

the air, even under the favourable conditions of the German artillery with the newest guns, it would be necessary to increase that velocity by 20 per cent. According to theoretic calculations for a range of 120 km. we should approach to an initial velocity of 1,460 m. as indicated by General Roche. As regards the falling velocity, it is certain according to known data, that it exceeds that of sound. At Paris, the sound produced by the displacement of the air caused by the projectile was not perceived until after the arrival of the projectile. It is calculated that the falling velocity may exceed 500 m. and perhaps be as much as 700 m. The element which most influences the increase of the range is the diminished density of the air at the great height attained by the trajectory.

Certain notable communications by the celebrated mathematician de Sparre of the Academy of Science at Paris in 1915-16 are well worthy of consideration. The calculations for a trajectory of a projectile of 381 mm., with a weight of 760 kg., projected with an initial velocity of 940 m., and with an angle of elevation of 45 degrees, gave the greatest range as from 25,692 m. or 35,359 m. supposing the density of the air to be constant and equal to I, where it's taken into account the effects caused by the diminution in the density of the air in the different strata of the trajectory. In the second hypothesis there is an increase of range of 38 per cent. as compared with the first. And it may be noted that the greatest co-ordinate gained by the trajectory of a projectile of 381 mm., as considered by de Sparre is 11,382 m., not even a third of that calculated for the guns that bombarded Paris. De Sparre calculates the influence on the range of guns of 381 mm., caused by the temperature and normal pressure, which are considered in the tables of fire, respectively of 15 C. and 750 mm., and obtains by result that an increase of temperature of 13 C. and a diminution of pressure of 10 mm. would produce an increase of range of 1,792 m.; vice versa a diminution of temperature of 13 C. and an increase of pressure of 10 mm. would cause a diminution of range of 1,276 m.

We may say, that since the passage of Halley's comet no scientific phenomenon has caused

so much interest and so much discussion, and it is certain that this last creation of the Krupp factory of cannon throwing 120 km., deserves to be followed with the greatest attention, as it is probable that it may be in its initial stage of practical employment, and much is still unknown with regard to the characteristics of new material, after several months, and the only objects of direct examination have been the fragments of the projectiles.

The writer of this Notice happened to be in Paris on the 28th and 29th May, when several shots were fired from the long-range gun. The people who were taking their tickets at the St. Lazare railway station took no notice at the time of the firing, and "carried on" as if nothing particular was happening.

E. T. Thackeray.

A Heated Argument.

The two retired majors were sitting by the fire at the club, fed-up, as only retired majors can be. There was nothing doing on the Western Front, and therefore little matter for discussion and criticism. For two hours they had sat gazing into the fire in moody silence.

Suddenly a powerful car rushed by the window. One of them inclined his ear towards the sound of the throbbing engine, and muttered "Daimler".

A few minutes passed and another car flew by.

"Napier," murmured the other.

For half an hour they sat on in silence, but not another car came by. The first major suddenly got up with a grunt.

"Where are you going?" asked his companion.

"Home."

"What for?"

"Oh! I can't stand these damned arguments," was the reply.

JEW D'ESPRITS.

Rabbi Stephen S. Wise, of New York, the eloquent Hebrew Clergyman who has been delivering pro-Ally addresses in Montreal and Toronto, has quite a fund of stories in which the forbles of his own and other races are the subjects of gentle raillery. One of them concerns an English business man whom he met while visiting the Old Country last year. Asked whether "business as usual" was his experience, the Englishman replied

emphatically in the negative, stating that he was almost in despair of making ends meet. On Rabbi Wise asking why conditions were so much worse for him than for the general run of commercial men, the Englishmen replied: "The character of my business necessitates my buying from the Scotchman and selling to the Jews. What chance have I?"

Another story which Dr. Wise relates with gusto is of the Irishman sick with smallpox, who believing that final dissolution was approaching and feeling the need of spiritual consolation, said to his wife: "Bridget, I'm getting near the end. Run for the Rabbi."

"The Rabbi, Patrick! Your mind must be wanderin'! You mean the priest."

"No, woman, I mean the rabbi. Would you have me give our good priest the smallpox?"

Those Shells!

A dear kindly old soul whilst staying at Brighton saw a wounded soldier being wheeled along the Parade each morning. He was quite a youngster, and she felt anxious to hear all about it, so one morning she went up to him and asked him how he had lost his leg.

The boy had had many similar inquiries from would-be sympathisers, and was getting rather sick of them, so he answered in an off-hand manner:

"Oh, just a shell, mum!"

The good lady was all over him at once: sympathy bristled from every part of her being.

"Dearie me, and did it burst?"

"Oh, no!" said the boy. "It just crept up behind me and when I wasn't looking bit me."

Spite.

Solly had saved up and bought a tremendous diamond ring. He was very proud of this ring, and at all times of the day could be seen twisting and twirling his moustache so as to display it.

A friend came to see him, and for some unaccountable reason did not notice the ring: this was more than Solly could stand, so with a beautiful flourish he held out his hand and said:

"What would you do with a beautiful ring like that?"

The friend replied:

"I'd sell the damn thing and buy a nail-brush."

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