit by a 38-caliber bullet, fired at a distance of 10 paces, was like being poked in the ribs. These were final tests to determine the qualities of Brother Casimir's bullet-proof cloth. The inventor demonstrated his own faith in the invention by giving his own body for a target. The bullets were of calibers 32 to 44, and all were fired from a distance of 10 paces. Regulation revolver cartridges were used. Brother Casimir thinks his thoroughly alive and healthy condition ought to be sufficient proof of his claim to having invented the first genuine bullet-proof fabric. The cloth of Dowe and other Europeans had proved valueless. Ever since Mayor Carter H. Harrison was assassinated by Prendergast, Brother Casimir has been at work on his idea. Every moment that could be spared from his regular duties was given to the effort of producing a fabric which would withstand the impact of a bullet. He felt certain he had succeeded, but gained but little encouragement until Dr. L. C. Borland became interested in his work. It remained to be demonstrated that the new fabric would protect human life. Neither Brother Zeglen nor Doctor Borland had any doubt of the fabric's efficacy in stopping the flight of a bullet. There was a question whether the force of the bullet's impact might be so distributed that the blow would still be dangerous. The tests made the other day were for the purpose of settling that point. Doctor Borland turned the roof of his private hospital into a place of test. Men whose integrity could not be impeached were invited to be present.

The human target was so arranged that the person offering himself for experiment could not be injured unless the bullet-proof cloth failed to do its work. A shield was set up made of timber with several sheathings of iron, making it bullet-proof. Through this there was a sort of tunnel, across the mouth of which was stretched the bullet-proof cloth, a patch 20x40 inches in size, so it came about on a level with a man's breast. The cloth was firmly fixed, of course, so it could not be torn loose, the object being to let the human target lean against the fabric, bring the cloth as closely in contact with his body as if it were his coat or vest. Before beginning the tests all the spectators were invited to make an examination of the revolver and cartridges. This invitation was extended particularly to Sergeant Boyd, who had been sent to the test by the police department as an expert in firearms. The first test was made with a Smith & Wesson revolver, 32 caliber. Brother Casimir took his place at the target with his breast pressed firmly against the fabric. Beside the bullet-proof cloth, his breast had no covering except an undershirt, a vest and a cravat. Sergeant Webb handled the revolver, taking aim from a distance of only 10 paces. The spectators were breathless as "he pulled the trigger. There was a flash, a report and Brother Casimir stepped from behind the shield with a smile

and picked up the bullet from where it had fallen at his feet. The cloth showed an indentation where it had been hit, but there was no sign of a break in it. Brother Casimir said he felt no pain further than a slight stinging sensation as the bullet struck his breast. It was so near painless that he was eager for the second trial.

The second test was identical to the first. It had the same result, except that Brother Casimir's quiet smile of triumph was slightly broader. A third test was made. The conditions were, the same as for the first and second, except that a 38-caliber revolver was substituted for the smaller weapon. Still the marvellous results were the same. Brother Casimir said the concussion from the third bullet was heavier than from the other two, but that there was no lasting pain. Doctor Westerschulte offered himself for the fourth test. He had even less protection for his body, under the bullet proof cloth, than had Brother Casimir— only a light negligee shirt and a thin gauze undershirt. He was fired on with the 38 Colt.

"It feels just like being poked in the ribs with a stick," he declared with triumph as he stepped from behind the wizard cloth. Brother Casimir then took his place behind the shield for the fifth test. This time a 44 caliber Colt revolver was used. The cloth was not penetrated. Brother Casimir said the shock of the bullet's impact was considerably more painful than either of the shots that had gone before, but it did not hurt so much that he would be afraid to have it repeated. Then all who had witnessed the tests signed their names to a concise statement of what had taken place, substantiating as it has been related here.

Brother Casimir intimates that the secret of making his fabric lies in the method of shrinking the cloth fibre. He is a chemist and he became satisfied, from a long study of fiber entering into the composition of cloth, that the fiber themselves possess, if properly treated, sufficient strength to withstand the impact of a lead bullet. This he now claims to have demonstrated. His cloth is made, he says, of silk and wool and one other fiber which he will not name. The tests were confined to revolvers, for against missiles from such weapons is all Brother Casimir claims his cloth will hold. This particular fabric he expects to see utilized for clothing for policemen, for lining the overcoats of men who are out late at night and in danger from footpads, and for all who are in danger of being fired on with ordinary lead bullets. He does not claim this cloth would be of service in an army, for armies now use steel bullets. But he is making a fabric for armies, and so confident is he of success, in view of what he has now discovered, that he has already made arrangements to go to Europe to introduce the invention to the continental powers.