

SOLDIERS CAME WITHIN ACE OF GETTING VILLA

Bandit Was Isolated When Order for Movement to North Was Given.

MOST OF RAIDERS ARE DEAD

Of the 485 Men Who Invaded Columbus 400 Are Dead, Wounded or Captured—Record Marches Made by Troops—Story of Hard Luck.

Field Headquarters, American Punitive Expedition in Mexico.—Regimental narratives of the cavalry regiments that participated in the search for Villa, which have just been brought up to date and submitted to headquarters, show in detail how near the American troopers came to accomplishing the full purpose of their expedition. They show that just after the Parral fight, on April 12, less than a month after the expedition had entered Mexico and immediately prior to the order to withdraw northward from the Parral district, the Americans had run Villa, sorely wounded, to earth, and had cut off every avenue of his escape to the south into Durango.

When Maj. Frank Tompkins' hundred men were attacked at Parral, Villa, disabled, had hidden at Santa Cruz. Maj. R. L. Howze, with his hard-riding squadron of the Eleventh cavalry, close on the bandit's trail, had run by his quarry. General Pershing was at Satevo, directing operations. Col. W. C. Brown, with five troops of the Tenth cavalry; Col. H. T. Allen, with two picked troops of the Eleventh cavalry; Major Tompkins and Major Howze, four cavalry columns in all, were between Villa and the haven of safety he was seeking in the Sierra Madre, ready to beat the brush for him. Wounded, virtually alone, he apparently had little chance to evade capture or death. Orders for withdrawal came, however, after Parral, and the highwater mark of the expedition passed.

From the beginning of the border trouble it was to the cavalry that fell the responsibility of dispersing the Columbus raiders. That this task was accomplished is evidenced by figures showing that of the 485 men who raided Columbus four hundred have been killed, wounded or captured. Full credit is given in the narratives for the co-operation of other branches of the service, notably in establishing advanced bases and maintaining the line of communication, but the fact remains that it was the cavalry that drove Villa in head-long, panic-stricken flight into Durango, five hundred miles from the American border, scattered his band to the four winds and set new records for marches under terrific handicaps. It also fought the four engagements that had an important bearing on the campaign:—Dodd at Guerrero, March 28; Tompkins at Parral, April 12; Dodd at Tomoche, April 21, and Howze at Ojos Azules, May 4. It was the victim, too, in the tragedy of April 21 at Carrizal.

Marches of the Troopers. Two of the five cavalry regiments now in Mexico, the Seventh and Tenth, crossed the line at Culberson's ranch early in the morning of March 16. Their dash to Colonia Dublan has been told and retold. The Thirteenth, which already had spent three and

a half years on the border, crossed March 16 at Columbus, where it had been attacked March 9 by Villa. Two squadrons of the Fifth left Columbus on March 29 and were joined by the third squadron April 10 at the Mormon lakes, near Dublin. The first detachment of the Eleventh entered Mexico March 17 via Columbus.

The marches of the Fifth may be summarized as follows:—Namiquipa, April 10; San Geronimo, April 23; Lake Itascate, April 24; San Antonio, May 3. About the time of the Scott-Oregon conference the regiment was given a district, with Satevo as headquarters, which it was ordered to search intensively for bandits. Each cavalry regiment was allotted a similar sector of southern Chihuahua. The beating of the brush for Villistas, however, was never fully done. The Fifth, on May 10, was made part of a provisional cavalry brigade to cover the withdrawal of the expedition northward at a time when 4,500 Carranzistas were reported to be within 30 miles of the Americans. Since Carrizal it has been encamped at El Valle.

The Seventh, after completing its dash to Colonia Dublan with General Pershing's column, proceeded post haste to San Miguel, where Villa was reported. Poor guides caused delay and the bandit escaped. It then started toward Guerrero. That town was reached by forced marches 12 days out from the border, with a daily average of 23 1/2 miles. The longest day's march was on March 17, when 58 miles were covered. The route chart shows that the regiment and detachments on reconnaissances covered 5,500 miles.

Mention is made that during Colonel Dodd's historic ride his men many times had only parched corn to eat. Nearly three hundred miles was made in a single file, the troopers leading their mounts, and a number of them leaving stained footprints on the rocky trail, for their shoes had worn out. Officers and men lent their own money to buy food and forage, but it was not until the end of April that clothing could be obtained. By that time the men were in a pitiable state. Two fights stand to the record of the Seventh—Guerrero and Tomoche.

The Thirteenth, which arrived at Colonia Dublan on March 17, furnished the two picked troops which Major Tompkins commanded in his dash after Villa and which were halted at Guerrero. The itinerary of the remainder of the regiment embraced El Valle, Las Cruces, Namiquipa, San Geronimo, Lake Itascate and El Rubio, where it made its headquarters May 1 to seek bandits in the district to which it had been assigned. It was concentrated at San Antonio on May 10 and later went into permanent camp at Colonia Dublan.

Story of Hard Luck. The history of the Tenth cavalry is a record of hard marching and hard luck. Short two troops when it was made part of the column that entered Mexico from Culberson's ranch, it was divided on reaching Colonia Dublan. The first squadron, sent south on the Mexican northwestern, lost a number of men by injuries when their ramshackle train was wrecked. The third squadron participated in the vain march to San Miguel. It was joined March 24 by the first, and both reached Namiquipa March 25. With the first squadron at San Diego del Monte, the second engaged in its first clash with the enemy at Aguascalientes on April 1. Three of the 50 Villistas were killed. On April 3 this squadron reached San Antonio, and on April 6 it was at Cusi. Ordered on April 10 toward Parral as a flanking force, it arrived at a point 20 miles from that city just in time to re-engage Major Tompkins' squadron, which had retreated from that city. The regiment was concentrated during the retreat and camped at Colonia Dublan on May 19.

The regiment on May 5 lost its commander when Colonel Brown, ill, left for home. Brief mention only is made of the hardships the only negro cavalry in the expedition endured. It received no clothes until May 13. The horses began to suffer early in the campaign from lack of forage and on March 25 they were further disabled when their shoes began to wear out. The first supply of coffee, hard bread and bacon received since March 18 was furnished the men on April 20. During that time the command subsisted almost entirely on beef killed on the range and corn ground in small hand mills. No details are given concerning the scouting expeditions in which Troop C, from Ojo Federico, and Troop K, from Dublin, were engaged when cut up at Carrizal.

FINDS BABY PARALYSIS GERM

Medical Achievement is Attributed to Dr. E. C. Rosenow of Mayo Foundation at Rochester, Minn.

New York.—Medical men showed keen interest when word reached this city that Dr. Edward C. Rosenow, head of the bacteriological department of the Mayo foundation at Rochester, Minn., had finally succeeded in isolating the germ which, judging from the invariable results of many experiments, is the cause of infantile paralysis.

One important result of Doctor Rosenow's work here during the summer—he went back to Minnesota only a few days ago—was the discovery that invariably the germ which he has isolated was found in the tonsils of children suffering from infantile paralysis. Doctor Rosenow's experiments here showed that children suffering from poliomyelitis who were not making a good recovery showed striking improvement after the tonsils had been removed.

NITROGEN FROM AIR TOO COSTLY

Dr. H. O. Porter Asserts United States Can Produce Enough From Coal.

CASE NOT LIKE GERMANY'S

Chemist Believes There Will Be No Dearth of Product in This Country in Case of War—Ammonia Production.

New York.—Among the papers prepared by well-known chemists and read at the sessions of the American Chemical society during its annual meeting for 1916, held during the second annual chemical exposition at Grand Central palace, was one by Dr. Horace O. Porter, an industrial chemist of Pittsburgh, in which he predicted that nitrogen would be extracted from the atmosphere in this country. Doctor Porter, however, told of other sources from which nitrogen could be produced in the United States at the present time, more cheaply than from the atmosphere, in such large quantities that there would be no danger of a dearth of nitrogen here in the event of war, such as was threatened in Germany when her sources of outside supply were cut off in the present war.

"The fixation of nitrogen from the atmosphere for application in agriculture and the arts is an industrial development now thoroughly well established in several foreign countries.

In Better Shape Than Germany.

"Whether in America, in the emergency of a great war and the shutting off of our foreign supply of nitrate, we should be obliged to meet the situation in the same way as Germany has done is very doubtful. Atmospheric nitrogen fixation will without question eventually be established in this country. This will be when its costs, including capital charges, shall have become low enough to admit of profitable expansion of the industry. It will be welcome as an additional and unlimited source of fixed nitrogen independent of the uncertainties of foreign importation.

"At present, however, owing to conditions affecting the cost of power in this country, fixed nitrogen can commercially be had more cheaply from coal. If the supply, therefore, is adequate from the latter source for an emergency of war, there is no need of government subsidy for atmospheric nitrogen fixation. As to prices of fixed nitrogen to the farmer in times of peace, the producers' prices of coal-by-product nitrogen are on a par with those in foreign countries and with those of other forms of fertilizer nitrogen in this or other countries.

"The available supply of fixed nitrogen from coal is adequate to this country's military needs in any reasonable contingency. By-product ammonia is being produced in rapidly increasing quantities. The crux of America's situation as compared to Germany's is that we are not called upon to reserve our entire by-product ammonia supply for agriculture; ample food crops for domestic consumption in time of war are assured us without the use of fertilizer, while Germany, on the other hand, is absolutely dependent on such use, especially of nitrogenous fertilizer, and has had even to increase her use of ammonium sulphate in this way since the beginning of the war.

Government Plant Insufficient.

"The by-product coking and coal gas industries of the United States have today a capacity of making 70,000 tons of ammonia per year. Within eighteen months they will increase this capacity to 110,000 tons. From 35 per cent to 40 per cent of this capacity is for ammonia in the form of liquor, and, with slight adjustment of those plants making sulphate, this capacity for liquor can be increased to 55 per cent or more, that is, to 60,000 tons of ammonia. The recent appropriation by congress of \$20,000,000 for a government nitrate plant will, if devoted to a water-power-cyanamide process installation, yield not over 20,000 tons of ammonia per year, and the probable needs of the government in the event of war have been estimated at 180,000 tons of nitric acid, corresponding to about 60,000 tons of ammonia.

"Germany makes all of her coke by the by-product process and therefore is unable to increase her ammonia output from coke ovens without increase in coke production; America, however, by turning still more from her coke by-product coking, can more than double her ammonia production without an increase of coke. Furthermore, the production and use of coke in America have every prospect of material increase, giving still larger ammonia production.

"The nitrogen reserves in the minable coal of the United States (not including peat) amount to 30,000,000,000 tons. The amount recoverable by present industrial methods of carbonization in ovens or gasifying in by-product producers is at least 6,000,000 tons. From the bituminous coal mined in the United States in 1915, 1,000,000 tons of nitrogen were thus recoverable, if all such coal had been coked or gasified.

"The apparatus and processes for recovery of fixed nitrogen from coal are not complicated, expensive, or impractical. Purification of the ammonia to any degree is practicable and not costly."

WASHINGTON GOSSIP

War Department Considers a Novel Steel Helmet

WASHINGTON.—The latest "engine" of military defense has been born in Washington. It is a combination steel helmet and trench digger, designed by Leonard D. Mahan, formerly in the United States army, now a member of the local police department detailed at headquarters.



Mahan's invention may result in the introduction of the steel helmet in Uncle Sam's army, for he has submitted his design to the war department, and it is now in the hands of the ordnance division.

The United States government has always barred the permanent steel helmet, which has been adopted as a part of the equipment of the European soldier, from the American army because of a belief that a permanent helmet was an unnecessary burden on the soldier.

Mahan hopes that his helmet will be adopted, however, for, he points out, it is not a permanent headgear and need only be worn while the men are under actual fire.

The new helmet would not do away with the present campaign hat. It is made of crucible steel and resembles the grocer's sugar scoop. When marching, the helmet could be carried as a part of the equipment, and while in camp it could be used handily as a digger, bailer, or even as a mess kit, Mahan believes.

Although Mahan does not assert that his helmet ever would do away with the regular trench-digging tools, he points out that in battle his helmet would protect the head and neck, and still not do away with the campaign hat.

Uncle Sam's Census Office Really Does Much Work

THE bureau of the census is now completing the manufactures census for 1914. This sounds as though the figures might be ancient, but how about the time when this census was made public five years after the work was undertaken, and then we thought we were lucky? As a matter of fact, very few of us realize the tremendous amount of work that is turned out by Uncle Sam's census office. In addition to the manufactures census and the general population census, many other censuses are undertaken at stated intervals, such as the tobacco census, now taken four times a year.

The work of this division of the federal government, now the greatest statistical office in the world, represents the outgrowth and development of a century and a quarter of periodical, and, in recent years, continuous, statistical inquiry.

While various labor-saving machines have been installed by the government from time to time, there is, perhaps, no bureau of the entire fabric of federal work that has benefited more by the use of modern machinery. In fact, the census office is doing today with the use of machines what would be absolutely impossible if hand labor had to be employed. From time to time various reforms and improvements have been inaugurated in this office, and at present the current work on all lines is practically up to date—a condition which has not until recently existed during the bureau's history.

According to officials of the bureau, the first use of mechanical appliances in the compilation of census data was made during the closing months of the work on the census of 1870, when a simple tallying machine was employed with good results.

At the census of 1890 there was introduced a card system of tabulation, which, with modifications and improvements, is still employed. These cards are punched by what is known as a verification machine, which is almost human in its work, throwing out all cards with errors. Following this, the cards are put through an automatic sorting machine which takes care of some 300 cards a minute; following which the card is placed in still another machine, which counts them at the rate of 500 a minute, purely automatically, and finally they are put into still a fourth machine, which records each item of information indicated on the card.

Great Variety of Domes in the National Capital

WASHINGTON possesses an unusual number of domed buildings. The student or lover of architecture finds here not only a great many, but a great variety of domes. It is extraordinary that examples of all the domes of the favorite schools of architecture are grouped within the limits of this city.



Needless to say, the capitol dome is Washington's dome par excellence. Its size alone gives it pre-eminence, and its beauty ranks it among the great domes of the world. The framework of this dome is of iron and it weighs nearly 9,000,000 pounds.

The keynote of its impressiveness is its massiveness; its curving sides, encircling rows of columns, variously shaped windows and graceful segmental ornamentations will always be only adjuncts to its impressive feature—its size. In height the capitol dome reaches 287 feet into the air; its greatest diameter is 135 feet.

Washington's most beautiful dome surmounts the Library of Congress. This has a diameter of 100 feet, making it almost as large as that of the capitol; but, of course, one would certainly say that it is a much smaller dome. This is due to its shape. The library dome is an Italian renaissance type and is a flattened spherical vault. It is built of stucco applied to a framework of iron and steel, filled in with terra cotta. The domed roof is sheathed with copper, and over this is laid the coating of gold leaf, 23 karats fine.

As far as ornamentation goes, this dome is the most exquisite in the United States. The interior walls are superbly painted and adorned with arabesques.

The National museum possesses a dome neither huge nor extremely ornate; yet it is one of the most pleasing domes to the architectural eye that is found in the city. It recalls the dome of the Pantheon at Rome; in the matter of contour they are quite similar.

These are Washington's three official domes. In addition to them are several church domes of large dimensions and varying ornateness. The Jewish synagogues of the city give a Byzantine touch to the capital's architectural horizon. The synagogue at the corner of Sixth and I streets has the true Arabian dome.

Washington Discovers It Has an Official Motto

"JUSTITIA Omnibus." Discovered; the motto of the city of Washington. D. J. Donovan, secretary to the board of commissioners, recently received from Edwin F. Manchester a letter inquiring whether it was true that Washington is the only city in the United States without a motto.

Secretary Donovan frankly admitted that he didn't know. Neither did several other officials. But not so Dr. William Tindall, assistant secretary. Doctor Tindall has written a history of Washington dating back to the time when the town pump was located at Fourteenth street and Pennsylvania avenue, so he ought to know.



"Justitia Omnibus" (Justice for all), is Washington's motto. The legislative assembly on August 31, 1871, passed an act prescribing a design for the seal of the District of Columbia. The legendary inscription on the seal is "Justitia Omnibus." This, Doctor Tindall says, is obviously the motto of the city of Washington and the District, though Washington is only a geographical designation of a portion of the District, and has been so since February 21, 1871.

THE Significance of Good Digestion

is strongly reflected in your general health and happiness.

For any digestive weakness, liver and bowel trouble or malaria, fever and ague

You should try

HOSTETTER'S Stomach Bitters

Cold Reception. "From the days of my childhood," said Sir Knight Stanzie, "I was ambitious to tread the boards, and when I finally butted in among the stage scenery, I felt that I was really due." "Well, how about it?" queried the great tragedian, Count DeFies. "Alas, I was mistaken," continued the near actor. "Before I had played one consecutive night I discovered that instead of being due I was a frost."

A GRATEFUL OLD LADY.

Mrs. A. G. Clemens, West Alexander, Pa., writes: I have used Dodd's Kidney Pills, also Diamond Dinner Pills. Before using them I had suffered for a number of years with backache, also tender spots on spine, and had at times black floating specks before my eyes. I also had lumbago and heart trouble. Since using this medicine I have been

relieved of my suffering. It is agreeable to me for you to publish this letter. I am glad to have an opportunity to say to all who are suffering as I have done that I obtained relief by using Dodd's Kidney Pills and Diamond Dinner Pills. Dodd's Kidney Pills 50c per box at your dealer or Dodd's Medicine Co., Buffalo, N. Y. Dodd's Dyspepsia Tablets for indigestion have been proved. 50c per box.—Adv.

FULL OF SPIRIT OF REVOLT

Deep Feeling Against Injustice Was a Factor in the Career of Bobbie Burns.

Revolt was temperamental and chronic in Burns. Sometimes this revolt was followed by a reaction of feeling; then the baffled rebel could only fall back upon resignation, upon a fatalism that soured the heart and turned mirth to melancholy, upon a pessimism that closed all doors of hope for the poor with "added proofs that man was made to mourn," and "death the poor man's dearest friend, the kindest and the best;" but this revolt was a constant factor in Burns' career.

It made him the fiery democrat, the Whig partisan; it got him into trouble by tempting him to approve in public of the earliest outbursts of the French revolution.

And yet revolt was restrained in him by profound insight of the law of compensation. He perceived that honest poverty, clean, well-mannered, blessed with reverence, was never the fit object of pity, for the poor, on the average, were more happy than the rich.

Motor cars fitted with X-ray apparatus are used extensively by the French Red Cross society.

Douglasville, N. J., has a dwelling occupied continuously for 200 years.

When The Doctor Says "Quit"

—many tea or coffee drinkers find themselves in the grip of a "habit" and think they can't. But they can—easily—by changing to the delicious, pure food-drink,

POSTUM

This fine cereal beverage contains true nourishment, but no caffeine, as do tea and coffee.

Postum makes for comfort, health, and efficiency.

"There's a Reason"

WEAR "Y" ON STOCKINGS



Not to be outdone by the fair Misses of Harvard, Yale's fair rooters have decided on a Y for their stockings. In this way Yale hopes to offset the effect of the Harvard brand of rooting in the big game. When the big game opens the two rival teams will be represented by fair rooters with hose adorned with emblems. These new college stockings which originated at Harvard threaten to be taken up by girl rooters of all the colleges. The effect of the girl rooters urging their team on to victory in the big game promises to cause a sensation.