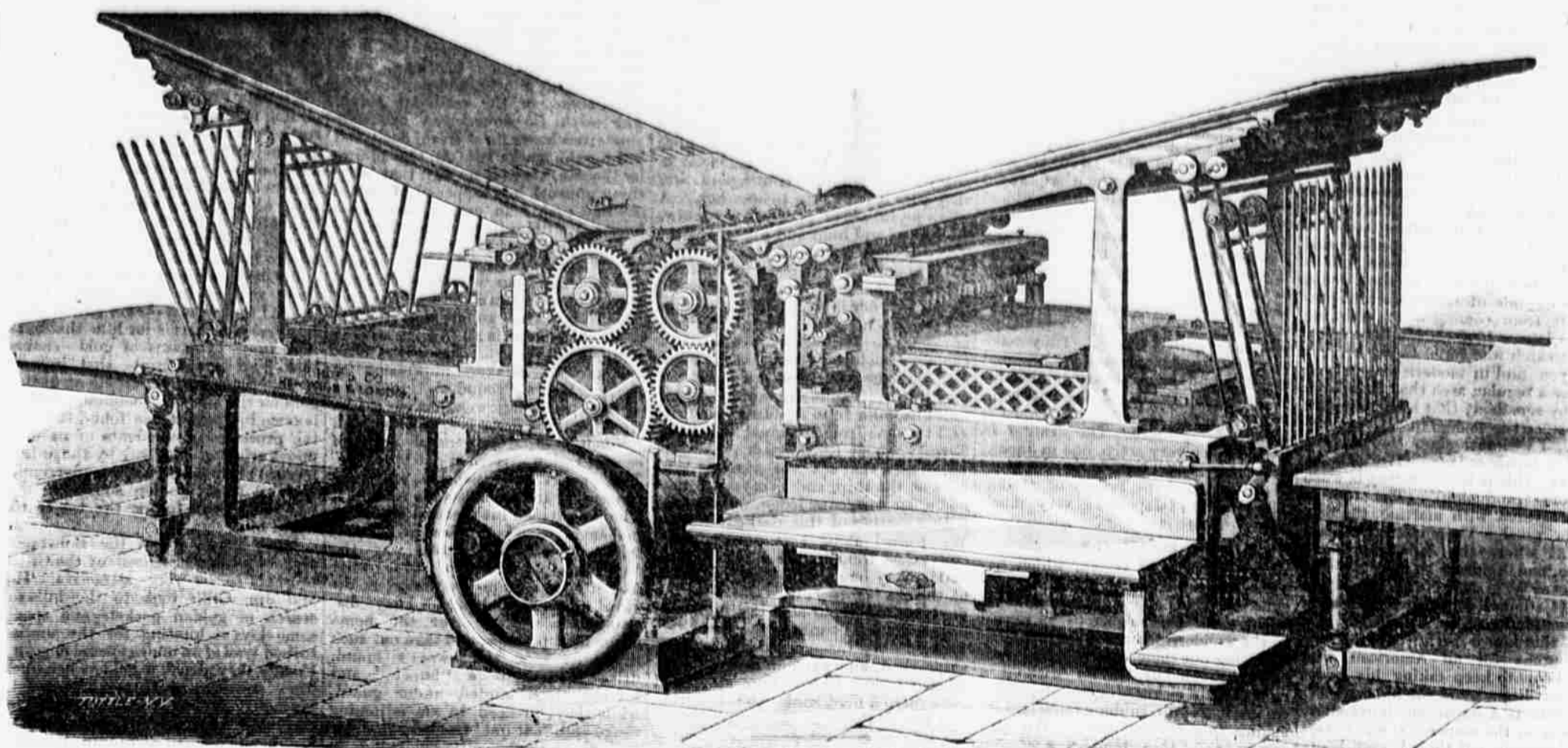


THE BEE'S NEW MACHINERY.

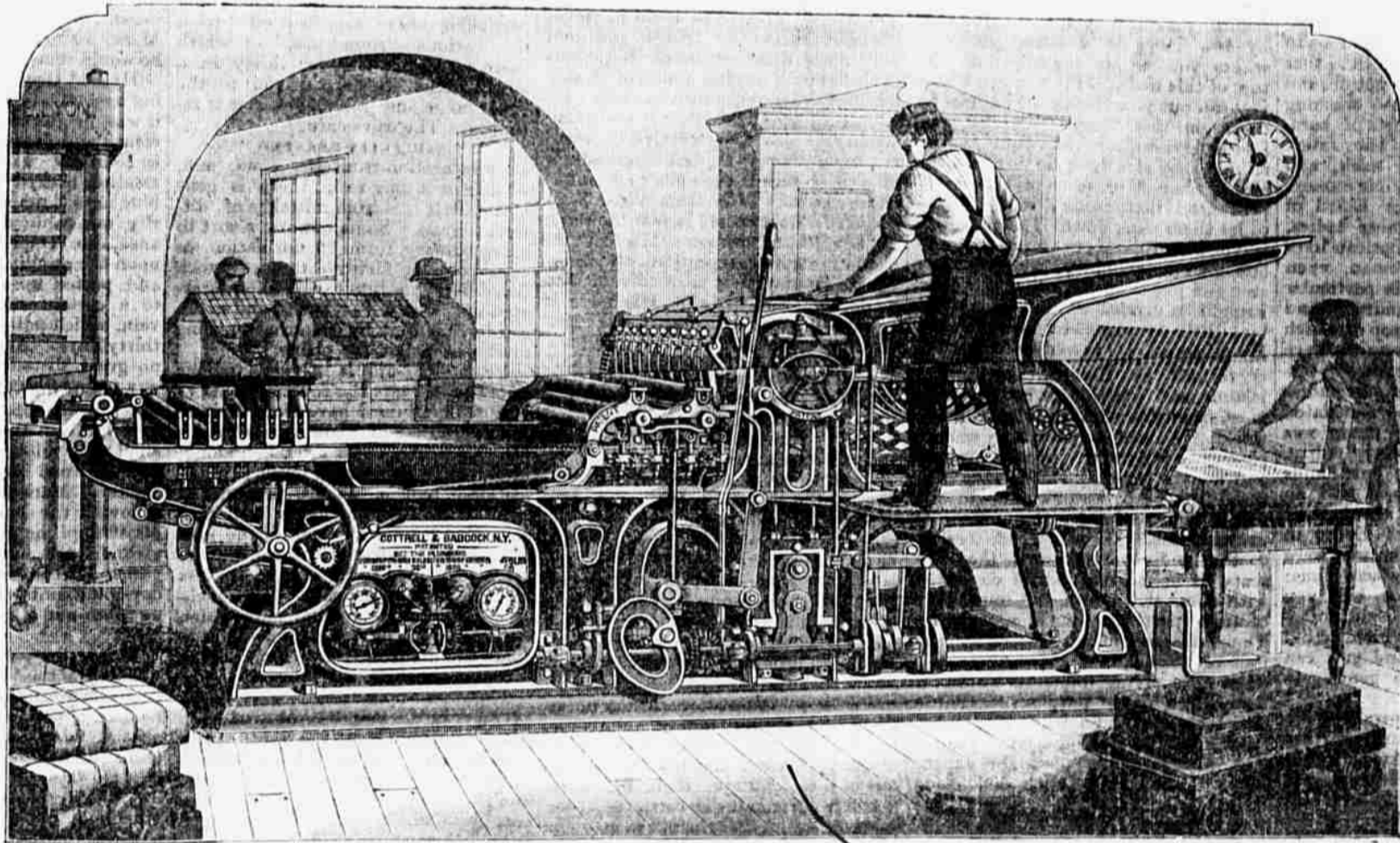
HOE'S PATENT IMPROVED DOUBLE-CYLINDER PRESS.

Capacity: Four Thousand Papers Per Hour.



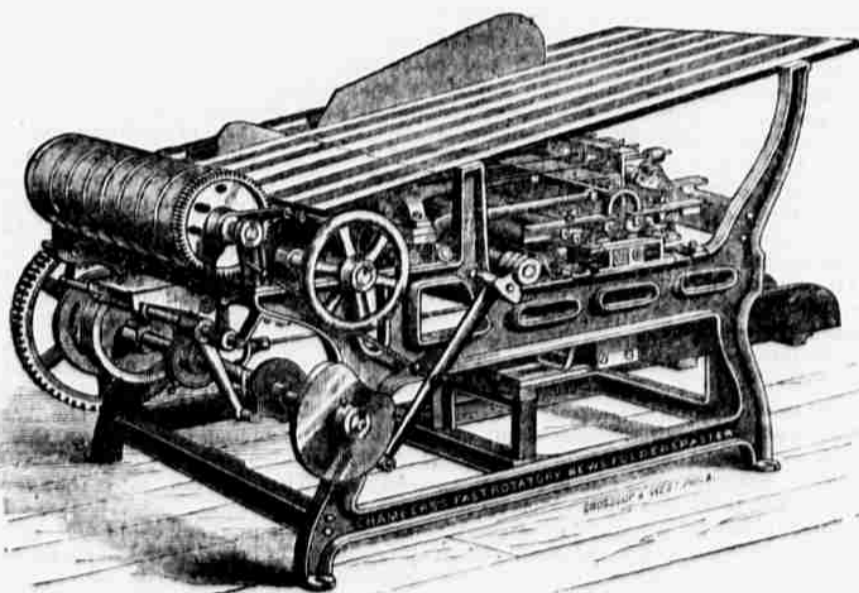
COTTRELL & BABCOCK'S TWO-REVOLUTION, AIR SPRING, PRESS.

Capacity: Two Thousand Papers Per Hour.



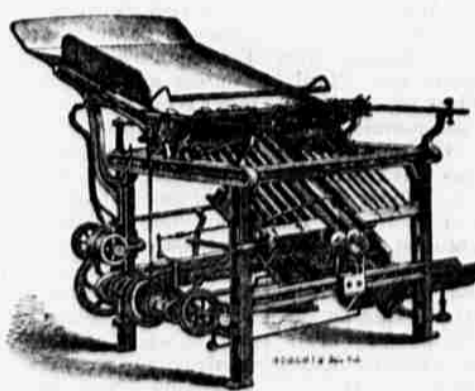
Chambers' Patent Folding, Trimming and Pasting Machine.

Capacity: Seventy-Five Per Minute.



Forsyth's Folding Machine.

Capacity: 60 Per Minute.



Improved Printing Machinery.
The engravings which accompany this sketch present the outlines of the new and improved printing machinery which has recently been placed in the press room of THE BEE. Before we enter upon the description of these machines, a brief history of THE BEE, through its various stages and growth, will be both interesting and instructive.

On Monday June 19th, 1871 THE BEE made its advent in the streets of Omaha. The founder Mr. Edward Rosewater, launched his enterprise without a dollar invested in printing material without a prospectus, and with no design to establish a permanent news paper. A two page sheet measuring 12x18 inches, the first number of THE BEE had the appearance of a play bill, and was in fact used as a programme in the Academy of Music during the first week of its existence.

At the end of the first two weeks the paper was slightly enlarged and transmitted into a four page paper 14x20.

Up to that time the circulation was varying from 300 to 800 daily was distributed in our business houses free of charge. On July 27th, '71, the paper was enlarged to an 18x34 sheet and delivered to subscribers in the city for 12 cents per week, or mailed at 85 per annum. On August 28th, '71, the paper was again enlarged to 6 columns, 4 pages 20x28 and the subscription price raised to 15 cents per week and \$8 per annum.

Since then enlargements were made in the daily on May 6th, 1872, to 7 columns, 23x33; July 22d, 1872, to 8 columns, 24x30; on March 7th, 1874, to 9 columns, 27x41, and again on May 14th, 1881, to 28x42.

During the first two months the type work and printing of THE BEE was done under contract by Redfield Brothers, job printers, corner 12th and Douglas streets. About the middle of September, 1871, an outfit of types, cases, imposing stones, &c., valued at \$1200, was purchased and placed in Redfield Brothers building.

In the spring of 1872 the proprietor of THE BEE bought out the German printing office of the *Beobachter Anzeiger*, with about \$1,500 worth of types and printing materials, and also purchased a full supply of types and materials for the Bohemian paper which he founded during the previous year. A large frame building known as the Cedar Rapids House adjoining Redfield & Brothers building, was rented, fitted up and occupied by THE BEE and these foreign publications.

On the 11th of June, 1872, the building was set on fire and the whole establishment destroyed by an incendiary, who was subsequently arrested and convicted. Undaunted by this calamity, THE BEE was kept on a half sheet, never losing a single issue, until the destroyed materials were again replaced.

In July, 1872, the new outfit of printing material, together with its first printing press and steam engine were placed in the brick building on Farnham street, which has ever since been occupied by THE BEE.

It is foreign to our purpose in writing this article to dwell at length upon the causes that have led to the marvellous growth of THE BEE, nor to have space to recite the various enterprises which this paper has set on foot, and the reforms it has successfully championed during the past ten years. While pointing with just pride upon the achievements of the past, the most striking proof of the prosperity and widespread influence of THE BEE is exhibited in the fast presses and improved printing machinery which it has been compelled to purchase in order to supply the demand of its constantly increasing patronage.

During the first year of its existence THE BEE was printed by Redfield Brothers, upon a Cincinnati drum cylinder press, propelled by the hand power of a broad-shouldered American citizen of African descent. The speed of this press varied from 400 to 600 impressions, or from 200 to 300 complete papers per hour. After the fire in June, 1872, THE BEE was printed on its own cylinder press, which was also a Cincinnati cylinder with steam attachment. This press was propelled by a six-horse power Baxter engine, and was capable of turning out from 800 to 1,000 impressions per hour. This speed was, however, somewhat risky because this class of presses are built very light and liable to go to pieces from jarring when put to their utmost speed.

When the circulation of the daily reached 1,200, in 1873, it became manifest that this light cylinder would not meet the demand. An exchange was therefore effected with the makers of that press, for a small cylinder Hoe press which they had purchased in trade and which, in those days, was not in general demand. This was the first Hoe press ever brought to Nebraska, and for a period of seven years it did excellent service, the only drawback being its tendency to crush type and the extraordinary wear upon the dress of the paper. The speed of this press ranged from 1,800 to 2,000 impressions per hour, but its size was only adapted to papers of 31x46 inches, hence both as a matter of necessity in printing the weekly edition, which is 33x47 inches, and as a precaution against accidents, another and larger press was purchased in the spring of 1874. This press was one of the old style, extra heavy Cottrell & Babcock drum cylinders. Its speed was from 800 to 1,200 impressions per hour, and after six years wear was reduced to from 600 to 800 per hour.

The rapid increase in circulation of both the daily and weekly editions, during the past two years, made this slow machinery costly and laborious. It was only possible to print the large editions of the weekly by working them off during the night, and that kept the engine constantly in motion night and day. A complete change of machinery became an absolute necessity.

The first step in this direction was the purchase of a new Baxter steam engine of fifteen-horse power. These engines, manufactured in Colt's armory at Hartford, Conn., are the most simple compact and economical engines made in the world and withal perfectly safe. Although these engines cost fully double the price of the ordinary upright engines, they more than offset the extra cost by their simplicity and durability. The next change made was the exchange of the old Cottrell & Babcock drum cylinder press for one of Cottrell & Co.'s improved patent two-revolution printing presses. This is one of the most elegant and finely finished presses made. The great advantages of this machine are its speed and the facility with which it can be handled for all kinds of work. It is adapted to the finest book and color work as well as newspaper printing. One of its special features is the air spring and governor which enable

the machine to attain much greater speed than wire spring machines. This press is capable of turning out 1,800 to 2,000 impressions per hour. The most valuable acquisition in machinery was made ninety days ago by the exchange of the small cylinder Hoe press for one of Hoe & Co.'s latest improved patent double cylinder presses, which we illustrate on this page. This magnificent piece of machinery is the first double-cylinder press brought to Nebraska, and the only latest improved machine of this pattern west of the Mississippi. The weight of this great press is 22,500 pounds; it covers a space with its attachments of 31x18 feet and cost at the factory \$6,000. It is therefore the largest printing press as well as the fastest and most costly press now in the state. While the ordinary printing presses in use in the newspaper offices in this city are provided with one large cylinder,

fed by one feeder, this press is provided with two sets of cylinders, fed simultaneously by two feeders, one of whom stands at each end of the press, and an imprint is made on two papers at each revolution of the cylinders. The capacity of this press is therefore doubled, and 4,000 impressions per hour are thrown off. One of the greatest drawbacks in expediting the large circulation of THE BEE was the tedious and laborious folding of the papers. Every afternoon the entire carrier force of boys were kept busy in folding the city edition, and from eight to ten persons had to labor a day and a half each week in folding the weeklies. As an effective remedy to this drawback the proprietors of THE BEE purchased one of the Forsyth's patent newspaper folding machines, soon after the double cylinder Hoe press had been placed in THE BEE press

room. This machine illustrated elsewhere is capable of folding 60 papers per minute or 3600 per hour. In order to meet the requirements of a metropolitan daily a contract was made with Chambers & Brothers, Philadelphia, in February last for one of their patent improved folding machines which was manufactured by them expressly for THE BEE and delivered at our press room last week. This is one of the most ingenious pieces of mechanism that has yet been devised in this age of marvellous inventions. The machine made for THE BEE (see illustration) is one of Chambers' most improved five fold fast rotary news folding machine, making three folds at right angles and two folds parallel and working sheets varying in size from a quarter sheet of our enlarged daily edition to a sheet measuring 37x52 inches. The machine is also provided with pasting and trimming attachments

which enable us to fold 75 papers per minute, paste each paper in the middle after it is folded to a quarto, and trim off the edges so that each of the eight pages of the paper are accessible to the reader without turning the sheet over. Mr. Edward Pfeiffer, the mechanic who came to Omaha to erect this machine for THE BEE, has made several trips across the ocean on similar errands. Last year he put up one of these machines in Germany and another in England. Although somewhat complicated the folder is not very large, occupying a space 5x7 ft., and its height above the base is less than 4 ft. With this superb set of machinery THE BEE is capable of printing 6,000 impressions or 3,000 complete papers every hour, and we have the means to fold, trim and paste these papers simultaneously while they are being printed. In cases of emergency from 5,000 to 6,000 copies of the daily and weekly editions can be printed, folded and

made ready for delivery or mailing in one hour. Taking an average of ten hours per day, including incidental delays, and we could print, fold and deliver 40,000 papers in one day. As yet, THE BEE is the only paper in Nebraska, and for that matter in Iowa, Nebraska and Kansas, that uses machinery for folding its circulation. That such machinery has become indispensable is evidenced by the following exhibit of the marvellous growth of this paper:

CIRCULATION OF DAILY BEE.	
1874—September 4th.....	2,736
December 30th.....	2,832
1875—January 3rd.....	2,808
June 3rd.....	2,928
1876—March 24th.....	3,048
August 4th.....	2,744
1877—July 20th.....	2,720
December 30th.....	2,856
1878—February 22d.....	2,712
November 7th.....	2,664
1879—January 20th.....	2,688
September 11th.....	2,448
1880—March 20th.....	2,808
December 30th.....	2,840
1881—January 3rd.....	2,812
CIRCULATION OF THE WEEKLY BEE.	
1874—October 9th.....	1,512
December 7th.....	2,064
1875—January 7th.....	2,064
December 12th.....	2,432
1876—January 24th.....	3,504
1877—January 13th.....	2,928
January 4th.....	2,784
December 14th.....	2,784
1878—January 11th.....	2,784
November 15th.....	2,808
1879—January 24th.....	2,808
December 5th.....	4,080
1880—January 6th.....	4,320
December 10th.....	11,040
1881—January 7th.....	13,400

A DESPERATE STRUGGLE.

Encounter of a Union Soldier with a Confederate.

Philadelphia Press.

"Halt! Who goes there?" shouted a long, lank confederate soldier, sitting upon a sorrel horse, leaning with a double-barreled shotgun, the favorite weapon of the western bushwhacker in the early war time. He was the picket guarding the camp of Dick McCann, one of the most daring of the confederate cavalry. The bivouac rested in the security of his vigilance in a piece of woods a mile or so to the left of the turnpike leading from Gallatin to Nashville, Tenn. The picket stood where the country road which led past McCann's camp made its junction with the turnpike. He evidently challenged the cavalry approaching from the direction of Gallatin as a matter of form, for as the officer approached him in response to his command, "Advance and give the countersign," his shotgun lay upon his lap, across the pommel of his saddle, while he was paying more attention to his comrade, who was coming up the wagon road with two chickens in one hand, the plunder of an unofficial forage, and an unruly horse in the other, than he did in the officer responding to his challenge. The Federal soldier got within a few feet of him before he seemed to recognize the possibility of an enemy being nearer than Nashville. The dress first attracted his attention, for he saw that it was not that of a Confederate, and hurriedly bringing his shotgun to bear upon the officer, he commanded, "Fourth Michigan cavalry," replied the officer.

Covering the officer with his shotgun as he passed around to surrender himself, the Confederate again commanded, "Give me your arms!"

The officer, who wore a heavy overcoat with a long cape, dropped the reins upon his horse's neck, pushed his hand under his overcoat to unbuckle his sabre and comply with the demand.

The Federal soldier's horse being thus left at liberty crowded against the Confederate, and, believing his game was already in hand, he laid his shotgun down across his saddle to receive the arms of his captive. Hardly had he done this before the Federal soldier saw his opportunity, and, throwing his left hand quickly under the cover of his cape, struck the muzzle of his shotgun and knocked it to the ground and with the same movement caught the Confederate by his long, flowing hair pulled his head upon his breast, whipped his revolver from its pouch, placed it against his body and fired. The hammer of the revolver caught in the fold of the long cape which hung from the Confederate's shoulders and did not explode. He drew it back, raised the hammer again, and made another attempt to secure the confederate. This time it got between his body and arm, and although it did not miss fire, the confederate was unajured and in the tussle escaped. All this was the work of a minute, for the officer had shouted to his command, "Forward!" the moment he had grappled with one of McCann's private soldiers. But by the time it arrived the soldier was going down the road at break-neck speed, while his comrade with the two chickens for the morning's breakfast had mounted his horse and was following him hurriedly. The little command passed on to Nashville as rapidly as possible, without stopping to do more than to pick up the soldier's shotgun to send home as a souvenir of the escapade.

A Novel Shipment of Carp.

Forest and Stream.

Last Saturday the Pacific mail steamer Colon took out 30 carp for Ecuador, in charge of Mr. Aguirre. They were sent by Prof. Baird, through Mr. Blackford, of the New York Fish Commission, and as after their arrival in Ecuador they will have a ten days journey to the plantation of Signor Jiro, near the city of Quito, upon the backs of Indian carriers, they required special cans for their transportation. These cans are made of strong tin, flattened on one side to fit a man's back, with places for the strap, which passes across the Indian's forehead, from which they depend. They are covered with felt and have perforated wooden covers to protect them from the tropical heat, and, when filled with water, will weigh 100 pounds. The water will not be changed from the time of leaving New York, but will be aerated by dippers. Mr. Aguirre accompanying them to the end of their journey, Messrs. Hoadley & Co., the New York agents, having given them every facility on shipboard. This is the greatest feat yet attempted in fish transportation, and we will watch for reports of the result with great interest. Ten day journey on the backs of men, in a tropical climate is enough to break down the endurance of even a carp.