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Hidden in plain sight: the beginnings of French chemical warfare in Morocco's Rif War (April–July 1925)

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This article reconstructs the early storage and use of chemical agents (chloropicrin, phosgene and mustard gas) by the French army in Morocco's Rif War (1921–1927). Hitherto, most historiography about the French involvement in this conflict basically has omitted or denied the question of gas use, though in recent years there have been more nuanced approaches which have either admitted it or documented the intention of using that weapon. This research shows how the beginnings of French chemical warfare in Morocco took place in the context of the Riffian offensive of April–July 1925 against the line of advanced outposts north of Fez. The army first used chloropicrin gas that may have been stored in Morocco since late 1918, a moment in which parallel insurrections in the northern (Rif) and south-eastern (Tafilalet) regions of the Protectorate seriously threatened French rule. Later, after repeated demands by the High Commissioner, Marshall Hubert Lyautey, the French metropolitan government dispatched 10,000 shells loaded with phosgene and mustard gas from the World War I stock, which were shipped from Marseille to Kenitra and stored near the front. Documentary evidence to support these findings has been gathered from French, British and international organizations' archives, as well as US, French and British newspapers. This pathbreaking investigation adds to the factual history about the frequency of gas use as well as to the historical debate about the efficacy of the 1925 Geneva Gas Protocol to prohibit the use of chemical weapons.

KEYWORDS

chemical warfare, France, Morocco, Rif War, 1925, chloropicrin, phosgene, mustard gas

1 Introduction

In 1990, Rudibert Kunz and Rolf-Dieter Müller revealed that the Spanish army had purchased German chemical weapons for use in Morocco's Rif War (1921–1927). Since then, historians have divulged multiple aspects of Spain's gas warfare in its North African Protectorate (Kunz and Müller, 1990; Pando, 1999; Balfour, 2002; Madariaga and Lázaro Ávila, 2003; Kunz, 2004; Raha et al., 2005; Sasse, 2006; Pita, 2012; Manrique and Molina, 2012; Albert, 2015; Muñoz, 2015; Martínez, 2022). By contrast, its eventual utilization by France, whose surreptitious involvement in the early stages of the war would be followed by a hurried mobilization of 200,000 men in 1925–1926, has not been explored seriously. In general, the few studies dealing with the “French Rif War,” either as an integral part of the conflict, or as a side episode of the main confrontation between Spaniards and Riffians, have omitted or explicitly denied the hypothesis that France used gas. The first option can be found in publications on the role of French aviation, such as those by Simone Pesquies and Gilles Krugler; in a study on French military strategy by Jan Pascal; in a book by Dirk Sasse on

Europeans and other foreigners who fought in the service of the Riffian leader Muḥammad bin ‘Abd al-Karīm al-Khaṭṭābī (shortened in French to Abdelkrim); and in studies on the French-Riffian conflict in general by Frédéric Danigo and Max Schiavon (Pesquies, 1990; Sasse, 2006; Pascal, 2009; Danigo, 2010; Krugler, 2012; Schiavon, 2016). Explicit denial can be found, for example, in the pathbreaking volume *Abdelkrim et la République du Rif* (1976), a compilation of papers and debates by an impressive list of young historians who became experts in Moroccan studies, such as Charles-André Julien, Daniel Rivet, Abderrahman Youssef, María Rosa de Madariaga, Daniel Guérin, Charles-Robert Ageron, David Montgomery-Hart and others. The volume, which contained, perhaps for the first time ever in historical literature, allusions to the Spanish use of gas in the conflict, suggested that this must “have very much weighed on the physical condition and the morale of Riffians” ([n.a.], 1976, p. 127). It claimed, however, that the French possessed a different outlook:

“In January 1925, [the High-Commissioner, Marshall Hubert] Lyautey stressed again the clear distinction made by Moroccans between the occupation methods of the two powers [France and Spain], and, pointing to the considerable emotion felt by Moroccan opinion on the occasion of the [Spanish] bombardment of the Andjera [tribe] with asphyxiating gas, he concluded: ‘Moroccan opinion observes [...] that France has never used such methods with dissidents’” (Ibid., p. 96).

In between these opposite stances of omission and denial, more nuanced accounts have emerged. On the one hand, some studies have admitted that France also used gas in the Rif but provide scant documentary evidence for that use or fail to develop even a basic analysis of the question (when, where, how, what types of gas were used). The best-known case is that of the comprehensive investigation, *The problem of chemical and biological warfare*, published by the Stockholm International Peace Research Institute (SIPRI). In the first volume, “The rise of CB weapons” (1972), dedicated to chemical warfare in World War I (hereinafter WWI) and the armed conflicts of the interwar period, the authors made only the following statement in relation to the Rif War: “The French also were alleged to have used gas during the Moroccan wars, on the northern front around Fez, a few months later [summer of 1925]. The latter allegation was strongly denied by the French War Office” (SIPRI, 1972, p. 142). The evidence supporting these claims was a short piece of news published in *The Times* on 22 July 1925 on the occasion of Marshall Philippe Pétain’s visit to the war front (Ibid., p. 362). A more recent example is Arnaud Lejaille’s blog “*La guerre des gaz*” (2003), in which this French pharmacist and amateur historian compiled data and documents on the manufacture and use of chemical weapons by France between WWI and WWII. In the blog section “*Les Services chimiques dans l’entre-deux guerres*,” Lejaille stated that “the French army is strongly suspected of having used mustard gas and phosgene” in Morocco and that “allegations of the use of chemical weapons point to the Fez region in 1925” Arnaud Lejaille’s blog *La guerre des gaz* (2003). However, the evidence he provided was limited. He referred to the allusion made in a book by the aforementioned María Rosa de Madariaga that “in 1925, Lyautey would have requested the prime minister Paul Painlevé to send mustard gas shells” to French Morocco (Madariaga, 2009). He also cited two archival documents handed to him by an anonymous “Mr. XXX, du SHD [*Service Historique de la Défense*, Vincennes, Paris]” showing

that the Ministry of War and the military administration of the French Protectorate requested chemical ammunition and gas masks:

“A document dated May 23, 1925, from Paul Painlevé, then Prime Minister and Minister of War, addressed to the commander of the E[tablissement de] R[eserve] G[énérale de Munitions] at La Ferté Hauterive, requests the shipment of 2,000 75mm shells loaded with phosgene and 2,000 shells loaded with mustard gas to the Casablanca regional artillery park. A second document [by the French Protectorate military authorities] requests the urgent shipment of 40,000 ARS masks, 500 pairs of mittens and 600 overalls for protection against mustard gas” (Lejaille, 2003).

Finally, Pascal Daudin, in an article on the military and humanitarian aspects of the Rif War, affirmed that “the French army also ordered and stored mustard gas shells, although it is not clear where and how they were deployed” (Daudin, 2023). A second group of accounts present robust documentary evidence of French intentions to use chemical weapons in the Rif but end up by concluding that those intentions never materialized, however close they came to becoming a reality. This line of argument can be found in Vincent Courcelle-Labrousse and Nicolas Marmié’s *La guerre du Rif. Maroc, 1921–1926* (Courcelle-Labrousse and Marmié, 2008). The authors devoted a chapter of this pathbreaking book to the “obus no 20,” the code name used by the French army to refer to howitzer shells loaded with mustard gas, listing all seven times (May 4, 7, 11 and 25; June 6, 7 and 19, 1925) the High Commissioner Lyautey requested them, along with aviation bombs also filled with mustard gas, from the Prime Minister and Minister of War Paul Painlevé. Only the May 11 request prompted Painlevé to issue a dispatch order 9 days later, though he finally cancelled it. Thus, the authors concluded that “it is not proved, in the actual state of research, that the French army used these special gases” in Morocco (Ibid., p. 222). Oliver Lion, an expert in chemical, biological, radiological and nuclear weapons of the French army, made the same statement in an article examining chemical warfare in asymmetrical conflicts of the twentieth century: “at this moment, it is not proved that stocks of special shells were set up and that French troops used chemical weapons in Morocco” (Lion, 2009).

Based upon new findings in archives including the *Service Historique de la Défense* (Vincennes, Paris), the *Archives Nationales de France* and the UK National Archives (London), this essay attempts to confirm that the French army stored and used chemical weapons during the Rif War. To do so, the essay focuses on the phase of the conflict in which the Riffians launched a massive offensive against the French Protectorate from mid-April to late July 1925. First, it will examine the use of chloropicrin gas in the military supply operations and evacuation of the French advanced outposts located north of Fez. Second, it will study the dispatch of phosgene and mustard gas shells from the metropolitan WWI stock towards the French Protectorate in June–July 1925, with a view to their employment in the Spanish-French counteroffensive scheduled for September. Beyond these factual contributions, the essay will also engage with more general issues, such as the seeming contradiction between France’s gas warfare in Morocco and its simultaneous advocacy of chemical weapons’ prohibition in the Geneva Conference of May–June 1925. Finally, it will contribute to the historiographical debate about the continuity or disruption in gas use after WWI by demonstrating that there were periodic calls for the use of gas in the mid-1920s.



FIGURE 1
Map of the division of Morocco 1912–1956. Source: Perry-Castañeda map collection, University of Texas Libraries, University of Texas at Austin.

2 The French Rif War

France's involvement in Morocco long predated the establishment of its Protectorate in 1912. The so-called "Moroccan question," i.e., the international struggle for the colonization of the North African sultanate continued for much of the nineteenth century and never resulted in a single European power gaining exclusive control over the "Far West" of Islam¹ (Pennell, 2000; Miller, 2013). The Algeiras Act of 1906 seemed to simplify the

problem by giving only France and Spain authority to carry out administrative and economic reforms in the name of the Sultan in two "zones of influence," although they were largely dissimilar in size and importance (see Figure 1). However, the agreement nominally preserved the sovereignty of the Sultan. It left Tangier outside both zones, paving the way for its eventual transformation into an "international city" under a separate regime. It also provided countries such as the United States, Germany and the United Kingdom with legal arguments for continuing to take commercial and diplomatic actions in the "zones of influence" that became the French and Spanish protectorates from March and November 1912, respectively, (Stuart, 1931, pp. 76–80). German objections, for example, resulted in it sending the cruiser *Panther* to Agadir in 1911 and in France's concession of a large part of Cameroon as compensation (Akmir, 2011). Both France and Spain were disappointed deeply and retained hope of displacing each

1 In the Arabic-Islamic world, Morocco was traditionally known as "Maghreb al-Aqsa," which literally means, "the Far West," by contrast with the rest of the Maghreb and with the Mashreq (the East) represented by Egypt and the Middle East at large.

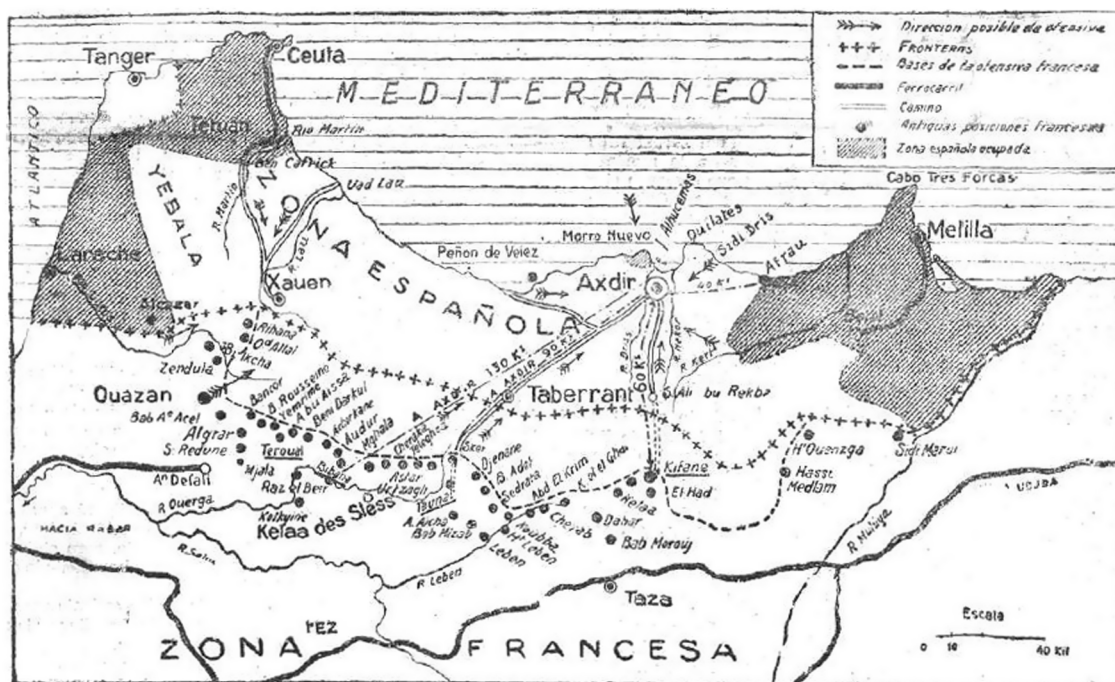


FIGURE 2

Map of the French Rif front with key advanced outposts. Source: *La Correspondencia Militar*, September 22, 1925. Imagen procedente de los fondos de la Biblioteca Nacional de España.

other (and, ideally, other international actors) from Morocco to achieve exclusive control of the country (Martínez, 2017a, 2017b). This “*méfiance cordiale*” (Delaunay, 2011) between both European powers led to relentless competition and intrigue.

The occupation of the northern Rif region by France and Spain came to symbolize the persistent international interference in Morocco and the detrimental effects of the lack of collaboration between them. Most of this abrupt and poor, albeit densely populated region was located within the Spanish Protectorate. The Spanish army, based in the enclaves of Ceuta and Melilla, had long faced armed resistance by their inhabitants, fighting outright battles in 1860 and 1893 (Madariaga, 2005). Following the Algeciras Act, the military occupation of the Rif proceeded slowly and was costly in human and economic terms. Domestic problems and international isolation help explain Spain's failure to access the region by 1921, as does France's military inaction as well as international Tangier and French Algeria's tolerance of the movement of people and goods (including smuggled guns) towards the Rif (Correale, 2014). Regardless, France could not postpone indefinitely its efforts to occupy the smaller Rif zone located within its Protectorate, which stood dangerously close to Fez and the main line of communications between Algeria and Morocco. Furthermore, because Spanish authorities did nothing to stop the incursions into the French Protectorate promoted by German-backed leaders Abdelmalek and Raisuli during WWI, Lyautey's initial strategy of letting Spain carry the weight of military operations against the Riffians was endangered (Usborne, 1936, pp. 222–229).

Events took a more favorable turn for the French with the end of the world war, especially when a Riffian uprising led to 10,000 Spanish dead in the so-called Annual Disaster of July–August 1921 and inspired an internationally publicized proclamation of an independent “Rif Republic” in January 1923. In that early phase of the Rif war, Lyautey played an

ambiguous game: while Riffian leaders were allowed to travel abroad, even to France, and to smuggle all sorts of products across the Algerian-Moroccan border, French troops surreptitiously occupied Rif areas which had remained beyond control previously. The establishment of dozens of military outposts in the high valleys of the Ouergha and Leben rivers (see Figure 2), the fertile granary from where the Riffians obtained their food provisions in the winter, led to an escalation of hostilities to which the French responded with an increased use of artillery and aviation. By the end of 1924, after Spain's dictator, General Miguel Primo de Rivera, had withdrawn most of the Western Spanish Protectorate's troops to the coastline, Lyautey feared that the Riffians might turn their forces against the French, but his requests for reinforcements fell on deaf ears (Courcelle-Labrousse and Marmié, 2008, pp. 142–145). Even at that early date, the toll of the Rif War for France was substantial: 1,599 dead, 2,752 wounded and 201 missing.² The worst, however, was yet to come.

3 Gas against the Riffian offensive (April–May 1925)

3.1 News matter

The reliability of the press in detecting gas use during the Rif War is a lesson to be learned from the historiography on Spanish chemical warfare in Morocco. Almost every time newspapers or magazines

² “Balance sheet of casualties. Years 1921–1922–1923–1924.” Service Historique de la Défense (henceforth, SHD), Fonds Maroc, 3H273.

GAS AND PLANES PROVE FIASCOS IN MOROCCO WAR

BY HENRY WALES.

[Chicago Tribune Press Service.]
[Copyright: 1925: By The Chicago Tribune.]
PARIS, May 30.—New school theorists of modern warfare who urge the exclusive use of gas and aviation have suffered a severe setback in the French campaign in Morocco, where military experts found that the old reliable infantry and artillery (particularly field guns) remain as the supreme fighting weapons.

Despite the fact that the enemy did not possess gas masks to protect himself from the deadly fumes and had

for special cases" and dooms them never to supplant the old standard fighting arms.

Airplanes and Gas Fail.

"Abd-El Krim's troops are trained in the latest tactics of warfare and they fight in relatively close formation in some assaults," said a military attaché of a certain great power, who has witnessed some of the operations against the Riffians, "but they are absolutely unequipped against the two greatest bugaboo about which youthful officers are boasting so much at home—gas and airplanes. The French tried gas shooting against some Riffian columns, but this was ineffective because they were not able to obtain sufficient concentration to give deadly intensity to the gas."

"Airplane attacks were an even greater fiasco. Riffian riflemen hid behind rocks until the pilots dived too low and then opened fire, succeeding in bringing down a number of French machines. The bombs which the French dropped did not cause much damage anywhere."

FIGURE 3

Article published by Henry Wales on the use of gas by French troops on the Rif front. Source: The Chicago Tribune, May 31, 1925.

published information about this issue, chemical weapons actually had been employed in combat. Certainly, journalists were often unable to determine the exact moment of release, the specific type of gas, the effects on the enemy; etc. Despite this, the news, albeit rare, about gas use constitutes highly valuable sources for historians. That is why Paris-based correspondent Henry Wales' May 31, 1925 article in the US newspaper *The Chicago Tribune* (hereinafter, *Tribune*), "Gas and planes prove fiascos in Morocco war" (see Figure 3) should be taken as credible proof of the French use of gas in Morocco (Wales, 1925a). Thanks to its correspondents in Paris, London and eventually Morocco, the *Tribune* was one of the first international newspapers to report on France's difficulties to check the Riffian offensive against its Protectorate in the spring of 1925 (Martínez, 2017b). The attack had begun in mid-April with the occupation of the Beni Zeroual tribe and continued through that month with sieges of French outposts (Ibid., pp. 149–160). This "*guerre des postes*" progressed rapidly in May, with fighting at strategic points such as Taounate and Bibane. For example, Riffian trenches equipped with machine and field guns surrounded and blocked the latter outpost, requiring French infantry units to take great pains to supply its besieged garrison with ammunition, food and water, involving massive support by artillery and aviation. The relief operations were costly in human terms for the French. The first one of May 13 and the fourth and last one of May 25 led to 21 killed and 89 wounded, and then 109 killed and 300 wounded, respectively (Ibid., pp. 172, 186). Without further attempts to relieve Bibane, it fell to the Riffians on June 5 (Ibid., p. 200). By that time, the French had lost dozens of outposts with a balance sheet of over 400 dead, 1,400 wounded and 150 missing.³

Henry Wales' account of the use of gas was published in the *Tribune* on May 31, just a few days after the last siege of Bibane. The American journalist argued that contrary to the beliefs of "new school theorists of modern warfare who urge the exclusive use of gas and aviation" to achieve military success, these weapons had experienced

a "severe setback" in the operations against the Riffians (Wales, 1925a). Although these lacked masks to protect themselves "from the deadly fumes," gas had proved "useless." The French had had to rely on infantry and conventional artillery "with a little cavalry" to try and check their attack (Ibidem). Wales described the failure in this way: "The French tried gas shooting against some Riffian columns, but this was ineffective because they were not able to obtain sufficient concentration to give deadly intensity to the gas" (Ibidem). Wales did not witness the fighting, but he may have obtained his information from two sources. One was General Aldebert de Chambrun, the man in charge of military operations on the Riffian front at that time. A descendant of the Marquis of Lafayette, the French aristocrat and army officer who had fought for the independence of the United States, his penchant for this country was reinforced by his previous tenure as military attaché in Washington and his marriage to the American art patron Clara Longworth. The *Tribune's* special correspondent in Morocco, Larry Rue, interviewed de Chambrun in Fez on May 14 and, although the general made no comment on gas use, he may have confided it to the journalist, and then Rue to his colleague Wales. More plausibly, however, Wales' sources were British army officers visiting the Riffian front. These officers had been first noticed by another *Tribune* correspondent, John Steele, in a short news piece published on May 15. Steele reported that, to reciprocate an invitation to watch maneuvers of the British Navy, the French were "entertaining a large staff of British observers at the operations in Morocco." The North African campaign generated interest because, "besides being a real war on a small scale, [it] gives the French an excellent opportunity for testing out the new ideas of warfare" (Steele, 1925a). In his article of May 31, Wales described one of those British officers as "a military attaché of a certain great power, who has witnessed some of the operations against the Riffians" (Wales, 1925a), implying that the officer had given him the details on the use of planes and gas. The American journalist probably was referring to Major-General George Sidney Clive, military attaché in Paris since 1924 and a man who had also served as the first British military representative at the Permanent Advisory Commission for the Reduction of Armaments of the League of Nations (henceforth, LN) in Geneva in 1920–1922.⁴ Whatever the source, the revelation would not have been possible without the disorientation provoked by the success of Abdelkrim's offensive against the line of advanced outposts in the French Protectorate, as well as by the widespread belief of French authorities that this attack would nevertheless be easily and quickly halted. In the following months, the French exerted a much tighter control on information as well as on the movements of journalists, travelers and foreign military observers, to the extent of prohibiting or strictly supervising their visits to the theatre of operations.

Beyond its novelty, the news about gas use probably was judged of particular interest for *Tribune* readers because of the generally strained

³ "Graphic of casualties from April 15 to November 1, 1925." Archives Nationales d'Outre-Mer, Fonds Protectorat Maroc FP11 APOM 13.

⁴ "Collection Clive GS – Clive Lt. General Sir Sydney (1874–1959)." King's College London, Archive Catalogues. Available online at: <https://archives.kingscollections.org/index.php/clive-gs> (Accessed July 9, 2025); "Representation of Great Britain on the Permanent Advisory Commission for the Reduction of Armaments (1922–1927)." League of Nations Archive, Secretariat, Disarmament Section, Registry files (1919–1927), Disarmament, File R184/8/18937/247.

state of French-American relations. At that point of the interwar period, the two countries markedly disagreed on issues such as the French occupation of the Ruhr region in Germany and the pending repayment of French WWI debts to the United States (Gill, 1985). More specifically, the alleged use of gas in Morocco reported by Henry Wales took place precisely at the time in which the conference sponsored by the LN that led to the drafting of the *Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare* was being held in Geneva from 4 May to 17 June. It is unlikely that Wales' article had any influence on France's stance at the conference, but it exposed, willingly or not, the contradiction between its active role in convening the conference and promoting gas prohibition⁵ and its war conduct in Morocco. That contradiction resided at the core of the resulting Protocol, which focused on gas use in conflicts between signatory states, leaving aside irregular wars, social revolutions, or colonial uprisings. The Rif War arguably ranked among the former, not the latter. While the French and the Spanish took care to present the Rif War as a "police" operation aimed at restoring the Sultan's authority, the American and British press insisted on depicting it as a "real war on small scale," "a little war,"⁶ or even "the next war"⁷ and the Riffians tried to obtain recognition as an independent state from the LN or as "belligerents" from the International Committee of the Red Cross (La Porte, 2011; Martínez, 2016). In this way, the Rif War predated other conflicts of the interwar period such as the Second Sino-Japanese War, the Italo-Ethiopian War, or the Spanish Civil War, whose similarly irregular nature underlay the use of gas, as well as a degree of public knowledge and controversy about it and a failure of the Geneva Protocol to prevent or stop it.

3.2 The gas that was already there

The main objection that can be raised against the credibility of Wales' article is the refusal of the French government to send chemical weapons to Morocco despite Lyautey's insistent demands. As mentioned above, Courcelle-Labrousse and Marmié documented as many as seven dismissed requests for mustard gas between May 4 and June 18, 1925. However, such an objection can be overcome if one considers that the French army may have used gas previously stored in Morocco in Bibane and other outposts. The Italian historian (Correale, 2014) revealed in his monograph, *La grande guerre des trafiquants*, that Lyautey had first asked Paris for chemical ammunition as early as mid-1918. The timing coincided with the final period of WWI in Europe, when military incursions by Abdelmalek, grandson of the famous Algerian resistance fighter Abdelkader, and Raisuli, a shareef who controlled the strategic massif of Djeballa, launched from the Spanish Protectorate, severely disrupted the northern region of French Morocco. Spanish authorities tolerated these attacks, while German intelligence and the military advice of German deserters from the Foreign Legion

(Correale, 2014) aided them. The French could barely weather the storm because a sizeable portion of the Protectorate's military contingent had been dispatched to Europe to meet WWI demands. According to Correale, the "boiling Rif" posed such a serious threat that Lyautey finally decided to ask Paris for authorization for "the use of toxic shells in Morocco" (Ibid., p. 331). He knew first-hand the terrible effects of phosgene and chloropicrin because he had been Minister of War between December 1916 and March 1917; he had seen those gases used, even if he had not witnessed mustard gas, because the Germans had not released it until July 1917. The exact date of the High Commissioner's request is not known, but the War Ministry contacted him on August 5, 1918, to know "how many toxic shells he would like to receive for the occupation corps" (Ibid., p. 332). Lyautey replied, on September 14, asking for "2,000 toxic shells, of the 75 mm or 90 mm type, with instructions for their use and storage," arguing that "in certain particular cases, they could render aviation a good service." He also asked for gas masks "in order to avoid accidents that could result from the passage of our own troops through areas recently bombed with toxic shells" (Ibid., p. 334).

No archive records have been found that directly prove the actual shipment of that material. Indirect proof of its arrival in Morocco is, however, seen in Lyautey's plans to use gas in late 1918 to check insurrections not just in the north but also in the south of the French Protectorate. The High Commissioner's problems in the latter region remained forgotten until revealed in Paul Doury's *Un échec occulté de Lyautey. L'affaire du Tafilalet. Maroc oriental (1917–1919)* (2008). This book reconstructs the neglected story of how anti-French agitation in the Tafilalet region in the extreme southwest of Morocco forced the withdrawal of the occupying corps led by General Joseph-François Poeymirau from the oases of the same name in October 1918 (Doury, 2008, pp. 319–333). This critical situation, which added to the serious problems in the north, led Lyautey to admit that he "had considered and studied, in particular with Generals Poeymirau and [Charles] Aubert, commanding the two most important fronts of operations [Tafilalet and Rif], not only the use of toxic shells for artillery, but also that of gas emissions and toxic projectiles launched from aircraft" (Correale, 2014, p. 332). In effect, the widespread insurrection that followed the abandonment of Tafilalet led Poeymirau to suggest Lyautey, on December 2, 1918, that "it would be a good idea to bring in shells and asphyxiating bombs which, in the [Ziz river] valley as in the Reteb [plateau], could be very effective and would impress the populations who have heard about them and fear them" (Doury, 2008, p. 335). It seems reasonable to think that if Poeymirau was asking Lyautey for gas, it was because he knew of its arrival in Morocco. Whether or not that gas was used at that time in the Tafilalet or the Rif is a question that remains uncertain.⁸ Its storage in Morocco, however, would explain how gas could be used against the Riffian offensive of April–May 1925 despite the rejection of Lyautey's requests by metropolitan authorities.

⁵ France was one of the main promoters of the conference, though it also defended that the Protocol concerned only signatory states and that these had the right to retaliation (Ronzitti, 1989).

⁶ "France's little war." *The Manchester Guardian*, May 19, 1925.

⁷ "The next war is on." *The Chicago Tribune*, July 22, 1925.

⁸ Some authors have claimed that secret reports arrived in Spain on the use of gases in Fez in 1920, but they fail to provide documentary evidence (Manrique and Molina, 2012, p. 14).

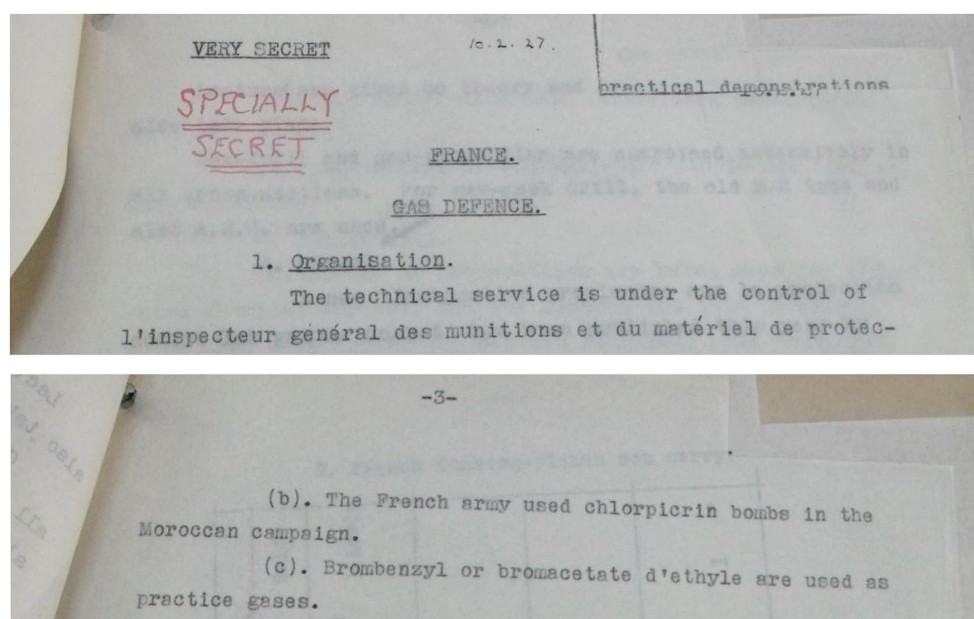


FIGURE 4

Fragments of a "specially secret" report on French "gas defence" with statement on the use of chlorpicrin in Morocco. February 10, 1927. Source: National Archives, UK.

3.3 Chloropicrin for all, all for chloropicrin

Henry Wales' article in the *Tribune* revealed, thus, the use of gas that had may have been stored in Morocco since late 1918. Wales spoke of "gas shooting," an expression that suggests that just artillery shells were fired against the Riffians. However, gas "bombing" from planes may have also occurred. Aviation played a key role in the defense of the French advanced outposts, partly because of the difficulties involved in moving guns through a highly mountainous region. For example, three air squadrons bombed "without interruption" the besiegers of the post of Aulāi on 9 May; four squadrons "continuously bomb and strafe the left flank of the mobile group" that managed to relieve Bibane on 13 May; and 120 planes "bombed intensively" the Riffian columns during de Chambrun's evacuation of the posts of Ouled Azam, Bou Adel, Srime and Si M'hammed on 22 May (Wales, 1925b). During the Riffian offensive, the press registered novelties in air bombing campaigns that hinted to the use of gas. After the combat in Bibane on 13 May, the French press revealed the use of a new type of plane bombs, information that the foreign press quickly repeated. Two days later, the *Tribune* republished a report by the *New York Times* according to which the French had carried out "a bombardment by the planes with new model bombs which were never used in the great war [that] helped to prepare the attack on Bibane and disrupt groups of the enemy wherever found" ([n.a.], 1925). The *Tribune* insisted on using similar terms on 17 May when its correspondent, John Steele, reported that France was "employing new guns and other material which were prepared during the great war, but which were not used owing to the end of the conflict" (Steele, 1925b). On 31 May, Henry Wales confirmed the central role of aviation in the operations, but also its failure against the Riffians: "Airplane attacks were an even greater fiasco [than gas shooting]. [...] The bombs which the French dropped did not cause much damage anywhere (Wales, 1925a).

Stronger evidence for the use of gas bombs by French aviation is in British military intelligence reports. An "especially secret" report on France's "gas defence" dated February 1927 (see Figure 4), drafted "from a new source" and addressed to the Chemical Warfare Committee (the higher organ responsible for chemical warfare organization and research in the UK) (Schmidt, 2015, p. 47) affirmed that "the French army [had] used chloropicrin bombs in the Moroccan campaign." The head of the Chemical Warfare Research Department, Captain James Davidson-Pratt judged this report as "accurate on the whole."¹⁰ A table at the end of the document contained the name and characteristics of four models of planes (Breguet XIV, XVI and XIX; Farman Goliath 60), suggesting that they were the ones capable of transporting and dropping the bombs. This information is consistent with the demands for "toxic" and "asphyxiating" gases that Lyautey had made in late 1918, because chloropicrin belonged with phosgene and diphosgene to the category of "green cross" gases, which caused those type of effects, in contrast with "blue cross" (arsines) and "yellow cross" (mustard gas, lewisite) (Spiers, 1986, p. 26). The early use of chloropicrin is also consistent with France's policy in relation to Spanish chemical warfare in Morocco. Historians have revealed that French help was crucial in launching Spain's gas program, whose first major step was the December 1921 purchase of 50,000 liters of chloropicrin from the company Schneider et Cie of Le Creusot which had produced it in large quantities during WWI. Along with the gas,

9 "France. Gas defence, 10 February 1927," The National Archives, London (henceforth, NA), War Office Records, 188–768 Chemical Warfare.

10 "James Davidson-Pratt. Comments of the Chemical Warfare Research Department, 4 March 1927," NA, War Office Records, 188–768 Chemical Warfare.

Spain acquired the howitzer guns and shells needed for firing the weapons, and Schneider also agreed to take charge of the installation of a gas filling workshop (*Taller de Gases*) in Melilla's *Maestranza de Artillería* that was ready for use in March 1922 and started pouring chloropicrin into the shell cases in April (Martínez, 2024). France was willing to give Spain access only to the same gas that it already possessed in Morocco; the Spanish request for mustard gas was turned down. Still, owing to the above-mentioned mistrust between France and Spain, French authorities tolerated Riffian attempts to purchase asphyxiating gases and protection masks from French agents in 1922 (Manrique and Molina, 2012, p. 41). The closer the Spanish and Riffian military strength was, the more their mutual exhaustion and the better for French aspirations of hegemony in Morocco.

Additionally, Spain acted as a proxy for French gas warfare in north Africa. For example, the Spanish army loaded chloropicrin not just in shells but also in bombs, an innovation in relation to WWI and something Lyautey had been considering since his early requests of gas to Paris. These bombs often failed to explode, so adaptations had to be made such as the insertion of British mine fuses, with which a chloropicrin air bombing test was carried out near Madrid in June 1923 (Kunz and Müller, 1990, p. 93). The Spanish army eventually decided the best bomb size for this gas was the 10 kg bomb (identified as C-4 in Spanish documents) (Manrique and Molina, 2012, p. 27). This bomb was ideal for the lighter Breguet XIV planes which could carry up to 32 and which performed most of the Spanish gas bombing before 1925. The French knew about all these developments (Manrique and Molina, 2012, pp. 21–33; Albert, 2015, pp. 19–20), so when the moment came for them to use gas in Morocco, the quickest solution at hand was the one Spain had been testing in the previous years: to load plane bombs with chloropicrin (Lyautey asked for 20,000 10 kg bombs on 8 May and “urgently” for 15,000 on 10 May “because of the quick reduction of supplies”¹¹) and release them from the Breguet XIV planes that accounted for most of the French Protectorate air force in May 1925 (Courcelle-Labrousse and Marmié, 2008, p. 182). Yet, if the bomb casings had arrived from metropolitan France, it is likely that the gas itself must have been taken from the 1918 stock established in Morocco, because no evidence has hitherto been found of other requests or shipments of “toxic” and/or “asphyxiating” gases before the spring of 1925. It is also possible that the French conducted firing or bombing tests in parallel to those carried out in Spain and in the Spanish Protectorate.

4 Dispatching chemical weapons from France to Morocco (June–July 1925)

The French failed to check the Riffian offensive of April–May 1925, despite the use of chloropicrin shells and bombs stored in Morocco. Far from slowing down, the attacks by Abdelkrim's forces escalated in June and July. In the central zone of the front, the pressure on the fortified strongholds of Tafrant and Taounat was very intense.

The French nevertheless managed to contain Riffian advances, making it increasingly difficult for Abdelkrim to meet his objective of entering the old capital city of Fez for the *Aid-el-Kebir* festivity on July 3. By contrast, in the western and eastern zones of the front, the situation neared collapse. In the former, “all the posts covering Ouezzane to the north were attacked” in early June; when most of them fell, the town stood virtually on the front line. The Riffians had a real chance to cut the Ouezzane-Souk el Arbaa road leading to the fertile plains of the Gharb and also to attack the French air base at Beni Malek, without whose planes “the infantry is blinded and the air-assisted outposts are asphyxiated” (Courcelle-Labrousse and Marmié, 2008, pp. 204–206). In the east, Riffian pressure culminated in the defection of the Tsoul and Branes tribes at the beginning of July. The Fez-Taza railway, the main line of communication and supply between western and eastern Morocco and between the latter and French Algeria, risked being cut off by the Riffians at any moment. Lyautey went as far as to evacuate women and children from Taza and even thought of abandoning the city on July 6, but in the end did not give the order. The situation, however, remained critical. The following day Paul Painlevé ordered the evacuation of the German Ruhr region hastened so that the Moroccan Division stationed there could be marched directly via Algeria to the area of Taza. Grouped together with other units in a new 19th Army Corps, they prepared to launch an offensive to relieve the city (Ibid. pp. 231–233). In the midst of these events, Lyautey continued to request Painlevé send gas to the Protectorate, a request that he transmitted not just through administrative channels on June 6 and 7, but also personally during the Prime Minister's hurried visit to the front on June 11–15. The government finally approved Lyautey's demand, but subject to the express reservation that they [the chemical weapons] will not be used, as you [Lyautey] propose, except in the most specific and determined cases of legitimate defense. In that case, please notify me [Painlevé] as a matter of urgency” (Ibid., p. 222).

But that is not the end of the story. Courcelle-Labrousse and Marmié claimed that “research has not established that the French army used these special gases” although their shipment had been approved by Painlevé (Ibidem). Before investigating that conclusion, though, one must ask whether the gases were sent to Morocco. Contrary to what is assumed by these and other authors, the answer is affirmative. Reconstructing the dispatch of gas shells from metropolitan France to the French Protectorate is not possible from the analysis of the Lyautey-Painlevé correspondence which Courcelle-Labrousse and Marmié have consulted. Other records and other archives need to be examined, and to identify them, it should be noted that France did not have to manufacture gases from scratch but could use its WWI stocks, unlike Spain. According to Arnaud Lejaille, these were “largely sufficient, actually too large” and had been preserved in some of the so-called *Établissements de Reserve Générale de Munitions* (ERGs) scattered throughout France (Lejaille, 2003). At the beginning of May 1925, two of them stored the bulk of chemical ammunition: 11,000 tons of gases at Toul and almost four million projectile loads at La Ferté-Hauterive (Ibidem). It is likely that the first one, located near Nancy and the German border, met the main needs of the *Armée du Rhin*, the 100,000 to 200,000 strong force responsible for the occupation of various areas of Germany between 1919 and 1930. The second ERG, located north of Clermont-Ferrand, close to the geographic center of the country, could send supplies both to the German border and to the port of Marseille in the south. Almost 90% of La Ferté-Hauterive's stock consisted of phosgene and mustard gas

11 “Encoded telegram High Commission [of France in Morocco] to [Ministry of] War. Rabat, May 7, 1925”; “Copy of a telegram received at the Military Cabinet of the Ministry [of War]. Paris, May 10, 1925.” Archives Nationales de France (henceforth, ANF), Fonds Painlevé, 313 AP 244.

shells, of which only 4,000 of the phosgene and 34,000 of the 75 mm caliber mustard gas shells had been “cased,” as a “precautionary stock for the Rhine army” (Ibidem).

Returning to Courcelle-Labrousse and Marmié’s account, the authors noted that the first, unsuccessful requests made by Lyautey on May 4 and 7, 1925, led to the drafting of a secret note for the Ministry of War (thus, Painlevé) with the title “*Note sur les existants en obus spéciaux chargés*” (Note on the stock of special loaded howitzer shells) on May 8, detailing the quantities and calibers of the shells kept at La Ferté-Hauterive.¹² Some practical observations concerning the eventual shipment of a part of this ammunition accompanied this note. For example, the “cased” stock only needed to be placed in containers for transport; it would take 8 days to ship 8,000 shells; 20 days for 20,000.¹³ If the military shipped the entire cased stock of 38,000 75 mm shells, it would require 15 days to replace it (from the stock of “not cased” shells). If more shells needed to be manufactured (an extremely unlikely situation because there were 1.8 million non-cased shells loaded with phosgene and mustard gas alone), the “[*Poudrerie Militaire* of] Angoulême and Pont-de-Claix [a factory of the Rhône-Poulenc chemical company located in the vicinity of Grenoble]” would be called upon.¹⁴ The note also made it clear that no stock of aviation bombs loaded with “toxic products” existed,

“neither the model of that kind of projectile. These bombs are the object of studies by the technical section of the Artillery, which has not presented any model yet. No belligerent, in the course of the last war, used toxic products for loading aviation projectiles. [In a different handwriting and ink] Only the Spaniards would have made use of them in Morocco.”¹⁵

Lyautey insisted on requesting chemical ammunition on May 11, and it was shortly after, on May 20, when Painlevé agreed and “told Lyautey that he prescribes the shipment of these munitions, but that they cannot be used without his prior authorization” (Courcelle-Labrousse and Marmié, 2008, 202). Indeed, as the document on Lejaille’s website that was mentioned at the introduction of this paper shows, the Prime Minister and Minister of War issued an order on May 23 asking the commander of the ERG of La Ferté-Hauterive,

“to proceed to ship towards the Regional Artillery Park of Casablanca, via the Port of Kenitra – after agreement with the Regional Artillery Park of Marseille (Transit Service) on the date of shipment – 1) 2,000 cartridges of 75 with special howitzer shells [phosgene] no 5 and 2) 2,000 cartridges of 75 with special howitzer shells no 20 [mustard gas] with [the] corresponding fuses” (Lejaille, 2003).

Painlevé’s order was apparently ignored because the High Commissioner once again requested “special” shells on May 25.¹⁶ Authorities in France finally informed Lyautey on June 6 that, “for general reasons, the sending of number 20 howitzer shells would be deferred until further notice” (Courcelle-Labrousse and Marmié, 2008, p. 204). The green light would only come on June 20, a few days after Painlevé and Lyautey met in person in Morocco. It is here that Courcelle-Labrousse and Marmié’s account stops, claiming that gas was never used in Morocco and implying that it was not even transferred from the war stock. Evidence found at the *Archives Nationales de France* in Paris shows, on the contrary, that 3 weeks after the note on chemical stocks was drafted, the commander of the Regional Artillery Park of Marseille informed the Ministry of War that “the special shells mentioned in the ministerial dispatch no 41.322/3 of May 23rd were shipped without incident [towards Morocco] on July 11th aboard the steamship *Tensift*.”¹⁷ This telegram proves that Painlevé’s order of May 23 actually had been executed, with 4,000 howitzer shells loaded with phosgene and mustard gas transported from La Ferté-Hauterive to be temporarily stored at the Regional Artillery Park of Marseille. The telegram shows that those shells were loaded on the *Tensift* (see Figure 5), a 59-meter-long steamboat named for one of the main Moroccan rivers and with a capacity of up to 900 tons that belonged to the *Compagnie de Navigation Paquet* of Marseille (Bernadac and Gallocher, 1991, p. 62). This was not all. In another telegram, this one kept at the *Service Historique de la Défense*, the head of the Military Base of Marseille reported directly to Lyautey that “[the] steamship *Tensift* left on July 11 for Kenitra with 625 tons of ammunition,” including “10,000 special shells”¹⁸ (see Figure 6). The gas, thus, was shipped to Morocco, and in much larger quantities than originally planned. The latter telegram did not offer details about the provenance of the additional 6,000 howitzer shells. They probably arrived from La Ferté-Hauterive and, in that case, the maximum number of phosgene shells would have been 4,000 (all the available “cased” stock), with the rest (6,000) being mustard gas shells. Less probably, the ammunition may have been sent from the ERG of Toul or from another one close to the German border, following the evacuation of the Army of the Rhine. It might even have arrived from the ERG of Miramas, the closest to Marseille, from where, according to Oliver Saint-Hilaire, France shipped chemical weapons overseas for various “French colonial wars” (Centre Norbert Elias, 2025), albeit probably those of the 1950s and 1960s.

Whatever the case, the *Tensift* arrived with its “special” cargo in Kenitra on July 13. One of the two main ammunition depots in the French Protectorate was located in that port town (the other was in Oujda, in eastern Morocco).¹⁹ From Kenitra, the gas shells

12 “Note on the stock of special loaded howitzer shells.” SHD, Fonds Maroc, 3H105.

13 Ibidem.

14 Ibidem.

15 Ibidem.

16 “Dispatch from the High Commissioner Lyautey to the Ministry of War. Rabat, 25 May 1925,” SHD, Fonds Maroc, 3H369.

17 “Translation of an encoded telegram received on July 11, 1925, at 21:15 h. Commander of the Regional Artillery Park of Marseille to the Ministry of War. Marseille, July 11, 1925, 18:50 h.” ANF, Fonds Painlevé, 313 AP.

18 “Decoding. Official telegram. Military Base Marseille to High Commissioner Rabat. Marseille, July 11, 1925, at 18:40 h.” SHD, Fonds Maroc, 3H639.

19 “Report on the functioning of services and equipment of the northern front and its rearguard. General Boichut, Rabat, April 21, 1926,” SHD, Fonds Maroc, 3H103.

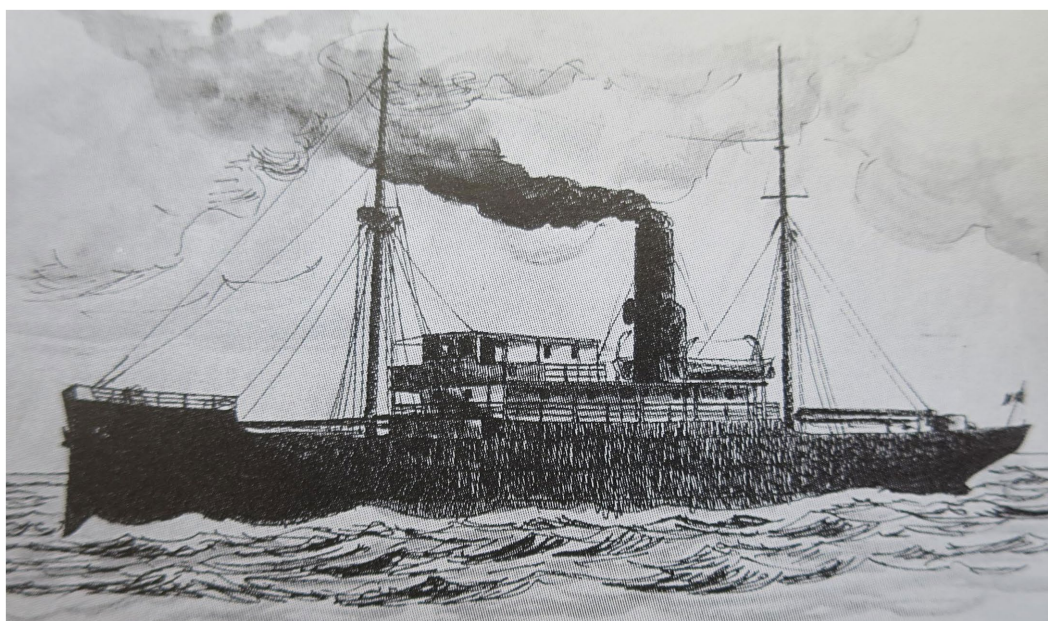


FIGURE 5

Drawing of the steamboat "Tensift" by Bernard Bernadac. Source: [Bernadac and Gallocher \(1991\)](#).

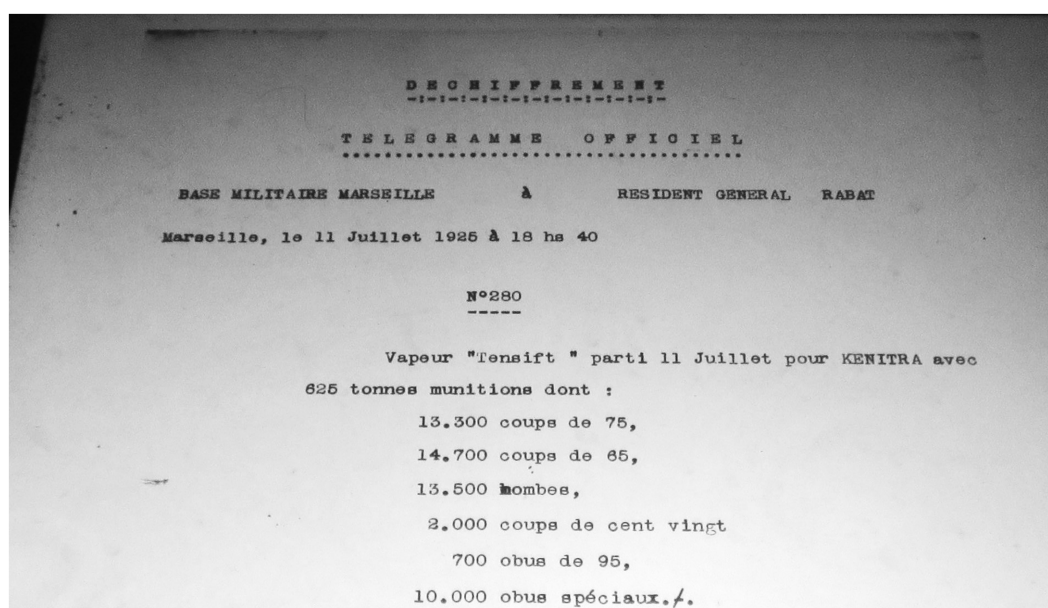


FIGURE 6

Microfilm reader view of a telegram communicating the departure of the steamboat "Tensift" from Marseille to Kenitra with 10,000 "special howitzer shells". Marseille, July 11, 1925. Source: Service Historique de la Défense, Vincennes, Paris.

must have been quickly transferred to the front. To manage the huge amount of all kinds of materials sent from metropolitan France, authorities had enlarged the Dar Mehraz depot at Fez and built "annexes" in Aïn Defali (south of Ouezzane), Meknes, and Taza. All of them were close enough to the network of advanced camps, outposts and airfields at the front to supply them with the required material. These developments did not remain concealed from the enemy. The Riffians detected the presence of chemical weapons. In an interview published on May 16, 1925, in the

communist newspaper *L'Humanité*, a Riffian who had "arrived in secret [to the French Protectorate] and later gone back to his country" referred to the stock of chloropicrin shells and bombs hurriedly mobilized for use in Bibane and other spots when he told the journalist Marcel Bertoni that "your folks have just received 155 mm guns, bombs, and asphyxiating [gas] shells" ([Bertoni, 1925](#)). Riffians confirmed to Robert Montagne, a French Navy intelligence officer who entered insurgent territory in early 1926, awareness that the cargo shipped on the *Tensift* and others that may

have arrived later that year had been stored in northern Morocco. According to Montagne, they knew “that stocks of projectiles loaded with asphyxiating gas have been established in the French zone,” though they readily watered down their statement by claiming that “French troops have never made use of it” for “there are limits to the horrors of war” (Montagne, 1927). To clarify if that use actually took place or not in the period between the French-Spanish counter-offensive of September 1925 and Abdelkrim’s surrender in May 1926 remains, however, a matter for further investigations.

5 Conclusion

While a part of the historiography on the “French Rif War” has long claimed that France used chemical weapons during that conflict, the issue has remained unsettled due to the lack of documentary evidence and deeper analysis. This essay has provided credibility to those claims and tried for the first time to reconstruct the beginnings of French chemical warfare in Morocco. American journalists exposed to the public the first use of gas by the French to check the Riffian offensive against the line of advanced outposts north of Fez in April–May 1925. The French used chloropicrin from the stock established in Morocco in late 1918, when the High Commissioner Lyautey requested gas from Paris to deal with serious insurrections in the Rif and Tafilalet regions. At this time, the French used 10 kg bombs, as the Spanish had done in previous years. This was later confirmed by British military intelligence reports. In addition, it was possible to reconstruct the shipment of phosgene and mustard gas howitzer shells from metropolitan France to French Morocco in June–July 1925, which were intended for use in the French-Spanish counteroffensive against the Riffians planned for September. The acquisition of the shells from metropolitan France had not been easy to achieve. Although Lyautey’s requests were repeatedly turned down in May and June, the Prime Minister and Minister of War Paul Painlevé finally ordered the transfer to Morocco of a part of the WWI stock kept at the ERG of La Ferté-Hauterive. The actual shipment, which was made from Marseille to Kenitra in the Paquet company steamboat *Tensift* on July 11, more than doubled the amount initially stipulated (10,000 shells compared to the original 4,000) and was stored in ammunition depots in Fez and other spots near the front. The Riffians were able to confirm the presence of the weapons. The use of gas by the French in Morocco symbolized their full-scale involvement in the Rif War, a commitment that ended a long period of mutual mistrust and lack of coordination with Spain. International interference in the Rif War persisted, nevertheless, and references to chemical warfare surfaced from time to time in the press and in humanitarian denunciations, thanks to the Riffians’ contacts in Europe, America, the Middle East and South-East Asia. This resolves a factual mystery about French actions and attitudes towards gas in the Rif War.

In addition, on the 100th anniversary of the signing of the Geneva Gas Protocol, the key interwar document inhibiting chemical warfare and a treaty being negotiated during the period discussed in this article, it is important to recognize that the Protocol failed to have an effect upon this conflict. This was partly because of timing. France only ratified it in May 1926, 2 weeks before Abdelkrim’s surrender,

and Spain did the same in August 1929, 2 years after the end of the war. More generally, the Protocol did not address the case of irregular wars in which at least one of the parties, in this case the Riffians, lacked international recognition as a state or belligerent. This situation would repeat itself in other conflicts before World War II. The consideration, preparation, and use of gas in the Rif War therefore shows the limits of anti-gas attitudes and efforts during the interwar period.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

FM: Methodology, Writing – original draft, Investigation.

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