

## “As Is Proper in Republican Form of Government”: Selling Chemical Warfare to Americans in the 1920s

By Thomas Faith

The specialty of the officers of the U.S. Army Chemical Warfare Service had been invaluable during the First World War. The nations that fought each other in the trenches of France made widespread use of poisonous gasses. Fighting in a place where chemical weapons attacks were a commonplace occurrence, soldiers relied on the Chemical Warfare Service (CWS) to help them protect themselves from enemy gas and to manufacture and deploy America’s own weapons against the enemy. It is ironic, then, that once the war ended the service itself would come



Researchers in a chemical lab at the Army’s Edgewood Arsenal in Maryland, ca. World War I.

under attack; not from foreign enemies but from Americans. Chemical weapons were called inhumane by both soldiers and civilians who understood that they had terrible effects on the human body. Chemical weapons poison the air you breathe; they burn you, blind you, and suffocate you. After the war, most Americans believed that the future use of such weapons ought to be disallowed, and the CWS ought to be discontinued as a branch of service.

Facing the end, the officers of the CWS fought a public relations campaign in the 1920s to change popular opinion and remain in operation. This campaign moved them into new realms of American society not necessarily related to chemical weapons research and development. The CWS worked to create chemical pesticides, crowd control methods, security devices, and medicinal cures for common respiratory ailments all in an effort to convince Americans that their organization was important and worthwhile. They also indirectly fostered the adoption of the gas chamber as a method of criminal executions and exacerbated the 1920s Red Scare. The CWS did all this because they faced a far greater challenge than the other military organizations that risked being downsized after the war. In between the wars many of the technical services of the U.S. Army worked in the areas of communication, transportation, and mechanical and metallurgical sciences, but the CWS’s wartime accomplishments had no ready civilian applications in peacetime. What possible civilian use could there be for chemicals designed to kill humans? This article investigates the CWS’s varied efforts to protect and redefine its role in the post–World War I period. It finds that the CWS’s efforts at self-promotion were partially successful, but popular skepticism about chemical weapons and their applications largely remained and ultimately manifested as support for a treaty to ban the use of chemical weapons in warfare.<sup>1</sup>

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<sup>1</sup> For a fuller history of the origins of the CWS see Thomas Faith, “Under a Green Sea: The US Chemical Warfare Service 1917–1929” (Ph.D. diss., George Washington University, 2008).

The CWS example challenges C. Wright Mills's description of the Military Industrial Complex articulated in his 1956 book *The Power Elite*.<sup>2</sup> The Military Industrial Complex, which has been discussed by so many academics since, has become a watchword for the dangers of government influence in society. For Mills, the Military Industrial Complex was part of an evolving governing structure that allows wealthy, influential individuals to lead a powerful nexus of corporations, the state, and the military. This trend stretched back in time to the earliest days of the Republic, but it was after World War II, Mills warned, that the lines separating government, the military, and business blurred into nonexistence. He believed that this concentration of power threatened constitutional democracy and the American way of life. President Dwight D. Eisenhower also famously warned Americans about the Military Industrial Complex in his 1961 farewell address, but he saw it as a clearly visible and largely resolvable public policy problem that resulted in the unusually high military spending the nation experienced in the peacetime 1950s.

The CWS unsuspectingly tested Mills's theories about the military and its effects on a democratic society. How much influence can a military organization exert in the United States? If a government organization tried to change the public's mind about something, as the CWS tried to change public opinion about chemical weapons in the 1920s, how well would they succeed? The CWS example suggests that the U.S. military can exert considerable influence on American opinions and behavior, but that there are often limits to that influence.

The CWS began its public relations work as soon as the war ended because it was up against some large obstacles. It was a known fact that the U.S. Army had suffered the highest proportion of gas casualties of any nation in WWI. About 70,000 men out of a total casualty figure of 200,000 soldiers—almost a third of American casualties—resulted from poison gas.<sup>3</sup> Additionally, the injuries caused by chemical weapons were considered far worse than those caused by more conventional weapons. Accordingly, chemical warfare was extremely unpopular amongst Americans by the end of the war. It was viewed as one of the most unpleasant aspects of an extraordinarily unpleasant conflict, and peace, labor, civic, women's, and religious groups used poison gas as a principal example of the evils of war. Journalist and peace author Will Irwin, for example, used chemical weapons as evidence of the inhumanity of war in his famous and widely read 1921 book *The Next War: An Appeal to Common Sense*.<sup>4</sup>

Soldiers also viewed chemical weapons negatively. War letters and memoirs are replete with descriptions of the suffering caused by gas. The U.S. Army Chief of Staff Peyton C. March, one of the most outspoken opponents of the future use of chemical



An Army photograph demonstrating an attack by chemical gas, World War I.

<sup>2</sup> C. Wright Mills, *The Power Elite* (New York, Oxford University Press, 1956).

<sup>3</sup> U.S. Surgeon General's Office, *The Medical Department of the United States Army in the World War: Volume XIV, Medical Aspects of Gas Warfare* (Washington: U.S. Government Printing Office, 1926), 274; Augustin M. Prentiss, *Chemicals in War: A Treatise on Chemical Warfare* (New York: McGraw-Hill Book Company, 1937), 671.

<sup>4</sup> Hugh R. Slotten, "Humane Chemistry or Scientific Barbarism? American Responses to World War I Poison Gas, 1915–1930," *Journal of American History* 77:2 (September 1990): 476–98; Will Irwin, *The Next War: An Appeal to Common Sense* (New York: E. P. Dutton and Company, 1921).

weapons after World War I, wrote in his memoirs that gas warfare was “cruel,” “savage,” “repugnant,” and “barbarous,” and said that if the United States continued to work in this area of warfare, it “had much to answer for.”<sup>5</sup> March acknowledged the arguments made in favor of chemical weapons for national defense but emphasized the harm chemical weapons can cause noncombatants. March, Irwin, and others expressed opinions held by most Americans in the aftermath of World War I, that chemical weapons were terrible and their use ought to be discontinued.

Inside the U.S. Army, the CWS viewed this trend in American public opinion with great concern. Their technical specialty and their branch of service could be eliminated unless people viewed chemical weapons in a more positive light. Worse yet, Congress, the State Department, and the international community as a whole also seemed willing to limit the future use of chemical weapons at the end of the war. The United States was a party to several arms limitation treaty discussions after World War I wherein ending chemical warfare was discussed. The officers of the CWS believed that disallowing the future use of chemical weapons would pose a critical national security risk for the United States, so they resolved to fight to remain part of the national defense establishment. The CWS treated the postwar years as a period of crisis, and under the dynamic guidance of its leader, Gen. Amos A. Fries, embarked on a public relations campaign to convince Americans that chemical weapons were effective, useful in peacetime, and even humane.

### Publicizing the CWS

In September 1919, while U.S. soldiers were still returning from France, General Fries, head of the CWS, gathered a small group of former chemical officers to organize and finance a publicity campaign that would convince the American public that the service should continue its work. Fries believed that a robust public relations campaign was the only way to ensure the service’s survival. “As is proper in republican form of government, sooner or later a cause must stand or fall on the appeal it makes to the average man,” Fries wrote.<sup>6</sup> “Our proposition is absolutely sound and I have the utmost faith that if we can get it properly before the public it cannot be beaten by any group of men.”<sup>7</sup>

The ad hoc group Fries formed included William H. Chadbourne, a former CWS major. He organized the Chemical Warfare Service Association, a group of CWS veterans who assembled for the purpose of lobbying congressmen to support the service. The group also included Charles E. Richardson, another former major who was employed by the International Coal Products Corporation in New York. Richardson used his connections in the chemical industry to publicize the CWS, and Fries described him as “the militant

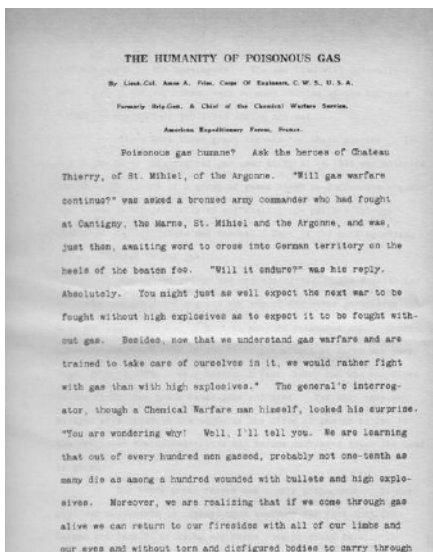
<sup>5</sup> Peyton C. March, *The Nation at War* (New York: Doubleday, Doran & Company Inc, 1932), 333–36.

<sup>6</sup> Letter from Amos A. Fries, Colonel, Chief of the Chemical Warfare Service, to Charles E. Richardson, International Coal Products Corporation, Aug. 16, 1919; Folder: Richardson- Maj. C.E., Box 19, Entry 7, General Fries’ File, 1918–1920; O-S; Chemical Warfare Service, Edgewood Arsenal, 1917–43; Records of the Chemical Warfare Service, Record Group (RG) 175; National Archives at College Park, Maryland (hereinafter NACP).

<sup>7</sup> *Ibid.*

driving force” of the effort.<sup>8</sup> A former lieutenant colonel named Richmond Mayo-Smith, who became a publisher in Massachusetts after the war, was Fries’s “cool manager, weighing every turn and crook of the game.”<sup>9</sup> These veterans attempted to influence public policy by appealing to as many members of the American public as possible.

They started by writing articles for newspapers, chemical industry publications, and their own weekly paper, *Chemical Warfare*. Some of the articles described scientific accomplishments made by Army chemists; others were historical accounts of how poison gasses



General Fries published an article in October 1919 defending the “humanity” of using chemical gasses in wartime.

Office calculated that out of 70,552 soldiers who were gassed in the American Expeditionary Force, only 1,221 of them died as a result.<sup>12</sup> The authors asserted that since less than two percent of soldiers who were gassed during World War I suffered death, chemical warfare could be called the most ideal and most humane form of war in human history. Gas seemed to be a weapon that would incapacitate an enemy long enough for the battle to be won, but that also would allow them to eventually recover and return to their homes and families. They repeated this argument



Gen. Amos A. Fries, head of the Chemical Warfare Service, organized a public relations campaign to preserve his branch within the national defense establishment.

helped win the war against the Germans. There were also some, however, that described “the humanity of chemical warfare.” In October 1919, *Chemical Warfare* published a lengthy explanation of this thesis called “The Humanity of Poison Gas.”<sup>10</sup>

In that article, and in other writings, the effects of poison gasses upon the human body were discounted as far less grotesque and traumatic than the wounds caused by bullets, artillery shells, and explosives. They asserted statistical proof. “The measure of humanity for any form of warfare,” the thesis read, “is the percentage of deaths to the total number injured by the particular method of warfare under consideration.”<sup>11</sup> This was the measuring bar because the casualty statistics available from the war indicated that a very low percentage of soldiers who were exposed to gas died from the exposure. The U.S. Army Surgeon General’s

<sup>8</sup> Letter from Amos A. Fries, Colonel, Chief of the Chemical Warfare Service, to E. J. Atkisson, Lt. Col., Corps of Engineers, Camp Benning, Georgia, Sept. 25, 1919; Folder: Atkisson- Col. E. J., Box 15, Entry 7, General Fries’s File, 1918–1920; A–C; Chemical Warfare Service, Edgewood Arsenal, 1917–43; RG 175, NACP.

<sup>9</sup> Ibid.

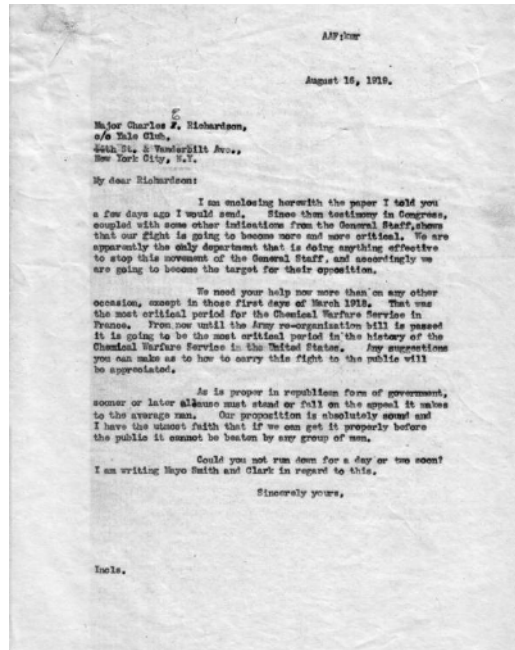
<sup>10</sup> Amos A. Fries, “The Humanity of Poison Gas,” *Chemical Warfare* 1:11 (Oct. 30, 1919), 1–6.

<sup>11</sup> Ibid., 4.

<sup>12</sup> U.S. Surgeon General’s Office, *The Medical Department of the United States Army in the World War: Volume XIV, Medical Aspects of Gas Warfare*, 274.

in publications throughout the 1920s, trying to convince their readers to accept chemical weapons as humane tools of war.<sup>13</sup>

Assuming that the numbers gathered by the U.S. Surgeon General's Office were completely accurate, they are still not necessarily a measure of the "humanity" of chemical weapons. Veterans who had been gassed in combat knew all too well that humanity is not something that can be easily quantified. "Is it humane to lie in excruciating pain," wrote Maj. A. Reid Moir, "with stomach swollen by the expansion of gas, and with lungs eaten by the deadly vapor to cough up one's life in an agonizing convulsion? This, sir, may not sound very beautiful, but it is far less beautiful to see . . . gas is not only 'inhumane'; it is not far from 'hellish.'"<sup>14</sup> But the CWS ignored the opinions of veterans like Moir, and they zealously promoted the idea throughout the 1920s that chemical warfare was better and more humane than other forms of war.



General Fries wrote to Maj. Charles E. Richardson on August 16, 1919, for his help in carrying the fight for preservation of the Chemical Warfare Service "to the public."

### Experimentation and Applications

Along with their literary efforts, the officers of the CWS also worked hard to popularize themselves by experimenting with new uses for old gasses throughout the early 1920s. They believed that one reason for public apprehension about chemical weapons was that war gasses had no real peacetime uses. They labored to find such uses so that the American public and the military would look more favorably on the work of the CWS.

<sup>13</sup> The statistics from the U.S. Army Surgeon General's Office that the Chemical Warfare Service used are the best available. Their numbers are nevertheless problematic. The data was recorded from field hospitals scattered across France during the war. Errors could naturally have occurred. Moreover no accurate reckoning can be made of the number of soldiers who died immediately of gas poisoning because they would not have been taken to a hospital. Cause of death is rarely recorded for soldiers killed outright on the battlefield, so the percentage of those deaths caused by chemical weapons will never be known. Likewise, soldiers listed as missing in action, captured by the enemy, or soldiers who appeared to have superficial wounds that were treated at the front lines, would all have not visited a hospital and could not be recorded as gas casualties if they were gassed.

In fact there was some evidence that poison gas combat deaths were much higher. From April to December 1917 the British Army compiled a set of data about the casualties caused by chemical weapons from interviews with German prisoners of war. The statistics they gathered indicated that a substantial number of German soldiers exposed to chemical weapons in battle were killed. In some cases, 25 percent or more German chemical warfare casualties died from the exposure. An abridgment of this British report, bearing Amos Fries' name, is among the records of the American Expeditionary Force held at the National Archives at College Park, MD. Amos A. Fries, "Gas Casualties Among Germans; Abstract of British Reports For April to December 1917 Inclusive on Effect of British Gas on the Enemy," February 6, 1918; Folder: B: Attacks, American and Allied, Box 1729, Entry 377, Army School of the Line; A.E.F. General Headquarters; Records of the American Expeditionary Forces (World War I), RG 120, NACP.

<sup>14</sup> "Gas as a Humane Weapon," *New York Times*, July 30, 1922, 95.

In his 2001 book *War and Nature*, Edmund Russell described the relationship between the military, the commercial chemical industry, and the American public in the development of insecticides and other pest poisons in the 1920s.<sup>15</sup> The CWS was a key participant in this story, since they were the military branch that dealt most with chemical weapons and had the closest relationship with the commercial chemical industry. Helping to develop insecticides was an important way that the CWS promoted new uses for old war gasses.

Some were initially skeptical of the potential of poison gas as a fumigant. In 1921 the Department of Agriculture publicly announced that they did not support the CWS's pesticide experiments.<sup>16</sup> In the face of such doubts, however, Army researchers eventually figured out ways to kill pests with chemicals originally designed to kill humans. The CWS's insecticide program stands out as one of their best known and successful postwar projects. They were able to use it to help convince Americans of the utility of war gasses and the soldiers who dealt with them.

But their success with insects was the exception rather than the rule. Many of their other attempts to find uses for war gasses in the 1920s failed. For instance, the CWS conducted a series of experiments with the Department of Agriculture designed to determine if war gas could be used to break up crow roosts on farms.<sup>17</sup> Another research project conducted by the CWS involved combining poisonous chemicals and marine paint to see if they could produce paint for use on boat hulls and marine pilings that could repel barnacles.<sup>18</sup> They were not successful.

One of the stranger research projects was brought to the attention of the CWS by a private inventor named Mr. W. O. Beckwith, of Fostoria, Ohio. Beckwith approached the service in June 1921 with a prototype of a device designed to protect post office safes from would-be robbers. The device was a container of poison gas and a small explosive detonator that could be affixed to the inside of a safe and rigged to release the gas if the door to the safe was forced open. A similar device foiled a bank robbery in Utica, Michigan, in February. The three robbers abandoned their attempt after the device released a large quantity of mustard gas at the Farmers and Merchants' Bank of Utica. The gas was so powerful that "it was a couple of hours before the building could be entered with safety" by police.<sup>19</sup>

When he heard about the invention, Amos Fries wrote that he was "quite interested in this, and I am sure many others in the War Department and other departments—especially the Post Office—are."<sup>20</sup> Fries was so optimistic about this invention that he ordered his subordinates to arrange for Beckwith and representatives from the Post Office to meet at the CWS facility at Edgewood Arsenal in Maryland for a test demonstration.

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<sup>15</sup> Edmund Russell, *War and Nature; Fighting Humans and Insects with Chemicals from World War I to Silent Spring* (Cambridge and New York: Cambridge University Press, 2001).

<sup>16</sup> "Department of Agriculture Criticizes Use of Poison Gas for Boll Weevil Control," *Chemical and Metallurgical Engineering* 24:7 (February 16, 1921), 543.

<sup>17</sup> "War on Rats With Poison Gas," *Chemical and Metallurgical Engineering* 23:11 (September 15, 1920), 543.

<sup>18</sup> "Chemical Warfare Gas Used as Fumigant," *Chemical and Metallurgical Engineering* 27:1 (July 5, 1922), 39; Amos A. Fries, "By-Products of Chemical Warfare," *Industrial and Engineering Chemistry* 20:10 (October 1, 1928), 1079–84.

<sup>19</sup> "Mustard Gas Drives Off Safe Robbers Who Blew Open a Michigan Bank Vault," *New York Times*, February 16, 1921, 1.

<sup>20</sup> Letter from Amos A. Fries, General, Chief of the Chemical Warfare Service, to E. J. Atkisson, Major, Chemical Warfare Service, June 30, 1921; Folder 470.61, Box #35, Entry 4, Secret and Confidential Files; Records of the Office of the Chief, RG 175, NACP.

I would like to have this given the greatest attention because I am convinced that the protection of safes and strong rooms generally by means of gas will be common throughout the United States within five years. Whether Mr. Beckwith's schemes are the best or time [*sic*], time alone will tell. However, any information we can get in the working of this apparatus will help us later.<sup>21</sup>

Fries hoped that poison gas safe-protectors would become common throughout the United States and help to prove that poison gas had important civilian uses, but the idea never caught on. The CWS held a demonstration of Beckwith's invention the next month, and the investigating officers decided that with a few minor modifications the device would become useable. They passed their information on to the Chief Inspector of the U.S. Post Office, but were promised only "that the matter will receive careful consideration."<sup>22</sup> Similar devices apparently continued to be used by some banks in the United States. In 1925 a group of burglars at a bank in Elnora, Indiana, were foiled by a device that released highly noxious lewisite. Following the thwarted robbery, the *Los Angeles Times* reported that other Indiana banks were discussing "plans to equip their vaults in a similar way with an antiburglar gas contrivance."<sup>23</sup>

Research projects that involved the use of war gasses in these ways suggest the considerable lengths to which the members of the CWS would go in the hope of proving their importance to the Army and the nation in peacetime. Occasionally they would go further. In 1924 and 1925 researchers in the CWS used bad science in an attempt to prove war gasses could be used as cures for common respiratory ailments.

The idea stemmed from an observation made by the CWS at their large chlorine gas manufacturing plant at Edgewood Arsenal. Doctors there noticed that during the influenza pandemic that followed the First World War, workers in the chlorine plant had proportionally fewer cases of influenza than anyone else at the Arsenal. From this evidence alone, however, medical researchers in the CWS quickly concluded that the poison gas that the chlorine plant workers were exposed to on a daily basis must have made them less susceptible to the disease.

Two officers in the Army Medical Corps stationed with the CWS at Edgewood Arsenal, Col. Edward B. Vedder and Capt. Harold P. Sawyer, conducted a series of experiments on patients with various respiratory ailments at the post hospital. Patients with influenza, bronchitis, pneumonia, whooping cough, and even colds were walked in to test chambers and exposed to non-lethal amounts of chlorine gas. The treatment was continued over a period of several days, and their symptoms were observed for signs of improvement. Vedder and Sawyer published their results in the *Journal of the American Medical Association*, where they concluded that chlorine gas could indeed be used to cure lung infections.<sup>24</sup> Vedder later authored a more extensive treatise on the subject, published as "The Present Status of Chlorine Gas Therapy" in the *Annals of Clinical Medicine*.<sup>25</sup>

<sup>21</sup> Ibid.

<sup>22</sup> Letter from R. Simmons, Chief Inspector, Post Office Department, to A. Gibson, Major, Chemical Warfare Service, September 8, 1921; Folder 470.61, Box 35, Entry 4, Secret and Confidential Files; Records of the Office of the Chief, RG 175, NACP.

<sup>23</sup> "War Gas Routs Yeggmen," *Los Angeles Times*, July 10, 1925, 5.

<sup>24</sup> Edward B. Vedder and Harold P. Sawyer, "Chlorin as a Theraputic Agent in Certain Respiratory Diseases," *Journal of the American Medical Association*, 82:10 (March 8, 1924), 764–66.

<sup>25</sup> Edward B. Vedder, "The Present Status of Chlorine Gas Therapy," *Annals of Clinical Medicine*, 4 (1925), 21–29.

Vedder and Sawyer's fellow officers in the CWS publicized this research into poison gas treatments for respiratory ailments as a breakthrough in the treatment of disease. They organized a series of publicity stunts to advertise the healing power of chlorine gas. In May 1924 the CWS sealed President Calvin Coolidge into a gas chamber and pumped in low levels of chlorine gas to cure his cold. After 45 minutes inside the chamber, Coolidge emerged and returned to work. A representative of his administration told reporters that the President felt much better, and that "all of the depression and lack of energy that accompanies a cold . . . had disappeared."<sup>26</sup> Apparently, spending almost an hour alone in a gas chamber breathing poison fumes could put the spring back in your step.

Coolidge was so pleased with the results that he returned for a second treatment the next day, but this time brought his wife to sit with him in the chamber while the gas was being administered. She did not have a cold, but reportedly wanted to experience the process anyway.<sup>27</sup> After a third treatment on the third day, Coolidge reported that his cold was gone.<sup>28</sup>

In the months that followed the gassing of the President, Fries, Vedder, and the rest of the CWS had to defend the chlorine gas cure against critics. Doctors outside the service pointed out (correctly) that it was normal for a cold to go away by itself after a few days whether chlorine gas was administered to the patient or not. They also suggested that the research methods used by the Army doctors who originally discovered the treatment were flawed.

The Chemical Warfare Service would have none of it. In 1925, when the New York Department of Health called the CWS's record of success exaggerated, Amos Fries publicly defended the cure again as a breakthrough. As evidence, he offered the results of the largest publicity stunt they had yet attempted. In a committee room on Capitol Hill, the CWS gassed 23 Senators, 146 House Members, and 1,000 of their staff members, friends, and family. Fries said that "no accurate record was kept of these cases," but concluded that the majority of them were cured of their ailments by poison gas.<sup>29</sup> Later that year the University of Minnesota conducted a controlled experiment with both patients who had been administered chlorine gas and patients who had not. They were able to demonstrate empirically that both sets of patients recovered at the same speed, proving war gasses were useless as a medical treatment.<sup>30</sup> While they failed to cure the common cold, this foray into the world of medical research was an attempt by the CWS to get Americans



Edgewood Arsenal, Maryland, ca. World War I.

<sup>26</sup> "Army's Chlorine Gas Helps Coolidge's Cold: He Spends 45 Minutes in Air-Tight Room," *New York Times*, May 21, 1924, 1.

<sup>27</sup> "Gas Treatment Taken Again By Coolidge," *New York Times*, May 22, 1924, 8.

<sup>28</sup> "Coolidge's Cold is Cured," *New York Times*, May 24, 1924, 17.

<sup>29</sup> "Gen. Fries Defends Chlorine Treatment," *New York Times*, January 6, 1925, 14.

<sup>30</sup> Harold S. Diehl, "Value of Chlorin in the Treatment of Colds," *Journal of the American Medical Association*, 84 (May 30, 1925), 1629–32.

thinking about chemical weapons in a more positive light. Clearly, though, they failed to get Americans to think of chemical weapons as medicine.

### Gasses for Crowd Control

The CWS had more success experimenting with war gasses as a method of crowd control. Fries and the other members of the CWS recognized that certain types of gasses could be marketed to police forces and National Guard units as law enforcement tools soon after the war ended. They worked to develop tear gas grenades and other non-lethal devices for law enforcement to use against both large mobs and individual criminals who barricade themselves in inaccessible places. In February 1919, however, the War Department expressly forbade the CWS from providing any military or civilian law enforcement personnel with any type of chemical weapon.<sup>31</sup> They opposed the use of chemical weapons on the general public in principle, for fear that the poison gas would badly harm its victims.

The Army briefly bent this rule that fall when federal forces were used to suppress the steel-worker's strike in Gary, Indiana. About 1,500 soldiers from the 6th U.S. Army Division were deployed in Gary to restore order after 5,000 workers at the U.S. Steel plant went on strike there in October. The commander of the operation was Gen. Leonard Wood, a prominent Army officer and candidate for president, and he requested that his soldiers be armed with tear gas grenades in addition to their other weapons. The War Department agreed, but then apparently got squeamish about the idea and informed all Army Department commanders that they did not want any chemical weapons used "against mobs composed of inhabitants of the United States."<sup>32</sup> All soldiers in Gary were required to turn their gas grenades over to an arsenal or army post, and no chemical weapons were used for the duration of the operation.

Of course the CWS continued to plead its case in the months that followed. They argued that their crowd control devices were effective and non-lethal.

We have developed a very satisfactory combination tear gas hand and rifle grenade for use against mobs and possible native uprisings where greater force would not be necessary. We have also developed an emergency type 25-lb. aero bomb loaded with tear gas for use in dropping on roads, trails, and other areas which it is desired to deny to mobs or other unlawful gatherings.<sup>33</sup>

In late 1921, the War Department relented and agreed to let the CWS try its new devices on crowds, revoking prior orders that prohibited the use of non-lethal gasses.<sup>34</sup> This decision

<sup>31</sup> Clayton D. Laurie and Ronald H. Cole, *The Role of Federal Military Forces in Domestic Disorders: 1877-1945* (Washington: U.S. Government Printing Office, 1997), 357.

<sup>32</sup> *Ibid.*

<sup>33</sup> Letter from Amos A. Fries, General, Chief of the Chemical Warfare Service, to Major J.W.N. Schulz, General Service Schools, Ft. Leavenworth, Kansas, Nov. 28, 1921; Folder 381-1-28, Box 18, Entry 4, Secret and Confidential Files; Records of the Office of the Chief, RG 175, NACP.

<sup>34</sup> Laurie and Cole, *The Role of Federal Military Forces in Domestic Disorders: 1877-1945*, 358.

proved timely, because the U.S. Army was ordered into West Virginia to restore order during a massive United Mine Workers strike known as the Coal Mine Wars around that same time. Not only was the CWS ordered to provide tear gas, but a detachment of soldiers from Edgewood Arsenal were ordered to accompany the tear gas and deploy it when directed. They were never ordered to use the gas, however, and the strike was ended without the aid of chemical weapons.<sup>35</sup> The War Department demonstrated its ongoing lack of confidence when it came to the use of gas by briefly reinstating the tear gas ban after that, from January to July 1922. They worried that the agreement being negotiated at the Washington Conference on the Limitation of Armaments prohibited the use of crowd control gasses. Once the military was assured that gas grenades were not prohibited by the treaty language they once again permitted their use on mobs.<sup>36</sup>

Members of the U.S. law enforcement community were willing to use chemical weapons in even more ways in 1921. That year Nevada's Deputy Attorney General successfully lobbied the State Assembly to authorize the use of poisonous gas in state executions. He argued that gas would be a more humane method of death than firing squad or hanging, the two other methods authorized in Nevada at the time. Early proposals for the humane use of gas in criminal executions included one that suggested condemned prisoners be gassed in their cells while asleep without warning, but thankfully that plan proved impossible since witnesses could not observe and prison cells were not airtight. Nevada instead constructed a small, specially designed gas chamber that prisoners would be led into prior to the release of the gas.<sup>37</sup>

A few months after gas executions were allowed by the state a Chinese American named Gee Jon was arrested for and convicted of the murder of Tom Quong Kee in Mina, Nevada. The court sentenced him to death by lethal gas. Gee Jon appealed the sentence to the state supreme court on several grounds, including the argument that death by lethal gas was cruel and unusual and therefore impermissible under federal and state law. The supreme court of Nevada disagreed, upheld the sentence, and their written opinion repeated some of the same arguments made by the CWS on the humanity of chemical warfare.

The revulsion on the part of many to the idea of execution by the administration of gas is due to an erroneous impression. The average person looks upon the use of gas with horror, because of the experiences incident to the late war. They forget that there are many kinds of gas, ranging from the harmless nonpoisonous tear gas, which may be used for the quelling of a mob, and the ordinary illuminating gas, which may produce painless death, to the highly poisonous gas which sears and destroys everything with which it comes in contact. It may be said to be a scientific fact that a painless death may be caused by the administration of lethal gas . . . We think it fair to assume that our Legislature, in enacting the law in question, sought to provide a method of inflicting the death penalty in the most humane manner known to modern science.<sup>38</sup>

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<sup>35</sup> *Ibid.*, 322.

<sup>36</sup> *Ibid.*, 360.

<sup>37</sup> Stuart Banner, *The Death Penalty: An American History* (Cambridge and London: Harvard University Press, 2002), 196–97.

<sup>38</sup> *State v. Gee Jon*, 46 Nev. 418, 211 P. 676 (1923).

Accordingly, Gee Jon became the first criminal in America to be executed by lethal gas on February 8, 1924. Eventually 11 other states in the United States would adopt the use of lethal gas in criminal executions before lethal drug injections became the standard. Gas executions joined tear gas weapons as law enforcement tools as a result of the CWS's efforts to change public opinion about chemical weapons. Most remarkable, though, is that the CWS was not directly related to the adoption of the gas chamber as a means of capital punishment. Instead, the science they helped create, combined with the argument that chemical weapons were a humane method of warfare, provided both a means and a rationale for lethal gas executions.

Their influence went further. In spite of the fact that fighting American communism was not directly related to its role in the national defense establishment, Amos Fries and the CWS actively participated in the first Red Scare. The 1920s in America was a period of intense civil unrest. Race and labor riots occurred with alarming frequency across the nation after World War I. The U.S. Army became involved in these disturbances whenever local law enforcement agencies were overwhelmed and called on federal military forces for aid. Acting as a civil police force was an Army role that many officers, both inside and outside the CWS, supported. They generally considered mob violence directly related to communism, and regarded it as imminent a threat to society as a foreign enemy.<sup>39</sup>

Under the direction of Amos Fries, the members of the CWS became enthusiastic warriors in the fight against communism. Fries himself was a rabid anticommunist, who spoke frequently at venues across the country about the threats that communists posed to the United States. Years after retiring from the Army, Fries published a book about his beliefs called *Communism Unmasked*, and it has been said that he once lobbied a school board to fire a teacher in Washington, DC, for writing a definition of socialism in *Forum* magazine.<sup>40</sup>

Fries believed that "Communists are parasites who live as highwaymen live, by robbery of nations." The communist was adept "at deceit, and so use every good organization they can betray, cajole, bulldoze, or seduce into joining with them in their efforts to destroy governments."<sup>41</sup> It is not surprising, then, that he and those in the CWS who believed the same things put so much effort into methods of crowd control. Fries and his supporters hoped that tear gas grenades would be a frontline weapon in the war against communist labor agitation. They hoped that chemical weapons and the CWS could make a meaningful contribution during the 1920s Red Scare in America.

General Fries and the CWS were responsible for one of the most notable smear campaigns during the whole Red Scare. In December 1922, a librarian in the CWS named Lucia R. Maxwell began preparing a chart that listed the names of many women's political organizations and their leaders, and illustrated their connections to each other. The "spider web chart," as it came to be known,

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<sup>39</sup> Laurie and Cole, *The Role of Federal Military Forces in Domestic Disorders: 1877-1945*, 256.

<sup>40</sup> Amos A. Fries, *Communism Unmasked* (Washington: The Georgetown Press, 1937); Norman Hapgood, *Professional Patriots* (New York: Albert & Charles Boni, 1927), 168.

<sup>41</sup> Fries, *Communism Unmasked*, 15.

purported to expose a vast conspiracy of women's organizations, all in a network that promoted Marxism and undermined the nation.<sup>42</sup>

Fries supported the creation of the chart, and once it was finished he made reproductions and disseminated it to military and civilian agencies across the country. Newspapers soon reproduced it to make the general public aware of this insidious red gender scheme. The organizations it listed as members of the international socialist movement included the Women's International League for Peace and Freedom, the National League of Women's Voters, the National Council for the Prevention of War, the Women's Christian Temperance Union, and the American Home Economics Association. The original version of the chart also included the Daughters of the American Revolution, but that organization's name was removed, and the space was left blank in early published versions of the chart.<sup>43</sup> The notion that anyone would accuse the DAR of being involved in a communist conspiracy is laughable. Members of the DAR were known as reliable anticommunist crusaders throughout the 1920s. Additionally, General Fries's wife was the publicity chairman for the DAR at that time.<sup>44</sup>

The spider web chart caused a backlash against the CWS and the Army once it was publicized. The groups that were mentioned by the chart and other sympathetic organizations protested the smear and demanded that the periodicals and government officials who distributed it destroy their copies and apologize. Worse, many of the antiwar groups then in existence took their cue and began to step-up their public attacks on the military in general and the CWS in particular for their role in the controversy. Pacifists had mounted opposition against the CWS since the close of the war, but the publication of the spider web chart focused and reinvigorated their protest.

All of it came to very little, however. While the organizations that were named in the chart were able to convincingly deny the existence of a Feminist-Marxist conspiracy in the United States, the chart appeared and reappeared in various places and versions throughout the 1920s. It plagued the reputations of women's groups through that decade, and damaged their fight for political rights. One historian of the feminist movement, J. Stanley Lemons, concluded that "while social feminism faced a number of difficulties in the late 1920s, one of the most emotion-charged and persistent problems was its entanglement in the spider web controversy."<sup>45</sup> Fries and the CWS had proven that their voice carried weight, even when they spoke on policies unrelated to chemical weapons.



Chlorine production at Edgewood Arsenal, August 1918.

<sup>42</sup> The spider web chart is discussed in Paul L. Murphy, *The Meaning of the Freedom of Speech: First Amendment Freedoms from Wilson to FDR* (Westport, Connecticut: Greenwood Publishing Company, 1972), 191–98; Joan M. Jensen, eds. "All Pink Sisters: The War Department and the Feminist Movement in the 1920s," in Lois Scharf and Joan M. Jensen, *Decades of Discontent: The Women's Movement, 1920–1940* (Boston: Northeastern University Press, 1987), 199–222; J. Stanley Lemons, *The Woman Citizen: Social Feminism in the 1920s* (Charlottesville and London: University Press of Virginia, 1990), 209–227; Kim E. Nielsen, *Un-American Womanhood: Antiradicalism, Antifeminism, and the First Red Scare* (Columbus: Ohio State University Press, 2001), 73–88.

<sup>43</sup> Joan M. Jensen, "All Pink Sisters: The War Department and the Feminist Movement in the 1920s," 212.

<sup>44</sup> Murphy, *The Meaning of the Freedom of Speech*, 191.

<sup>45</sup> Lemons, *The Woman Citizen*, 225.

## Conclusion

Thus the CWS was able to improve its status in the United States during the first half of the 1920s. Though average Americans still had a negative opinion of chemical weapons, by searching for peacetime uses for war gasses, advertising their accomplishments, and by participating in the Red Scare, the officers of the CWS were able to stay in business in the face of opposition. Members of the military set aside some of their objections to chemical weapons as a tool of war, and permitted their continued research and development. Civilians tolerated the CWS enough that Congress allowed it to remain a military organization despite an initial inclination to save money and eliminate it. Americans in law enforcement and pesticide-dependent farmers who now relied on the peacetime applications of chemical weapons were grateful for the work the CWS was doing and glad that they would continue their efforts.

In spite of the CWS's achievements, though, many Americans never considered chemical weapons humane and never looked forward to the possibility of a future chemical war. In 1922 a delegation from the United States helped to negotiate an agreement at the Washington Conference on the Limitation of Armaments that would have limited the future production of different types of weapons among several world powers. Chemical weapons were expressly banned in the text, but the agreement as a whole was never ratified. Soon after, in 1925, representatives from several nations met in Geneva to discuss regulating the international trade of arms, munitions, and implements of war. There, the U.S. delegation proposed an amendment prohibiting any future use of chemical or biological weapons. The amendment began by repeating the language of the 1922 Treaty of Washington, which stated that "the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, has been justly condemned by the general opinion of the civilized world."<sup>46</sup> This ban on chemical weapons was signed into international law as the Geneva Gas Protocol (1925), and to date 133 countries have signed it.

The CWS story suggests that government agencies can influence public opinion and behavior, but to varying degrees. In this case, a military office used the public relations equipment at its disposal to change public opinion, and they were successful at getting some members of the military and officials in government to accept the need for a chemical warfare agency in the Army. The CWS even managed to convince some Americans that chemical weapons had potential peacetime uses. Despite their efforts, however, the officers of the CWS found themselves unable to alter Americans' core abhorrence of chemical weapons. For example, the claim that poison gas could cure respiratory ailments was not met with widespread acceptance, but skepticism and disapproval. Even today, Americans view chemical weapons negatively and actively hope for a future without them. U.S. foreign relations commitments bear this

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<sup>46</sup> Stockholm International Peace Research Institute, *The Problem of Chemical and Biological Warfare: A Study of the Historical, Technical, Military, Legal, and Political Aspects of CBW, and Possible Disarmament Measures*, vol. 3 (Stockholm: Almqvist & Wiksell, 1973), 155.

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Photo credits: Chemical lab, 165-WW-99-149, Gas attack, 111-SC-23094, Edgewood Arsenal, 165-WW-98-1, Chlorine production, 111-SC-54709, National Archives; Gen. Amos Fries, Library of Congress; "Humanity" article, *Chemical Warfare*; Letter to Richardson, RG 175, National Archives at College Park, Maryland.

out. Ultimately the qualified success of the CWS campaign on American society of the 1920s bears little resemblance to the thorough dominance in the Power Elite conspiracy described by C. Wright Mills. The CWS efforts were an exception to that concept in large part because Americans proved capable of exercising control over their personal opinions and setting limits on the uses of poison gas applications.