individuality, thereby conspicuously advancing scientific interests but obscuring his own all-important part in the procedure.

Full consideration might find it just henceforth to give Schoolcraft at least joint credit with Gallatin for the foundation of the American Ethnological Society.

CHASE S. OSBORN
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SPECIAL CORRESPONDENCE

WOUND HEALING

DR. S. PILIPCHUK, executive secretary of the Moscow Soviet Scientists Anti-Fascist Committee, has sent to SCIENCE the following communications by wireless from Moscow.

HEALING WOUNDS BY SKIN TRANSPLANTATION

Wound healing by the method of transplanting tissues evolved by Academician Filatov and his school is now widely practised. Particular attention has been attracted by the work of Professor Krause (Saratov) who has applied dead tissues chemically treated with chloraclyde in the healing of fresh and granulated wounds and chronic ulcers. Experience has shown that transplanted chloraclyde-treated tissues have the same, and in some cases even better, curative action. For grafting, Professor Krause has suggested using preserved skin from dead bodies and later chemically treated animal tissues, while his assistant Levkov uses the pericarpoidal [pericardial?] membrane treated the same way.

Hundreds of transplantations made in the Saratov Hospital on chronically non-healing ulcers, fistulas, burns, frostbite, skin diseases and in corneal lesions yielded excellent results in practically all instances. Surgical Clinic Pikin, candidate for the degree of doctor of medical sciences, has applied Professor Krause's method, using chemically treated pericarpoidal [?] skin from corpses and animal abdominal tissues. Careful preparation of transplanted skin is of the utmost importance. After being sprayed with chloraclyde solution the wound is drained, then sprayed again with chloraclyde. A piece of skin of the same form and shape as the wound, but slightly smaller than its surface area, is laid on the wound and fixed by several ligatures. This is covered by dry aseptic dressings. Pain in patched wounds ceases in from one to three hours after transplanting the skin. Healing takes less time under the grafted skin than in ordinary aseptic treatment. The bandage remains dry, and the scar remaining when the healing process is complete is small, soft and mobile.—N. EGOROV.

STIMULATION OF WOUND HEALING

Professor Goldberg, who holds the chair of pathological physiology in the Tomsk Medical Institute, suggests embryonal emulsion in the form of a liquid ointment made on a castor oil base for stimulation of the healing processes in wounds. Embryos are taken from guinea pigs, divided with scissors, and carefully ground with a small quantity of sterilized castor oil. Zeroform is added in the ratio of 0.3 parts to every 100 cc of oil. Tests made with this ointment on trophic ulcers in the Tomsk surgical clinics and hospitals prove that during the second phase of wound healing, and also when the process is sluggish, when granulation is either absent or poorly developed and there is sluggish regeneration of epithelium, this ointment has definite beneficial effect. This is frequently apparent after one or two dressings. It has an unquestionable stimulating influence on the regeneration of epithelium.—N. EGOROV.

MESSAGE RECEIVED BY THE AMERICAN ASSOCIATION OF SCIENTIFIC WORKERS FROM THE SOVIET SCIENTISTS ANTIFASCIST COMMITTEE

WE have received your letter of greetings through Professor Propper-Grastchenkov. Your proposal to establish closer contact between American and Russian scientists has met with greatest approval among Soviet men of science.

Soviet scientists are struggling for freedom and independence of all nations and for preservation of science and culture. . . .

In the struggle being waged by the democratic countries against fascist reaction science and technique play an important part. Soviet scientists spare no efforts in helping the Red Army to hasten the complete defeat of Hitlerism.

Several conferences were held in our country recently at which the work of scientists in wartime was discussed and plans for new efforts outlined. At the Jubilee Session of the Academy of Sciences of the USSR, convened in November, the results of scientific endeavor during the quarter century of Soviet power and the work of scientists in the war against Hitlerism were reviewed. Some time later there was a joint plenum of the medical councils of the People's Commissariat for Health of the USSR and of the Commissariat for Health of the RSFSR. The session of the Lenin All-Union Academy of Agricultural Sciences met in December.

At all these conferences a summary of what was done in each respective field of science was discussed and plans for further work in the war effort drawn up.

We believe that the exchange of reports on the

scientific activities of our freedom-loving countries would help to consolidate and widen our contacts. With this view in mind, we are in a position to despatch articles by Soviet scientists to American scientific journals.

Best New Year greetings to our American colleagues, wishing the American people success in hastening the defeat of Hitler's bands.

(Signed)

NIKOLAI DERZHAVIN,
President, Soviet Scientists Anti-fascist Committee
SERGEI PILIPCHUK,
Secretary

SCIENTIFIC BOOKS

THE "PIROTECHNIA" OF BIRINGUCCIO

The Pirotechnia of Vannoccio Biringuccio. Translated from the Italian with an introduction and notes by CYRIL STANLEY SMITH and MARTHA TEACH GNUDI. Publication sponsored by the Seeley W. Mudd Memorial Fund. xxviii + 476 pp. 92 illustrations. $7\frac{1}{2} \times 10\frac{1}{2}$ inches. New York: The American Institute of Mining and Metallurgical Engineers, 1942.

THE present century has witnessed an awakening of interest in several classic metallurgical treatises, as is indicated by the appearance of English translations of four important works of the sixteenth, seventeenth and eighteenth centuries. The first of these was the publication in 1912 by Herbert C. and Lou H. Hoover of their splendid translation of the first 1555 Latin edition of the "De Re Metallica" of Georgius Agricola. The second of these works was the translation in 1913 of "El Arte de los Metales" of Alvaro Alonso Barba by R. E. Douglass and E. P. Mathewson from the Spanish edition of 1640. The third of this group of treatises was the publication in mimeograph form in 1938 by the British Non-Ferrous Metals Research Association of the long-neglected translation by Arthur H. Searle of Emanuel Swedenborg's "Regnum Subterraneum, sive Minerale de Cupro et Orichalco" from the first Latin edition of 1734. The present English translation of the "Pirotechnia" of Biringuccio from the first Italian edition of 1540 is the fourth and latest member of this series of important historic metallurgical publications.

In the Introduction to the present edition of the "Pirotechnia" Dr. Gnudi gives first a two-page sketch of Biringuccio, who was born at Siena in 1480 and after a most adventurous life as a smelter and worker in metals died in 1538 or 1539. Dr. Smith then follows with a most interesting thirteen-page discussion of "The Background of the Pirotechnia and its Place in Metallurgical Literature" and of "The Editions of the Pirotechnia." The present edition, he remarks, "is the result of collaboration of two individuals whose chief fields of activity have been, respectively, in Italian literature and in metallurgy." Dr. Gnudi concludes the Introduction with two pages of remarks upon some of the problems encountered in making her translation.

The general scope of Biringuccio's "Pirotechnia" (by which was meant not so much pyrotechnics as pyrotechny in the broader sense of the use of fire in the mechanic arts) is indicated by the following brief synopsis of the ten books of the translation:

Book 1. Ores of gold, silver, copper, lead, tin, iron and making steel and brass.
Book 2. Ores of quicksilver, sulphur, antimony, vitriol, alum, arsenic and other so-called semiminerals.
Book 3. Assaying and preparing ores for smelting.
Book 4. Separation of gold from silver.
Book 5. Alloys of gold, silver, copper, lead and tin.
Book 6. Art of casting guns and objects of bronze such as bells.
Book 7. Methods of melting metals.
Book 8. Special methods of casting and moulding.
Book 9. Arts of alchemy, distilling, minting, metal working, extracting, etc. and of making wire, metallic mirrors, crucibles, pottery, lime and bricks.
Book 10. Manufacture of saltpeter, gunpowder, mines, bombs, etc. and fireworks for purposes of war and festivals.

To the ninety-nine strictly technical chapters, which make up the ten books of his Art of Fire, Biringuccio, for the sake of full measure, has added a final curious allegorical one hundredth chapter on the fire of love; "it consumes without leaving ashes, it is more powerful than all other fires, its smith is the great son of Venus, and its instruments, in place of glowing melting furnaces, bellows, hammers, and anvils, . . . are naught but quarrels, jealousies, fears and many other great and annoying agencies."

In addition to the flashes of wit and humor that appear here and in other pages of Biringuccio, the reader is impressed not only by the up-to-dateness of some of his descriptions of processes but also by the sagacity and common sense with which in an age of superstition he disposes of those who trust in divining rods, or in other magical devices, for locating mineral deposits, in the efficacy of which there are even now some believers. As for those who sought to produce precious metals by transmutation Biringuccio re-