

THIRTY-FIRST
EDITION OF
ONE MILLION.



THE ABOVE
IS A COPY OF OUR PACKAGE.

"THAT'S WHAT
I WANT"

HAND-BOOK
OF
VALUABLE
INFORMATION.

1899.

PERPETUAL CALENDAR.

- 1.—The first Table gives the week-day on which falls the first of each month.
 2.—If the month commences on Sunday, Table headed "Sunday" is the Calendar for that month, and so on.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1889	Tues.	Fri.	Fri.	Mon.	Wed.	Sat.	Mon.	Thur.	Sun.	Tues.	Fri.	Sun.
1890	Wed.	Sat.	Sat.	Tues.	Thur.	Sun.	Tues.	Fri.	Mon.	Wed.	Sat.	Mon.
1891	Thur.	Sun.	Sun.	Wed.	Fri.	Mon.	Wed.	Sat.	Tues.	Thur.	Sun.	Tues.
1892	Fri.	Mon.	Tues.	Fri.	Sun.	Wed.	Fri.	Mon.	Thur.	Sat.	Tues.	Thur.
1893	Sun.	Wed.	Wed.	Sat.	Mon.	Thur.	Sat.	Tues.	Fri.	Sun.	Wed.	Fri.
1894	Mon.	Thur.	Thur.	Sun.	Tues.	Fri.	Sun.	Wed.	Sat.	Mon.	Thur.	Sat.
1895	Tues.	Fri.	Fri.	Mon.	Wed.	Sat.	Mon.	Thur.	Sun.	Tues.	Fri.	Sun.
1896	Wed.	Sat.	Sun.	Wed.	Fri.	Mon.	Wed.	Sat.	Tues.	Thur.	Sun.	Tues.
1897	Fri.	Mon.	Mon.	Thur.	Sat.	Tues.	Thur.	Sun.	Wed.	Fri.	Mon.	Wed.
1898	Sat.	Tues.	Tues.	Fri.	Sun.	Wed.	Fri.	Mon.	Thur.	Sat.	Tues.	Thur.
1899	Sun.	Wed.	Wed.	Sat.	Mon.	Thur.	Sat.	Tues.	Fri.	Sun.	Wed.	Fri.
1900	Mon.	Thur.	Thur.	Sun.	Tues.	Fri.	Sun.	Wed.	Sat.	Mon.	Thur.	Sat.

	SUNDAY.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
S 1	8 15 22 29	M 1 8 15 22 29	T 1 8 15 22 29	W 1 8 15 22 29	T 1 8 15 22 29	F 1 8 15 22 29	S 1 8 15 22 29
M 2	9 16 23 30	T 2 9 16 23 30	W 2 9 16 23 30	T 2 9 16 23 30	F 2 9 16 23 30	S 2 9 16 23 30	S 2 9 16 23 30
T 3	10 17 24 31	W 3 10 17 24 31	T 3 10 17 24 31	F 3 10 17 24 31	S 3 10 17 24 31	S 3 10 17 24 31	M 3 10 17 24 31
W 4	11 18 25	T 4 11 18 25	F 4 11 18 25	S 4 11 18 25	S 4 11 18 25	M 4 11 18 25	T 4 11 18 25
T 5	12 19 26	F 5 12 19 26	S 5 12 19 26	S 5 12 19 26	M 5 12 19 26	T 5 12 19 26	W 5 12 19 26
F 6	13 20 27	S 6 13 20 27	S 6 13 20 27	M 6 13 20 27	T 6 13 20 27	W 6 13 20 27	T 6 13 20 27
S 7	14 21 28	S 7 14 21 28	M 7 14 21 28	T 7 14 21 28	W 7 14 21 28	T 7 14 21 28	F 7 14 21 28

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INTRODUCTION.



ONCE more we make our bow to the American Housewife and the Public in general, in introducing this, our latest effort, in the line of a useful and instructive booklet of general information.

This booklet was first introduced by our firm about twenty-one years ago, and has been improved and enlarged in many ways since then, until the present time when we enter on the publication of the 31st million edition.

We have endeavored in producing this book, to present one that would be of interest to the younger as well as the older portion of the community; and in view of the stirring events through which our beloved country has just passed, especial interest will be taken in the Chronological history of the Spanish-American War; the vessels of the Navy, as well as the pictures of the leading officers of our Army and Navy, of the Paris, Cuban and Porto Rican Peace Commissioners, all of which are taken from the latest photographs obtainable.

For the young, the pages on Palmistry, Dreams and Puzzles, will be of special interest, and will, we trust, prove to be instructive and entertaining in every household.

This book is issued particularly to educate Common-Sense Housekeepers, especially in the rural communities, to the value and saving by the use of ARM and HAMMER BRAND SODA or SALERATUS with sour milk.

Most of the Cook-Books now being published, when referring to the preparation of edibles, where Soda can be used, recommend in most cases the use of Baking Powder. This practice we do not advise: first, because it

encourages extravagance in the household and, secondly, because the residuum resulting in the food by the Chemical action of most Baking Powders is very injurious, as compared with the natural action of Sour Milk or Pure Soda or Saleratus, like the ARM and HAMMER BRAND. The solid business style of the ARM and HAMMER wrapper covers the purest quality of Soda and Saleratus, which no other brand can approach, and American Housekeepers know it.

CHURCH & CO.

Additional Copies of this Book may be had FREE upon application to CHURCH & CO., New York.

The Great "Arm and Hammer Brand."

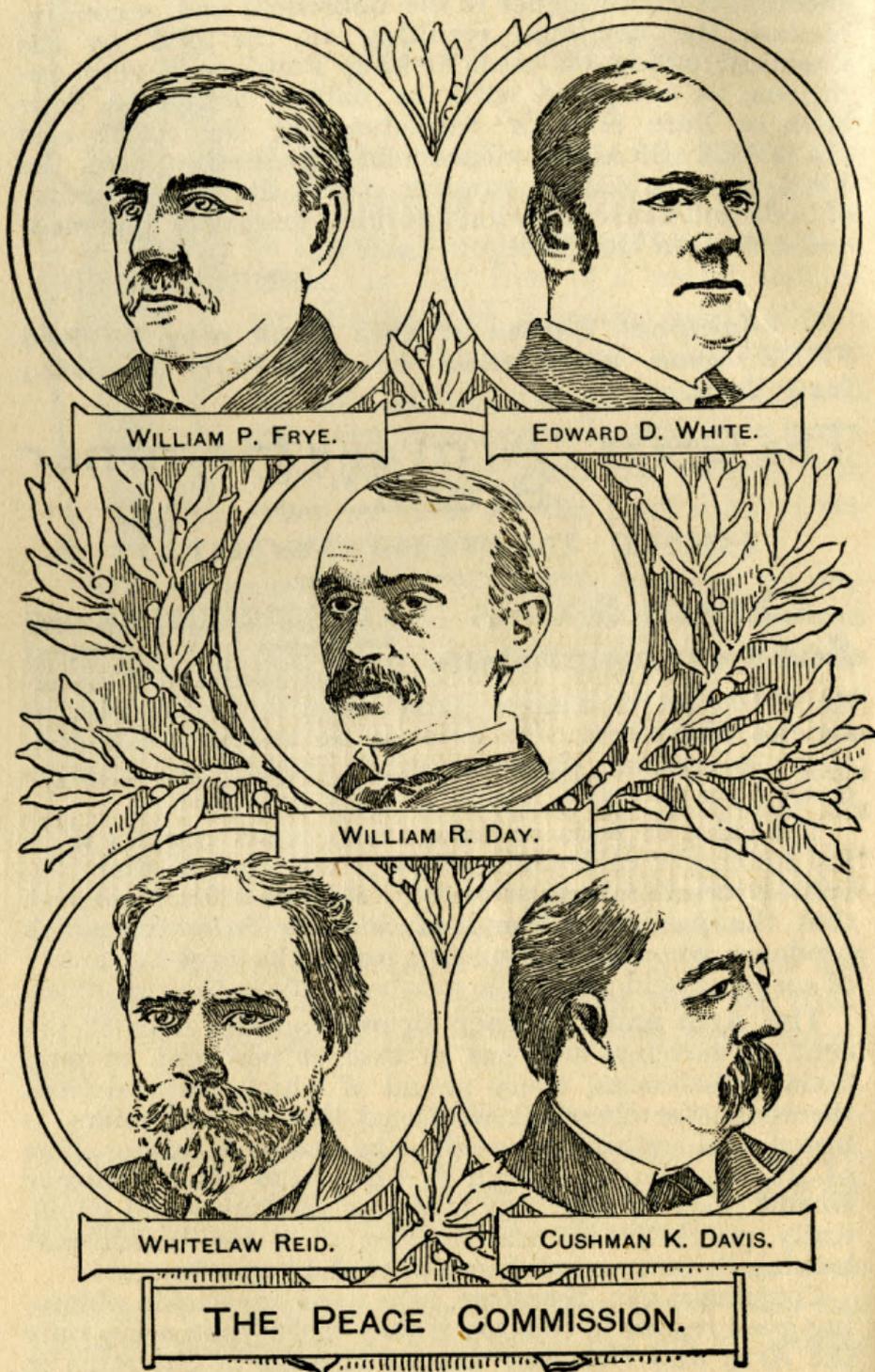
BEST IN THE WORLD!

Church & Co's HOUSEKEEPERS well know how important **Soda or Saleratus.** it is to thoroughly understand the art of making good bread and other similar articles of cookery. In order to do this it is essential, above everything else, to procure good materials, especially flour and good Baking Soda or Saleratus.

The value of Soda or Saleratus depends entirely upon the amount of carbonic acid gas it contains, as that constitutes its sole raising property. It is, therefore, apparent that the particular brand of Soda or Saleratus which produces, when used for making bread, the largest quantity of carbonic acid gas, is the most valuable to the consumer.

The Arm and Hammer Brand contains over 52 per cent. of carbonic acid gas, or over 99 per cent. of pure Soda or Saleratus, every pound of which, shipped from the extensive chemical works of the manufacturers, is tested, and nothing allowed to be delivered falling short of this standard. Church & Co's **Arm and Hammer Brand** Soda or Saleratus is almost absolutely and chemically pure—the minute fraction of a hundredth part lacking in that respect being of trivial importance.

Consumers can, therefore, rely upon invariably obtaining good results in cooking if they insist upon using only the **Arm and Hammer Brand** of Soda or Saleratus in their households.



WILLIAM P. FRYE.

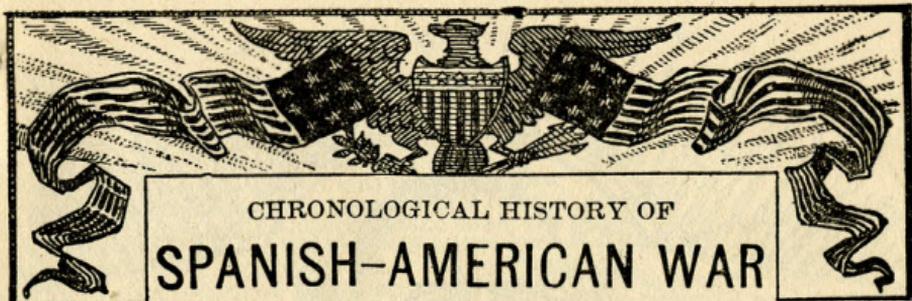
EDWARD D. WHITE.

WILLIAM R. DAY.

WHITELAW REID.

CUSHMAN K. DAVIS.

THE PEACE COMMISSION.



CHRONOLOGICAL HISTORY OF
SPANISH-AMERICAN WAR

February 15 to August 12, '98.

- February 15—Battleship *Maine*, U. S. Navy, destroyed in the harbor of Havana, with 248 of her officers and crew.
- February 16—Tremendous excitement throughout the United States, and charges of treachery made against the Spaniards.
- February 17—Twenty-seven American tars buried in Havana.
- February 21—Naval Court of Inquiry opened in Harbor of Havana.
- February 22—Board of Inquiry decides to keep its investigations secret.
- February 23—Ascertained that the *Maine* was not wrecked from exploding boilers.
- February 25—President McKinley admits the situation grave. Ammunition shipped to New York.
- March 1—Hanna tells the President to quiet the public pulse. Secretary Long acquits Spain of participation in the explosion.
- March 3—Foraker says war will follow a finding of treachery.
- March 5—Both branches of the military being prepared for service.
- March 5—President flatly refuses to recall Fitzhugh Lee at the request of Spain. Naval officers discussing war and the blockading of Havana.
- March 7—The Montgomery ordered to Havana. The national defense bill appropriates \$50,000,000. Bill to be rushed. Orders issued to recruit artillery.
- March 9—Commander Brownson sails to Europe to purchase war ships.
- March 14—The U. S. buys the "New Orleans" from Brazil.
- March 15—President refuses to withdraw fleet from Cuban waters.
- March 27—Board of Inquiry declares that the *Maine* was destroyed by external agencies.
- March 30—The President given further time to prepare his ultimatum demanding the evacuation of Cuba by Spain.
- April 5—Senate warlike in its utterances.
- April 6—Havana in a state of terror.
- April 9—Fitzhugh Lee departs from Havana. Spanish fleet joined torpedo flotilla.
- April 11—The President's message goes to the House.
- April 12—Lee says American army could easily land in Cuba.
- April 13—House adopts Cuban resolution directing the President to intervene.
- April 15—Troops ordered to Southern ports.
- April 16—Senate adopts Cuban resolution.
- April 20—President's ultimatum sent to Spain. Spain expected to refuse. Spanish minister given his passports.
- April 21—Minister Woodford given his passports by Spain.
- April 22—American fleet sails for Havana.
- April 23—Blockade of Havana begun. President makes first call for 125,000 troops.
- April 24—News received of Spanish fleet leaving Cape Verde.
- April 25—War declared.
- April 26—Dewey ordered to Manilla.
- April 27—First fight of the war. Bombardment of the Matanzas forts.
- April 29—Portugal declares neutrality.
- May 1—Dewey's victory. Destroys Admiral Montijo's fleet at Manilla. Sinks 11 Spanish ships.
- May 5—Sampson leaves for Porto Rico.
- May 12—Bombardment of San Juan de Porto Rico. Ensign Bagley and four sailors killed at Cardenas. First land fight between troops from the *Gussie* and the Spaniards in Pinar del Rio.
- May 14—Americans killed while cutting cable at Cienfuegos.

COMMISSIONERS FOR CUBA.



MAJOR-GENERAL
M. C. BUTLER.



REAR-ADMIRAL
W. T. SAMPSON.



MAJOR-GENERAL
J. F. WADE.

AMERICAN COMMISSIONERS FOR THE EVACUATION
OF CUBA AND PUERTO RICO.



MAJOR-GENERAL
J. R. BROOKE.

REAR-ADMIRAL
W. S. SCHLEY.



BRIG.-GENERAL
W. W. GORDON.

COMMISSIONERS FOR PUERTO RICO.

SPANISH-AMERICAN WAR--Continued.

- May 15—Spanish Cabinet resigns.
May 17—Cervera's fleet reported off Venezuela.
May 19—Dewey asks for reinforcements.
May 19—Cervera's fleet enters harbor of Santiago.
May 24—Oregon reaches Florida coast.
May 25—First expedition leaves for Manila.
May 26—President makes second call for volunteers.
May 31—President announces that to secure peace, Spain must cede Cuba to Cuban people. Spain authorizes loan of \$200,000,000.
June 1—Schley bombards outer forts of Santiago.
June 2—Secretary of War Alger asks for fifty millions of dollars.
June 3—Hobson sinks the Merrimac in Santiago channel and is taken prisoner with his men. Four thousand men volunteered for this service.
June 5—Americans land near Santiago.
June 6—Santiago forts bombarded and Reina Mercedes sunk.
June 7—Marines land in Guantanamo Bay.
June 7—Marines land at Baiquiri.
June 10—Panther lands troops at Guantanamo Bay.
June 13—Marines have fight with Spanish guerrillas. Four men killed.
June 14—Shafter expedition sails for Cuba.
June 15—Fight at Guantanamo Bay—100 Spaniards killed.
June 16—Santiago bombarded.
June 16—Vesuvius tries her gun cotton shells.
June 21—Shafter reaches Santiago Bay.
June 22—First landing at Baiquiri.
June 23—Shafter lands his entire force at Baiquiri. Shell explodes on the Texas and kills one man.
June 24—The fight of La Guasima, Roosevelt's Rough Riders receive a bloody baptism.
June 27—Commodore Watson's fleet ordered prepared for expedition to Spain.
June 27—Admiral Camara's fleet at Port Said refused coal by Egyptian government.
June 30—Cost of war so far, \$60,000,000.
July 1—American troops move upon Santiago.
July 2—American troops capture Heights of San Juan and El Caney, with great loss on both sides.
July 3—Admiral Cervera's entire fleet destroyed by Schley. Spanish loss, about 300 killed, 1300 prisoners.
July 4—The Ladrone Islands taken.
July 4—First relief expedition reaches Manila.
July 6—German man-of-war Irene ordered out of Subic Bay and Isla Grande captured by Dewey.
July 6—Capt. Lazago of the Infanta Maria Teresa commits suicide and Admiral Villamil dies of his wounds.
July 7—Hobson and crew exchanged.
July 8—Santiago given formal notice of bombardment.
July 9—Admiral Camara's fleet returns through the Suez Canal.
July 9—Major-General Miles leaves with re-enforcements for Santiago.
July 10—Warships begin the bombardment of Santiago.
July 10—Cervera and other prisoners reach Portsmouth, N. H.
July 11—Several deaths from yellow fever reported in the American camps.
July 11—Armistic agreed for twenty-four hours at Santiago.
July 12—The Spanish Cabinet resigns.
July 14—Gen. Toral formally surrenders Santiago.
July 15—Commissioners agree on details of terms of surrender.
July 16—Second relief expedition reaches Manila.
July 17—Santiago occupied by Americans.
July 21—Miles sails for Porto Rico.
July 21—Gen. Garcia withdraws from Santiago, because of Shafter's treatment.
July 22—Nipe harbor captured and Spanish gunboat sunk.
July 23—Second expedition to Porto Rico starts under Gen. Schwan.
July 23—Shafter reports yellow fever at Santiago on the increase. Determined that the Brooklyn did the greater part of the damage to Cervera's fleet.
July 24—Spanish garrison at San Luis and Palmo Soriano surrender.
July 25—Spanish forces defeated at Sancti Espiritu by Cubans.
July 25—Guantanamo surrenders to Shafter.



MAJOR-GENERAL
NELSON A. MILES.



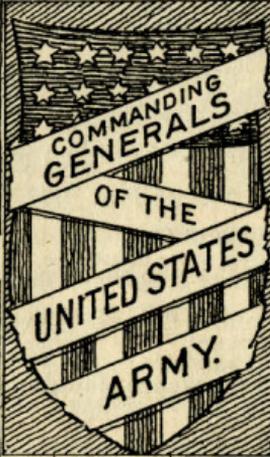
BRIG.-GENERAL
WM. R. SHAFTER.



MAJOR-GENERAL
WESLEY MERRITT.



BRIG.-GENERAL
J. J. COPPINGER.



BRIG.-GENERAL
WM. M. GRAHAM.



BRIG.-GENERAL
ELWELL S. OTIS.



MAJOR-GENERAL
J. WHEELER.



BRIG.-GENERAL
H. C. MERRIAM.

- July 25—Gen. Merritt reaches the Philippines.
 July 26—Gen. Miles lands at Guanica, Porto Rico.
 July 26—Skirmish at Yauco, Porto Rico,
 July 27—Spanish Garrison at Caimanera surrenders,
 July 28—Third Porto Rico expedition, under Gen. Brooke, leaves Newport News.
 July 28—Transport Berlin leaves New Orleans with Hood's Immunes (Second United States Volunteers.)
 July 29—Ponce, Porto Rico, surrenders.
 July 30—American peace ultimatum delivered to Cambron.
 July 30—Spaniards defeated at Holguin by Garcia.
 July 31—American troops welcomed by alcalde and citizens of Yauco.
 July 31—Battle at Malate, near Manilla, Spaniards attack American forces in the midst of a storm and are driven back.
 August 1—Spanish attack at Malate resumed.
 August 1—Arroyo and Guayama, Porto Rico, captured by the Americans.
 August 1—Juan Diaz in Porto Rico occupied by the American troops.
 August 2—Garcia captures Mayuri.
 August 2—Spain accepts American Ultimatum.
 August 2—Immune regiments ordered to Cuba for garrison duty.
 August 3—Gen. Brooke's expedition lands at Arroyo.
 August 4—Round robin from the Generals at Santiago demanding that the soldiers there be removed to the United States to escape the yellow fever.
 August 4—Monterey reaches Manilla.
 August 5—All the well men in Shafter's army ordered back to the United States.
 August 6—Shafter's army begins embarking from Santiago.
 August 7—Blanco releases political prisoners.
 August 7—Gen. Garcia breaks through the trocha near Las Villas.
 August 7—Skirmish at Guayamo in which Spaniards are defeated.
 August 8—Spanish answer to peace proposition received in Washington.
 August 8—Spanish prisoners leave Santiago for Spain.
 August 9—Gen. Miles asks that no more troops be sent to Porto Rico.
 August 10—Gen. Lawton appointed Millitary Governor of Cuba.
 August 10—Coamo, Porto Rico, captured by Americans,
 August 10—President submits a protocol to Spain on which peace can be arranged.
 August 11—Spanish cabinet accepts the protocol, practically ending the war.
 August 12—The peace protocol signed and President orders a cessation of hostilities, which had then lasted 110 days.
 Dec. 10—Treaty of Peace signed at Paris.

“No, thank you.” This is the correct reply to a merchant who would sell you one article when you have asked for another.

**AVERAGE LENGTH OF HUMAN LIFE
 AT THE FOLLOWING AGES:**

AGE.	AVERAGE LENGTH OF LIFE.	AVERAGE DEATHS PER 1000 ANNUALLY.
40	28 years.	9
45	24 “	11
50	20 “	13
55	18 “	18
60	14 “	26
65	11 “	40
70	8 “	61
75	6 “	94



COMMODORE
JOHN W. PHILIP.



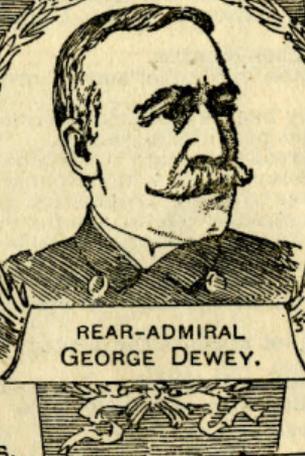
CAPTAIN
WILLIAM N. FOLGER.



COMMODORE
JOHN C. WATSON.



COMMANDER
HENRY E. NICHOLS.



REAR-ADMIRAL
GEORGE DEWEY.



CAPTAIN
M. L. JOHNSON.



CAPTAIN
A. S. BARKER.

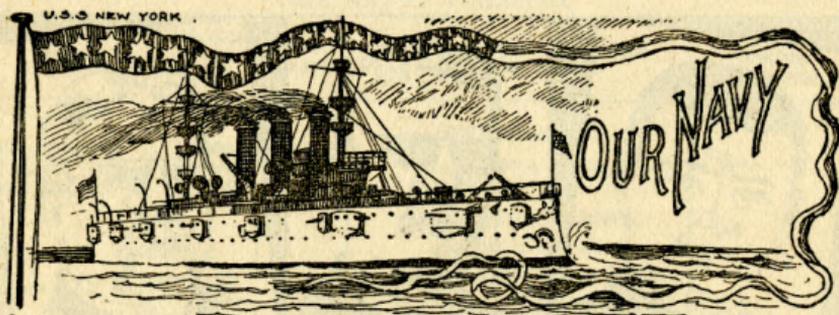


COMMANDER
B. H. MCCALLA.



COMMANDER
R. CLOVER.

PROMINENT AMERICAN NAVAL COMMANDERS.



Name.	Displacement Tons	Speed Knots	*Armament in Guns and Torpedo Tubes.	*Protection Inches of Armor.
First-class Battleships				
Kearsage.....	11,525	16	4 13-in., 4 8-in., 14 5-in., 20 6-p. 6 1-p., 5 m., 4 torpedo tubes	15, 17, and 5
Kentucky.....	11,525	16		
Alabama.....	11,525	16	4 13-in., 14 6-in., 16 6-p., 4 1 p., 2 m., 4 torpedo tubes.....	16½
Illinois.....	11,525	16		
Wisconsin.....	11,525	16	4 12-in., 8 8-in., 6 4-in., 20 6-p., 4 1-p., 4 m., 4 torpedo tubes.	14, 15, and 8
Iowa.....	11,410	16.53		
Indiana.....	11,288	15.547	4 13-in., 8 8-in., 4 6-in., 20 6-p., 6 1-p., 4 m., 6 torpedo tubes.	18, 17, and 8
Massachusetts.....	11,288	16.21		
Oregon.....	11,288	16.79		
Second-class Battleship.				
Texas.....	6,315	18.5	2 12-in., 6 6-in., 12 6-p., 6 1-p., 6 m., 4 torpedo tubes.	12, 12, and 3
Double-turreted Monitors				
Monterey.....	4,084	13.6	2 12-in., 2 10-in., 6 6-p., 4 1-p., 2 m.	13, 10, and 3
Puritan.....	6,060	12.4	4 12-in., 6 4-in., 6 6-p., 4 m.....	12, 11½, and 2
Monadnock.....	3,990	12	4 10-in., 2 4-in., 2 6-p., 2 1-p....	9, 11½, and 2
Amphitrite.....	3,990	10.5		
Terror.....	3,990	10.5	4 10-in., 2 6-p., 2 3-p., 2 1-p....	7, 11½, and 2
Miantonomoh.....	3,990	10		
Armored Cruisers				
Brooklyn.....	9,271	21.91	8 8-in., 12 5-in., 12 6-p., 4 1-p., 4 m., 5 torpedo tubes.....	7, 8, and 6
New York.....	8,200	21	6 8-in., 12 4-in., 8 6-p., 4 1-p., 4 m., 3 torpedo tubes.	4, 10, and 6
Protected Cruisers				
Olympia.....	5,870	21.69	4 8-in., 10 5-in., 14 6-p., 6 1-p., 4 m., 6 torpedo tubes.....	None, 4, and 4½
Minneapolis....	7,375	23.07	1 8-in., 2 6-in., 8 4-in., 12 6-p., 4 1-p., 4 m., 4 torpedo tubes	" 4, and 4
Columbia.....	7,375	22.8	4 8-in., 8 6-in., 2 5-in., 9 6-p., 4 1-p., 2 m.....	" 4, and 4
Chicago.....	4,500	17	4 8-in., 6 6-in., 4 6-p., 2 3-p., 2 1-p., 6 m., 4 torpedo tubes.	" 4, and 1½ 4½, and 4
Baltimore.....	4,413	20	12 6-in., 4 6-p., 4 3-p., 2 1-p., 7 m., 4 torpedo tubes.....	" and 4½ Steel Sheathed
Philadelphia..	4,324	19.68	2 8-in., 6 6-in., 4 6-p., 2 3-p., 2 1-p., 6 m., 4 torpedo tubes.	None, 4½, and 3
San Francisco.	4,098	19.53		
Newark.....	4,098	19	1 6-in., 10 5-in., 8 6-p., 4 1-p., 2 m., 4 torpedo tubes.....	" 2, and 3½ " 2½
Charleston....	3,730	18.2		
Cincinnati....	3,213	19	2 8-in., 6 6-in., 2 6-p., 2 3-p., 4 1-p., 6 m.....	" 1½ " 1½
Raleigh.....	3,213	19		
Atlanta.....	3,000	15.6	6 6-in., 4 4.7-in., 10 6-p., 2 3-p., 2 1-p., 4 m., 4 torpedo tubes.	Steel sheathed
Boston.....	3,000	15.6		
New Orleans..	3,600	21.5	Unprovided with armament.	" "
Albany.....	3,600	20.3		



CAPT. R. D. EVANS,
BATTLESHIP
"IOWA."



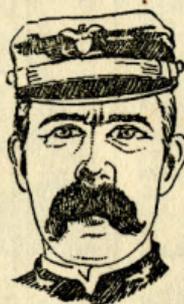
COLONEL
THEO. ROOSEVELT,
ROUGH RIDERS.



MAJOR-GENERAL
FITZHUGH LEE.



ENSIGN W. BAGLEY.
KILLED
ON THE WINSLOW
MAY 11, 1898.



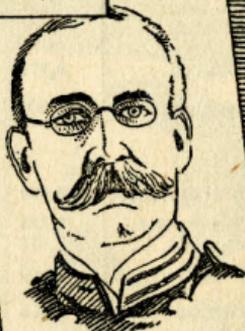
LIEU'T-COMMANDER
R. WAINWRIGHT.
"GLOUCESTER."



CAPT. C. E. CLARK
"OREGON."



ASSISTANT NAVAL
CONSTRUCTOR,
R P HOBSON.



CAPT. C. D. SIGSBEE.
"ST. PAUL."
COM. OF THE MAINE.

PROMINENT AMERICAN OFFICERS.

OUR NAVY.—Continued.

Name.	Displacement Tons	Speed Knots	*Armament in Guns and Torpedo Tubes.	*Protection Inches of Armor.
Cruisers.				
Montgomery ..	2,089	10.5	} 9 5-in., 6 6-in., 2 1-p., 2 m., 3 torpedo tubes.....	
Detroit	2,089	18.7		
Marblehead ...	2,089	18.7		
Auxiliary Cruisers.				
Recently armed.				
Yankee.....	4,659	15	} 4 5-in. and secondary battery of 14 R. F. guns.....	
Dixie	4,670	16		
Yosemite	4,600	15	} 4 5-in., and secondary battery of 12 R. F. guns.....	
Prairie.....	4,600	15		
St. Paul.....	11,629	22.7	} 10 6-in. and 14 6-p.....	
St. Louis.....	11,629	21.5		
Panther	2,843	16	} 65 in., and secondary R. F. battery of 12 guns.....	
Badger	2,500	15		
Resolute.....	2,300	17.5	} Armed similarly to the Yankee	
Yale.....		21		
Harvard		21	} Armed similarly to the St. Paul, and used as scout- ing ships on account of their high speed.....	
Gunboats.				
Concord	1,710	16.8	} 6 6-in 2 6-p, 2 3-p, 4 m., 6 tor- pedo tubes.....	
Yorktown	1,710	16.14		
Bennington...	1,710	17.5	} 2 4-in., 2 6-p., 6 m.....	
Delphin	1,486	15.5		
Helena	1,392	13	} 8 4-in., 4 c-p., 4 1-p., 2 m., 1 tor- pedo tube.....	
Wilmington ..	1,392	13		
Nashville.....	1,371	14	} 4 8-in., 4 6-p., 2 1-p., 2 m., 1 tor- pedo tube.....	
Castine	1,188	16		
Petrel	892	11.8	} 4 6-in., 2 3-p., 1 1-p., 2 m.....	
Bancroft.....	976	14.3		
Machias	1,177	15.5	} 4 4-in., 2 6-p., 2 3-p., 2 m., 2 tor- pedo tubes.....	
Vicksburg.....	1,000	12		
Annapolis	1,000	12	} 8 4-in., 4 c-p., 2 1-p., 2 m., 1 tor- pedo tube.....	
Newport.....	1,000	12		
Princeton	1,000	12	} 6 4-in., 4 6-p., 2 1 p.....	
Wheeling	1,000	12		
Marietta.....	1,000	12	} 6 4-in., 4 6-p., 2 1 p.....	
Topeka.....	1,800	16		
Harbor Defense Ram				
Katahdin.....	2,155	16.11	4 6-p., and steel-backed ram....	6, 18, and 6.3
Dynamite Cruisers				
Vesuvius.....	929	21.5	} 3 3-p., 3 15-in. calibre pneu- matic dynamite guns.....	
Buffalo	4,500	18.5		
			—formerly the Nicheroey.....	

*NOTE.—The three numbers given under the column "Protection" represent the armor thickness on water line, gun position, and protective deck respectively.

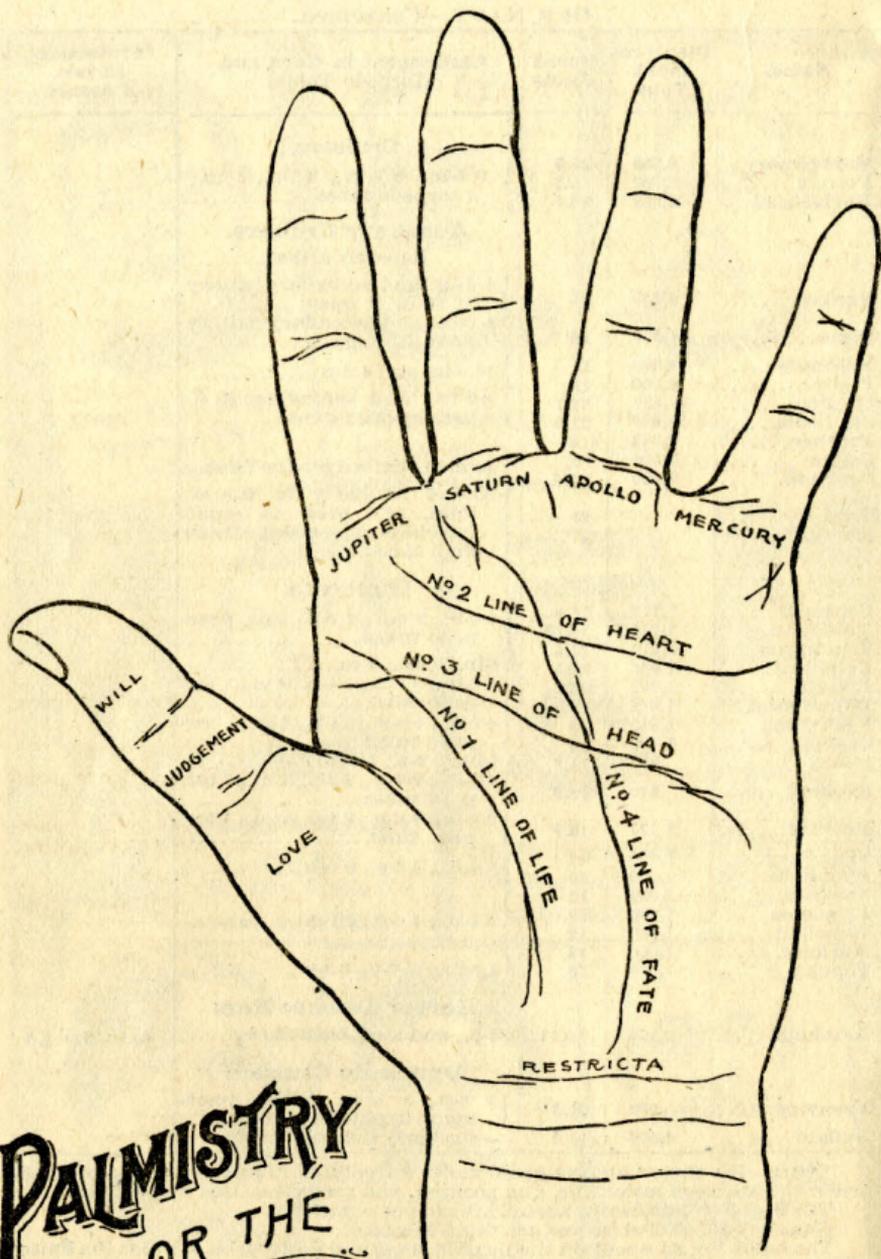
The first five battleships named are not yet completed.

Guns of 5 in. caliber or less are rapid-fire guns.

The following lists contain the torpedo boats and destroyers, of which the United States has a rapidly increasing force; also the auxiliary gunboats recently converted from revenue cutters, yachts, and tugs into fighting vessels:

Cushing, 22 knots, 2 3-p., and 3 tubes.	Dupont. Same as Porter.
Ericsson, 24 " 4 1-p., " 3 "	Davis. Same as Porter.
Rodgers,	Gwin. 24 knots. 2 1-lb., and 2 tubes.
Winslow, } 27 " 4 1-p., " 3 "	Talbot, 24 " 2 1-p., " 2 "
Foote,	Stiletto, 19 " practice boat.
Porter, 27 " 3 1-p., " 3 "	McKee and Mackenzie, 23 knots, 2 1-p., and 2 tubes.

Somers and Manley, recently purchased, the former being held by the English government until the close of the war. The Manley is a Yarrow boat of small tonnage.



PALMISTRY
OR THE

**ART OF READING THE CHARACTER
FROM THE PALM OF THE HAND.**

PALMISTRY.

For the purpose of telling fortunes by the lines in the palm of the hand, the left hand is always the one chosen, as the heart and the brain have more influence over it than over the right hand.

No. 1.—THE LINE OF LIFE.

This being broad, of a dark color, without intersections and points, shows the party long lived and subject to few diseases.

If slender, short and crossed with little lines, and deformed either by a pale or dark color, it foretells weakness of the body, sickness and a short life.

If joined to the heart, it shows good wit or an evenness of nature.

If it has branches in the upper parts, it signifies riches and honor,

If these branches be extended towards the restricta, it threatens poverty, deceits, and unfaithfulness of servants.

If in this line there be found some confused lines near the restricta, be assured of diseases that will happen in the early life. When they appear in the centre, in the middle age; if above, in the declining age.

If this line be anywhere broken, it threatens danger of life in that age which the break in the line indicates; this line being divided into seventy parts, you must begin numbering from the lower part near the restricta; the number falling where the break in the line is, determines the year.

No. 2.—LINE OF HEART.

This line, being straight, continued, and not crossed by little lines, denotes a healthful body.

If it be short or broken, it shows diseases and shortness of life.

If cut at the end thereof by a small intervening line, it threatens poverty in old age.

If in the upper part it be distant from the line of life by a great space, it shows distemperatures of the heart, as palpitations, syncope, &c.

This also shows prodigality, especially if the line is broad.

If it wind and turn several ways and is of a dark color and crossed, it shows an evil constitution of the liver, and diseases proceeding from the weakness thereof. Covetousness also, and a depravity both of nature and wit, especially if it be under the region of the middle finger.

If strongly drawn and well colored, it is a sign of a cheerful and bright disposition.

If it is represented by double lines, it promises inheritance.

If it shows some little hard knots, it denotes manslaughters, either perpetrated, or to be committed, according to the number of these said knots.

If a cross be found under the region of the middle finger, it announces death to be at hand.

No. 3.—LINE OF HEAD.

This is called the line of the head and brain, which, if it connects the lines of the heart in a triangular form, has a lively color, and is not crossed, declares a man of admirable prudence and one of no vulgar wit and fortune.

The smaller the triangle is, so much the better shall the wit and courage be; but if it be blunt, it shows an evil disposed nature, and a man that is rude; and if no triangle at all, far worse.

If it should be a right angle, foretells good-heartedness, but when it is too acute, especially if it touch the line of life, it shows covetousness.

Double lines show in gentlemen a clear brain and fortunate voyages by sea; in ladies, cheerfulness.

No. 4.—LINE OF FATE.

This is also called the line of fortune. Which said line, when it is long, and without a break, shows constancy; the contrary if it be short, crooked, or parted.

If it terminates under the mount of Saturn, it shows a vain fellow.

If extending small branches to the mount of Jupiter, it promises honors.

If it shows a little line drawn to the space between the middle finger and the ring finger, sorrow or labor.

Confused little lines denote sickness; if they are under Mercury, in the early life; under Apollo, in the middle life; under the middle finger, in old age.

LONG HANDS.—Capacity for detail.

SHORT HANDS.—Impulsive judgment.

HARD FIRM HANDS.—Energy and perseverance.

SOFT HANDS,—Lazy, fond of ease.

SMOOTH HANDS.—Impressionability, Inspiration, Intuition.

KNOTTED HANDS.—Reflection, order, science.

Important Reasons

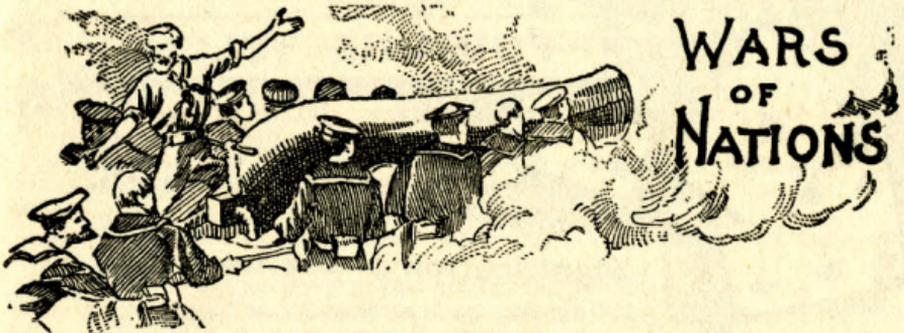
WHY housekeepers should buy **Arm and Hammer Brand** package Soda or Saleratus in preference to bulk Soda or other package Soda recommended by the dealer.

The retail price of the **Arm and Hammer Brand** of Soda in **packages** is the same as for inferior package Soda. Consumers gain nothing by buying unknown and inferior Soda; they simply put more money into the merchants' pockets.

Package Soda, like Church & Co.'s **Arm and Hammer Brand**, has the guarantee of a responsible manufacturer. Bulk Soda may be of anybody's manufacture, and generally of a poor quality. Sometimes retail dealers are imposed upon, not knowing what the jobber sends. A few think their customers should accept anything they choose to sell them, saying it is really **Arm and Hammer Brand Soda**, or it is the same thing.

Arm and Hammer Brand Soda being of such perfect quality, is of necessity **very strong**, and we caution parties **not to use too much**.

No wise merchant tries to make customers take what he knows they do not want. He will not substitute goods of doubtful value for those of demonstrated merit.



WARS OF NATIONS

- 1775-83—The American Revolution.
- 1801—U. S. War with Tripoli.
- 1800—Austrian War with France.
- 1806—French War with Prussia.
- 1807—French War with Russia.
- 1809—French War with Austria.
- 1809-12—French War with Spain.
- 1812-15—Second U. S. War with Great Britain.
- 1813—French War with Europe.
- 1815—French War with England and Prussia.
- 1832—U. S. Black Hawk War (Northwest Territory).

- 1837-38—Patriot War, Canada against England.
- 1846-48—U. S. War with Mexico.
- 1854—Crimean War.
- 1857—Indian Mutiny against England.
- 1859—French and Sardinian war against Austria.
- 1861-65—The U. S. Civil War (Rebellion).
- 1864—Prussian War with Denmark.
- 1866—The Prussian-Austrian War.
- 1870-71—The Franco-Prussian War.
- 1876—U. S. War with the Sioux.
- 1898—The Spanish-American War.

Don't hurry in the store. Salesmen are paid to be patient. See that you have the right thing, and not a substitute, before you hand over your money.

BIRTHDAY STONES.

MONTH.	STONE.	STANDS FOR
JANUARY.....	Garnet.....	Constancy.
FEBRUARY.....	Amethyst.....	Contentment.
MARCH.....	Bloodstone.....	Courage.
APRIL.....	Diamond.....	Innocence.
MAY.....	Emerald.....	Success in Love.
JUNE.....	Pearl.....	Purity.
JULY.....	Ruby.....	Nobility.
AUGUST.....	Moonstone.....	Felicity.
SEPTEMBER.....	Sapphire.....	Brings Success.
OCTOBER.....	Opal.....	Hope.
NOVEMBER.....	Topaz.....	Fidelity in Friendship.
DECEMBER.....	Turquoise.....	Prosperity.

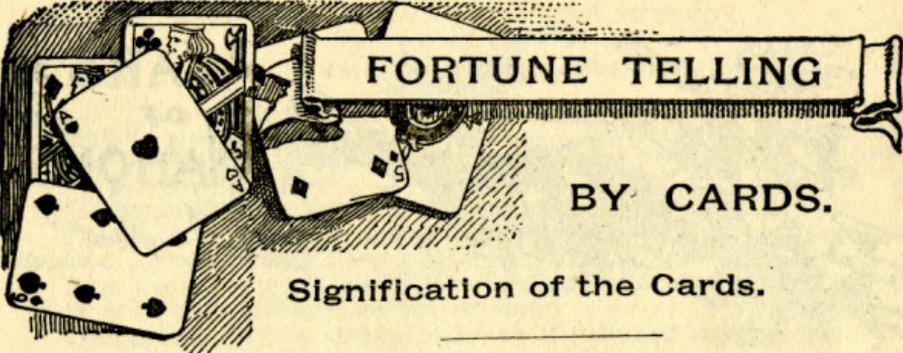
The reputation of a responsible firm is behind statements concerning widely advertised wares. Who answers for the cheap substitutes that are sometimes offered?

BIRTHDAY RHYMES.

Mondays child is fair of face.
 Tuesdays child is full of grace.
 Wednesdays child has far to go.
 Thursdays child is filled with woe
 Fridays child is loving and giving.

Saturdays child must work for a living.

The child that is born on the Sabbath day is blithe and bonny, and rich and gay.

An illustration at the top of the page shows several playing cards scattered on a surface. A banner with a decorative border is draped across the top, containing the title. The cards include a King of Clubs, a Queen of Clubs, a Knave of Clubs, and several Clubs of other ranks.

FORTUNE TELLING

BY CARDS.

Signification of the Cards.

CLUBS.

Ace of Clubs.—Wealth, happiness, and peace of mind.

King of Clubs.—A dark man, upright, faithful, and affectionate in disposition.

Queen of Clubs.—A dark woman, gentle and pleasing.

Knave of Clubs.—A sincere, but hasty friend—also a dark man's thoughts.

Ten of Clubs.—Unexpected riches, and loss of a dear friend.

Nine of Clubs.—Disobedience to friends' wishes.

Eight of Clubs.—A covetous man—also warns against speculations.

Seven of Clubs.—Promises good fortune and happiness; but bids a person beware of the opposite sex.

Six of Clubs.—Predicts a lucrative business.

Five of Clubs.—A prudent marriage.

Four of Clubs.—Cautions against inconstancy or change of object for the sake of money.

Three of Clubs.—Shows that a person will be more than once married.

Two of Clubs.—A disappointment.

DIAMONDS.

Ace of Diamonds.—A letter—from whom, and about what, is seen by the neighboring cards.

King of Diamonds.—A fair man, hot-tempered, obstinate and revengeful.

Queen of Diamonds.—A fair woman, fond of company, and a coquette.

Knave of Diamonds.—A near relation, who considers only his own interests. Also a fair person's thoughts.

Ten of Diamonds.—Money.

Nine of Diamonds.—Show that a person is fond of roving.

Eight of Diamonds.—A marriage late in life.

Seven of Diamonds.—Satire, evil speaking.

Six of Diamonds.—Early marriage and widowhood.

Five of Diamonds.—Unexpected news.

Four of Diamonds.—Trouble arising from unfaithful friends. Also a betrayed secret.

Three of Diamonds.—Quarrels, law-suits, and domestic disagreements.

Two of Diamonds.—An engagement, against the wishes of friends.

HEARTS.

Ace of Hearts.—The house. If attended by Spades, it fortells quarreling—if by Hearts, affection and friendship—by Diamonds, money and distant friends—and Clubs, feasting and merry-making.

King of Hearts.—A fair man of good natured disposition, but hasty and rash.

Queen of Hearts.—A fair woman. Prudent, affectionate and faithful.

Knave of Hearts.—A fair person's thought. The best friend of the consulting party.

Ten of Hearts.—Indicates many children and great happiness.

Nine of Hearts.—Wealth and high esteem.

Eight of Hearts.—Pleasure and company.

Seven of Hearts.—A fickle and false friend, against whom be on guard.

Six of Hearts.—A generous, but credulous person.

Five of Hearts.—Troubles caused by unfounded jealousy.

Four of Hearts.—A person not easily won.

Three of Hearts.—Sorrow caused by a persons own imprudence.

Two of Hearts.—Great success.

SPADES.

Ace of Spades.—Very great misfortune. Perhaps from spite.

King of Spades.—A dark ambitious man.

Queen of Spades.—A malicious dark woman.

Knave of Spades.—An indolent envious person.

Ten of Spades.—Grief, dissapointment.

Nine of Spades.—Sickness and misfortune.

Eight of Spades.—Warns to be cautious in your undertakings.

Seven of Spades.—Loss of a friend.

Six of Spades.—Wealth through industry.

Five of Spades.—Shows a bad temper.

Four of Spades.—Sickness.

Three of Spades.—A journey.

Two of Spades.—A removal.

HOW TO EMPLOY THE CARDS.

After shuffling, cut them three times and lay them out in rows of nine cards each. Select any queen or king to represent yourself; and wherever you find that card placed, count nine cards every way, reckoning it as one; and every ninth card will prove the prophetic one. Before, however, beginning to count study well the disposition of the cards, according to their individual and relative signification. If a married woman consult the cards, she must make her husband the king of the same suit of which she is queen; but if a single woman, she may make any favorite friend king of whatever suit she pleases. As the knave of the various suits represent the thoughts of the persons represented by the picture cards of a corresponding color, they should also be counted from.

MUCH inferior Soda is put up in kegs, and although the **Arm and Hammer Soda** is put up in that way, it is an easy matter for the dealer to substitute one kind for another when selling from a keg. Hence it is always best to insist upon having it in *one-pound* or *half-pound packages*, with the manufacturers' name and brand of **Arm and Hammer** printed thereon in red and blue ink. This is done at the factory, and guarantees that you are getting what you want.

FACTS FOR HOUSEKEEPERS.

Do not use too much. The superior quality and Strength of Arm and Hammer Soda or Saleratus does not require that so large a quantity be used as does cheap bulk soda.

Insist on having the Arm and Hammer Soda or Saleratus in packages, and you will have the best.

Cinnamon.—The so-called "Cinnamon" commonly sold in retail stores is not true Cinnamon, but a species of Cassia bark. True Cinnamon is only the inner bark of the Ceylon Cinnamon tree, while Cassia is the whole bark of the Cassia tree, grown in China.

Cassia appears as a rather thick bark, from 1-16 "to 1-8" in. in thickness, while the best Cinnamon is not much thicker than a sheet of paper.

Mace.—Mace is a ribbon-like sack or covering enclosing a single nutmeg. An outer shell covering both the Mace and Nutmeg.

Nutmeg trees attain a height of from 25 to 30 feet, and resemble an orange tree in general appearance. They grow wild in certain parts of India and are also cultivated in the tropical far East, also on the northern coast of South America and the West Indies.

Pepper.—Pepper is the seed or fruit of a vine growing wild in various parts of China and India. It attains a length of from 10 to 12 feet, and when the berries are nearly ripe they are picked and dried in the sun. The cultivation of Pepper is carried on extensively in the Philippine Islands, Borneo, Siam, Sumatra, Java and other far Eastern Islands.

White Pepper is simply Black Pepper deprived of its outer coating or skin. This is done in revolving cylinders with brushes so arranged as to catch the moist Pepper and simply brushes the skin off, leaving the hard interior which is known as White Pepper.

Allspice.—Allspice is the fruit of a tropical American tree, which attains a height of from 25 to 30 feet. It was named Allspice from its fragrant odor—thought to resemble a mixture of Cinnamon, Cloves and Nutmegs. It is a native of the East Indies, Mexico and South America. In Jamaica it is also known as Jamaica Pepper.

To soften water, use a liberal amount of bicarb. soda dissolved slowly in boiling water.

The value of "Javelle Water" was known to our grandmothers for whitening linen and taking stains out of white goods. Household Ammonia and other substitutes have become popular, because they are easily obtained at the grocer's but can not be called superior to "Javelle Water." For fruit stains it is invaluable, or for mildew and rust. To make a quantity—four pounds bicarbonate of soda, one pound chloride of lime; put the soda into a kettle over the fire, add one gallon of boiling water, let it boil from 10 to 15 minutes, then stir in the chloride of lime, avoiding lumps, use the mixture when cool. Baby linen and children's pinafores will be benefited by "Javelle Water," and it should be in every laundry. Keep in bottle well corked.

In washing use plenty of Arm and Hammer brand Soda, and the clothes will look whiter, and not need so much soap nor so much rubbing.

Milk which has changed may be rendered fit for use again by stirring in a little Arm and Hammer brand Soda or Saleratus.



When the butter fails to come after the customary amount of churning a teaspoonful of Arm and Hammer brand Soda or Saleratus will be found to expedite matters.

Fancy long plumes on ladies' hats can be washed beautifully in a weak solution of Arm and Hammer brand Soda or Saleratus, squeezed out with the hands and dried in corn starch; curled up again they look like new. Also delicate laces can be cleaned in like manner.

Almost every vegetable, both green and dry (except corn), is greatly improved by using Arm and Hammer brand Soda or Saleratus in the boiling water.

Your white fur boa will look fluffy and pretty as ever if you wash it carefully in warm water and Arm and Hammer brand Soda or Saleratus.

Feather dusters, and even white pet dogs, look lovely after a bath in Arm and Hammer brand Soda and Saleratus.

IN ANY RECIPE

CALLING for Baking Powder one even teaspoonful of Arm and Hammer Brand Soda with two even teaspoonfuls of pure Cream Tartar will produce far better results if used instead of Baking Powder, besides making the cooking lighter and more digestible. Every recipe which specifies Soda or Saleratus without naming any brand, or, even if brand is named, will produce better results if only the Arm and Hammer brand is used.

We urgently advise the use of sour milk or buttermilk with our Arm and Hammer brand of Soda or Saleratus, in preference to using with Cream Tartar or using Baking Powder alone. Not only is the cookery more palatable, but it is decidedly more healthy, because, even if pure Cream Tartar could be obtained, there is a residuum left after the acid unites with the Soda or Saleratus which ought not to go into food. If Baking Powder is used, the quality of the Powder may be inferior, and the same residuum goes into the articles cooked, as in the case of the Soda and Cream Tartar.

*Wholesome bread depends altogether upon pure ingredients.
Use only the Arm and Hammer Brand of Soda IN PACKAGES.*

Do not discuss the matter with the salesman. When you ask for an advertised article, see that you get it, and nothing else.

Don't Hurry. Don't buy until you are convinced.

❧ BICYCLES. ❧



THE gear of a Bicycle is the distance in inches the rear wheel travels at one revolution of the cranks or pedals. An 80 inch gear on a 28 inch wheel is equivalent to riding a wheel 80 inches in diameter. A 28 inch wheel travels at one revolution about 84 inches; an 80 inch wheel would travel about 240 inches, so that with an 80 inch gear the 28 inch wheel makes about 2.85 revolutions to each revolution of the pedals—the Bicycle travelling 20.9 feet at the same time. To ascertain the gear of a Bicycle count the number of teeth in each sprocket (front and rear). Multiply the diameter of the rear wheel by the number of teeth in the front sprocket, divide by the number of teeth in the rear sprocket and the result will be the number of inches the wheel is geared to, or the gear.

FOR EXAMPLE, the rear wheel is 28 inches diameter; there are 20 teeth in the front and 7 teeth in the rear sprocket—20 times 28 inches is 560 inches, and one-seventh of that is

80 inches, showing that the wheel is geared 80 inches.

TABLE OF BICYCLE GEARS.

Front Sprocket.	Rear Sprocket, 7-tooth.	Distance per Revol'n of Pedals.	Rear Sprocket, 8-tooth.	Distance per Revol'n of Pedals.
18-tooth,	72 gear.	18.8 feet.	63 gear.	16.4 feet.
19 “	76 “	19.8 “	66 ¹⁻² “	17.4 “
20 “	80 “	20.9 “	70 “	18.3 “
21 “	84 “	21.9 “	73 ¹⁻² “	19.2 “
22 “	88 “	23 “	77 “	20.1 “
23 “	92 “	24 “	80 ¹⁻² “	21 “
24 “	96 “	25.1 “	84 “	21.9 “
25 “	100 “	26.2 “	87 ¹⁻² “	22.9 “

Front Sprocket.	Rear Sprocket, 9-tooth.	Distance per Revol'n of Pedals.	Rear Sprocket, 10-tooth.	Distance per Revol'n of Pedals.
18-tooth.	56 gear.	14.6 feet.	50 ²⁻⁵ gear.	13.1 feet.
19 “	59 ¹⁻⁹ “	15.4 “	53 ¹⁻⁵ “	13.9 “
20 “	62 ²⁻⁹ “	16.2 “	56 “	14.6 “
21 “	65 ¹⁻³ “	17.1 “	58 ⁴⁻⁵ “	15.3 “
22 “	68 ⁴⁻⁹ “	17.9 “	61 ³⁻⁵ “	16.1 “
23 “	71 ⁵⁻⁹ “	18.7 “	64 ²⁻⁵ “	16.8 “
24 “	74 ²⁻³ “	19.5 “	67 ¹⁻⁵ “	17.5 “
25 “	77 ⁷⁻⁹ “	20.3 “	70 “	18.3 “

The wheel is one of the most delicately adjusted machines ever produced by man's ingenuity.

ARM AND HAMMER SODA in the Sick Room and for Toilet Uses.



For scalds and burns Arm and Hammer brand Soda or Saleratus is invaluable and acts like magic, and in some cases, where badly scalded, it has been known to save a person's life. Make a paste with water of Arm and Hammer brand Soda, just moist enough to hold together, and apply directly to the scald or burn. After one trial you will always keep it for this purpose, if for no other.

For prickly-heat, sunburn, an eruption on the face, or mosquito bites, nothing will give quicker relief than frequent washing in a strong solution of Arm and Hammer brand Soda. For hives or eczema it gives a most cooling and comfortable feeling, relieving the patient almost instantly from the irritating itch which always accompanies those maladies.

For headache or sour stomach the effect of Soda is apparent instantly, by taking a little dissolved in water.

When the patient is feverish, wash the skin in warm water and Soda.

If an odor arises from excessive perspiration, use a teaspoonful of Soda to a pint of warm water

If the food distresses the stomach, give half a teaspoonful of Soda in a wineglass of milk.

If you wish to keep gruel or milk in the sick room, put in a pinch of Soda to keep them sweet.

After washing out the baby's bottle, let it stand in a solution of Soda and water before using again.

If your face looks red and shiny in warm weather, bathe it in a solution of Soda and hot water.

Applications of a solution of Soda and hot water will cure piles and other inflammations of the rectum.

If the hair smells sour and feverish, wash it in cool (not too cool) water, with half a spoonful of Soda to a quart of water. Dry thoroughly and rub in a little bay rum.

Cure of Rattle-Snake Bite, apply to the wound slightly moistened, just so as to make a paste. When it becomes discolored, either yellow or greenish, remove and put on a fresh application. Continue to apply in this manner until the Soda ceases to become discolored.

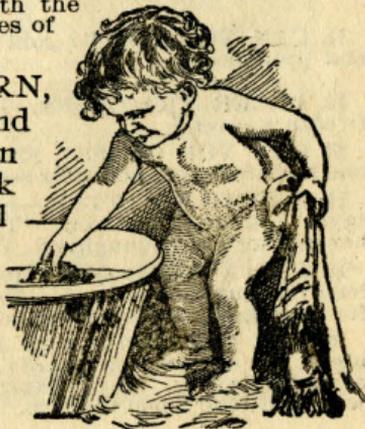
Wash baby with weak solution of Soda and water in warm weather.

Arm and Hammer brand Soda or Saleratus is recommended by English physicians for Toothache. A small quantity dissolved in a wine-glass of water, a piece of cotton soaked in the solution and placed in the tooth, and the mouth washed with the balance, will cure the most severe cases of toothache.

DYSPEPSIA or HEARTBURN,
a little Arm and Hammer Brand Soda or Saleratus dissolved in a tumbler of water, and drank three or four times a day, will be found very beneficial.

INVALUABLE FOR THE CURE OF HICCOUGH.

A teaspoonful of Arm and Hammer Soda dissolved in half a glass of water will give instant and permanent relief.



PUZZLERS.

CAN YOU DO THEM?

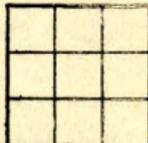


WE have purchased the right to use the copyrighted "Mental Nuts," marked * of S. E. CLARK, of Philadelphia.

1. THE DUCKS.—Two fathers and two sons went hunting and shot three ducks. How was it possible for each one of them to carry home a duck.

2. THE IMPOSSIBLE MADE POSSIBLE.—Place three pieces of money on the table and ask some one to take away the piece from the centre without touching it.

3. THE WONDERFUL SQUARES.—Into these nine squares write numerals from 1 to 9, that added in any direction, either vertically, diagonally, or horizontally, will always produce the sum of 15.



4. THE AGE QUESTION.—A father is 40 years of age, his son 9 years old. In how many years will the father, who is at present more than four times his son's age, be only twice the age of his son.

*5. THE HORSE QUESTION.—A man sold a horse for \$90, bought him back for \$80, and resold him for \$100. What did he make on the transaction.

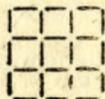
6. FIGURES DON'T LIE.—How would you write eleven thousand eleven hundred and eleven in numerals.

*7. THE BEGGAR.—A beggar had a brother, the brother died and the man who died had no brother.

*8. THE FARMERS AND THEIR CORN.—Three farmers, A, B, and C, met on their way to town. A had 50, B 30, and C 10 bushels of corn. They went to town and all sold their corn at the same prices, and strange to relate, each one received the same amount of money for his corn. Why?

*9. ARE THEY SIMILAR? or, which is the most? Six dozen dozen or a half a dozen dozen. Be quick.

10. THE TOOTH-PICKS.—Place 24 tooth-picks so as to form 9 equal squares. Remove 8 tooth-picks so as to leave 2 squares formed by 16 tooth-picks.



11. CAN YOU DO IT? Add to these 3 lines 6 other lines and produce ten.



12. QUEER FRACTIONS.—How can you prove that the half of twelve is seven?

13. CAN YOU GUESS? Show me something that exists and that no one has ever seen, nor after seeing will ever see again.

14. A FAMILY MATTER.—A lady meets a gentlemen. The gentleman says, "I think I know you." The lady said he ought, as his mother was her mother's only daughter. What relation was he?

*15. THE ANIMAL QUESTION.—A man has one hundred dollars and buys one hundred animals. He pays ten dollars for cows, three dollars for hogs, and fifty cents for sheep. How many of each did he buy.

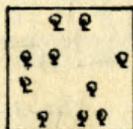
16. THE CATERPILLARS JOURNEY.—A caterpillar crawls, every night, the distance of 4 yards up a tree; during every day, however, it descends 2 yards. At the expiration of the twelfth night it completes its journey to the top of the tree. How high was the tree.

PUZZLERS.—Continued.

17. A SUM IN SUBTRACTION.—Take one from nineteen. the remainder you'll see is twenty, exactly. Pray, how can this be?

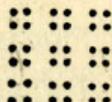
18. A QUIBBLE.—Place a candle in such a manner that every person shall see it except one, although he shall not be blindfolded, nor shall the candle be hidden.

19. THE LAND DIVISION.—This is a plot of ground of which a father retains a quarter for himself. The balance so to be divided amongst his 4 sons, that each son gets a plot of the same size and same shape, with 2 trees on each plot.



20. A SUM IN MULTIPLICATION.—What two numbers multiplied together will produce seven?

21. A MATTER OF ARRANGEMENT.—From the dots here placed, so as to count twelve along each side, remove four and arrange the balance, so that you may still count 12 on each side.



*22. A PUZZLING QUESTION.—What is the third and a half of a third and a half of ten?

23. AN ENIGMA IN TWO SYLLABLES.—My first I hope you are; my second I see you are, and my whole I know you are.

*24. THE PERCENTAGE QUESTION.—I buy goods ninety per cent. off and sell them at eighty and ten per cent. off. What is the per cent. profit?

*25. THE WATER CASK.—A cask has three faucets. The first can empty it in one hour, the second can empty it in two hours, the third can empty it in three hours. How long will it take all three, running at one time, to empty it?

*26. THE BOY AND THE DUCKS.—A boy, driving home some ducks, was asked how many he had. He replied, "When in line, there are two ducks ahead of a duck, two ducks behind a duck, and one duck in the middle." How many ducks had he?

*27. THE MAN AND THE STORES.—A man goes to a store and says, "Give me as much as I have and I will spend ten cents with you." It is done, and the man repeats the operation to a second and a third store, and has no money remaining. What did he start with?

*28. THE FARMER AND HIS HORSES.—A farmer goes to four county fairs with his drove of horses. He gives a horse to enter the fair, sells one-half of the remainder in the fair, and gives one horse to get out. He repeats the operation at each of the other fairs, and has but one horse to go home on. How many horses did he start out with?

*29. THE GENTLEMAN AND HIS TENANT.—A gentleman rented his farm on equal shares to a tenant, who raised a crop of wheat. Each hauled away his share each day as fast as threshed. One day each had on twenty bushels and the tenant's wagon broke down, his load was put on the gentleman's wagon, and he took it home, saying to the tenant. "You go to-morrow and get another twenty bushels for the twenty you broke down with and gave me. Would that make them square?"

30. GOOD BISCUITS.—How can as good biscuits be made with any other Soda as with Arm and Hammer Soda?

ANSWERS TO PUZZLERS.

No. 1.—They were grandfather, father, and son, therefore 2 fathers and 2 sons.

No. 2.—Transfer the end penny over to the other side. The penny that was in the middle will then have changed positions, and instead will be at the side?

PUZZLERS.—Continued.

No. 3.

4	9	2
3	5	7
8 ⁴	1	6

No. 4.

In 22 years.

*No. 5.

\$20; had \$90 at first,
\$110 at last.

No. 6

12111.

*No. 7.

The beggar was
a woman.

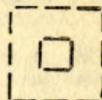
*No. 8.

Sell 49, 28 and 7 bushels
at rate of 7 for \$1; then 1,
2 and 3 bushels at \$3 per
bushel; hence each one
receives \$10.

*No. 9.

No; one is 72,
the other 864.

No. 10.



No. 11.

TEN

No. 12.

XIII

No. 13.

Crack nut, show
the kernel, and
then eat it.

No. 14.

Her Son.

*No. 15.

5 cows, 1 hog,
94 sheep.

No. 16.

26 yards.

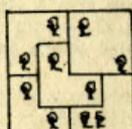
No. 17.—Take the one from between the

two tens leaves twenty.

XIX

No. 18—Place the candle on his head, but see to it that there is
no mirror in the room.

No. 19.



No. 20.

7 and 1.

No. 21.

⊗ : ⊗
: : :
⊗ : ⊗

*No. 22.—2½.

No. 23.—Welcome. *No. 24.—80% *No. 25.— $\frac{6}{11}$ hour. *No. 26.—Three.

*No. 27.—8¾ cents. *No. 28.—61 horses. *No. 29.—No. should get 40.

No. 30.—Impossible.

**CHURCH & CO'S ARM AND HAMMER
BRAND Soda or Saleratus is always full
strength. If the cooking is not right at first,
use less of the Soda afterward, until the
proper quantity is determined.**

Better sure than sorry. Guard against the
substitution of inferior wares for good ones by
examining your purchases before you leave the
store.



USEFUL INFORMATION FOR FARMERS AND DAIRYMEN.

Hog and Chicken Cholera.—A judicious mixture of Arm and Hammer Soda with the animal feed will prove a SURE prevention of this very prevalent disease among swine and poultry. It should be continued weekly. It is a prevention rather than a CURE, and is harmless, besides keeping the animals in good condition otherwise.

Farmers should insure against Damage of Weevil in Grain.—In cribbing corn in the shuck, put in a layer of corn about six inches thick, then scatter or sprinkle over this corn. Arm and Hammer Brand of Soda, in proportion to from twelve to fifteen pounds to every one hundred barrels of corn in the shuck, and continue this until the crib is filled. This will absolutely prevent all danger of weevils damaging corn. See separate handbills with testimonials and Arm and Hammer book of valuable recipes.

Dairymen and Farmers should use the Arm and Hammer brand only, both for baking purposes and for keeping milk cans clean and sweet.

Cows.—WE CALL DAIRYMEN AND FARMERS SPECIAL ATTENTION TO THIS ARTICLE. The yield of milk in cows can be greatly increased (without increasing the food) by giving one tea-spoonful of Arm and Hammer Soda in the feed once a day. It takes about ten days to obtain the desired effect.

Colic in Horses and Cattle. Dissolve one half pound of Arm and Hammer Soda in warm water. Put in a long necked bottle, and pour the contents down the animal's throat. If the first does not prove sufficient, repeat in one hour. THIS APPLIES TO ALL CATTLE.

Horses.—One tablespoonful of Arm and Hammer brand Soda or Saleratus to a pail of water, if given a horse to drink once or twice a week will be found very beneficial, preventing worms, and is cooling and sweetening to the stomach, etc., etc. This also applies to all cattle.

For the Cure of Scratches in Horses.—First wash all dirt from the parts with Castile soap and warm water. Then take one-half cup full of Arm and Hammer Bicarbonate Soda to a quart of luke-warm water. Wash the affected part twice a day. Should the scratches not heal readily to this treatment on the third day, increase the quantity of Bicarbonate of Soda.

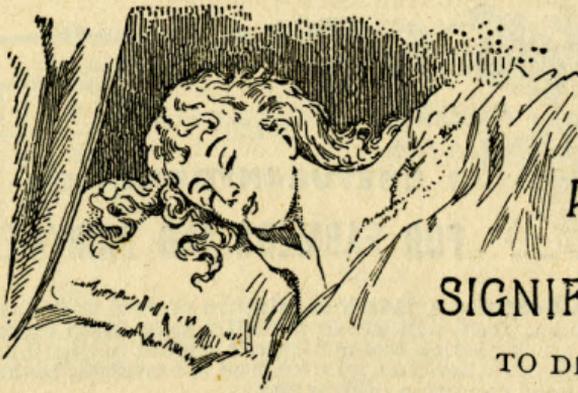
The above solution also makes an excellent wash for horses' tails and manes.

Vaseline and Arm and Hammer Bicarbonate Soda well mixed will also be found very beneficial in case of scratches.

Measurement of Corn in the Crib, Hay in the Mow, etc.—Two cubic feet of good dry corn in the ear will make one bushel of shelled corn. therefore, to calculate the quantity of shelled corn in a crib of corn in the ear, ascertain the length, the breadth and the height of the crib in feet, measuring inside of the rail; multiply the length by the breadth and the product by the height: this gives the cubic contents of the crib in feet; divide by 2, and the result will be the number of bushels of shelled corn in the crib. When the sides are flaring, multiply half the sum of the top and bottom width, the perpendicular height, and the length in inches. together, and divide the product as in the previous rule.

To find the number of bushels of apples, potatoes, etc., in a bin, ascertain the cubic contents as above by multiplying together the length, the breadth and the depth of the bin, divide the product by 8 and point off one in the result for decimals.

To ascertain the weight of hay in a mow, approximately in tons, find the cubic contents as above and divide by 512.



DREAMS

AND THEIR

SIGNIFICANCE

TO DREAM OF

- ACQUAINTANCE.**—To fight with them denotes distraction.
ALTAR.—To dream you see an altar shows joy.
ANGEL.—To dream you see angels is good.
ANGLING.—To dream you are angling, betokens much affection.
APES.—To dream you see them, signifies secret enemies.
APPAREL.—To dream you are dressed in white, is a sure token of success; in green, denotes that you are about to take a journey; in black is unlucky; in blue, denotes happiness; in scarlet, you are warned of some heavy calamity; in yellow, is lucky; in crimson, that you will live to an old age.
APPARITION.—To dream you see a ghost is unfortunate.
ASSES.—To dream you see jackasses is a good sign.
ASSASSIN.—To dream of an assassin is a warning.
BEGGARS.—To dream of beggars is unfavorable.
BLIND.—To dream of being blind, shows that you confide in an enemy.
BOAT.—To dream you are in a boat denotes prosperity.
BREAD.—To dream you see bread denotes success in life.
BUILDING.—To dream of buildings denotes you will soon remove.
BANQUETS.—To dream of banquets denotes poverty and want.
BAT.—To dream of bats is very inauspicious.
BARN.—To dream of a barn denotes much good.
BATH.—To dream of a bath is very unpropitious.
BELLS.—To dream you hear bells denotes a speedy marriage.
BEEES.—To dream they sting you denotes loss of character.
BEARD.—To dream of a long beard denotes good fortune.
BATTLE.—To dream of battle forewarns you against enemies.
BEANS.—To dream you eat them denotes and signifies trouble.
BRIARS and BRAMBLES.—To dream of these things denotes and portends trouble.
BIRDS NEST.—To dream you find one is a good sign.
BAKING.—To dream of baking shows an ill house wife.
BURIED ALIVE.—To dream of this shows you shall have much wealth
BASKET.—To dream of baskets is evil.
BONNET.—To dream of a bonnet gives promise of a new lover.
CARDS.—To dream of cards shows you will soon be in love.
CATS.—To dream of cats shows much trouble.
CATTLE.—To dream you see cattle denotes great prosperity.
CLOCK.—To dream you hear it strike denotes a speedy marriage.
COACH.—To dream you are riding in one foretells poverty.
COMETS.—To dream you see one is ominous of war.
CORN.—To dream you see fields of corn is very favorable.
CROWNS.—To dream you see them portends success.
CHURCH.—To dream of a church portends evil.
CAKES.—To dream you are eating them denotes happiness.
CHICKENS.—To dream of chickens is a forerunner of bad luck.
CHARIOT.—To dream you drive one denotes great enemies.
CROSS.—To dream you see a cross signifies sadness.
CHILDREN.—To dream you see them denotes success.
DITCHES.—To dream of them foretells danger.
DIRT.—To dream of dirt signifies dishonor.
DAIRY.—To dream you are in one is a favorable omen.
DROWNING.—To dream you are drowned denotes good.
DANCING.—To dream you are dancing denotes good news.

- DRAGON.**—To dream you see one denotes riches.
DEER.—To dream you see deer denotes war.
DOGS.—To dream you see dogs is a very favorable omen.
DEAD.—To dream you are dead signifies great trouble.
DEVIL.—To dream of the devil denotes dangers are threatening.
EAGLES.—To dream you see one denotes riches and honor.
EGGS.—To dream you are selling them is very favorable.
ELEPHANT.—To dream you see one is very fortunate.
ENEMY.—To dream you talk to him is a caution to beware.
FATHER-IN-LAW.—To dream you talk to him is ill.
FOREST.—To dream you are walking in one denotes trouble.
FIRE.—To dream of one denotes happiness.
FLOOD.—To dream of one shows you will meet with opposition.
FLOWERS.—To dream of them is very favorable.
FRIEND.—To dream you see one betokens joyful news.
FAIRY.—To dream you see one betokens speedy marriage.
GIANTS.—To dream of giants is ominous of good.
GOLD.—To dream of gold is a very good omen.
GRAVE.—To dream of seeing one foretells disappointment.
GRAIN.—To dream of grain signifies profit.
HAY.—To dream you cut it shows you will have great influence.
HAT.—To dream your hat is torn signifies dishonor.
HORSES.—To dream of horses is a particularly good sign.
HEN.—To dream you hear them cackle signifies joy.
HOUSE.—To dream of building one is a good omen.
KNIVES.—To dream of knives is very unpropitious.
LAMB.—To dream you feed one signifies torment.
LANTERN.—To dream of seeing one denotes sadness.
LIGHT.—To dream you see a light is a happy presage.
LAKE.—To dream of a lake denotes content.
LAMP.—To dream you see one burning denotes prosperity.
LETTERS.—To dream you receive one shows you are beloved.
LION.—To dream you see one denotes money.
LAND.—To dream of land shows your marriage will be a success.
LIGHTNING.—To dream of it shows a change.
LOVE.—To dream you are in love shows you are not susceptible.
MARKETS.—To dream of them is good.
MARRIAGE.—To dream of it is ominous of death.
MICE.—To dream of mice denotes prosperity.
MUSIC.—To dream you hear it is very favorable.
NUTS.—To dream of them denotes riches and happiness.
OCEAN.—To dream of it shows you have a deceitful friend.
OWL.—To dream of this bird is a bad omen.
OXEN.—To dream of them shows a plentiful year.
PLOUGHING.—To dream of ploughing is good.
POVERTY.—To dream you are poor signifies good.
PEACOCK.—To dream you see this bird is a good omen.
QUILTING.—To dream you are quilting denotes a speedy marriage.
RATS.—To dream of seeing them denotes you have enemies.
RING.—To dream of it is favorable.
SERPENT.—To dream you see one signifies danger.
SHEEP.—To dream you see a flock is very favorable.
SHIP.—To dream of seeing one denotes prosperity.
TREASURE.—To dream you find one is very ominous.
WATER.—To dream of it denotes great trouble.
WHEAT.—To dream of wheat is very favorable.
WRECK.—To dream of one shows you will be deceived.
WOOD.—To dream you are cutting it shows you will be happy.
WOOL.—To dream you are buying it denotes prosperity.
WAXES.—To dream of them shows you will be in trouble.
WELL.—To dream of one shows you will live long.
WHALES.—To dream of them is good.
WEeping.—To dream of weeping shows coming joy.

Trade Marks and Labels of Standard Goods are sometimes ingeniously imitated. Remember this when you go shopping.

Interest Tables.

1 Per Cent.

AMOUNT.	ONE DAY.	ONE WEEK.	ONE MONTH.	ONE YEAR.
\$ 1.00.....	.0000277	.0001939	.000833	.01
10.00.....	.000277	.001939	.00833	.10
100.00.....	.00277	.01939	.0833	\$1.00
1,000.00.....	.0277	.1939	.833	10.00

5 Per Cent.

\$ 1.00.....	.0001385	.00097	.00416	.05
10.00.....	.001385	.0097	.0416	.50
100.00.....	.01385	.097	.416	\$5.00
1,000.00.....	.1385	.97	4.16	50.00

6 Per Cent.

\$ 1.00.....	.0001662	.001163	.005	.06
10.00.....	.001662	.01163	.05	.60
100.00.....	.01662	.1163	.50	\$6.00
1,000.00.....	.1662	1.133	5.00	60.00

Time at Which Money Doubles at Compound Interest.

—At 2 per cent. interest, in 35 years; at 3 per cent., in 23 years 5½ months; at 4 per cent., in 17 years 8 months; at 5 per cent., in 15 years 2½ months; at 6 per cent., in 14 years 11 months; at 7 per cent., in 10 years 3 months; at 8 per cent., in 9 years; at 9 per cent., in 8 years and ½ month; at 10 per cent., in 7 years 3½ months.

A Table of Daily Savings at Compound Interest.

PER DAY.	PER YEAR.	IN TEN YEARS.	FIFTY YEARS.
\$0.02¾	\$10	\$130	\$2,900
.05¼	20	260	5,890
.11	40	520	11,600
.27½	100	1,300	29,000
.55	200	2,600	58,000
1.10	400	5,200	116,000
1.37	500	6,500	145,000

By the above table it appears that if a mechanic or clerk saves 2¾ cents per day from the time he is twenty-one till he is seventy, the total, with interest, will amount to \$2,900; and a daily saving of 27½ cents reaches the important sum of \$29,000. Save all you can in a prudent manner for a time of possible want, but act justly by paying your debts, and liberally by assisting those in need and helping in a good cause.

No housekeeper should allow any other brand to be put upon her, on the ground that it is just as good, etc., but should insist upon having the "Arm and Hammer" brand or none. It is therefore better to insist on having it in packages bearing our name and trade mark which is a guarantee of its genuineness and purity.

Rates of Postage

IN THE UNITED STATES.

Letters to any part.....2 cents per ounce.
City drop letters.....2 cents per ounce.
Postal cards.....1 cent each.

Registered letters, letter postage and 8 cents extra.

Special delivery letters, letter postage and special stamp, 10 cents extra.

Periodicals, newspapers, magazines, etc., 1 cent for each 4 ounces.

Periodicals, newspapers, magazines, etc., mailed by the publisher to subscribers, 1 cent per pound.

Books, pamphlets, circulars, and other matter wholly in print, including music, lithography, and corrected copy accompanied by the manuscript, 1 cent for every 2 ounces. Limit of weight in this class 4 pounds, unless a single volume of a book weighs more.

Merchandise, cards, patterns, photographs, letter paper and envelopes, printed or plain, printed blanks, bulbs, roots, seeds, etc., 1 cent per ounce. Limit of weight in this class 4 pounds.

TO CANADA.

Postage on letters, newspapers, books, circulars, etc.. same as in United States.

Patterns and sample packages, not to exceed 8 ounces, 10 cents, prepaid.

Money Orders.

IN UNITED STATES.

Not exceeding \$2.50, 3 cents; \$2.50 to \$5, 5 cents; \$5 to \$10, 8 cents; \$10 to \$20, 10 cents; \$20 to \$30, 12 cents; \$30 to \$40, 15 cents; \$40 to \$50, 18 cents; \$50 to \$60, 20 cents; \$60 to \$75, 25 cents; \$75 to \$100, 30 cents.

FOR FOREIGN COUNTRIES.

Great Britain and Ireland, France, German Empire, Canada, Belgium, Italy, Switzerland, Portugal, Algeria, Jamaica, Windward Islands, Sandwich Islands, Victoria, Tasmania, Queensland, Cape Colony, Japan, Hong Kong, New Zealand, New South Wales, Leeward Islands and Sweden, under \$10, 10 cents; \$10 to \$20, 20 cents; \$20 to \$30, 30 cents; \$30 to \$40, 40 cents; \$40 to \$50, 50 cents.

Foreign Postage.

The rates to all countries in the Universal Postal Union are: letters, 5 cents for each $\frac{1}{2}$ ounce or fraction thereof; 2 cents for each postal card, and 1 cent for each 2 ounces on newspapers and periodicals.

The Universal Postal Union comprises: Argentine Republic, Austria-Hungary, Belgium, Bolivia, Brazil, Bulgaria, Ceylon, China (via Hong Kong), Chili, Colombia, Cuba, Denmark and Danish Colonies, Ecuador, Egypt, Falkland Islands, France and French Colonies, Germany, Great Britain and British West Indies, Greece, Greenland, Guatemala, Hayti, Holland and Dutch Colonies, Honduras, Hong Kong, India (British), Ireland, Italy, Japan, Liberia, Luxembourg, Malacca, Mauritius, Mexico, Montenegro, Newfoundland, Norway, Paraguay, Patagonia, Penang, Persia, Peru, Portugal and Portuguese Colonies, Roumania, Russia, St. Bartholomew, Salvador, Servia, Siam, Singapore, Spain and Spanish Colonies, Straits Settlements, Sweden, Switzerland, Trinidad, Turkey, United States of Colombia, Uruguay, Venezuela.

On letters to the above places, prepayment is optional.

POSTAGE TO FOREIGN PLACES NOT IN THE POSTAL UNION.

	Letters not exceeding 2 ozs.	Newspapers.
Australia, via England.....	12 cents.	2 cents.
*Australia (except New South Wales, Queenstown, Victoria, Tasmania), via San Francisco.....	5 cents.	2 cents.
*Canada and British N. A. Provinces, except Newfoundland.....	2 cents for each oz.	1 cent for each oz.
Cape of Good Hope and Colony.....	15 cents.	4 cents.
China, via England.....	13 cents.	5 cents.
Natal.....	15 cents.	4 cents.
*New South Wales, Queensland, Victoria, Tasmania and New Zealand, via San Francisco.....	12 cents.	2 cents.
St. Helena.....	15 cents.	4 cents.
Transvaal.....	21 cents.	5 cents.

*Prepayment compulsory. To the countries not so marked it is optional.

Bible Weights and Measures.

A day's journey.....	= 33 1-5 U. S. miles.
A Sabbath-day's journey.....	= 1 " "
Ezekiel's reed.....	= 11 feet (nearly).
Cubit—Hebrew.....	= 22 inches "
" —Greek.....	= 18 " (about).
A finger's breadth.....	= 1 inch "
A shekel of silver.....	= 62 1/2 cents.
" gold.....	= \$8.09.
A talent of silver.....	= \$1,518.32.
" gold.....	= \$23,309.
A piece of silver.....	= 13 cents.
A farthing.....	= 3 "
A gerah.....	= 2 1/2 "
A mite.....	= 1 1/2 mills.
A homer (as dry measure).....	= 1 1-9 bushels.
" (as liquid ").....	= 76 gallons and 5 pints.
An ephah or bath.....	= 7 " 4 "
A hin.....	= 1 " 2 "
A firkin.....	= 7 "
An omer.....	= 6 "
A cab.....	= 3 "
A log.....	= 3/4 "

The Pulse.—The natural rate of the pulse varies at different ages, as follows:

BEATS PER MINUTE.

At birth.....	130—140
One year.....	115—130
Two years.....	100—115
Three years.....	95—105
Four to seven years.....	85—95
Seven to fourteen years.....	80—90
Fourteen to twenty-one years.....	75—85
Twenty-one to sixty years.....	70—75
Old age.....	75—85

ARM AND HAMMER BRAND SODA AND SALERATUS BATHS.

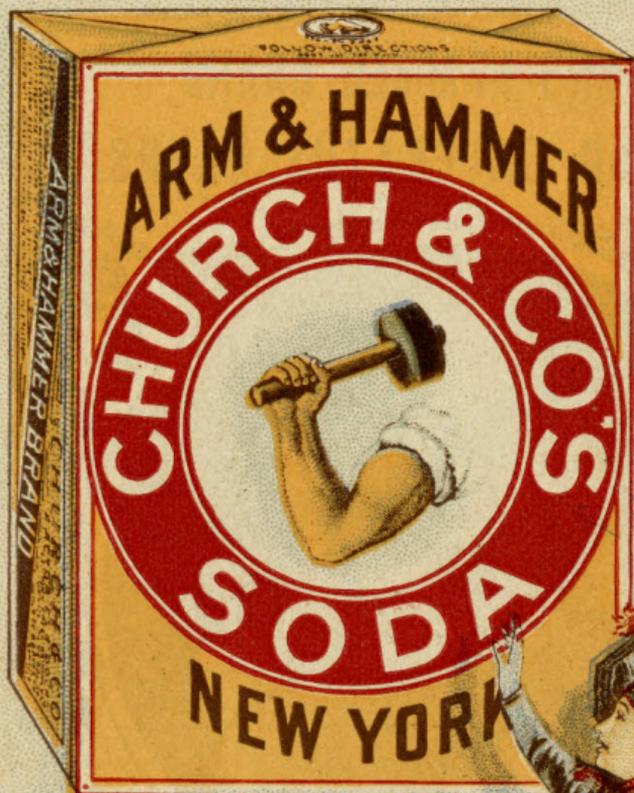


GIVE IT A FAIR TRIAL AND NOTE ITS EFFECT.

A most delightful bath may be taken by filling the bath tub with water as warm as can be comfortably borne and then thoroughly dissolving in it from one-half to one pound of ARM and HAMMER BRAND SODA or SALERATUS. It makes the water delightfully pleasant and has the effect of softening the skin and giving it a velvety texture.

For Colds, Rheumatism, Lumbago, and ills of like nature, this is also a remedy.

THIRTY-FIRST
EDITION OF
ONE MILLION.



THE ABOVE
IS A COPY OF OUR PACKAGE.

"THAT'S WHAT
I WANT"

HAND-BOOK
OF
VALUABLE
INFORMATION.

1899.