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PACK ARTILLERY PROGRESS

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PACK Artillery in our army undoubtedly possesses the unique distinction of having been permitted to exist for a number of years largely on the grounds of sentiment and faith. The sentiment was that of a great number of now senior officers, who had served with either the Fourth or the old Second; the faith was that of many officers who believed that Pack Artillery could be so armed and equipped that it would have a place in a modern army.

The first problem in the rehabilitation of the Pack Artillery was to get a gun comparable to those of the other classes of Field Artillery. The solution of this problem resulted in the 75-mm. pack howitzer M-1923, which is acknowledged by both the faithful and the unbelievers to be a truly remarkable weapon. In 1927 Battery "B" of the Fourth conducted firing tests and a 500-mile march with the new gun. As a result of these tests the gun has been adopted and, when funds are available, will be used to rearm the Pack Artillery. It is anticipated that rearmament of the 4th Field Artillery Battalion will be completed in 1929. The Marine Corps has also adopted the new howitzer and is having twelve of them built for their artillery.

Having secured a modern weapon, the next problem was to devise a reasonably reliable pack saddle to carry it. The new howitzer did not of itself necessitate a new pack saddle; it can be, and has been, transported on the old aparejo. But there did exist a real need for a satisfactory pack saddle, a need felt throughout the Army. That the aparejo was not satisfactory can hardly be denied. It was used primarily because it was, until recently, the best pack saddle known to our Army. Since the World War much time and thought has been spent on developing something that would be more satisfactory. Colonel A. E. Phillips of the Cavalry has been one of the leaders in the good cause, and it is his pack saddle that has been adopted by all branches of the service except the Field Artillery. However, it has been in use in Battery "C" of the Fourth since 1923 and in its latest form is now, in conjunction with the new gun, being given a 500-mile test march by Battery "B," 4th Field Artillery.

Before passing on to the details of the test march, it might be well to review briefly the characteristics of the aparejo and of the Phillips pack saddle.

The aparejo is essentially a pair of large leather bags stiffened inside by vertical sticks or ribs and stuffed with hay to provide a cushion effect on the animal's back and sides. This contrivance is held in place by means of a wide canvas cincha passing entirely around the saddle and the barrel of the animal. The cincha, when properly placed, prevents any rearward movement of the aparejo. To prevent any forward movement a wide crupper passes from the sides of the aparejo around the animal's quarters, the greatest part of the holding effect being in a dock piece fitting snugly under the animal's tail.

Even assuming that the aparejo was designed on correct principles, it possesses three distinct disadvantages that alone preclude its use in an emergency: after being issued it must be stuffed and fitted to the animal; it can be used only on the animal to which it is fitted; and it requires an expert to fit and maintain it properly fitted. Only those who have served with the packs can realize the tremendous amount of time and skill required to fit and care for aparejos or the difficulty of training men for that purpose; expert handling is not merely a desideratum but a vital necessity if a pack outfit is to remain operative in the field. In general, a pack battery is lucky to be able to boast a good packmaster and a promising understudy, as there will be no other men possessed of the requisite expertness and long years of experience.

In discussing the merits of the Phillips saddle it must be borne in mind that definite conclusions as to the virtue of some of the claims made in its behalf must await completion of the test march. However, it possesses six advantages over the aparejo: it is issued ready for use; by simple attachments to the frame it can be used for a wide variety of loads now requiring special frames; it will stand much rougher usage without losing its shape; the cinchas can be adjusted without removing the load; it is lighter; and it is cheaper. From the above list, it will be noted that this saddle incorporates several characteristics that are prime requisites in any article of equipment to be issued to hastily raised troops in an emergency. The important unproved advantages claimed are that it does not cause injuries; that it does not hinder the natural movements of the animal; that it may be changed from one animal to another without refitting; and that it does not require anything like the same degree of expertness and experience in its handling as the aparejo. All these claims have been substantiated in other branches of the service and, were it not for the great weight and peculiar nature of the loads in the Pack Artillery, the present exhaustive test would not be needed to warrant the stamp of our approval.

The Phillips pack saddle consists of two large hair-stuffed felt pads held together by a light detachable frame. In lieu of a crupper, a breeching somewhat similar, at least in appearance, to

that of the artillery harness, limits forward movement of the saddle. The wide overall cincha of the aparejo is replaced by two hair cinchas attached on either side to the bottom of the saddle. In addition a light breast collar is provided but has not been found necessary for pack artillery animals moving at a walk.

The aparejo and the Phillips pack saddle are entirely different in principle as well as in construction. With the aparejo the weight of the load is carried not only on the back but well down the sides. In this type very tight cinching is required to keep the saddle in position against the animal's sides and to prevent overturning. The cincha is centrally placed so that pressure is exerted equally over the barrel. The animal is thus held in a corset-like grip between the aparejo body and the cincha. In the Phillips pack the weight is borne almost entirely on the back and cinching is therefore only tight enough to prevent overturning. With the double cinchas the forward one is adjusted so as to exert most of the pressure and the rear one only a negligible pressure. This method of cinching, with the cincha well forward on the saddle, is the same as that used on our riding saddles. The lighter and forward cinching naturally permits freer movement especially of the quarters.

The systems of breeching in the two saddles are also radically different. In the aparejo forward displacement is checked by the action of the crupper against the dock. In the other saddle it is prevented by a distributed force acting against the buttocks and croup.

Naturally, with the Phillips principles, sore tails, a common trouble with the aparejo, are eliminated, and side and belly injuries minimized because of the much lighter pressure exerted against those parts. Whether the increased pressure per unit of back surface will result in injuries compensating the benefits gained will not be discussed until the final results of the present test are obtainable.

The first lot of Phillips saddles issued to the Field Artillery were tested by an earlier Pack Artillery Board in 1923. In general the board found this saddle superior to the aparejo but recommended several changes which were incorporated in six new saddles. As a result of observation of these six saddles, twelve more were made up according to the specifications of the board. It is these twelve together with six each of the two types constructed according to Colonel Phillips' ideas that are now undergoing test on the 500-mile march.

The chief differences of opinion between the former board and Colonel Phillips lie in the method of cinching and in the adjustment of the breeching. The board advocated the overall cincha and construction of the breeching so that the applied force would act horizontally against the animal's buttocks. Colonel Phillips argued that his method of cinching was not only easier on the animal but

equally efficacious and that the force of breeching should be applied from the saddle in a slightly upward direction so as to be distributed over both the croup and buttocks. That the views of the present Pack Artillery Board are in conformity with those of Colonel Phillips will be commented on below.

At first a further divergence of opinion existed as to the proper height of the saddle. The board recommended that the height of the sides be increased from 22 to 25 inches. Colonel Phillips considered the increased height unnecessary and a useless addition of weight. However, since constructing the saddles to the specifications of the board, he has come to the conclusion that the added gripping and bearing surface is advantageous with heavy loads. Twenty-five inches has therefore already been adopted as the height for cargo and artillery saddles, the smaller saddle being retained for lighter loads as in the Cavalry.

As stated above, the results of the first test inclined the board to favor the Phillips saddle with changes. However, the Chief of Field Artillery was not satisfied that it had been definitely proven superior to the aparejo for artillery use. He accordingly directed that a further comparative test be made on a 500-mile march, to be held during hot weather.

The experimental equipment was received last winter at Fort McIntosh, Texas, by the 4th Field Artillery Battalion. This consisted of twelve saddles according to the views of the earlier board with overall cinches, horizontal breeching adjustment, and 25 inches in height; six saddles according to Colonel Phillips' ideas with double hair cinchas; sloping breeching adjustment and a height of 22 inches; and six saddles identical with the other six except for being 24 inches in height. Due to the change of station of the Fourth it was impossible to conduct a test of this equipment until after arrival at Fort Robinson, Nebraska. Toward the end of June the battalion was sufficiently settled to permit breaking out the new saddles and preparing for the test.

The primary purpose of the test was to be a comparison between the aparejo and the Phillips pack saddle as to carrying qualities, ease of fitting and adjustment, and relative injuries resulting from the two types.

In addition to the general comparison of the two saddles it will be recalled that several points remained to be settled with regard to the Phillips saddle. These were roughly: the type of cinching, the method of breeching, the height of the saddle, the amount of fitting required for various animals, and the expertness required in handling.

During the conditioning of men and animals, members of the board were generally present on the daily practice marches. As a result of this observation and prior to the beginning of the 500-mile

march two important conclusions were reached. It was found that the Phillips saddles with the overall cincha worked forward on the mules' withers, while those with Colonel Phillips' method of cinching did not. It was also found that the method of breeching advocated by the earlier board was not satisfactory. The overall cincha was therefore replaced by double cinchas and all breechings changed to conform to Colonel Phillips' ideas. As noted above, the board and Colonel Phillips were already in accord on the height of the saddle, namely, 25 inches. Having eliminated these points of difference, the board and Colonel Phillips were in entire agreement on all points as to the best type of his saddle. Therefore, there remained to be determined only the relative merits of his saddle and the aparejo.

During the delay in holding the test several other items of experimental equipment were received.

Among these items were two types of ammunition boxes. These were shipping boxes adapted to packing, thus eliminating the necessity for transferring rounds from the shipping box to special ammunition chests as now provided in the Pack Artillery. At an early date it was found that one of the two types was of too light construction throughout. On the other type the adapters for hanging the box on the saddle frame were weak and broke after a few practice marches.

Another special item was a Cavalry pack cooking outfit. This outfit is much lighter and more compact than the present Mountain Artillery outfit. The main point in question is that of cooking capacity. Present indications are that with the addition of two more boilers the Cavalry outfit will be ample for a battery of Artillery.

A third item of equipment is a new wire pack consisting of two large spools carried as side loads. It is not desired to go into the details of the various wire packs as a full discussion would be material for a separate article. However, the final results of any wire pack test should be of interest to all field artillerymen as indications now point to the adoption of wire packs for forward communications even in the Light Artillery.

In order not to introduce too many possibly confusing details in the descriptions of the aparejo and the Phillips saddle no mention was made above of the types of blankets or pads used. It is felt that at this point some mention should be made of these accessories. With the aparejo a corona or canvas-lined pad and a regular saddle blanket are used. These articles have been replaced with the new saddle by a single pad of mohair. This pad is light and cool and shapes itself immediately to the conformation of the animal. In general it is an excellent article and apparently provides sufficient padding between the saddle and the pack.

Throughout July the battery conducted daily practice marches to harden men and animals and to enable the board to make such observations as might be possible. During this period the board settled upon a distribution of saddles to the best advantage. The final plan was to equip two gun teams with the 25-inch Phillips saddles, with the remaining saddles distributed throughout the same two sections and the maintenance section. The other two gun sections were equipped with aparejos. Some aparejos were also used in the maintenance section. It was believed that this distribution would best permit a comparison of the two types of saddles. For the last week of preparations, Colonel Phillips was present and gave valuable assistance and instruction.

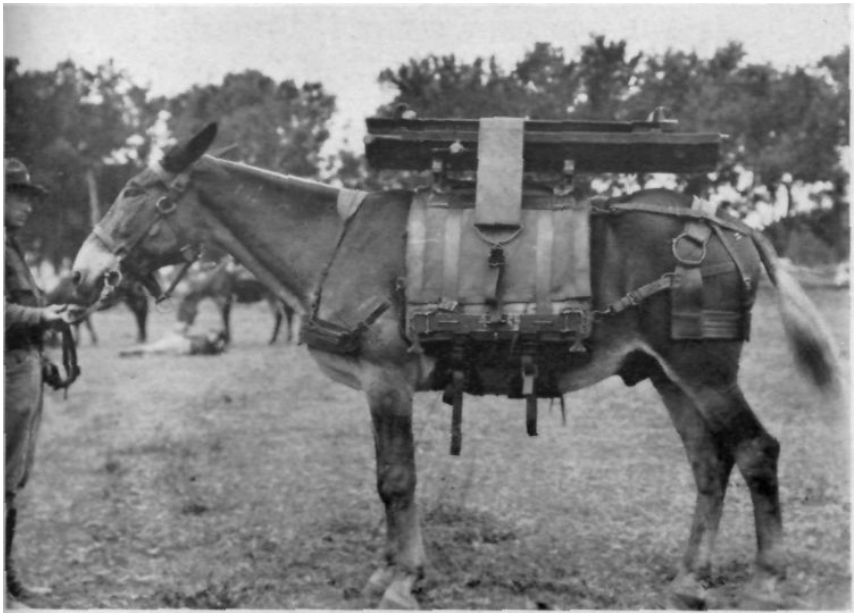
While the battery was conditioning there were a great many details to be settled. The itinerary selected was roughly a march to Fort Meade, South Dakota, of about 175 miles, a loop of 150 miles out of Meade through the Black Hills and the return march from Meade to Robinson. The country covered is ideal for hiking and quite a contrast to the country with which the Fourth was familiar after its long tour in Texas. Needless to say, because of the route selected, the hike was popular from its inception.

The one drawback to the route was the difficulty of supply. As no motor transportation was available, a minutely detailed plan of supply, largely by rail, was evolved and finally approved together with the necessary funds. The battery was able to carry only two day's rations and forage, so that it was impossible to go more than a day's march from a railroad except for the first few days where it was possible to supply by wagons from Fort Robinson.

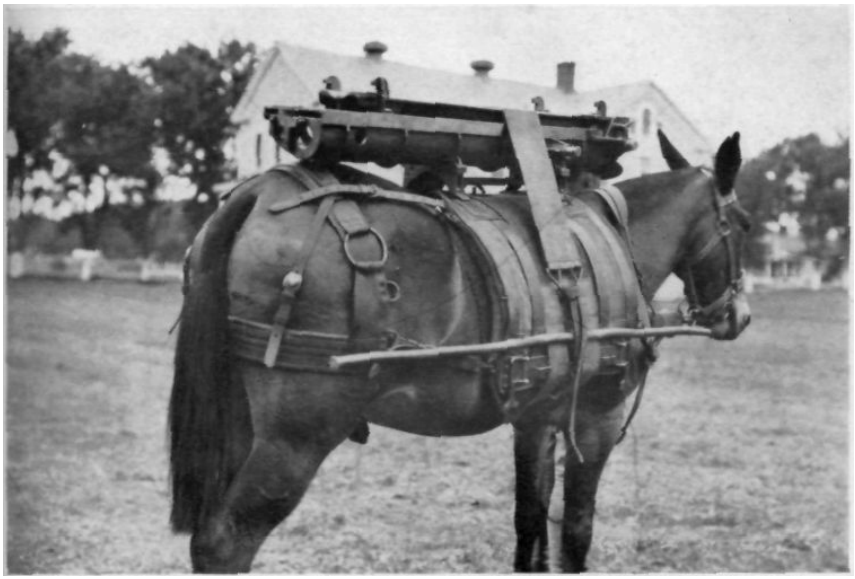
After much G-4 work, the stage was finally set and the Battery moved out of Robinson on July thirty-first. With the battery went a section of the Combat Train to act as a supply train. The entire expedition consisted of six officers, one hundred and twelve men, not to mention a Marine Corps Sergeant, three wagons, and one hundred and forty-four animals. Among the six officers were Colonel Phillips and Captain L. L. Leech of the Marine Corps, as observers. The Artillery officers were Captain J. W. Russey and Lieutenant S. S. Koszewski as battery officers and members of the board, Captain L. V. Warner as a member of the board, and Lieutenant W. M. Creasy as supply officer.

While sufficient reports on the test are now available to warrant additional comments on the experimental equipment, it is felt that such comments should be withheld until a complete and final discussion is possible.

As this article is being completed, the battery is within a few days of its homecoming. The march appears to be not only a success but a pleasant expedition as well.



PHILLIPS PACK SADDLE IN CONFORMITY WITH THE VIEWS OF COLONEL PHILLIPS AND THE PRESENT PACK ARTILLERY BOARD. NOTE DOUBLE HAIR CINCHAS AND SLOPING POSITION OF THE HOLDING STRAP CONNECTING SADDLE WITH BREECHING.



PHILLIPS PACK SADDLE AS RECOMMENDED BY THE EARLIER PACK ARTILLERY BOARD. NOTE OVERALL CINCHA AND HORIZONTAL POSITION OF HOLDING STRAP CONNECTING SADDLE WITH BREECHING BODY. THE PACK HAS SLIPPED FORWARD DROPPING THE LOAD ON THE MULE'S RUMP.